

Rushenden Neatscourt Queenborough Swale Kent



Archaeological Evaluation Report



September 2007

Client: SEEDA

Issue N^o: 1
OA Job N^o: 3656
NGR: 592230E 171350N

Client Name: SEEDA

Client Ref No:

Document Title: An archaeological evaluation at Rushenden Neatscourt,
Queenborough, Swale, Kent

Document Type: Archaeological Investigation Report

Issue Number: 1

National Grid Reference: 592230E 171350N
Planning Reference: Neatscourt Phase 1 - Swale Borough Council SW/06/1468
Rushenden Relief Road - Kent County Council SW/07/01

OA Job Number: 3656
Site Code: QURUN07
Invoice Code: QURUNEV
Receiving Museum: Queenborough Guildhall Museum
Museum Accession No:

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Document File Location Server1:\Projects\Queenborough and Rushenden
Neatscourt\QURUNEV_Evaluation
Graphics File Location Ditto
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1 SUMMARY

Introduction

Oxford Archaeology (OA) carried out a 71 trench field evaluation at Queenborough and Rushenden, Isle of Sheppey, Kent in late June 2007. The investigation was commissioned by Campbell Reith Hill Engineers, on behalf of SEEDA, as part of the Swale Redevelopment Project. The present evaluation relates to two planning applications: Neatscourt Phase 1 (Swale Borough Council SW/06/1468) and Rushenden Relief Road (Kent County Council SW/07/01). The total area is c. 20 hectares, located immediately to the south of the new A249 link road.

The current phase of trenching follows the Stage 1 Cultural Heritage assessment, and a programme of geoarchaeological test pits. The latter were used to model sub-surface deposit sequences, to identify areas where significant prehistoric and later archaeology could be buried by alluvium at the edge of the floodplain. The results of the trenching will be used to assess possible impacts on the Cultural Heritage that may be caused by the proposed development, so that they can be minimised, or suitable mitigation measures adopted.

Distribution of significant archaeological deposits

The evaluation has identified six areas of archaeological potential (See Figure 17). Three areas which were inaccessible for trenching still have uncertain potential. Areas of archaeological potential are summarised on Figure 17. The figure also includes a summary plan of the adjacent A249 excavations.

The general distribution and character of archaeology appears consistent with findings from large scale open area excavations carried out along the route of the A249 Iwade to Queenborough Link Road in 2004. Interim results from this investigation provide a valuable guide to the types and distribution of archaeology that may be expected in the Neatscourt Phase 1 development.

The remains discovered in the present evaluation include finds from the Middle to Late Bronze Age, the Iron Age, Roman and medieval period. Most artefactual evidence relates to the Roman and medieval periods. The distribution of features was not continuous and many trenches contained no features. The density of features is expected to be sparse overall, but with distinct concentrations at the following locations:

- 1) Along the proposed Rushenden Relief Road, immediately east of the Sheerness Railway Line (Fig.17, Area 1)
- 2) On the higher ground at the east end of the Neatscourt Phase 1 development (Fig 17, Area 4)
- 3) In the vicinity of a later prehistoric and Roman site excavated during construction of the western junction of the A249 Link Road, north-east of the Port Authority access (Fig.17, Area 3).

Prehistoric evidence

Overall the evidence for prehistoric activity is sparse. It is surprising that the enclosure and trackway ditches recorded at the western end of the A249 excavations were not more clearly apparent in this evaluation. No securely dated prehistoric features were found, although sherds of later prehistoric pottery (possibly Bronze Age) were found within the alluvium in Areas 1, 2 and 3 (Fig.17). It is possible that prehistoric archaeology is buried beneath Roman

and medieval deposits along the Rushenden Relief Road embankment, on either side of the Sheerness Railway Line.

Roman evidence

Excluding isolated and unstratified finds, significant Roman archaeology was found in three separate locations: Most obviously significant are three early Roman human cremation burials, found at two separate locations c.250m apart on the rising ground in Area 4 (Fig.17, Trenches 53 and 66). Comparison with the adjacent A249 excavations, where c. 40 early Roman cremations were found, suggests that these burials are likely to be part of larger cemetery groups.

The other significant Roman deposit comprises an extensive, organic, pottery-rich deposit (0204) found throughout Trench 2, which was initially thought to be a saltern. In the absence of any specific evidence for salt-working, the deposit is here described as a midden. The deposit is rich in pottery, predominantly of late Roman date but including a significant quantity of residual later prehistoric and early Roman material. The deposit is probably re-deposited, but is unlikely to have been transported far from the originating settlement.

Roman and later features across the site were generally found close to the present ground surface, sealed by topsoil and no more than a very thin layer of silty clay alluvium (typically 0.1 - 0.2m thick), even in the low-lying western areas along the proposed Rushenden Relief Road). There is some evidence that the edge of the marsh in the Roman and medieval periods lay between Trenches 1 and 2 (Fig 17, Area 1), coinciding with a drop in the level of the London Clay at this point.

Medieval evidence

Reasonably well-dated medieval features are limited to two locations: A 12th-13th century pit (0205) was found cut into the late Roman midden (0204) in Trench 2 (Fig.17, Area1). A ditch and cattle burial (7116) as well as other potentially contemporary features, was found in Trench 71 (Fig.17, Area 4).

Marine shells, predominantly oyster shell, were a common find on the site. Particular concentrations were noted in Trenches 1, 54, 66, 67 and 71. Most of these are undated, but one deposit (Trench 71, context 7111) contained 6 sherds of 12th-13th century AD pottery. However, the oyster deposits need not belong to a single period, given the known importance of oysters to the local economy in the Roman, medieval and post-medieval periods.

Post-medieval and modern features

Post medieval and modern features identified within the site comprise a small number of boundary and trackway ditches, at least one of which appears to be of very recent date.

Areas of uncertain potential

Three areas of uncertain potential include very low-lying wetland areas which were inaccessible due to ecological constraints (protected nesting birds) (Fig.17, Area 1). They include the western end of the proposed Rushenden Relief Road embankment (immediately east of the Sheerness Railway Line) and the wetland area to the south-east of the Port Authority entrance (Fig.17 Area 3).

The Rushenden Relief Road to the west of the Sheerness Railway has also not been subject to evaluation trenching, as it is currently occupied by active trading and industrial premises. It is predicted that any surface archaeological horizons in areas to the west of the railway will have been extensively disturbed by previous industrial development. A limited test pit

investigation is proposed to establish the degree of disturbance (not illustrated - see Written Scheme of Investigation for details of the proposed test pit locations (OA May 2007). Even if archaeological potential is identified in this area, the intention is to preserve significant deposits under the alluvium and road embankment.

These low-lying marshy areas must be considered to have high potential for well-preserved archaeological remains of various periods. Evidence from geoarchaeological test pits and deposit modelling indicates that the alluvial deposits in these areas are thicker than elsewhere on the site, with potential for archaeological remains to occur at different levels, separated by layers of alluvium.

Significance of the archaeology

None of the archaeological features and deposits discovered in this evaluation are of national importance. The limited range of prehistoric, Roman and medieval features identified are considered to be of moderate regional importance.

Impact of the proposed development on buried archaeology

The proposed development will have an unavoidable impact upon archaeological features and deposits in areas where significant archaeology has been identified just below the topsoil (Fig.17, unhatched areas shaded orange) if the topsoil is removed during construction. Impacts may be avoided to some extent in areas of construction fill (Fig.17 Areas 1, 2 and 3 - See also the Cultural Heritage Environmental Impact Assessment, Figure 10). In areas of deeper alluvial deposits, archaeology will generally be preserved in situ beneath alluvium and construction earthworks. However, archaeology of unpredictable character, importance and extent could emerge during localised excavations in the lower lying wetland areas. Piling for building footprints may also adversely affect buried remains.

In areas of construction cut (Fig. 17, Area 4) all archaeological features will be removed, with no opportunity for preservation in situ.

Mitigation design

An archaeological project design will be prepared, detailing measures required to mitigate these impacts. Impacts on significant archaeological remains will be minimised in the construction design as far as reasonably practicable, by reducing areas of topsoil strip and limiting the extent and depth of excavations in the alluvial areas to the minimum possible. Where preservation is not feasible, mitigation measures will comprise an appropriate programme of investigation and recording.

2 INTRODUCTION

2.1 Location and scope of work

2.1.1 Oxford Archaeology (OA) carried out a field evaluation at Queenborough and Rushenden Neatscourt, Isle of Sheppey, Kent between 16th May and 29th June 2007. The investigation was commissioned by Campbell Reith Hill Engineers, on behalf of SEEDA, as part of the Swale Redevelopment Project. The proposed regeneration project will comprise the establishment of improved access to Rushenden by a link road from the new A249 improvement and the development of approximately 120 Hectares for light industrial, residential and recreational purposes. The area to be developed comprises urban and wasteland areas with car depots, industrial buildings and a large area of grazing marsh with associated drainage features and wetland/estuarine habitats. The present applications relate to the Rushenden Relief Road and c. 20 hectares of development to the south of the new A249 link road (Planning application: Neatscourt Phase 1 - Swale Borough Council SW/06/1468; Rushenden Relief Road - Kent County Council SW/07/01). The site is centred on Ordnance Survey Grid Reference 91900E 71500N.

2.1.2 The current phase of trenching follows the Stage 1 Cultural Heritage assessment, and a programme of geoarchaeological test pits. The former incorporated preliminary desk-based assessment of potential cultural heritage impacts. The latter were used to model sub-surface deposit sequences, to identify areas where significant prehistoric and later archaeology could be buried by alluvium at the edge of the floodplain. The results of the trenching will be used to assess possible impacts on the Cultural Heritage that may be caused by the proposed development, so that they can be minimised, or suitable mitigation measures adopted.

2.1.3 The evaluation consisted of 71 trial trenches, excavated across both current application areas, with the exception of the western part of the Rushenden Relief Road route (west of the Sheerness Railway) which is occupied by tenants and unavailable for trenching at this stage. The latter area has been subject to extensive previous industrial development and is considered to have low potential for surviving archaeology close to the present ground surface, although prehistoric deposits could be preserved at depth in undisturbed alluvial peats and clays.

2.2 Topography and geology

2.2.1 The site area lies within Neatscourt marshes and is overlooked by Furze and Barrow Hill to the north-east (Fig.1). Part of the marshes were converted to hardstanding in the 1970s and used as car pounds. To the north-west, c 700m distant, lies the Queenborough Conservation Area with its associated Listed Buildings and Scheduled Monument. To the west lies the Swale foreshore and tidal flats, parts of which were

extensively developed as industrial complexes in the late 19th century and remain extensively occupied by factory buildings and areas of hardstanding.

- 2.2.3 The topography of the proposed development area rises from north-west to south-east. The south-western end lies at c +2.5m OD and its north-eastern end at c +9.85m OD.
- 2.2.4 The geology of the site has been examined and modelled in a previous phase of work, using data from geoarchaeological and geotechnical test pits (OA May 2007). The general deposit sequence is described below:

Pre-Holocene deposits and basement topography

- 2.2.8 The underlying bedrock across the site is mapped as London Clay, which outcrops under Queenborough, Rushenden and the slopes of Barrow's and Furze Hills (BGS, 272). In the test pits it was generally recorded as a stiff grey structureless clay. Where the test pits penetrated these deposits it produced elevations of between -3.0m and 4.0m OD, reflecting a sharp drop in the bedrock surface across the site from south-east to north-west.
- 2.2.9 Stiff clay: This unit consists of stiff reddish brown clay with occasional inclusions of mudstone and pockets of coarse sand. The unit is thickest towards the north-west of the site where it varies from 0.10m (OA TP37) to 2.10m (OA TP11) in thickness, and is found at elevations between -1.3m and +2.5m OD. The sedimentary origins and date of these clays have not been fully established. Similar deposits have been identified elsewhere in Kent and have been interpreted as deposits of weathered London Clay.
- 2.2.10 The surface of the London Clay deposits essentially defines the topography of the early Holocene landscape. Bates (1995) refers to this as the 'topographic template' and suggests that variations in the template largely dictated the patterns of subsequent landscape evolution, as flooding and sedimentation ensued during the prehistoric period.
- 2.2.11 An area of higher ground was identified around the Port Authority access road to the north of site, at slightly higher elevations c +1.90m OD.

The Holocene sediment sequence

- 2.2.12 Organic horizon: These deposits consist of a mid/dark brown organic silty clay directly overlying the stiff clays. These deposits produced frequent charcoal, pottery, burnt clay and flint. They were confined to a number of test pits located to the north of the site (OA TP10, 11, 12, 13, 14, 15, 16, 17, 18 and 23) along the proposed Rushenden Relief Road, where it was generally 0.10m in thickness and found at elevations between +1.98m and +2.53m OD.

- 2.2.13 Alluvium I: These deposits were only identified in two test pits (located along the western part of the proposed Rushenden Relief Road). They vary from bluish grey silty clays to clay silts and range in thickness from 0.10m (Fig.2, TP10) to 0.20m (Fig.2, TP11). The elevation of this deposit ranges between +1.3m (OA TP10) and +1.70m OD (Fig.2, TP11). Varying amounts of organic content are present within the deposit, including localised pockets of peat. Variations in the organic content of this deposit may indicate that a range of different depositional environments could have existed at the same time. The more organic parts of the sequence potentially indicate lower energy conditions within shallow water conditions at the edge of the floodplain, compared to more minerogenic deposits, which represent high-energy environments within the deep areas of the floodplain. Any archaeological material associated with these deposits is likely to have been reworked to varying degrees, depending on position within the floodplain.
- 2.2.14 Peat: These deposits consist of firm grey black fibrous peat, found in two geotechnical test pits between 0.10m (GSG TP12) and 1m (GSG TP11) in thickness, at elevations between +0.50m and +1.50m OD. In terms of Devoy's model they are consistent with Roman peat elevations that have been identified elsewhere within the Lower Thames. Peat deposits have not been encountered at all in the present evaluation or geoarchaeological test pits. However the proximity of the higher ground has previously been found to cause variations to the model. More precise age estimates must await radiocarbon dating. The deposits are confined to the edge of the floodplain along the north-western edge of the proposed Rushenden Link Road. The deposits were not encountered within any of the geoarchaeological test pits or evaluation trenches and were recorded only in the geotechnical investigations. Any archaeological material associated with these low energy deposits may have undergone little disturbance and is likely to be found near to its place of deposition.
- 2.2.15 Alluvium II: These deposits consist of yellowish brown silty clays and clay silts with evidence of root action and weathering of its upper surface. The deposit extends across the western part of the site (Figure 2, Areas 1, 2 and 3). It ranges in thickness from 0.20m (OA TP40) to 0.70m (OA TP18), at elevations between +1.45m (OA TP10) to +3.10m OD (OA TP23). These deposits represent the most recent episode of sedimentation within the Thames Floodplain. The fine-grained nature of these deposits indicates low energy deposition. Any archaeological material present within clay and silt deposits will have undergone low levels of lateral movement. It is possible that some of this material, along the eastern edge of Area 3, has formed through colluvial action.
- 2.2.23 Topsoil. The thickness of topsoil across the site was quite consistent, ranging between 0.20m and 0.40m. These deposits were recorded as silt clays with frequent roots and occasional rounded pebble inclusions. The lower lying western part of the site is generally flat, but rises to the south-east, with heights ranging between +2m and +9m OD.

2.3 Archaeological and historical background

2.3.1 There are several known sites with archaeological remains adjacent to the development area. Extensive open area excavations were carried out in 2004, along the line of the A249 Queenborough to Iwade Link Road, immediately to the north of the development area. These turned up significant remains, ranging in date from the late Neolithic to the medieval period and provide a valuable guide to the types of archaeology that may be expected in the Neatscourt Phase 1 development. Detailed reports on the A249 excavations are not yet available. However, draft specialist assessment reports and site summary phase plans have been provided by CgMs Consulting (CgMs in prep). The overall site plan is incorporated on the site location figures in this report (See Figure 2).

2.3.2 The results of the desk-based assessment, carried out as part of the Cultural Heritage and Environmental Impact Assessment (OA, 2005 & 2006) is summarised below:

The early prehistoric period (Mesolithic and early Neolithic)

2.3.3 Early prehistoric remains are at best ephemeral and it is not surprising that very little has yet been found in the vicinity of the proposed development. In the western part of the site, remains of early prehistoric activity are likely to be buried by later alluvial deposits. By the early prehistoric period the area is likely to have been part of a tributary valley of the Thames/Swale which at this time had become established approximately within its present floodplain. River valleys may have been the focus for seasonal camps and small scale clearances of woodland in spring and summer, with winter hunting on higher ground. Mesolithic artefacts that have been recovered are concentrated along the southern edge of the Swale Marshes (Wilkinson 2001). Locations on hill slopes overlooking valleys would have been attractive to early prehistoric communities as they would have offered good views of the movement of game (Wilkinson 2001). Other natural resources, and the possibility of using the waterways for movement, would also have been available from the margins of a riverine environment. The possibility that evidence for at least seasonal early prehistoric exploitation of a tidal and/or wetland environment exists within the confines of the study area cannot be discounted. The wetland nature of the western part of the study area means that organic structural elements and deposits such as trackways, boats and fish traps may be well preserved in waterlogged conditions.

Later Neolithic and Bronze Age

2.3.4 A small amount of late Neolithic or early Bronze Age archaeology has been identified in recent excavations along the new route of the A249 between Iwade and Queenborough, concentrated at the western end of the new road. The prehistoric pottery assemblage from this site includes c.10 abraded sherds in grog-tempered fabrics that may possibly be Grooved Ware. However, no diagnostic sherds were present and all were very worn. Otherwise the earliest material found was Beaker (Late Neolithic / early Bronze Age). The material comprised 55 sherds (406g), mostly

from a single small East Anglian Beaker. Sherds from another Beaker in the same context had incised and comb-impressed decoration, although the pattern was indiscernible (unpublished draft assessment text by Lavender, pers. comm. via CgMs Consulting).

- 2.3.5 No sites or finds mid-late Bronze Age date have been identified within the study area. Study of aerial photographs has identified what may be the cropmarks of ploughed out ring-ditches and enclosures (OA 2005) on the upper slopes and crest of Barrow's Hill, overlooking the north-eastern edge of the study area. Later features such as windmill mounds or signalling beacons can result in similar cropmarks, but the presence of several apparently related features suggests a barrow cemetery of prehistoric date, as suggested by the place name.
- 2.3.6 Any potential surviving evidence within the marsh will have been buried under succeeding estuarine/alluvial deposits, but could include structural evidence for the exploitation and management of an inter-tidal and wetland environment. The potential presence of surviving remains associated with estuarine and even continental trade, such as boats, again cannot be discounted in the western parts on the site. Such remains may possibly survive within former channels located on the marshland.

The Iron Age

- 2.3.7 Evidence for Iron Age occupation was identified during evaluation and open area excavation in 2004, along the route of the A249 Iwade to Queenborough Link Road. Most finds of this date were concentrated in a group of enclosure or trackway ditches and pits, found on the westernmost roundabout of the new link road, adjacent to the Port Authority car storage area access (Fig.2). The irregular enclosures are generally typical of later prehistoric settlement, and perhaps represent stock enclosures and droveways. The site has earlier and later evidence but the largest pottery assemblage dates from the mid-late Iron Age. The pottery assemblage and charred plant remains suggest domestic occupation on or close to the site. The identified features were cut into subsoil and sealed by just c 0.20 - 0.40 m of topsoil and subsoil. The relatively shallow depth at which these remains were found suggests that the site was comparatively dry, although located on the edge of an established marsh, by this period.
- 2.3.8 A Beaker feature (transitional late Neolithic/ early Bronze Age) found in the A249 excavations was located in the same area as the Iron Age features, which may indicate some degree of continuity in land-use from the early prehistoric period, although there was no evidence for activity in the intervening mid-late Bronze Age.
- 2.3.9 Territories established on the higher ground of the mainland may potentially have been using the Swale marshes as part of their wider agricultural system. The development of Neatscourt and Minster Marshes as a managed marshland

environment within the inter-tidal zone, may have become established at this time or even earlier. The settlement pattern generally appears to conform to that established during the later Neolithic and Bronze Age periods, showing a preference for locations on lower slopes overlooking valleys.

- 2.3.10 The development of a widespread salt-making industry within, and adjacent to, coastal marshland is first attributed to the Iron Age (Topping and Swan 1995). A number of Salterns and saltings are present within 1.5km of the study area. No dating is available for the majority of these, though a medieval or later date is normally suggested. It is possible that some may be earlier.

The Roman period

- 2.3.11 Enclosure ditches of probable Roman date were identified during the recent investigations along the new route of the A249, concentrated in the same area as the Iron Age occupation features described above, which may indicate some degree of continuity in settlement or land-use.
- 2.3.12 The A249 interim archaeological site plan indicates that as many as 40 cremation burials were found during topsoil stripping, widely scattered across the excavation area, but with most burials concentrated in five cemetery groups, located on the rising ground to the north and east of Neatscourt Phase 1. The largest group consisted of c.20 burials. The human remains specialist assessment (Mckinley, in draft via CgMs Consulting) mentions a minimum of 9 individuals, with bone recovered from 30 separate features (37 contexts) of which four could be definitely identified as urned and three as unurned burials. The pottery assessment (Compton, in draft via CgMs Consulting) indicates a 1st- 2nd century AD date range for those burials accompanied by pottery vessels. Other deposits are currently inconclusive but are likely to include urned and unurned burials of similar date. Just outside the desk-based study area (c.2km to the north east) a Roman burial was identified during archaeological investigations at Sheppey High School.
- 2.3.13 As noted above, it is possible that some of the salterns within the wider area may also be ascribed a Roman date. A significant Roman salt industry has been identified on the Isle of Sheppey (notably on the Isle of Harty) and it is probable that this will have extended into the study area, which forms the closest part of the Isle of Sheppey to the mainland (Topping and Swan 2001). The site also lies just to the north-east of the important Upchurch pottery production area, which seems to have had its main focus c. 10km to the south-west of Queenborough, but extends over the southern side of the Medway estuary, from Gillingham to Iwade. Pottery production in the area flourished from the 1st to the mid-3rd century AD. It is possible that salt-working and pottery production were carried out in conjunction on some sites. Both processes require access to wood for firing, and clay for making vessels and kiln furniture. Ready access to Watling Street (now the A2), 7 km to the south of Queenborough, and water

transport must also have been important considerations in the location of these industries.

The early medieval period

- 2.3.14 No sites or finds of early medieval date have been identified within the study area. There is a relative dearth of archaeological evidence for the period following the decline of Roman infrastructure in the 5th to 6th centuries AD. The collapse of regional potteries seems to have heralded a period of relatively aceramic settlement with an associated shift in settlement and agricultural practices (Wingfield 1995). Many Saxon sites could easily have not been recognised during the excavation of the later phases of Romano-British sites or the earlier phases of later medieval sites, due to this relative lack of cultural material (Williams 1989). It is particularly difficult to detect settlement evidence of this period in evaluation trenches.
- 2.3.15 The Swale in all probability remained an attractive waterway and anchorage during the Early Medieval period. By the 10th century the north sea herring fisheries had become established (Page 1926) and may in part have used anchorages in the Swale. Evidence for early dock structures and other maritime features may potentially survive in foreshore deposits and in the vicinity of creeks.

The late medieval period

- 2.3.16 One possible later medieval site lies within the proposed study area, the location of a possible saltworking. Queenborough itself enters the historical record in 1361 when Edward III ordered the construction of a Castle, and in 1366, granted his royal favour to the town by charter, making it the seat of a borough and a corporation. Prior to this date, Queenborough was little more than a small hamlet called “Binney”. It’s very name means an ‘eyot’ (island) within a marsh (Tyler). The founding of Queenborough as a planned town so late in the Medieval period is significant because such late foundations are relatively rare. The award of admiralty rights and a wool staple by Edward III (Page 1926), strongly suggest that the local economy was grounded on sheep rearing and the maritime industry at this point. Oyster dredging is recorded as an important economic activity in the town from at least the late medieval period.
- 2.3.17 A significant addition to the Borough’s economy was the foundation by Brabantine Matthias Falconer of a Copperas works in the 15th century (Taylor 1932). This may be the earliest documented chemical factory in Britain. The location of the original works is unknown, but lies under the remains of the Sheppey Glue works to the north west of the study area.

The post -medieval period

- 2.3.18 One Grade II Listed Building, Neats Court, lies within the study area. Others lie within the Queenborough Conservation Area to the north-west. Many maritime sites

exist just to the west, including wrecks, barges and wharves associated with the foreshore.

- 2.3.19 The area just to the north-east of the study area to the south of Queenborough became increasingly important for its post-medieval industries. Queenborough continued to be an important manufacturing centre for Copperas throughout the 17th and 18th centuries.
- 2.3.20 From the late 19th century, the area of marshland west of the Sheerness Railway has been developed for residential and industrial purposes. The area of Rushenden stands on higher ground, but between this and Queenborough, marsh reclamation has occurred. This reclamation may have utilised the higher ground that forms on the seaward edge of tidal saltmarsh but a degree of deliberate drainage must have occurred to allow building to take place.

3 EVALUATION AIMS

The primary objectives of the evaluation were to:

- Identify any archaeological deposits or features that may be present and assess the overall archaeological potential of the site.
- Identify any archaeological horizons within the site that may exist buried within or sealed by alluvium.
- Characterise the sequence of sediments and patterns of accumulation across site, including the depth and lateral extent of major stratigraphic units, and the character of any potential land surfaces/buried soils within or pre-dating these sediments.
- Identify the location and extent of any waterlogged organic deposits. Where appropriate and practicable suitable samples will be retrieved to assess the potential for the preservation of palaeoenvironmental remains and material for scientific dating.
- Clarify the relationships between sediment sequences and other deposit types, including periods of 'soil', peat growth, archaeological remains, and the effects of relatively recent human disturbance, including the location and extent of made-ground.

4 EVALUATION METHODOLOGY

4.1 Scope of fieldwork

- 4.1.1 71 trial trenches were completed out of the 73 originally specified within the WSI. This includes 56 excavated as originally specified, and 13 that had to be realigned or relocated for various reasons, including ecological constraints, major obstacles, the presence of standing water and buried services.
- 4.1.2 The overburden was removed under close archaeological supervision by a 360° mechanical excavator fitted with a 2.1m wide toothless bucket. Sondages were dug at the ends of most trenches to investigate the depths of the alluvium and solid geology, these were back-filled immediately.
- 4.1.3 A 2-3% sample of the overall site area within Area 1 was undertaken. The sample was not uniform across the site: In areas which are covered by alluvium (the western half of the site, including the Rushenden Relief Road) the trenches were kept to a minimum on the assumption that the archaeology will be preserved *in situ beneath* alluvium and made ground. The trenches in this area were targeted to investigate archaeological find spots (from test pits) and proposed building footprints only.
- 4.1.4 A 3-4% sample strategy was adopted for the planned building footprints, on the assumption that piling will cause some impact to buried archaeology, regardless of the presence of alluvium and made ground. Elsewhere the sample is *c* 2% in areas of proposed car parks and landscaping.. It is accepted that a 2% sample is not sufficient for detecting ephemeral prehistoric archaeology and will not be sufficient to 'clear' the site for construction purposes. However it will be sufficient to establish the presence/absence and extent of complex archaeological sites, which will allow mitigation measures to be developed at an appropriate level.

4.2 Fieldwork methods and recording

- 4.2.1 All evaluation trenches were excavated using a 360 degree mechanical excavator fitted with a flat toothless bucket and taken down slowly in 20cm spits. The trenches were approximately 2m wide and 30m long. All trenches were taken down to the weathered London Clay, or to an archaeological horizon. Topsoil and subsoil were kept separate and reinstated in sequence. Trench locations were set out by a sub-contracted surveyor from Mouchel Parkman Limited. All setting out was carried out in accordance with the WSI, except where trench locations were modified to take account of access constraints.
- 4.2.2 The trenches were cleaned by hand and the revealed features were sampled to determine their extent and nature, and to retrieve finds and environmental samples. All archaeological features were planned and where excavated their sections drawn at scales of 1:20. All features were photographed using colour slide and black and white

print film. Recording followed procedures laid down in the *OAU Fieldwork Manual* (ed D Wilkinson, 1992).

4.3 **Finds**

4.3.1 Finds were recovered by hand in the course of the evaluation and generally bagged by context. Finds of special interest were given a unique small find number.

4.4 **Palaeo-environmental sampling**

4.4.1 All sampling methods followed the procedures laid out in Guidelines for Environmental Archaeology (EH 2002) and Oxford Archaeology Sampling Guidelines.

4.4.2 Bulk Samples of 40 litres (where possible) were taken from selected, stratigraphically intact and potentially datable deposits for the recovery of charred plant remains and small bones, to provide information on past economic and dietary practices, and the function of features/ deposits. The samples were processed using a modified Siraf-style flotation system to 250 microns (flot) and 0.5 mm (residue).

4.5 *Presentation of results*

4.5.1 Factual results from the evaluation are described trench by trench in Section 5. Trenches are grouped according to topographical zone and archaeological results (Areas 1-4). The areas are indicated on the relevant location figures (Fig.2). Descriptive text is only included in Section 5 for trenches containing potentially significant archaeological features. Standard trench details (including dimensions and surface elevations) are listed in Appendix 1 for all trenches. Context details are listed in Appendix 2. Section 6 comprises specialist finds and environmental assessments. Section 7 relates the findings to known landscape history of the area, and discusses the significance of the results.

5 RESULTS: DESCRIPTIONS

5.1 General description and distribution of deposits

- 5.1.1 The general site sediment sequence consists of light yellow weathered London Clay, overlain in the lower lying parts of the site (Areas 1 - 3, Fig.17) by a light to mid yellowish brown alluvium of varying thickness, up to 0.60m in places, sealed by topsoil typically c. 0.20m thick. The alluvium is thickest towards the west, as the London Clay gradually increases in elevation towards the north and north-east. Within the areas of higher ground, little or no subsoil separated the topsoil from the weathered London Clay.
- 5.1.2 Historically the site has been used as pasture. Although there was some indication of plough or slope erosion it does not seem to have been too destructive - Roman cremation urns in Trenches 53 and 66, and an articulated cattle skeleton in Trench 71, survived immediately below the thin topsoil, albeit in a crushed and somewhat truncated state.

5.2 Area 1 (Trenches 1, 2, 3 and 4)

- 5.2.1 Area 1 (Figs.2 and 3) comprises the proposed Rushenden Relief Road to the east of the railway. The sediment sequence within Area 1 consists of weathered London Clay (104, 205, 302, 403) encountered at a depth of 0.60m to 0.70m below ground level, overlain by mid-brownish yellow silt clay alluvium (102, 203, 303 and 404) between 0.23m and 0.70m, sealed by 0.26m of dark greyish silty clay topsoil (101, 201, 301 and 401). Within Trenches 1 and 2, archaeological features and deposits of Roman and medieval date were exposed near to the top of the alluvial sequence at a depth of 0.35m. Trenches 3 and 4 were excavated to the weathered London Clay and contained no archaeological features.
- 5.2.2 Trench 1: (Fig 9) Contained a 0.10m thick dark greyish brown silt clay layer (104) that occurred as a lens within the upper alluvial deposits (102) almost immediately below the topsoil. This dark layer was spread across the western end of the trench and included two sherds of pottery, one Roman and one medieval. This is insufficient for dating the deposit. The same context produced a small number of oyster shells. Excavation was stopped at this level due to the extent of the deposit. A test pit was excavated to the London Clay (103) at the western end of the trench, but no significant archaeology was recorded at this level.
- 5.2.3 Trench 2: (Figs 3 and 7) The soil sequence comprised a 0.27m thick dark greyish brown organic silt clay layer (204) located just below the topsoil, and a thin layer of alluvium (203). A test pit was excavated into the London Clay (202), the surface of which was encountered c 0.7m below ground level. This did not expose any archaeology sealed below the alluvium. Layer 204 extended throughout the whole of the trench and the surface was littered with abundant, predominantly Romano-British

pottery. A sample section through layer 204 produced 128 sherds, of which 31 were of later prehistoric date and 97 were Romano-British. The largest and latest component of the assemblage dates from the mid-late 4th century (see pottery assessment report). The Roman pottery in this context was almost as fragmented as the earlier material (average sherd weight 9.2 g as against 8.8 g), which implies that the prehistoric and Roman material were both extensively re-worked before their final deposition in this context.

- 5.2.4 The deposit also contained burnt clay and fragments of fired clay which were initially thought to be briquetage, leading to the suggestion that the site might be a saltern (late prehistoric and Roman salterns are characterised by fragments of kiln furniture and salt containers made from crudely fired clay - known as briquetage). However the quantity is very small and specialist examination does not indicate any artefacts that are diagnostic of salt manufacture. The fired clay recovered is either ceramic building material or derives from normal domestic structures, most likely hearths. However, the charred plant remains recovered from context 204 (sample 10) are dominated by oak. The absence of grain and other food waste from sample 10 lends some support to interpretation of the layer as an industrial, rather than a domestic deposit.
- 5.2.5 A large south-west to north-east aligned sub-rectangular pit (205) (3.6m long x 0.9m wide x 0.31m deep) was cut through the late Roman layer (204). The lower fill (206) comprised a 0.15m thick dark grey silt clay deposit, containing abundant charcoal, and pottery fragments dating to the medieval period (c.1075-1150 AD). It was initially interpreted as a possible tank for either the storage of water or brine prior to evaporation during the salt-making process. However, there is no artefactual evidence for salt-making. At the end of its' life the pit appears to have been used for refuse disposal - The comparatively large medieval pottery assemblage (96 sherds) was relatively unabraded and contained only a small amount of residual prehistoric and Roman material. The charred plant remains from context 206 (sample 9) included moderate concentrations of charred grains, including hulled barley and free-threshing wheat. This is most likely to be food waste, which suggests that the pit fill derives from a domestic occupation or midden deposit.

5.3 Area 2 (Trenches 5, 6, 7, 8 and 9)

- 5.3.1 Area 2 (Figs. 2 and 3) forms the northernmost part of the Neatscourt Phase 1 Planning Application area, located to the north of the proposed Rushenden Relief Road. The soil sequence was comparatively deep, comprising weathered London Clay deposits (502, 602, 702, 802 and 902) encountered at a depth between 0.56m and 0.75m below ground level, overlain by a mid-brown silty clay alluvium (503, 603, 703, 805, 902) and sealed by 0.26m of dark greyish silty clay topsoil (501, 601, 701, 801, 901). Substantial modern disturbance (803) was apparent at the base of the topsoil within Trench 8, almost certainly resulting from construction of the adjacent A249 Link Road. Archaeological features and deposits were identified within Trenches 7, 8 and 9, stratified below the alluvium and dug into the London Clay. It is possible that

Roman and later features lying immediately below topsoil have been lost to modern disturbance.

- 5.3.2 Trenches 5 and 6 were devoid of archaeological features and are not described in detail. However an alluvial deposit within Trench 5 (503) produced a flint flake and a single pottery fragment possibly of Bronze Age date.
- 5.3.3 Trench 7 (Fig.3) included a north-east to south-west aligned palaeochannel (706) measuring 2.25m across. It was visible in plan immediately below the topsoil. The fill (707) comprised a homogeneous blue-grey, mottled orange-brown silty clay. One fragment of cow or sheep bone was recovered from the deposit, along with two pottery fragments dating from the early Roman period (1st - 2nd century AD). Hand excavation of this feature was taken down to a maximum depth of 1.2 m. The finds and stratigraphic evidence indicate that the palaeo-channel was in-filled, by natural alluvial silting, in the Roman period or later.
- 5.3.4 Two other possible irregular features/deposits in Trench 7 (704 and 705) were identified below the alluvium at a depth of 0.60m below ground level. Both were very shallow and ill-defined in plan. They were filled with an organic silty clay deposit containing small quantities of prehistoric pottery (11 small abraded sherds) and worked flint. The features are interpreted as natural hollows or tree throw holes, in which the prehistoric finds accumulated as the features silted up, at some time after the early-middle Bronze Age.
- 5.3.5 Trench 8 (Fig.3) included Pit 806, which was recorded in the south-west facing section, cut through the alluvium. It had two fills, the lower a light greyish brown silty clay (807) and the upper a brownish yellow silty clay (808). This feature produced no finds but is stratified above the alluvium, so is most likely to be of Roman or later date.
- 5.3.6 The level immediately below topsoil had clearly been subject to substantial modern disturbance and modern in-fill. The trench partly overlaps with the area topsoil stripped for the A249 Link Road, which no doubt explains the disturbance. No archaeological features are shown on the A249 site drawings in this area (CgMs pers.comm.; see Figure 8).
- 5.3.7 Trench 9 (Fig 3 and 8) This trench included one possible shallow ditch (904) sealed underneath a thin layer of alluvium at a depth of 0.40m below ground level. The feature was c. 0.1m deep and was >2.2m by 1.4m wide in plan. It was filled with thick greyish brown silty-clay containing 6 fragments of pottery dating to the mid-late Bronze Age. Several other potential spreads of material with fragments of Bronze Age pottery were also recorded in the trench at this depth, but on further excavation appeared to represent very shallow natural features or in-filled hollows, with no identifiable edges.

5.3.8 Comparison with the geoarchaeological records suggests that the Bronze Age finds from the alluvium may be residual, and that excavation in this trench did not reach London Clay (in the adjacent Test Pit 23, the London Clay was reached at 0.9m bgl) (OA 2007). It appears that the probable Bronze Age ditch (904) is cut from part way through the alluvial sequence at this location, rather than entirely sealed by it.

5.4 Area 3 (Trenches 10-40)

5.4.1 Area 3 (Figs. 2 and 4) refers to the western part of the Neatscourt Phase 1 development, to the south of the recently built A249 Link Road (Fig.2). The field boundary forming the eastern side of Area 3 follows the 5m contour. It marks an approximate dividing line between the lower lying, alluvial areas and the rising ground in Area 4. The natural deposit sequence in Area 3 comprised weathered London Clay (1002-4002) overlain by variable thickness of alluvium (1103-4003), sealed by 0.20-0.35m of dark greyish silty clay topsoil (1001-4001). Few features were recorded immediately beneath the topsoil in Area 3. However Trenches 10, 11, 12, 26, 29, 36, 37 and 38 exposed archaeological features and deposits that were sealed underneath the alluvium. Trenches 13, 14, 15, 16, 17, 18, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 39 and 40 were devoid of archaeological features and are not described in detail (Depths and surface elevations are listed in Appendix 1). Some trenches lying alongside the A249 and associated access routes, showed evidence of disturbance, truncation and in-filling of modern ditches, resulting from construction of the road.

5.4.2 Trench 10 (Fig.3) Contained two postholes 1003 and 1009, and a linear ditch aligned north-east by south-west. Posthole 1003 was 0.5m in diameter and 0.15m deep. It contained three fills; a dark brown silty clay deposit (1004) 0.08m thick, a yellow brown silty clay deposit (1005) 0.06m thick, and a light greyish brown silty clay deposit (1006) 0.01m thick.. The second posthole (1009) was 0.45m in diameter, with a dark brown silty clay upper fill (1010). A 0.50m wide linear ditch (1007) contained a dark brown silty-clay upper fill (1008).

5.4.3 Trench 11 (Fig.3) was substantially disturbed near the surface, probably as a result construction work for the adjacent A249. This may explain why archaeological enclosure ditches and other features recorded in the adjacent A249 topsoil strip were not seen in this trench. Animal bone from context 1106 in this trench was found within the area of modern disturbance and probably derives from imported material. Two broad, shallow depressions (1105 and 1111) are recorded as possible features, on the grounds that they contained an assemblage of late Iron Age pottery (40 small, abraded sherds, weighing 104g). However, the form and relationship of the features could not be defined within the limits of the evaluation trench (the surviving depth was too shallow to record stratigraphic relationships and the features occupied the full width of the trench. They appear to be no more than slight depressions in the London Clay containing accumulated artefacts re-worked from the adjacent Iron Age and

Roman enclosures. They could be erosion features resulting from trampling of livestock and people in soft muddy ground.

- 5.4.4 Trench 12 (Fig.4) contained one possible archaeological sub-circular feature (1207) measuring 0.40 in diameter, this appears to be a small pit or posthole containing a dark greyish brown silty clay upper fill (1208). This feature could not be excavated due to the depth of the trench and unstable trench sides. No finds were recovered from its surface. The exceptional depth of the trench (c. 1.2 m) resulted from a build-up of modern made ground (1203, 1204), which was clearly associated with construction of the adjacent A249 road embankment.
- 5.4.5 Trench 18 (Fig.4) contained two probable features that were sealed beneath a very thin alluvial deposit at a depth of 0.18m. On investigations these deposits produced 5 very small sherds of late prehistoric pottery or fired clay, weighing 12 grams. On excavation the features were very shallow and ill-defined in plan, with irregular edges and an undulating concave base. It is possible that the deposits represent natural hollows or partly man-made features, created by people or livestock trampling in wet ground.
- 5.4.6 Trench 24 (Fig.4) exposed two small pits: Pit 2403 was 0.6m in diameter and 0.08m deep. It contained one fill (2404) a greyish mottled orange-brown silty clay, 0.08m thick. The pottery assessment suggests a broadly late prehistoric date. Pit 2405 was 1.2m in diameter and 0.1m deep. It contained one fill (2406) a dark orange-brown silty clay. No finds were recovered from this deposit.
- 5.4.7 Trench 36 (Figs. 4 and 9) exposed one north-west by south-east aligned ditch (3604) which was 1.8m wide and 0.7m deep. The feature was cut into the London Clay and was sealed by a thin layer of alluvium. The ditch was fairly shallow in profile. Small fragments of preserved wood were discovered in the fill (3605). They did not appear to be worked or part of *in situ* structures but do suggest that the lower ditch fills are anaerobic, which raises the potential for preservation of organic materials. The fill consisted of a blue-grey mottled dark brown silt clay, 0.7m thick. It is likely that this feature is late prehistoric in date, on the basis that it was found stratified below the alluvium, although no dating evidence was retrieved from the fill.
- 5.4.8 Pit 3606 was 1.18 m wide, 1.4 m long, and 0.1 m deep. The fill (3607), a blue-grey mottled dark brown silty-clay, was 0.1m thick. The surrounding natural geology appeared slightly oxidised, indicating possible evidence for *in situ* burning. No finds were recovered from the fill.
- 5.4.9 The trench also contained a north-south aligned land drain (no number assigned).
- 5.4.10 Trench 37 (Fig 4 and 10) contained a hearth, probably of prehistoric date as it contained a single sherd in a later prehistoric fabric and was stratified below alluvium. There were no indications of associated structures within the trench. The cut (3711) was 2.6m long, 1.0m wide and 0.1m deep. It contained one fill (3710) a

dark orange-brown silty clay fill which was 0.1m thick and contained abundant charcoal. The surrounding natural geology appeared oxidised indicating *in situ* burning.

- 5.4.11 Trench 38 (Fig.4) contained two inter-cutting ditches (3803 and 3806) and ditch 3808, all of which were east-west aligned. They could form part of a single track or embanked boundary. The alignment forms a right angle with the extant boundary to the east, which suggests that a post-medieval date is most likely. No finds were recovered from any of the ditches.
- 5.4.12 Ditch 3803 was 2.2m long, 0.57m wide and 0.4m deep. It contained two fills, comprising a 0.3m thick, dark greyish-brown silty clay upper fill (3804), and a 0.1m thick, greyish brown silty clay (3805). Ditch 3806 (unexcavated) is a recut of ditch 3803 (fill 3807), on the same alignment.
- 5.4.13 Ditch 3808 was an east-west ditch, running parallel to 3803 and 3806. The fill (3809) was a dark orange-brown silty clay deposit. No finds were recovered.

5.5 Area 4 (Trenches 41-74)

- 5.5.1 Area 4 (Figs.2 and 5) comprises the rising ground in the eastern part of the Phase 1 Neatscourt Development (Fig.5). The natural deposit sequence here consists of London Clay, overlain on the lower part of the slope by a very thin subsoil which is probably colluvial in origin, although weathering of the upper surface of the clay may also be a factor. The topsoil is very thin, particularly on the top of the slope (typically c.0.20m). The area appears to have been subject to a limited degree of erosion or plough truncation - The best indication of the extent of erosion is the condition of three Roman cremations found in Trenches 53 and 65 - The vessels and cremation deposits were found immediately below the shallow topsoil in a crushed, moderately truncated state. Prior to excavation the surviving portions were relatively undisturbed, which indicates that the site has not been intensively deep-ploughed.
- 5.5.2 Archaeological features and deposits were identified sealed just underneath the topsoil in Trenches 44, 48, 52, 53, 54, 59, 60, 65, 66, 67, and 71. The features dated from the early Roman to the modern period and occurred in discreet patches across the site (Fig.9). Trenches 41, 42, 43, 45, 46, 47, 49, 50, 51, 55, 56, 57, 58, 60, 61, 62, 63, 64, 68, 69, 70, 72, 73, and 74 were devoid of archaeological features, and are not described below (trench depths and surface elevations are listed in Appendix 1).
- 5.5.3 Trench 44 (Figs. 5 and 11) exposed two parallel east-west aligned ditches (4403) and (4405) which were of similar dimensions and depth. The ditches were 1.8m wide and 0.42m deep. Both contained similar fills (4404 and 4406) - an orange-brown silty clay, 0.41m thick. Excavation showed that these were wide, shallow features, possibly forming an east-west aligned trackway. No trackway is marked on this alignment on historic OS maps, but the ditches do continue the line of a modern boundary, which first appears on the 1985 edition OS map. Some small fragments of

early Roman pottery were retrieved from Fill 4404, but the quantity is too small to be considered reliable dating evidence for the feature. They could be residual from disturbed cremation burials in the surrounding area.

- 5.5.4 Trench 48 (Fig.5) exposed several ephemeral features, two of which were excavated (4803 and 4805). Both features are located approximately on the predicted line of a modern boundary ditch recorded in Trench 53 (5309). They could be either ditch terminals or pits. Feature 4805 was 1.38m in diameter and 0.2m deep, containing a grey-blue, mottled orange brown silty clay fill (4804). A sherd of 19th century pottery and a residual prehistoric sherd were the only artefacts found, and suggest that a post-medieval or modern date is most likely. Feature (4806) was 0.8m wide and 0.14m deep, containing one fill (4807), a grey-blue mottled orange-brown silty clay from which no artefacts were recovered. The other features in this trench were all very shallow and irregular and produced no finds. They may not be archaeological features.
- 5.5.5 Trench 52 (Fig.5) exposed a north-south aligned ditch (5204), which ran along the length of the trench, and was filled by a blue grey mottled orange brown silt clay fill (5205). The ditch was also recorded in trenches 53 and 48 (5309 and 4803). As noted above, the ditch coincides with a boundary shown only on late 20th century OS maps, so is probably of recent origin. The historic map evidence suggests that this boundary relates to a short-lived episode of field sub-division, between c.1973 and 1985.
- 5.5.6 Trench 53 (Figs.5 and 12) contained a single Romano-British cremation burial, with three accompanying urns (5305, 5306 and 5308) all dating from the 1st to 2nd century AD. A total of 654g of cremated human bone, from an adult male individual, was recovered from the burial. The burial included three vessels of early Roman type: A central Gaulish Samian dish (Dragendorff 18/31) dating from c.120-150 AD, the base of an early 2nd century cremation urn, and a beaker (Monaghan type 2A4, undecorated) dating from c.130-170 AD, the last two vessels probably both locally made. Unfortunately, due to the clay soil conditions and the very shallow depth at which it was found, the burial was somewhat disturbed by the mechanical excavator.
- 5.5.7 Ditch 5309 was a 1.22m wide, north-south aligned feature with three fills (5310, 5311 and 5312). 5310 was a blue-grey silty clay, 0.4m thick. 5311 is a blue-grey mottled orange-brown silty clay, 0.26m thick. 5312 is an orange brown silty-clay 0.13m thick. The feature contained a single sherd of 11th - 13th century AD found in context 5312. (This is not sufficient to reliably date the feature). There was nothing in the feature to suggest a more recent date. However Trench 53 lies astride a removed modern field boundary, which is not shown on the 1973 OS map or earlier editions, but appears on the 1985 edition, so it is most likely be of very recent origin. What may be the same boundary ditch was recorded in Trench 52 and possibly Trench 48.
- 5.5.8 Trench 54 (Figs. 5 and 13) was widened slightly at the south end to clarify the extent and relationship of two archaeological features identified. Pit 5403 (1.1m long and

0.42m wide) was filled with a dark orange brown silty clay (5404) which included a concentration of oyster shell (133 fragments recovered), but no datable artefacts. It was cut by a (broadly) east-west aligned ditch (5405), which was 1.6m wide and 0.34m deep, with a single greyish brown silty clay fill. The ditch fill included a single sherd of pottery dating from the 1st -2nd century AD, which is insufficient to reliably date the feature. The ditch was not recorded in the neighbouring trenches; nor can it be equated with post-medieval/ modern boundaries recorded on historic OS maps.

- 5.5.9 Trench 59 (Fig. 5) Contained eight large irregular pits (contexts 5904 - 5910) and one small north-east aligned gully (context 5911). The pits were all irregular and poorly defined in plan. One of the features (5902) was excavated. It was 4.8m wide and 0.44m deep, containing a single homogeneous fill (5903), a yellowish-brown silty clay. Six abraded sherds of pottery from the fill date from the late 12th-13th century AD (one residual prehistoric sherd was also recovered).
- 5.5.10 This feature group appears superficially reminiscent of a similar group of features found during excavations along the A249 link road (CgMs, in prep) c. 500m to the east of Trench 59. The date of these is unclear from the information supplied - A report is not yet available. The draft phase plans indicate that prehistoric, Roman and medieval pottery was found, which presumably reflects similar small assemblages with a considerable residual component. No clear interpretation is possible on present evidence. They could perhaps be clay extraction pits. The mixed, abraded pottery assemblage may result from the features being left to silt up naturally.
- 5.5.11 Trench 65 (Figs. 5 and 14) Contained two early Roman urned cremation burials (6503 and 6510). They were found immediately below the very thin topsoil, as a result of which they were disturbed somewhat during mechanical excavation of the trenches.
- 5.5.12 Burial 6503, which probably dates from the early 2nd century AD, was 0.4m in diameter and 0.2m deep and included three vessels (6504, 6505 and 6506). The cremation urn (Monaghan type 4A2 in CAT fabric R73) is of 2nd century AD type. There was also a south Gaulish Samian cup (Dragendorff 33), and a ?flask of late 1st century type. The latter was missing its rim, which indicates some truncation due to ploughing or erosion. 441g of cremated human bone, from an adult of uncertain sex, was present in urn 6504 (See human remains assessment).
- 5.5.13 Burial 6510 is most likely to date from the latter part the 2nd century AD. It was 0.5m in diameter and 0.4m deep and also included three vessels (6507, 6508 and 6509). The cremated human bone was placed in a locally made urn (6507) (Monaghan Type 4A2). The fill of the vessel produced 601g of cremated human bone, from a single adult of uncertain sex. The other vessels comprised a locally made flask (Monaghan Type 1B) and a Central Gaulish Samian dish (Dragendorff 36).

- 5.5.14 Trench 66 (Fig.5) exposed a shallow, north-west to south-east aligned ditch (6603) which was 0.4m wide and 0.22m deep and contained two fills (6604 and 6605). The upper fill (6604) was a dark grey-brown silty clay, containing a concentration of oyster shell (325 fragments, the largest group from the evaluation) and a single sherd of Romano-British pottery, as well as small amounts of animal bone and fired clay. The only intrinsically datable material is the pottery, but a single sherd is not sufficient to reliably date the feature. The lower fill (6605) consisted of orange-brown silty clay with no finds.
- 5.5.15 Trench 67 (Figs. 5 and 15) revealed two parallel east-west aligned ditches (6703 and 6707) which together may have formed a trackway or embanked field boundary. The east-west alignment of the two ditches is similar to that of the surrounding modern field system, although no boundaries are shown on that alignment on historic OS maps.
- 5.5.16 Ditch 6703 was 1.03m wide and 0.38m deep and contained a single homogeneous fill (6704). This dark, organic, grey-brown silty clay, contained two sherds of medieval pottery dating from the 11th-13th century AD, and three fragments of animal bone. A piece of coarse-grained quartzitic pink sandstone from the same context may be a quern fragment. The organic character of this deposit, and the finds, suggests that it contains re-worked domestic refuse including medieval material. However, a post-medieval or even modern date cannot be ruled out.
- 5.5.17 Ditch 6707 was left unexcavated. It was 1.7m wide and filled by dark grey silty clay (6708). The surface of the fill included fragments of oyster shell.
- 5.5.18 Pit 6705 was initially thought to be a large oval pit, but on excavation proved very shallow and irregular in profile, and may be a tree throw hollow or other form of ground disturbance. A single sherd of late Iron Age or Roman pottery was recovered from the silty clay fill. Other unexcavated features in this trench were similar to 6705 in the general character, irregular in plan, with similar fills. Rapid investigation of the features indicated that they were also very shallow (6709, 6711, 6713, 6715, 6717). Of these, features 6713 and 6715 had occasional fragments of oyster shell and animal bone on the surface.
- 5.5.19 Trench 71 (Figs. 5 and 16) revealed a notable concentration of features. They include an east-west aligned ditch (7105) which ran along the trench from the west end for a distance of 11m, where it ended in a clearly defined terminal. The fill of the ditch (7111) was a dark greyish brown silty clay, containing a concentration of oyster shells (a sample of 89 were recovered) and 5 sherds of medieval pottery dating from the 12th - 13th century AD. The pottery assemblage is very small, but gives reasonable confidence that Ditch 7105 is medieval or later in date.
- 5.5.20 A slightly truncated, but otherwise well-preserved and articulated, juvenile cattle skeleton was found in a pit (7116), which was cut through Ditch 7105, c. 1.5m west of the ditch terminal. Both features were cut from immediately below the topsoil to a

similar depth (0.25m). The fill of Pit 7116 (7117) was a dark greyish brown silty clay, similar to 7111, but no oyster shells were recorded. A single sherd of Romano-British pottery was recovered from fill 7117, but it cannot be a reliable indication of the date of the cattle burial as the burial cuts through medieval ditch 7105. The cattle burial must therefore be medieval or later in date.

- 5.5.21 A ditch (7104) was cut through both Pit 7117 and Ditch 7105, on a north-south alignment. It was 0.7m wide and 0.11m deep with a single fill (7110), a dark greyish brown silt clay. Ditch 7105 is probably medieval in date, so Ditch 7104 must be also be of medieval or later date.
- 5.5.22 A north-south aligned ditch (7108), which survived to a depth of 0.2m, was found at the western end of the trench. The fill (7109) comprised a dark greyish brown silty clay, containing oyster shells, ceramic building material and animal bone. It was cut by a small pit (7115) 0.58m in diameter and 0.14m deep, which had a single fill (7123), a light greyish brown silt clay.

6 FINDS AND ENVIRONMENTAL SPECIALIST ASSESSMENTS

6.1 Pottery

by Paul Booth (OA) with John Cotter (OA)

6.1.1 Some 1077 sherds of pottery weighing 6924 grammes were recovered during the evaluation (Appendix 3, Table 2). These were scanned rapidly to provide dating for the associated contexts as well as some characterisation of the site overall; pottery is quantified by sherd count and weight by major period for each context group in Table 1. The pottery ranged from perhaps as early as the Middle Bronze Age to the post-medieval period, although the bulk of the material was of Roman date, consisting of assemblages from three 2nd-century cremation burials, and a late Roman midden deposit.

Prehistoric

6.1.2 The prehistoric assemblage consisted mostly of sherds in a range of flint-tempered fabrics. This material was typically highly fragmented, with an average sherd weight of only 4.6 g. Diagnostic pieces were therefore very scarce, usually making close dating of sherds in this long-lived ceramic tradition impossible. Such fabrics were in use in the region at least from the middle Bronze Age into the late Iron Age and small sherds cannot be dated more precisely within that range without detailed fabric analysis, and perhaps not even then.

6.1.3 Only three small rims are present amongst the flint-tempered sherds (one each in contexts 204, 206 and 905). Those in 204 and 206 are both simple upright forms, neither closely dateable. The rim in context 905 is similar but has slight finger tip impressions in its top; a middle to late Bronze Age date is possible for this piece. A similar date may be suggested by the thickness (up to 14 mm) of the body sherds in context 704, a characteristic of some vessels of this period, but this is not certain.

6.1.4 Some seven fragments in grog-tempered fabrics were also assigned a broad later prehistoric date range. Most of these were very small fragments, not all of which were certainly pottery. Only one sherd was of any size or significance; this was another upright rim, slightly expanded, from context 204. An early-middle Bronze Age date is likely for this sherd but, as with the other prehistoric material from this context, together forming the largest prehistoric group from the site, it was residual.

6.1.5 A single context group (1110) was dated to the late Iron Age within trench 11. This comprised sherds in flint-tempered and sand-tempered fabrics, as well as sherds in fabrics tempered with grog and flint or grog and sand. An everted rim sherd from a jar in the latter fabric was the only diagnostic piece from the group, but overall a date in the late pre-Roman Iron Age seems clear, although it is less certain if all the components of the group are contemporary.

Late Iron Age and Roman Pottery

- 6.1.6 Roman pottery occurred in Trenches 1, 2, 7, 22, 36, 44, 53, 54, 65, 66 and 71, but the majority of the Roman assemblage and, with one exception, its most important components, consisted of vessels from three cremation burials of 2nd century date; burial 5303 in Trench 53 and burials 6503 and 6510 in Trench 65. Each burial included a ceramic container for the cremated remains - a jar of Monaghan (1987) type 4A2 in two cases - but the auxiliary vessels varied; a fine oxidised ware carinated beaker and a samian ware dish (form 18/31) in 5303, a grey ware ?flask and a samian ware cup (form 33) in 6503, and a fine grey ware flask and a samian ware dish (form 36) in 6510 (Note that in Table 1 the fabrics of these vessels are related to Canterbury Archaeological Trust fabric codes). These varying combinations of vessel types are all well-attested in Roman cremation burials in Kent, for example in the major cemeteries at Ospringe (Whiting *et al.* 1931) and Pepper Hill, Springhead (Biddulph forthcoming). Date ranges for the burial assemblages as a whole have been suggested in Table 1, as well as dates for the individual vessels. All three groups fall within the 2nd century, and while it is possible that all the burials could have been placed at about the same time, towards the middle of the century, a spread of dates is more likely, the possible sequence being 6503, then 5303 and finally 6510. It is notable that apart from the samian ware all the vessels were in fabrics produced in the Thameside Kent industries (Monaghan 1987) and that they were mostly heavily fragmented. The samian ware vessels, being relatively shallow forms, were considerably less broken - a pattern commonly seen in burial groups in this region.
- 6.1.7 The only other significant Roman assemblage from the site was from context 204 in Trench 2. As already discussed, this group contained a significant mixed collection of later prehistoric material, but it had an even more substantial Roman component, ranging from grog-tempered material of late Iron Age-early Roman character to late Roman sherds. Amongst the latter specific notes were made of late forms in black-burnished ware (BB1, CAT fabric R13), late Roman shell-tempered ware (CAT fabric LR3) and Oxfordshire white mortaria (CAT fabric LR10) and oxidised colour-coated ware (CAT fabric LR22). Together these fabrics suggest a date in the second half of the 4th century for this assemblage. It is notable, however, that on average the Roman pottery in this context is almost as fragmented as the earlier material (average sherd weight 9.2 g as against 8.8 g). This might imply that both groups of material had undergone similar processes, perhaps involving reworking, before their final deposition in this context.

Medieval Pottery

- 6.1.8 Medieval pottery was less widely distributed across the site than later prehistoric and Roman material, but was encountered in Trenches 1, 2, 11, 53, 59, 67 and 71. Most context groups were small and all fall within an 11th-13th century date range, the component material consisting almost entirely of Canterbury early sandy wares and

North Kent shelly wares. The only other fabrics were a probably local flint and sand-tempered ware and sandy London-type ware, both represented by single sherds in context 5903 and the latter the only glazed medieval sherd from the site.

Post-Medieval Pottery

- 6.1.9 Post-medieval pottery occurred in small quantities across the site, usually in superficial contexts (one tiny sherd was intrusive in the 2nd century burial context 6512). All the sherds appeared to be of 18th-19th century date and none was remarkable.

Distribution of pottery

- 6.1.10 Prehistoric sherds, albeit usually in very small quantities and frequently redeposited with later material, were more widely distributed across the site than pottery of any other period, occurring in 15 trenches. These characteristics suggest relatively widespread but low density activity on the site, although the chronological range covered by the material, perhaps from the middle Bronze Age onwards, is such that at any one time the extent of such activity was probably very limited. Intensification of use of the site may have occurred in the late Iron Age, as is seen elsewhere in Kent, but significant Roman activity attested by ceramics is still restricted to the placing of cremation burials in Trenches 53 and 65 in the early Roman period and a single deposit in Trench 2 in the later 4th century (or perhaps later). The only ceramically important medieval feature was also located in Trench 2.
- 6.1.11 Local pottery traditions are attested throughout. For the Roman period samian ware was the only foreign import and the extra-regional fabrics identified in the late Roman group are all commonly attested in groups of this date in Kent (Pollard 1988). None of the groups provides indications of distinctive status. The three early Roman cremation assemblages are characteristic of the region and may be considered typical of groups just a little above the lowest status level.

6.2 Flint

By Hugo Lamdin-Whymark

- 6.2.1 A total of five struck flints and thirty pieces (286 g) of burnt unworked flint was recovered from the evaluation. The struck flint comprises two flakes (contexts 5301 and 3405), a blade (context 5301), a platform rejuvenation tablet (context 5201) and a platform-edge rejuvenation (context 705). The flint from all contexts, except 3405, exhibited extensive edge-damage indicating disturbance from their original place of deposition and redeposition in later archaeological contexts. The surface condition of the flints varied. The two flints from context 5301 were free from surface cortication, whilst flints 3405 and 705 exhibited a light and moderate bluish white cortication respectively. The flint from 5201 was lightly iron-stained. Dating such a limited assemblage is difficult, but the presence of two rejuvenation flakes indicates a

considered reduction strategy. A Neolithic to early Bronze Age date is, therefore, most appropriate.

- 6.2.2 The burnt unworked flint was recovered in small quantities from seven archaeological contexts (204, 206, 2404, 3710, 5301, 5303 and 7117). The majority of the burnt flint was red in colour, indicating it was burnt at relatively low temperatures, but a few more heavily burnt grey flints were recorded. The limited quantity of burnt flint may suggest that it was produced accidentally during other activities involving a hearth or fire.
- 6.2.3 A total of 14 natural flint pebbles was recovered in association with the cremations. Some of the pebbles (five pieces) are complete nodules, however most are broken and six are burnt. The pebbles are quite small in size, ranging from 2 g to 75 g. It is not likely that the flint pebbles were deliberate deposits within the cremation, but that they were present in the soil, having been lightly burnt due to contact with the hot cremation pyre.
- 6.2.4 The small assemblage size limits the potential for further work and so the value of the material from the Isle of Sheppey lies in its representation of activity at the site during the early to middle Bronze Age, possibly with an emphasis on scraping activities.

6.3 Human bone

By Nicholas Marquez-Grant

- 6.3.1 Human cremated bone was recovered from contexts (5303), (6511) and (6512) within trenches 53 and 65 in Area 4 (Appendix 3, Table 3). In all three contexts, the human cremated bone was urned, although that of (5303) and (6512) was heavily truncated. Truncation appears to have been moderate but significant further disturbance occurred during machine excavation due to the very shallow depth of topsoil covering the features, and the excavation characteristics of the clay soil. Detailed assessment of the remains can be found in Appendix 3.
- 6.3.2 The most represented elements were those from the upper and lower limbs. Skull bones were also present to a certain extent in all three contexts, while teeth were identified in contexts (5306) and (6512). In general, the bone was in good condition. The compact bone had suffered slight post-mortem erosion but trabecular bone was rarely preserved. Some articular surfaces were present and identified in deposit (5306).
- 6.3.3 A minimum of three individuals was represented in total. All of these individuals appear to have died at an adult age (>18 years) as inferred from the dimensions of the bones. There were no repeated bone elements in any of the contexts and no obvious differences between elements according to age. It will be necessary, however, to examine whether the smaller residue (4-2mm) fragments in (6512) may represent another, younger, individual. The dimensions of the bones from (5306)

were within the range that is typical for male skeletons. However, no skeletal landmarks were identified that would provide a more accurate sex estimation. No indicators of sex were observed among the other deposits.

- 6.3.4 With the exception of deposit (5306), the surviving bone fragments tended to be white in colour and homogeneous throughout the skeleton. This is indicative of full oxidation of the bone (Holden *et al.* 1995a, 1995b). The bone from context (5306) displayed a variety of colours. Further study of the anatomical distribution of these degrees of oxidation would contribute data on the funerary rite and the efficiency of cremation. For example, an abundance of one anatomical region over others may suggest that certain parts of the skeleton were considered to be more important for burial over others. Further, the colour of the bones may indicate how the body had been laid out on the pyre, as well as the duration of exposure to heat and the pyre technology that was employed. The present assessment indicates that the human bone from deposit (5306) showed the greatest variation in colour, while the other deposits were more uniform.

6.4 Animal bone

By Lena Strid

- 6.4.1 A total of 503 animal bones were recovered during the evaluation (Appendix 3, Table 6). Most bones were in a good to fair condition (see Behrensmeyer 1978 for definitions). Five bones were burnt, and only one bone displayed carnivore gnaw marks.
- 6.4.2 The medieval or later assemblage is the largest, mainly due to an almost complete cattle burial in context 7117. Judging by epiphyseal fusion, the animal was 2-2.5 years old at death; however the tooth wear would indicate an animal of 4-8 years old. Castration can prolong an animal's growth period (O'Connor 2000:95) and this would suggest that the animal was a c. 4 year old ox.
- 6.4.3 There are few identified bones in all phases, and it is therefore difficult to discuss any animal husbandry strategies in terms of preferred species, slaughter age patterns and sex preferences. Judging by tooth wear, epiphyseal fusion and surface structure of the bones, the cattle, sheep/goat, pig and horse bones derived from sub-adult or adult animals. Juvenile bones were absent.
- 6.4.4 Butchering marks were found on three bones. Cut marks indicating skinning were found on two of the first phalanges from the cattle burial. A Roman sheep/goat metatarsal displayed cutmarks on the ventral side of the distal condyles, suggesting disarticulation of the joint.
- 6.4.5 No further information can be gained from such a small sample of bones, but the data should be further considered should the site proceed to full excavation in the future.

6.5 Metal

6.5.1 Thirty-two metal finds were recovered during the evaluation (Table 1). Of these 18 (24 fragments) are nails or fragments of nails, 6 are small unidentified fragments ('Unknown') and 5 are miscellaneous pieces. The single structural piece is a bolt or rod with a washer attached. There are 2 objects of uncertain identification ('Query'), which include a piece of rough cast copper alloy and a tiny modern machine-made non-ferrous alloy object.

6.6 Other finds

6.6.1 A total of 20 pieces of stone were retained during the evaluation. Of these, five are worked or of interest. A further 50+ fragments were recovered from sieving but have no obvious significance or potential for further work. The five worked pieces include four fragments from lava rotary querns (from contexts 7109 and 7111) and a single fragment from a quartzitic sandstone. The lava querns could be Roman or medieval in date but none are large enough for any details to be recorded and the assemblage warrants no further work.

6.7 Palaeo-environmental remains

By Luke Howarth and Wendy Smith (OA)

6.7.1 A total of eleven soil samples were taken, for a variety of palaeoenvironmental analysis, most of which have been sieved for charred remains. Five were taken from the cremations to retrieve human bone. One column sample was taken in trench 2 to assess the sediment sequence and its' potential for further analysis.

Table 1: Summary quantification of samples collected

Number of samples	Sample collected for
5	Cremated bone
4	Bones/artefacts and charred remains
1	Waterlogged remains
1	Soil micromorphology

6.7.2 Four sample were processed for the recovery of charcoal and charred plant. Two samples (7 and 8) were taken from possible hearth or rubbish deposits from trenches 24 and 37. In addition two samples (9 and 10) were taken from deposits initially thought to be associated with Roman salt-workings, in Trench 2. However subsequent analysis has produced no clear evidence to support this. The extensive Roman layer 0204 has been re-interpreted as a heavily re-worked late Roman midden deposit (with significant residual prehistoric and early Roman components). Pit 0205 is securely dated to the medieval period (11th-12th century).

6.7.3 All of the samples processed for charred plant remains contained abundant oak charcoal, which would be consistent with the interpretation of the deposits as hearth

and/or industrial deposits. However sample <9>, from medieval pit 0205, contained moderate concentrations of charred grain, specifically hulled barley (*Hordeum* spp.) and free-threshing wheat (*Triticum* spp.) which is not obviously consistent with the suggested interpretation of the site as a saltern. However, we cannot rule out the possibility of malting waste being used as fuel (although no sprouted grain was observed in this relatively well preserved assemblage).

7 DISCUSSION AND INTERPRETATION

7.1 Reliability of field investigation

- 7.1.1 The location of the trenches and the percentage sample of the development area provides a representative sample of the topographical zones affected by the development, with the exception of the lowest lying areas (See Figure 17, parts of Areas 1 and 3 shaded green). These wetland areas were inaccessible for trenching due to ecological restrictions (nesting birds). It is clear, from geoarchaeological modelling and trenching in adjacent areas, that prehistoric, Roman and medieval archaeology may be present buried beneath alluvium in these areas.
- 7.1.2 The trench sample is comparatively low, at c.2.5% overall, with a lower percentage applied in the Rushenden Relief Road area, where it was initially expected that archaeology could be preserved *in situ* beneath embankment. However, the trenching follows an earlier phase of test pitting, which examined and modelled the sub-surface topography in detail. In addition the general distribution and character of archaeology appears entirely consistent with findings from the adjacent A249 excavations (CgMs Consulting, in prep.).
- 7.1.3 No trenches or test pits have been excavated on the line of the Rushenden Link Road embankment to the west of the Sheerness Railway, which is an active trading estate at the time of writing. This area has been subject to extensive industrial development since the late 19th century and any archaeology present is expected to be substantially truncated and disturbed. A limited test pit investigation is proposed to establish the degree of disturbance. Even if archaeological potential is identified the intention is to preserve significant deposits *in situ* under the embankment.
- 7.1.4 Overall the evaluation results are considered sufficient as a basis for devising a mitigation strategy.

7.2 Overall interpretation and potential

Up-dates to the geoarchaeological deposit model

- 7.2.1 The evaluation results broadly confirm the conclusions of the geoarchaeological modelling. One amendment to note is that material modelled as Alluvium II in Area 4 (the eastern part of the Neatscourt Phase 1 Development) is considered to be the result of weathering or slope erosion. The eastern edge of the alluvium lies approximately along the eastern boundary of Area 3. The interface between these weathering or colluvial deposits, the silty clay alluvium, and the underlying weathered London Clay was very difficult to distinguish, as all are minerogenic deposits derived from the London Clay. Archaeological features and horizons were found sealed by alluvium in Areas 1, 2 and 3, but this was no more than a thin blanket, except potentially in Trenches 1 and 2. The density of Roman and medieval

finds in Trenches 1 and 2 prevented excavation of the trenches to the full depth. However, test pits in the same area recovered later prehistoric, possibly Bronze Age, sherds from alluvium at a depth of c.0.9m, underneath the recorded Roman/ medieval deposits. Somewhat deeper alluvial sequences are likely to be found in the lower lying wetland areas (shaded green on Figure 17), which were inaccessible for trenching.

- 7.2.2 Area 4 corresponds with the predicted extent of permanent dry ground, where there is little or no alluvium. There is some evidence for the formation of a very shallow subsoil in places, which is most likely to result from weathering or slope erosion, but generally the medieval and Roman archaeology was found, in a somewhat truncated condition, 0.2 - 0.3m below ground level. The moderate truncation of features observed in Area 4 is most likely due to natural erosion as there is little sign of intensive ploughing.
- 7.2.3 The possible edge of the permanent wetland in the Roman and medieval period probably coincides with a sharp drop in the level of the London Clay (see the geoarchaeological report, OA 2007, Figure 7). This boundary occurs between Trenches 1 and 2 (in Area 1): A midden deposit (0104) containing single sherds of both Roman and medieval pottery was found sealed by alluvium in Trench 1. Another (possibly equivalent?) layer (0204) was found beneath a very thin layer of alluvium in Trench 2. Layer 0204 is dated to the Roman period but it had a medieval pit cut through it. These extensive organic horizons probably owe their survival to a protective layer of alluvium and little or no ploughing. The most intensive activity appears to relate to the medieval period (specifically the 11th-13th century AD) and the Roman period (1st to 4th century AD), but these periods may simply be more visible due to the large associated artefact assemblages. The occurrence of Roman and medieval deposits at the same locations suggests that the location of the marsh edge did not change greatly in the intervening period. In spite of extensive modern drainage, the field to the north of Trenches 1 and 2, and the area south of the Port Authority car storage area, remains permanently wet and seasonally flooded (See Figure 17, Areas shaded green).
- 7.2.4 The Rushenden Relief Road to the west of the Sheerness Railway has not been subject to evaluation trenching as it is currently occupied by active trading and industrial premises. It is predicted that any surface archaeological horizons in areas to the west of the railway will have been extensively disturbed by previous industrial development. However the deposit sequence is known in general terms from geotechnical records which have been included in the deposit model. Deposits of firm grey black fibrous peat, 0.10m (GSGTP12) to 1m (GSGTP11) thick, are found at elevations between +0.50m and +1.50m OD. In terms of Devoy's model they are broadly consistent with Roman peat elevations that have been identified elsewhere within the Lower Thames. However floodplain edge situations are complex - Radiocarbon dating is required to confirm the date of these deposits. The deposits are confined to the edge of the floodplain at the western end of the proposed Rushenden

Relief Road. Peat deposits were not encountered in any of the geoarchaeological test pits or trenches and were recorded only in the geotechnical investigations. Any archaeological material associated with these low energy deposits may have undergone little disturbance and is likely to be found near to its place of deposition.

Distribution of archaeological deposits

7.2.5 The evaluation has identified six areas of archaeological potential and two areas of uncertain potential (which were inaccessible for trenching purposes) (Fig.17).

7.2.6 The remains discovered range in date from perhaps the late Bronze Age, through the Iron Age and Roman periods, to the medieval period. Most artefactual evidence relates to the Roman and medieval periods

7.2.7 The distribution of features was not continuous and many trenches contained no features. Overall the density of features appears low, although evaluation trenching normally underestimates feature density, particularly with regard to small, discreet features such as burials. The adjacent A249 excavations provide a valuable general indication of the type and density of archaeological features that may be expected. The density of features is expected to be sparse overall, but with distinct concentrations

1) on the higher ground at the east end of Area 4

2) along the proposed Rushenden Relief Road around the edges of the former marsh,

3) in the vicinity of the later prehistoric and Roman site excavated on the site of the western junction of the new A249 Link Road.

7.2.8 The areas of uncertain potential identified on Figure 17 are wetland areas which were inaccessible due to ecological constraints (mainly protected nesting birds) (Fig.17). These low-lying marshy areas must be considered to have high potential for well-preserved archaeological remains of various periods. Evidence from geoarchaeological test pits and deposit modelling indicates that the alluvial deposits in these areas are thicker than elsewhere on the site, with potential for archaeological remains to occur at different levels, separated by layers of alluvium.

Prehistoric period

7.2.9 No securely dated prehistoric features were found, although sherds of later prehistoric pottery (possibly Bronze Age) were found within the alluvium in Areas 1, 2 and 3 (TPs 10, 12, 14, 18 and 23, and in Trenches 1, 2, 7 and 23 - highlighted red on Figure 2). In Trenches 1 and 2, further investigation of the underlying alluvial sequence was prevented by the density of archaeology at higher levels, so it is possible that prehistoric archaeology is buried beneath Roman and medieval deposits along the Rushenden Relief Road embankment.

- 7.2.10 The available evidence suggests that there may be a prehistoric land surface buried by alluvium along the margins of the former marsh. The pottery presumably derived from an occupation site close by. The A249 occupation site is located immediately to the east of the evaluation area and is the most likely candidate, although the nature of activity at this site is far from clear. The bulk of the prehistoric pottery from the A249 site has been dated to the Middle Iron Age, with very small earlier prehistoric components including a small Beaker and Food Vessel assemblage from the Late Neolithic/ early Bronze Age, and substantial Roman and medieval pottery groups. The largest later prehistoric pottery groups from the evaluation were recovered as a residual component in a late Roman midden deposit (0204), and from an erosion hollow in Trench 11 (next to the A249 later prehistoric and Roman occupation site).
- 7.2.11 A few undated features (possibly prehistoric) were recorded beneath alluvium in the south-west corner of the Phase 1 Neatscourt site) but there were no associated artefacts (Trenches 24, 36, 37 and 38). A possible hearth pit, which had evidence for *in situ* burning and contained abundant charcoal, was found in Trench 37. The feature contained a single sherd in a later prehistoric fabric, which is not sufficient to reliably date the feature.
- 7.2.12 Overall the evidence for prehistoric activity is sparse. It is surprising that the enclosure and trackway ditches recorded at the western end of the A249 excavations were not found in this evaluation. However the limited prehistoric artefactual evidence is mainly concentrated in that area. Further prehistoric features should be expected to emerge during topsoil stripping, particularly at the eastern end of the Rushenden Relief Road and the north-west corner of the Neatscourt Phase 1 development.

Roman

- 7.2.13 Excluding isolated and unstratified finds, significant Roman archaeology was found in three separate areas: Of most obvious significance are three human cremation burials, found at two locations (Trenches 53 and 66, c.250m apart) on the rising ground in Area 4 (Fig.17).
- 7.2.14 Given the number and distribution of early Roman cremation burials found on the adjacent A249 excavations, these are likely to be part of larger cemetery groups. The A249 site plans provided suggest that c. 40 cremation burials were found in total, . Most occurred in five tight groups of between 3 and 20 burials, dispersed widely across the landscape, but almost all found on the rising ground in the eastern section of the route (CgMs site plan, in prep). A number of undated isolated cremation burials were also found scattered in between. Only one undated burial was found in the same area as the occupation site at the west end of the route. The largest A249 burial group lay c.300m north of the burial in Trench 53 and a similar distance from the burials in Trench 66. No evidence for prehistoric barrows were found in the A249 excavations.

However, Barrow Hill is located close by and it would not be unusual to find Roman burial groups in association with prehistoric burial mounds.

- 7.2.15 Other significant Roman deposits an extensive, organic, pottery-rich deposit (0204) found in Trench 2, which was initially thought to be a saltern. In the absence of any specific evidence for salt-working, the deposit is here described as a midden. The deposit is rich in pottery, which was scattered across the stripped surface throughout the trench. The small sample section produced a substantial pottery group, the latest and largest element of which is late Roman, including characteristic late 4th century wares. However this is a very mixed, clearly re-worked assemblage, with a large residual component including later prehistoric and early Roman sherds. The material is probably re-deposited, but is unlikely to have been transported far from the originating settlement (the occupation site identified on the adjacent A249 excavations is located c. 400m to the east of Trench 2). In contrast to medieval deposit from the same trench, the charred plant remains examined were dominated by oak charcoal, with no indication of cereal grains or other indicators of domestic occupation. The small fired clay assemblage did not contain any obvious briquetage.
- 7.2.16 Roman and later features across the site were generally found close to the present ground surface, sealed by topsoil and no more than a very thin layer of silty clay alluvium (typically 0.1 - 0.2m thick), even in the low-lying western areas). A slightly thicker alluvial deposit was recorded overlying an organic Roman or medieval horizon in Trench 1, possibly indicating that the edge of the marsh in the Roman period lay between Trenches 1 and 2 (as suggested by the a dip in the underlying bedrock at that location).

Medieval period

- 7.2.17 Reasonably well-dated medieval features are limited to two locations: A 12th-13th century pit (0205) was found cut into the late Roman midden (0204) in Trench 2. A ditch and cattle burial (7116) as well as other potentially contemporary features, was found in Trench 71. There appears to be a correlation between areas of Roman and later medieval activity. This could indicate some degree of continuity in land-use between those periods, even though there is currently no evidence for activity in the intervening early medieval period. However, the connection may be an indirect one, perhaps resulting from proximity to a long-lived settlement site (perhaps Neats Courts) or the repeated re-use of a now-vanished landmark, such as a barrow, for a variety of purposes.
- 7.2.18 Marine shells, predominantly oyster shell, were a common find on the site. Particular concentrations were noted in Trenches 1, 54, 66, 67 and 71. Most of these are undated, but one deposit (Trench 71, context 7111) contained 6 sherds of 12th-13th century pottery. However, the oyster deposits need not belong to a single period, given the known importance of oysters to the local economy in the Roman, medieval and post-medieval periods.

7.2.19 Dating these small oyster shell deposits would be of some local and regional interest. Oysters from Kent were prized as a delicacy in both the Roman and medieval periods. By the 18th century oyster-dredging was the main occupation of Queenborough's inhabitants, the local oyster beds being among the most important in Kent (along with Whitstable, Milton, Faversham and Rochester). The evidence from the present evaluation suggests that people periodically visited the site to consume or process oysters, perhaps having gathered them from the creek shore at low tide. The wide distribution of these deposits across the site, and the small quantity of shells in each, suggest that the oysters consumed on site represents small scale, subsistence level exploitation, perhaps on an opportunistic basis. However the deposits could indicate more systematic gathering, a proportion being consumed on site leaving these slight traces, while the bulk were removed for consumption elsewhere, leaving no archaeological trace.

7.2.20 **Post Medieval and modern**

7.2.21 Post medieval and modern features identified within the site comprise a small number of boundary ditches, at least one of which appears to be of very recent date. Historic Ordnance Survey maps appear to show that the rising ground in the eastern part of the site was sub-divided for a short time into smaller fields. The new boundaries were first included on the 1973 OS edition but were not marked on the 1985 edition. It is possible these boundaries have a longer history but, being unhedged, were not always obvious to the OS surveyors.

7.3 **Areas of uncertain potential**

7.3.1 Remaining areas of uncertain potential include very low-lying wetland areas which were inaccessible due to ecological constraints (nesting birds) (Fig.17, Area 1). They include the western end of the proposed Rushenden Relief Road embankment (immediately east of the Sheerness Railway Line) and the wetland area to the south-east of the Port Authority entrance (Fig.17 Area 3).

7.3.2 The Rushenden Relief Road to the west of the Sheerness Railway has not been subject to evaluation trenching as it is currently occupied by active trading and industrial premises. It is predicted that any surface archaeological horizons in areas to the west of the railway will have been extensively disturbed by previous industrial development. A limited test pit investigation is proposed to establish the degree of disturbance (not illustrated - see Written Scheme of Investigation for details of the proposed test pit locations (OA May 2007). Even if archaeological potential is identified in this area, the intention is to preserve significant deposits under the alluvium and road embankment.

7.3.3 These low-lying marshy areas must be considered to have high potential for well-preserved archaeological remains of various periods. Evidence from geoarchaeological test pits and deposit modelling indicates that the alluvial deposits

in these areas are thicker than elsewhere on the site, with potential for archaeological remains to occur at different levels, separated by layers of alluvium.

8 ASSESSMENT OF CONSTRUCTION IMPACTS ON BURIED ARCHAEOLOGY

8.1 *Significance of the archaeology*

8.1.1 None of the archaeological features and deposits discovered in this evaluation are of national importance. The limited range of prehistoric, Roman and medieval features identified are considered to be of moderate regional importance, at most. The most significant and informative individual landscape components identified by the trenching programme are the early Roman cremation burials and the marsh edge deposits of prehistoric, Roman and medieval date recorded in Trenches 1 and 2. The small oyster shell deposits found scattered across the site, possibly of medieval date, are also of some local and regional interest.

8.1.2 However, archaeology of unpredictable character, importance and extent could emerge during localised excavations in the lower lying wetland areas.

8.2 *Impact of the proposed development on buried archaeology*

8.2.1 The proposed development will have an unavoidable impact upon archaeological features and deposits in areas where significant archaeology has been identified just below the topsoil (Fig.17, unhatched areas shaded orange) if the topsoil is removed during construction. Impacts may be avoided to some extent in areas of construction fill (Fig.17 Areas 1, 2 and 3 - See also the Cultural Heritage Environmental Impact Assessment, Figure 10). In areas of deeper alluvial deposits, archaeology will generally be preserved in situ beneath alluvium and construction earthworks. Piling for building footprints may also adversely affect buried remains. In areas of construction cut (Fig. 17, Area 4) all archaeological features will be removed, with no opportunity for preservation in situ.

Area 1

8.2.2 The western section of the Rushenden Relief Road is to be constructed on embankment (the proposed extent of the embankment and ground treatment is shown on Figure 18). However at present it is expected that the topsoil will be removed prior to building the embankment. Prehistoric archaeological horizons buried at depths of up to 0.9m could feasibly be preserved *in situ*, but Roman and later archaeology found just below topsoil would be subject to substantial disturbance in the course of construction earthworks.

Area 2

8.2.3 The eastern section of the Rushenden Relief Road and adjacent areas to the north produced little substantial archaeological evidence. The archaeology within Area 2 consists mainly of prehistoric pottery finds from within the alluvium, found between

+1.98m and +2.53m OD. It is anticipated that most of this area will be preserved beneath made ground, except in the case of piling beneath building foundations and other localised disturbances. However the area is close to the A294 later prehistoric and Roman occupation site, so the possibility of archaeological remains of this date cannot be entirely discounted. A small part of this area was stripped previously in connection with the A249 construction works (Fig.17) and no features are recorded on the site plan provided.

Area 3

- 8.2.4 The northern part of Area 3 lies adjacent to the A249 later prehistoric and Roman occupation site. Surprisingly, no definite features from this site were found in the evaluation trenches, although significant amounts of later prehistoric pottery were recovered from the alluvium. These deposits will be disturbed by any topsoil stripping or ground reduction.

Area 4

- 8.2.5 The archaeological features identified in Area 4 are all located just beneath the topsoil and will be disturbed by any topsoil stripping or ground reduction. Area 4 is in case to be reduced in level, which will completely remove any archaeological deposits that may be present.

8.3 *Mitigation design*

- 8.3.1 An archaeological project design will be prepared, detailing measures required to mitigate these impacts. Impacts on significant archaeological remains will be minimised in the construction design as far as reasonably practicable, by reducing areas of topsoil strip and limiting the extent and depth of excavations in the alluvial areas to the minimum possible. Where preservation is not feasible, mitigation measures will comprise an appropriate programme of investigation and recording.

9 ACKNOWLEDGEMENTS

9.1 *The evaluation was commissioned by Peter Lingwood of Campbell Reith Engineering on behalf of SEEDA, who were represented on site by Brian Jones. Thanks are due to the landowner, Crown Estates, and their tenant Mr. Lawrence, for allowing access to the land. Martin Burgess of Rummey Environmental and Stuart Pankhurst of Southern Ecological Solutions conducted the ecological fencing and surveys in advance of the archaeological trenching. Simon Mason of Kent County Council Heritage Environment Services monitored the trenching on behalf of the local authority. The archaeological fieldwork was supervised by Kate Wheaton (OA). Site assistants were Mark Woodley, Vickie Jameson and Andy Simmonds. Carl Champness advised on geoarchaeological matters and Paul Booth and John Cotter assessed the pottery finds. Small Finds were identified by Ian Cook. Environmental samples were assessed by Luke Howarth and Wendy Smith and the animal bone by Lena Strid. The OA Project Manager was Stuart Foreman.*

APPENDICES

10 APPENDIX 1 TRENCH COORDINATES/ SURFACE ELEVATIONS

Trench point ID (2 points per trench)	Easting	Northing	Ground surface elevation
1.1	591469.11	171500.12	2.97
1.2	591444.06	171484.28	3.00
2.1	591609.96	171569.06	2.61
2.2	591578.07	171558.73	2.64
3.1	591758.48	171495.41	2.80
3.2	591783.24	171494.02	2.79
4.1	591729.46	171515.70	2.84
4.2	591758.29	171503.12	2.88
5.1	591909.99	171549.31	3.15
5.2	591878.88	171498.01	3.78
6.1	591874.49	171495.22	3.30
6.2	591905.47	171543.33	2.96
7.1	591935.77	171572.11	2.80
7.2	591922.51	171594.57	1.99
8.1	591983.16	171472.43	3.85
8.2	591970.56	171445.21	3.09
9.1	591926.74	171435.68	2.65
9.2	591961.60	171428.58	3.25
10.1	592041.33	171424.06	3.39
10.2	592071.14	171420.71	3.33
11.1	592040.62	171420.96	3.06
11.2	592065.28	171466.49	3.21
12.1	592160.33	171398.36	3.60
12.2	592181.51	171394.88	3.54
13.1	592062.41	171389.51	2.94
13.2	592074.82	171382.11	2.87
14.1	592052.47	171375.20	2.89
14.2	592046.11	171349.45	2.88
15.1	592082.50	171366.42	3.01
15.2	592079.15	171336.61	3.05
16.1	592102.97	171325.11	2.55
16.2	592102.25	171301.90	2.47
17.1	592043.59	171324.79	2.73
17.2	592074.58	171318.14	2.71
18.1	592028.89	171368.26	2.86
18.2	592005.90	171353.78	2.56
19.1	591919.57	171327.63	3.11
19.2	591949.38	171324.28	2.42
20.1	591928.72	171308.99	2.83
20.2	591925.37	171279.17	2.68
21.1	592041.57	171422.03	3.07
21.3	592073.97	171425.46	3.21
22.1	592001.57	171418.57	2.81
22.2	592008.73	171392.03	3.16

Trench point ID (2 points per trench)	Easting	Northing	Ground surface elevation
23.1	591997.92	171193.14	2.31
23.2	591970.50	171201.91	2.15
24.1	592047.17	171288.12	2.21
24.2	592040.98	171258.79	2.10
25.1	592031.67	171242.49	2.19
25.2	592057.88	171237.96	2.39
26.1	592042.80	171234.77	2.22
26.2	592036.07	171205.81	2.30
27.1	592104.80	171269.48	2.53
27.2	592078.30	171269.40	2.40
28.1	592197.74	171361.94	3.11
28.2	592194.39	171332.13	3.19
29.1	592081.84	171366.80	2.78
29.2	592075.96	171337.24	2.73
30.1	592216.22	171304.62	3.39
30.2	592212.87	171274.81	3.68
31.1	592179.66	171276.63	3.02
31.2	592198.37	171253.18	3.40
32.1	592160.41	171274.83	2.72
32.2	592157.06	171245.02	2.70
33.1	592139.65	171225.98	2.63
33.2	592169.47	171222.63	2.99
34.1	592095.20	171231.85	2.38
34.2	592091.85	171202.03	2.26
35.1	592107.50	171206.14	2.34
35.2	592126.22	171182.69	2.55
36.1	592073.04	171168.93	2.32
36.2	592102.85	171165.58	2.41
37.1	592151.80	171197.15	2.68
37.2	592148.45	171167.34	2.63
38.1	592207.41	171221.26	3.58
38.2	592204.06	171191.45	3.49
39.1	592178.88	171171.48	3.06
39.2	592208.70	171168.13	3.69
40.1	592204.96	171133.98	3.50
40.2	592201.61	171104.17	3.20
41.1	592235.93	171344.25	3.71
41.2	592265.74	171340.90	3.91
42.1	592294.84	171336.38	4.51
42.2	592291.49	171306.57	4.53
43.1	592268.66	171289.74	4.18
43.2	592298.47	171286.39	4.68
44.1	592344.87	171304.42	5.63
44.2	592341.52	171274.61	5.72
45.1	592232.31	171250.68	3.74
45.2	592262.12	171247.33	4.14
46.1	592279.66	171261.43	4.41
46.2	592276.31	171231.62	4.45
47.1	592297.86	171243.61	4.76

Trench point ID (2 points per trench)	Easting	Northing	Ground surface elevation
47.2	592316.57	171220.16	5.06
48.1	592322.70	171241.50	5.16
48.2	592352.52	171238.15	5.73
49.1	592257.49	171198.51	4.14
49.2	592287.31	171195.16	4.73
50.1	592268.49	171162.06	4.37
50.2	592265.14	171132.25	4.31
51.1	592246.33	171099.14	3.94
51.2	592276.14	171095.79	4.50
52.1	592333.70	171205.05	5.50
52.2	592330.35	171175.23	5.51
53.1	592311.54	171142.13	5.13
53.2	592341.35	171138.78	5.61
54.1	592325.54	171121.70	5.53
54.2	592322.19	171091.89	5.28
55.1	592376.74	171185.11	6.03
55.2	592406.56	171181.76	6.44
56.1	592448.85	171235.27	7.36
56.2	592445.50	171205.45	7.17
57.1	592387.74	171148.66	6.01
57.2	592384.39	171118.85	5.78
58.1	592393.92	171094.12	5.63
58.2	592423.73	171090.77	5.86
59.1	592456.15	171102.64	6.59
59.2	592452.80	171072.83	6.27
60.1	592430.79	171128.73	6.37
60.2	592460.60	171125.38	6.99
61.1	592388.53	171300.06	6.34
61.2	592418.35	171296.71	6.80
62.1	592460.38	171305.97	7.39
62.2	592457.03	171276.15	7.56
63.1	592500.31	171278.56	8.50
63.2	592530.12	171275.21	9.13
64.1	592467.44	171228.50	7.83
64.2	592497.25	171225.15	8.62
65.1	592510.97	171224.26	8.95
65.2	592507.62	171194.45	8.85
66.1	592495.99	171171.71	8.41
66.2	592525.81	171168.36	9.13
67.1	592506.99	171135.26	8.40
67.2	592503.64	171105.45	8.26
68.1	592595.53	171207.12	9.80
68.2	592625.34	171203.77	9.70
69.1	592637.41	171221.23	9.86
69.2	592634.06	171191.42	9.66
70.1	592615.24	171158.31	9.64
70.2	592645.06	171154.96	9.54
71.1	592550.04	171115.33	9.51
71.2	592579.85	171111.98	9.70

Trench point ID (2 points per trench)	Easting	Northing	Ground surface elevation
72.1	592562.63	171088.84	9.40
72.2	592559.28	171059.03	9.13
73.1	592626.24	171121.86	9.45
73.2	592622.89	171092.04	9.36
74.1	592599.69	171071.31	9.21
74.2	592629.50	171067.96	8.97

11 APPENDIX 2 ARCHAEOLOGICAL CONTEXT INVENTORY

Notes

*Contexts are arranged in context (not stratigraphic) order.

**Depth below ground level (bgl) refers to the first level at which the context is recorded (in plan or section). The actual depth of trench excavation and feature depths are given in the comments column or report text where relevant.

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
1	101	Layer	0	Topsoil			Surface level 2.95mOD
	102	Layer	0.25	Stiff silty clay alluvium			
	103	Layer	0.70	Stiff clay (natural)			Test pit excavated to 0.70m. Interface of alluvium and weathered London Clay indistinct
	104	Layer	0.6	Midden deposit			This layer appeared to be sealed by alluvium in Trench 1, in contrast to possible equivalent deposit in Trench 2 (204) which overlay the upper alluvium. If they are equivalent deposits, they may indicate that the contemporary boundary between wet and dry ground lies between Trenches 1 and 2. However, it is not clear, on present evidence, whether this layer is Roman or medieval.
					Pottery	2 / 56g	1 sherd Roman and 1 sherd medieval pottery (not enough to securely date the deposit - single sherds may well be intrusive).
					Shell	20 / 138g	Oyster shells
2	201	Layer	0	Topsoil			Surface level 1.67mOD
	202	Layer	0.60	Stiff clay (natural)?			Interface of alluvium and weathered London Clay indistinct
	203	Layer	0.25	Stiff silty clay alluvium			
	204	Layer	0.35	Midden deposit			Dark, organic silty clay layer extending all along the trench, with abundant pottery visible on the stripped surface.

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
					Pottery	128 / 1166g	The latest and largest component of the excavated pottery assemblage is mid-late 4th century AD, but the pottery has a substantial residual component (c. 10%, including ?Bronze Age, later prehistoric and early Roman elements. The layer is cut by a securely dated medieval pit (205).
					Metal	2	1 nail, 1 misc.
					CPR sample		Frequent oak charcoal, no grain recorded
	205	Cut	0.25	Cut of elongated sub-rectangular pit			0.31m deep
	206	Fill		Bottom fill of pit 205	Pottery	80 / 953g	Medieval - 1075-1150 AD (also with c. 10% residual prehistoric and Roman component)
					CPR sample		Much oak charcoal; moderate amounts of hulled barley and free threshing wheat grains
	207	Fill	0.25	Upper fill of pit 205			
3	301	Layer	0	Topsoil			Surface level not recorded
	302	Layer	0.65	Stiff clay (natural)			
	303	Layer	0.25	Stiff silty clay alluvium			
4	401	Layer	0	Topsoil			Surface level 3.16mOD
	402	Layer	0.60	Stiff clay (natural)			
	403	Layer	0.25	Stiff silty clay alluvium	Pottery	1 / 2g	Late prehistoric (flint-tempered)
5	501	Layer	0	Topsoil			Surface level 3.2mOD
	502	Layer	0.48	Stiff clay (natural)			Trench excavated to 0.70m. Interface of alluvium and weathered London Clay indistinct.
	503	Layer	0.	Stiff silty clay alluvium			
6	601	Layer	0	Topsoil			Surface level 3.00mOD

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
	602	Layer	0.38	Stiff clay (natural)			Trench excavated to 0.60m. Interface of alluvium and London Clay indistinct.
	603	Layer	0.20	Stiff silty clay alluvium			
7	701	Layer	0	Topsoil			Surface level 3.20mOD. Topsoil disturbed/ contaminated with oil - (A249 reinstatement?)
	702	Layer	0.56	Stiff clay (natural)			Test pit excavated to 0.85m. Interface of alluvium and weathered London Clay indistinct.
	703	Layer	0.32	Stiff silty clay alluvium			
	704	Feature	0.32	Fill of very shallow linear channel or gully? Visible in plan as a band of slightly darker clay than alluvium, but no clear cut in section.	Pottery	12 / 52g	Late prehistoric (flint-tempered); includes poss Middle Bronze Age sherds
	705	Feature	0.32	Irregular, shallow depression/ hollow (tree throw?)	Pottery	2 / 1g	?Late prehistoric
	706	Cut	0.32	Cut for Palaeochannel			Diffuse edge recorded in plan at a W end of trench.
	707	Fill	0.32	Fill of Palaeochannel	Pottery	1 / 2g	1sherd Roman pottery from within channel in-fill. Indistinct boundary with surrounding alluvium.
8	801	Layer	0	Topsoil			Surface level 3.89mOD (W end)
	802	Layer		Stiff clay (natural)			
	803	Layer	0.05	Modern infill			A249 reinstatement.
	804	Layer	0.48	Buried turf and topsoil			
	805	Layer	0.56	Stiff silty clay alluvium			
	806	Cut	0.60	Cut of pit?			
	807	Fill	0.90	Primary fill of pit			

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
	808	Fill	0.60	Secondary fill of pit			
9	901	Layer	0	Topsoil			Surface level 3.30mOD
	902	Layer	0.34	Stiff silty clay alluvium			Test pit excavated to 0.7m. Interface of alluvium and weathered London Clay indistinct.
	903	Layer	0.20	Stiff silty clay alluvium	Pottery	2 / 3g	Late prehistoric (flint-tempered)
	904	Cut	0.34	Cut for shallow ditch			Indistinct edges
	905	Fill	0.20	Fill of ditch 904	Pottery	6 / 20g	Late prehistoric (flint-tempered) - ?Middle -Late Bronze Age
10	1001	Layer	0	Topsoil			Surface level 3.16mOD
	1002	Layer	0.35	Stiff silty clay alluvium	Pottery	1 / 2g	Late prehistoric (flint-tempered)
	1003	Cut	0.35	Cut for posthole?			Surviving depth of feature - 0.48m.
	1004	Fill		Upper fill of posthole 1002			
	1005	Fill		Secondary fill of posthole 1002			
	1006	Fill		Primary fill of posthole 1002			
	1007	Cut	0.35	Cut for ditch			Modern land drain
	1008	Fill		Fill of ditch 1007			
	1009	Cut	0.35	Cut for posthole? (unexcavated)			Investigation showed this feature to be extremely shallow and indistinct - probably not archaeological
	1010	Fill		Fill of posthole 1009			
	1011	Layer	0.48	Stiff clay (natural)			Interface of alluvium and weathered London Clay indistinct.
11	1101	Layer	0	Topsoil			Surface level 2.49mOD
	1102	Layer	c.0.50	Stiff clay (natural)			Test pit excavated to 0.8m. Interface of alluvium and weathered London Clay indistinct.

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
	1103	Layer	0.25	Stiff silty clay alluvium			
	1104	Fill		Fill of 1105	Pottery	13 / 34g	Medieval - ?11th -13th century
	1105	Cut	0.36	Shallow irregular depression/ hollow			Stratigraphic relationship with alluvium indistinct
	1106	Modern feature	0.36	Modern disturbance			
	1110	Feature	0.36	Shallow irregular depression/ erosion hollow?			
	1111	Fill	0.36	Fill of 1110	Pottery	40 / 104g	Late Iron Age
12	1201	Layer	0	Topsoil			Surface level 3.00mOD. Level artificially raised by spread of A249 embankment material, infilling adjacent ditch.
	1202	Layer	1.0	Stiff clay (natural)			Maximum depth of excavation 1.2m. Interface of alluvium and weathered London Clay indistinct.
	1203	Layer	0.18	Chalk rubble			A249 embankment material
	1204	Layer	0.46	Modern build up			A249 embankment material
	1205	Layer	0.76	Buried turf and topsoil			
	1206	Layer	0.90	Stiff silty clay alluvium			
	1207	Cut	1.0	Cut for pit (unexcavated)			Relationship with alluvium unclear
	1208	Fill		Upper fill of pit			
	1209	Cut	0.90	Cut of modern ditch (unexcavated)			
	1210	Fill	0.90	Upper fill of ditch			
13	1301	Layer	0	Topsoil			
	1302	Layer	0.28	Stiff silty clay alluvium			
	1303	Layer	0.70	Stiff clay (natural)			Test pit to 0.8m. Interface of alluvium and weathered London Clay indistinct.

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
14	1401	Layer	0	Topsoil			Surface level 2.80mOD
	1402	Layer	0.30	Stiff silty clay alluvium			
	1403	Layer	0.65	Stiff clay (natural)			Test pit to 0.8m. Interface of alluvium and weathered London Clay indistinct.
15	1501	Layer	0	Topsoil			Surface level 2.78mOD
	1502	Layer	0.25	Stiff silty clay alluvium			Typically stripped to 0.40m
	1503	Feature	0.25	Very shallow, irregular linear feature (natural?)			
	1504	Feature	0.25	Very shallow, irregular linear feature (natural?)	Pottery	1 / 3g	Late prehistoric (flint-tempered)
	1505	Layer	0.65	Stiff clay alluvium			Weathered London Clay not reached?
16	1601	Layer	0	Topsoil			Surface level 2.90mOD
	1602	Layer	0.23	Stiff clay alluvium			Weathered London Clay not reached?
17	1701	Layer	0	Topsoil			Surface level 2.87mOD
	1702	Layer	0.26	Stiff clay alluvium			Weathered London Clay not reached?
	1703	Natural Feature	0.30	Very shallow, irregular feature (natural depression/ tree throw?)			
	1704	Natural Feature	0.30	Very shallow, irregular feature (natural depression/ tree throw?)			
18	1801	Layer	0	Topsoil			Surface level 2.87mOD
	1802	Layer	0.28	Stiff clay (natural)			Test pit maximum depth excavation 0.57m.
	1803	Natural Feature	0.28	Very shallow, irregular feature (natural depression/ tree throw?)	Pottery/ Fired clay?	5 / 12g	?Late prehistoric (grog-tempered), possibly not pottery

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
	1804	Natural Feature	0.28	Very shallow, irregular feature (natural depression/ tree throw?)			
	1805	Natural Feature	0.28	Very shallow, irregular feature (natural depression/ tree throw?)			
21	2101	Layer	0	Topsoil			Surface level 2.19mOD
	2102	Layer	0.6	Stiff clay (natural)			Maximum depth excavation 0.6m
	2103	Layer	0.25	Buried turf			
	2104	Layer	0.30	Buried topsoil			
	2105	Cut	0.2	Cut for modern feature			Probably associated with construction of the A249 of the adjacent cattle pen
	2106	Fill		Upper fill			
	2107	Fill		Secondary fill			
	2108	Modern feature	0.2	Modern disturbance			Probably associated with construction of the A249 of the adjacent cattle pen
22	2201	Layer	0	Topsoil			Surface level 2.03mOD
	2202	Layer	0.3	Stiff clay (natural)			
	2203	Cut	0.3	Very shallow, irregular feature (natural depression/ tree throw?)			
	2204	Fill		Fill of 2203	Pottery	2 / 9g	Roman
	2205	Cut	0.3	Very shallow, irregular feature (natural depression/ tree throw?)			
	2206	Fill		Fill of 2205			

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
	2207	Natural Feature	0.3	Very shallow, irregular feature (natural depression/ tree throw?)			
	2208	Natural Feature		Fill of 2207			
23	2301	Layer		Topsoil			Surface level 2.87mOD
	2302	Layer		Stiff clay (natural)			
	2303	Layer		Stiff clay alluvium			
	2304	Layer		Stiff clay alluvium			
	2305	Layer		Stiff clay alluvium			
24	2401	Layer		Topsoil			
	2402	Layer		Stiff clay (natural)			
	2403	Cut		Cut for fire pit			
	2404	Fill		Fill of pit	Pottery	1 / 11g	Late prehistoric (flint-tempered)
					CPR sample		Abundant oak charcoal, hulled barley grains present
	2405	Cut		Cut for pit			
	2406	Fill		Fill or pit			
	2407	Layer		Stiff clay alluvium			
25	2501	Layer		Topsoil			
	2502	Layer		Stiff clay (natural)			
	2503	Layer		Stiff clay alluvium			
26	2601	Layer		Topsoil			
	2602	Layer		Stiff clay (natural)			
	2603	Cut		Cut for modern ditch			

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
	2604	Fill		Fill of ditch			
	2605	Cut		Cut for paleo-channel			
	2606	Fill		Fill of Paleo-channel			
	2607	Cut		Cut for paleo-channel			
	2608	Fill		Fill of Paleo-channel			
	2609	Layer		Stiff clay alluvium			
	2610	Layer		Stiff clay alluvium			
27	2701	Layer		Topsoil			
	2702	Layer		Stiff clay (natural)			
28	2801	Layer		Topsoil			
	2802	Layer		Stiff clay (natural)			
29	2901	Layer		Topsoil			
	2902	Layer		Stiff clay (natural)			
30	3001	Layer		Topsoil			
	3002	Layer		Stiff clay alluvium			
	3003	Layer		Stiff clay (natural)			
31	3101	Layer		Topsoil			
	3102	Layer		Stiff clay alluvium			
32	3201	Layer		Topsoil			
	3202	Layer		Alluvium			
33	3301	Layer		Topsoil			
	3302	Layer		Stiff silty clay alluvium			

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
34	3401	Layer		Topsoil			
	3402	Layer		Stiff silty clay alluvium			
	3403	Layer		Stiff clay (natural)			
	3404	Layer		Burnt clay layer			
	3405	Layer		Burnt clay layer			
	3406	Layer		Burnt clay layer			
35	3501	Layer		Topsoil			
	3502	Layer		Stiff silty clay alluvium			
36	3601	Layer		Topsoil			
	3602	Layer		Stiff silty clay alluvium	Pottery	1/ 13g	Roman ?1st - 2nd century AD
	3603	Layer		Stiff clay (natural)			
	3604	Cut		Cut for NW-SE ditch			
	3605	Fill		Fill of ditch			
	3606	Cut		Cut for pit			
	3607	Fill		Fill of pit			
	3608	Cut		Cut for pit			
	3609	Fill		Fill of Pit			
37	3701	Layer		Topsoil			
	3702	Layer		Stiff silty clay alluvium			
	3710	Fill		Fill of hearth	Pottery	1 / 1g	Late prehistoric (flint-tempered)
					CPR Sample		Frequent oak charcoal; no grain
	3711	Cut		Cut for hearth			

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
38	3801	Layer		Topsoil	Glass	1	Household glass (modern?)
	3802	Layer		Stiff silty clay alluvium			
	3803	Cut		Cut for E-W ditch			
	3804	Fill		Primary fill of ditch			
	3805	Fill		Secondary fill of ditch			
	3806	Fill		Base fill - Unclear interface between ditch fill and natural clay			
39	3901	Layer	0-0.28	Topsoil			
	3902	Layer	0.46+	Stiff clay (natural)			
	3903	Layer	0.28-0.46	Stiff silty clay alluvium			
40	4001	Layer	0-0.3	Topsoil			
	4002	Layer	0.3+	Stiff clay (natural)			
41	4101	Layer		Topsoil			
	4102	Layer		Stiff silty clay alluvium	Pottery	1 / 1g	Modern - 18th - 19th century
42	4201	Layer		Topsoil			
	4202	Layer		Stiff silty clay alluvium			
	4203	Layer		Stiff clay (natural)			
43	4301	Layer	0-0.3	Topsoil			
	4302	Layer	0.3+	Stiff silty clay alluvium			
44	4401	Layer		Topsoil			
	4402	Layer		Stiff silty clay alluvium			
	4403	Cut		Cut for E-W ditch			

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
	4404	Fill		Fill of ditch	Pottery	4 / 4g	?Romano-British
					Metal	1	misc.
	4405	Cut		Cut for E-W ditch			
	4406	Fill		Fill of ditch			
45	4501	Layer		Topsoil			
	4502	Layer		Stiff clay (natural)			
	4503	Layer		Alluvium			
46	4601	Layer		Topsoil	Pottery	1 / 4g	Modern - 18th-19th century
	4602	Layer		Stiff silty clay alluvium			
47	4701	Layer		Topsoil			
	4702	Layer		Stiff silty clay alluvium			
48	4801	Layer		Topsoil			
	4802	Layer		Stiff silty clay alluvium			
	4803	Cut		Cut for pit/ hollow			Tree throw?
	4804	Fill		fill of pit/ hollow	Pottery	2 / 18g	Modern - 19th century
	4805	Cut		Cut for pit/ hollow			Tree throw?
	4806	Fill		Fill of pit/ hollow			Tree throw?
	4807	Cut		Cut for pit/ hollow			Tree throw?
	4808	Fill		Fill of pit/ hollow			Tree throw?
	4809	Cut		Cut for pit/ hollow			Tree throw?
	4810	Fill		Fill of pit/ hollow			Tree throw?
	4811	Cut		Cut for pit/ hollow			Tree throw?

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
	4812	Fill		Fill of pit/ hollow			Tree throw?
	4813	Cut		Cut for NNE-SSW ditch			
	4814	Fill		Fill of ditch			
	4815	Cut		Cut for pit			
	4816	Fill		Fill of pit			
	4817	Fill		Fill of ditch			
	4818	Cut		Cut for ditch			
49	4901	Layer		Topsoil			
	4902	Layer		Stiff clay (natural)			
	4903	Natural feature		Geological depression			
	4904	Layer		Stiff silty clay alluvium			
50	5001	Layer		Topsoil			
	5002	Layer		Stiff clay (natural)			
	5003	Layer		Stiff silty clay alluvium			
51	5101	Layer		Topsoil			
	5102	Layer		Stiff clay (natural)			
	5103	Layer		Stiff silty clay alluvium			
	5104	Layer		Linear stain in natural clay, visible in plan after stripping the trench			Possible very shallow feature or furrow - investigated but probably not archaeological - No associated finds
	5105	Layer		Ditto			Possible very shallow feature or furrow - investigated but probably not archaeological - No associated finds
	5106	Layer		Ditto			Possible very shallow feature or furrow - investigated but probably not archaeological - No associated finds

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Findings	No. sherds/ Weight (g)	Context/ finds comments
52	5201	Layer	0	Topsoil			Surface level 5.23mOD
					Glass	5	Modern
					Pottery	6 / 15g	Modern - 18th-19th century
					Shell	1 / 7g	Oyster
					Metal	1	Misc.
	5202	Layer	0.25	Stiff clay (natural)			Trench base level 4.78mOD
	5203	Layer		Stiff silty clay (alluvium?)			
	5204	Cut		Cut for N-S ditch unexcavated			
	5205	Fill		Fill of ditch			
53	5301	Layer	0	Topsoil			Surface level 5.30mOD
					Pottery	7 / 57g	Modern - 18th/ 19th century
					Metal	3	2 nails, 1 Misc.
					Shell	1 / 2g	Whelk
					Metal	2	2 nails
	5302	Layer	0.25	Stiff clay (natural)			Trench base level 4.92mOD
	5303	Cut		Cut for cremation urns	Pottery	36 / 438g	Roman - 120-150 AD - Dragendorff 18/31 dish (Central Gaulish); + sherds from urn 5306
					Metal	1	1 Nail, 1 unidentified
	5304	Fill		Backfill	Pottery	16 / 35g	Roman - Early 2nd century+; Sherds from 2 vessels, as 5303
	5305	Fill		Cremation urn	Pottery	8 / 19g	Roman - Early 2nd century sherds from urn 5306
					Metal slag	1 / 2	
	5306	Fill		Cremated bone	Pottery	55 / 273g	Roman - Early 2nd century+, base only

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
					Cremated bone	654g	
	5307	Fill		Fill of cremation			
	5308	Fill		Cremation urn	Pottery	110 / 94g	Roman - Beaker dating from 130 - 170 AD
	5309	Cut		Cut for N-S ditch			
	5310	Fill		Upper fill of ditch			
	5311	Fill		Secondary fill of ditch			
	5312	Fill		Primary fill of ditch	Pottery	2 / 4g	Medieval - ?11th - 13th century
	5313	Cut		Cut for N-S ditch unexcavated			
	5314	Fill		Fill of ditch			
54	5401	Layer	0-0.26	Topsoil			Surface level 5.23mOD
					Pottery	4 / 41g	Modern - 18th-19th century
					Glass	1	Modern
					Metal	1	1 modern bolt with washer, 1 unidentified
	5402	Layer	0.26	Alluvium	Pottery	6 / 13g	Modern - 18th-19th century
					Glass	3	Modern
	5403	Cut		Cut for pit			
	5404	Fill		Fill of pit	Shell	133 / 2725g	Oyster
	5405	Cut		Cut for E-W ditch			
	5406	Fill		Fill of ditch 5405	Pottery	1 / 1g	Roman pottery - 1st - 2nd century AD
	5407	Layer		Stiff clay (natural)			Trench base level 4.88mOD
55	5501	Layer	0	Topsoil			Surface level 6.23mOD

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
	5502	Layer	0.25	Stiff clay (natural)			Trench base level 5.81mOD
56	5601	Layer	0	Topsoil			Surface level 7.07mOD
	5602	Layer	0.28	Stiff clay (natural)			Trench base level 6.76mOD
57	5701	Layer	0	Topsoil			Surface level 5.75mOD
	5702	Layer	0.22	Stiff clay (natural)			Trench base level 5.37mOD
58	5801	Layer	0	Topsoil			Levels not recorded
	5802	Layer	0.20	Stiff clay (natural)			Trench excavated to 0.40m
59	5900	Layer	0	Topsoil			Surface level 6.57mOD
	5901	Layer	0.25	Stiff clay (natural)			Trench base level 6.20mOD
	5902	Cut		Cut for large pit			
	5903	Fill		Fill of pit	Pottery	7 / 28g	Medieval - 12th-13th century
	5904	Feature		Large unexcavated pit or hollow			
	5905	Feature		Large unexcavated pit or hollow			
	5906	Feature		Large unexcavated pit or hollow			
	5907	Feature		Large unexcavated pit or hollow			
	5908	Feature		Large unexcavated pit or hollow			
	5909	Feature		Large unexcavated pit or hollow			
	5910	Feature		Large unexcavated pit or hollow			

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
	5911	Feature		Small NE-SW aligned gully (unexcavated)			
60	6000	Layer	0	Topsoil			
					Pottery	2 / 19g	Modern - 19th century
					Glass	2	Modern
	6001	Layer	0.35	Stiff clay (natural)			
	6002	Fill		Upper of 6005			
	6003	Fill		Middle of 6005			
	6004	Fill		Lower fill of 6005			
	6005	Cut		Very shallow, irregular feature (natural depression/ tree throw?)			
	6006	Fill		Dark greyish brown silt clay, fill of 6007			
	6007	Cut		Very shallow, irregular feature (natural depression/ tree throw?)			
	6008	Fill		Dark greyish brown silt clay, fill of 6009			
	6009	Cut		Very shallow, irregular feature (natural depression/ tree throw?)			
	6010	Fill		Dark greyish brown silt clay, fill of 6011			
	6011	Cut		Cut for N-S ditch unexcavated			

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
	6012	Fill		Dark greyish brown silt clay, fill of 6013			
	6013	Cut		Cut for NE-SW ditch unexcavated			
	6014	Fill		Dark greyish brown silt clay, fill of 6015			
	6015	Cut		Very shallow, irregular feature (natural depression/ tree throw?) - Unexcavated			
	6016	Fill		Dark greyish brown silt clay, fill of 6017			
	6017	Cut		Very shallow, irregular feature (natural depression/ tree throw?) - Unexcavated			
	6018	Fill		Dark greyish brown silt clay, fill of 6019			
	6019	Cut		Very shallow, irregular feature (natural depression/ tree throw?) - Unexcavated			
61	6101	Layer	0-0.25	Topsoil			Surface level 6.53mOD
	6102	Layer	0.25+	Stiff clay (natural)			Base level of trench 6.17mOD
62	6201	Layer	0-0.27	Topsoil			Surface level 7.19mOD
	6202	Layer	0.27+	Stiff clay (natural)			Base level of trench 6.66mOD
63	6301	Layer	0-0.28	Topsoil	Metal	12	8 nails, 4 unidentified. Surface level 8.85mOD
	6302	Layer	0.28+	Stiff clay (natural)			Base level of trench 8.41mOD

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
64	6401	Layer	0-0.26	Topsoil			Surface level 8.26mOD
	6402	Layer	0.26+	Stiff clay (natural)			Base level of trench 7.98mOD
65	6501	Layer	0-0.3	Topsoil			Surface level 8.80mOD
	6502	Layer	0.30	Stiff clay (natural)			Base level of trench 8.50mOD
	6503	Cut	0.30	Cut for cremations	Cremated bone	441g	Base level of cremation cut 8.36mOD
	6504	Artefact		Cremation urn	Pottery	146 / 1421g	2C; cremation urn (Mon type 4A2 in CAT fabric R73) in burial 6503
					Coal?	2 / 2	
					Metal	1	1 nail
	6505	Artefact		Cremation urn - Burial 6503	Pottery	8 / 103g	Roman - 2nd century AD. S.Gaulish Samian (Drag. 33 cup).
	6506	Artefact		Cremation urn - Burial 6503	Pottery	151 / 242g	Roman - Late 1st century ?flask (no rim)
	6507	Artefact		Cremation vessel - Burial 6510	Pottery	70 / 774g	Roman - 120-200 AD - Large urn, possibly holding cremated remains.
	6508	Artefact		Cremation vessel - Burial 6510	Pottery	90 / 276g	Roman - 120AD+. Small satellite vessel
	6509	Artefact		Cremation vessel - Burial 6510	Pottery	5 / 367g	Roman - 120-200 AD, Central Gaulish Drag. 36 dish, burial 6510
	6510	Cut	0.3	Cut for cremation urns			Base level of cremation cut 8.32mOD - Roman pottery date range - 120 - 200 AD, perhaps more likely 150-200 AD
	6511	Fill		Fill of cremation urn 6544			
	6512	Fill		Cremation deposit, originally filling 6507 but truncated by machine.	Cremated bone	601g	
					Pottery	28 / 123g	Roman - Same vessel as 6508
					Coal	65 / 24g	

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
					Metal slag	4 / 2g	
					Metal	5	3 nails, 1 unidentified, 1 rough cast Cu alloy (burnt in pyre?)
					Glass	1	Vessel glass includes 4 sherds from a single small cylindrical bottle.
	6513	Fill	0.3	Backfill of cremation 6510			
66	6601	Layer	0-0.32	Topsoil			Surface level 8.40mOD
	6602	Layer	0.32	Stiff clay (natural)			Trench base 8.11mOD
	6603	Cut	0.20	Cut for N-S ditch			
	6604	Fill		Upper fill of ditch	Pottery	1 / 6g	Roman pottery
					Shell	325 / 2476	Oyster shell
	6605	Fill		Lower fill of ditch			
67	6701	Layer	0-0.35	Topsoil			Surface level 8.16mOD
	6702	Layer	0.35+	Stiff clay (natural)			Trench base 7.66mOD
	6703	Cut		Cut for E-W ditch			
	6704	Fill		Fill of ditch	Pottery	2 / 10g	11th - 13th century
					Worked stone	1	Pink sandstone lump - Possible worked surface?
					Shell	9 / 76g	Oyster and cockle shell
	6705	Cut		Cut of pit			
	6706	Fill		Fill of pit	Pottery	1 / 3g	Late Iron Age / Roman pottery
	6707	Cut		Cut for E-W ditch unexcavated			
	6708	Fill		Fill of ditch			
	6709	Cut		Cut for pit/terminal			

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
	6713	Cut		Cut for pit - Unexcavated			
	6714	Fill		Fill of pit	Shell		Oyster shell on surface
	6715	Cut		Cut for pit - Unexcavated			
	6716	Fill		Fill of pit	Shell		Oyster shell on surface
	6717	Cut		Cut for pit - Unexcavated			
	6718	Fill		Fill of pit			
	6719	Fill		Fill of pit 6705			
68	6801	Layer	0-0.26	Topsoil			Surface level 9.36mOD
	6802	Layer	0.26+	Stiff clay (natural)			Trench base 8.93mOD
69	6901	Layer	0-0.23	Topsoil			Surface level 9.51mOD
	6902	Layer	0.23+	Stiff clay (natural)			Trench base 9.09mOD
70	7001	Layer	0-0.24	Topsoil			Surface level 9.16mOD
	7002	Layer	0.24+	Stiff clay (natural)			Trench base 8.82mOD
71	7101	Layer	0-0.24	Topsoil			Surface level 8.90mOD
	7102	Layer	0.24	Stiff clay (natural)			Trench base 8.74mOD
	7104	Cut		Cut for N-S ditch			
	7105	Cut		Cut for E-W ditch			
	7106	Cut		Cut for pit			
	7107	Fill		Fill of pit			
	7108	Cut		Cut for N-S ditch			
	7109	Fill		Fill of ditch 7108	Worked stone	1	Fragment of lava rotary quern with one worked surface.
					Shell	15 / 199g	Oyster

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
	7110	Fill		Fill of ditch 7104			
	7111	Fill		Fill of ditch 7105 T6666	Pottery	6 / 76g	Medieval - ?12th-13th century
					Worked stone	1	3 fragments of lava quern
					Shell	89 / 1271g	Oyster
					Metal	1	Miscellaneous
	7112	Cut		Cut for pit - Unexcavated			
	7113	Fill		Fill of pit			
	7114	Cut		Cut for pit - Unexcavated			
	7115	Cut		Cut for small pit			
	7116	Cut		Cut for large pit			
	7117	Fill		Fill of pit 7116 containing juvenile cattle skeleton	Animal bone	9639g	Cattle burial, possibly in ditch terminal
					Pottery	1 / 5g	Romano-British?
	7118	Cut		Cut for pit - Unexcavated			
	7119	Fill		Fill of pit 7118			
	7120	Cut		Cut for small pit - Unexcavated			
	7121	Fill		Fill of pit 7120			
	7122	Fill		Fill of pit 7114 - Unexcavated			
	7123	Fill		Fill of small pit 7115			
72	7201	Layer	0-0.25	Topsoil			Surface level 9.05mOD

Trench*	Context No.	Type of deposit	Depth bgl/ (m) **	Description	Finds	No. sherds/ Weight (g)	Context/ finds comments
	7202	Layer	0.25+	Stiff clay (natural)			Trench base 8.71mOD
73	7301	Layer	0-0.25	Topsoil			Surface level 9.14mOD
	7302	Layer	0.25+	Stiff clay (natural)			Trench base 8.75mOD; Test pit base 7.77mOD
74	7401	Layer	0-0.26	Topsoil			Surface level 8.69mOD
	7402	Layer	0.26+	Stiff clay (natural)			Trench base 8.31mOD

12 APPENDIX 3 FINDS AND ENVIRONMENTAL ASSESSMENT TABLES

Table 2: Pottery spot dates

Context	Prehistoric		Roman		Medieval		Post-medieval		Uncertain		Ceramic date/comment
	No sh	Weight (g)	No sh	Weight (g)	No sh	Weight (g)	No sh	Weight (g)	No sh	Weight (g)	
104			1	51	1	5					?11-13C
204	31	274	97	892							mid-late 4C; range from ?BA through LPR and RB
206	2	8	6	78	70	833			2	34	1075-1150; uncertain sherds poss medieval
403	1	2									LPR (flint-tempered)
704	11	50							1	1	LPR (flint-tempered); includes poss MBA sherds
705	?2	1									?LPR
706			1	2							RB
903	2	3									LPR (flint-tempered)
905	6	20									LPR (flint-tempered) - ?M-LBA
1002	1	12									LPR (flint-tempered)
1004	1	2			11	30			1	2	?11-13C
1110	40	104									Late Iron Age
1504	1	3									LPR (flint-tempered)
1803	5	12									?LPR (grog-tempered), possibly not pottery
2204			2	9							RB
2404	1	11									LPR (flint-tempered)
3602			1	13							?1-2C
3710	1	1									LPR (flint-tempered)
4102							1	1			18-19C
4404	2	1	2	3							?RB
4601							1	4			18-19C
4804	1	4					1	14			19C
5201							6	15			?19C
5301	1	1	1	1			5	55			18-19C
5303	■	■	36	438	■	■	■	■	■	■	120-150 - Drag 18/31 dish (Central Gaulish); + sherds from urn 5306
5304	1	1	16	35	■	■	■	■	■	■	early 2C+; sherds from 2 vessels as 5303
5305	■	■	8	19	■	■	■	■	■	■	early 2C+; sherds from urn 5306

Context	Prehistoric		Roman		Medieval		Post-medieval		Uncertain		Ceramic date/comment	
	No sh	Weight (g)	No sh	Weight (g)	No sh	Weight (g)	No sh	Weight (g)	No sh	Weight (g)		
5306	1		55	273							early 2C+; cremation urn in CAT fabric R73, base only	
5308			110	94							130-170; beaker (Mon type 2A4, undecorated) in CAT fabric R17.2	
5303											?130-160	
5312			1	1	1	3					?11-13C	
5401							4	41			18-19C	
5402							6	13			?18-19C	
5406			1	1							1-2C	
5903	1	6			6	22					Late 12-13C	
6001							2	19			?19C	
6504	1		146	1421							2C; cremation urn (Mon type 4A2 in CAT fabric R73) in burial 6503	
6505	1		8	103							Flavian; South Gaulish Drag 33 cup, in burial 6503	
6506	1		151	242							Late 1C+; ?flask (no rim) in CAT fabric R73, in burial 6503	
6503											c 100-150, but ?better in first half of this range	
6507	1		70	774							120-200; Urn (Mon 4A2) in CAT fabric R73, in burial 6510	
6508	1		90	276							120+; flask (Mon type 1B) in CAT fabric R16, plus fragments of vessel 6507 above, burial 6510	
6509	1		5	367							120-200; Central Gaulish Drag 36 dish, burial 6510	
6512	1	1	26	120			1	2			120-200; as 6508, burial 6510	
6510											120-200, perhaps more likely 150-200	
6604			1	6							RB	
6704					2	10					?11-13C	
6706									1	3	??LIA/ERB	
7111			1	10	5	66					?12-13C	
7117			1	5							RB	
TOTAL	112	517	837	5234	96	969	27	164	5	40		
			or 116 sherds plus 9 vessels from 3 burials									

Note: Coloured contexts represent the three cremation vessel groups

Table 3: Sheppey urned cremation burials: Summary assessment

Context	5306	6511	6512
Cut	5303 (urn)	6503 (urn)	6507 (urn)
Comments	Truncated by machining. Urn excavated in lab		Likely related to urn (6507). Truncated by machining
Bone weight	654g	441g	601g
MNI	1	1	1
Skeletal areas identified during assessment	skull (including dental fragments), axial skeleton, upper and lower limbs	cranium, upper and lower limbs	skull (including one molar root), axial skeleton, upper and lower limb bones including phalanx
Potential for age	Based on size, dental root formation, cranial suture closure	Based on size	Based on size, dental root formation
Potential for sex	Based on size	No	No
Preliminary age	Adult (>18 years)	Adult (>18 years)	Adult (>18 years)
Preliminary sex	Male	?	?
Colour	Various	White	White
Pathological conditions	None	None	None
Unsorted residues	largely <2mm	<4 mm	<4 mm
Observations	Some side identification possible. Trabecular bone. present. Some slight degradation of bone surface. Some articular surfaces present. Need to record bone colour distribution in detail	Majority are long bones (shafts only). Slight degradation of bone surface (need to quantify this better). Hardly any trabecular bone. No articular surfaces present	Mainly long bone shaft fragments although some cranial landmarks identified. Good bone preservation. Some articular surfaces preserved. Non-human bone spotted occasionally.

Table 4: Summary of the charred plant remains

Sample No	Cxt No	Flot vol (ml)	Type of context	Charcoal >2mm	Grain	Chaff	Weeds	Other charred	Molluscs	Volume floated (litres)	Notes
7	3710	90	Hearth	Oak ++	-	-	-	-	-	30	Lots of modern roots and grasses.
8	2404	60	Hearth	Oak ++++	+ Hulled Barley	-	-	-	-	15	
9	0206	250	Medieval pit	Oak ++++	+++ hulled barley and free - threshing wheat	+	+++	-	-	45	Abundant cereal grain and weed/ wild taxa present. Cereal grain includes hulled barley, free-threshing wheat and possible oat (although this could be a wild variety and, therefore a weed of crop). Weed/ wild taxa observed include numerous achenes of stinking chamomile (<i>Anthemis cotula</i> L.) and cleaver (<i>Galium</i> sp.) seeds. A single culm node was also observed. Some diffuse porous oak - strong rays and large cells, poss slow growing oak?
10	0204	300	Re-worked late Roman midden deposit with significant residual prehistoric and early Roman components	Oak ++	-	-	-	-	-	45	Loots of modern root material.

Key: +=present (up to 5 items), ++=frequent (5-25), +++=common (25-100) ++++=abundant (>100)

Table 5: Identified bones/species in the QURUN07 assemblage. MNI in parenthesis.

Species	Late Prehistoric - Roman	Medieval	Post-medieval	Undated	TOTAL
Cattle		300 (3)		1 (1)	301
Sheep/goat	5 (1)	8 (1)	1 (1)	1 (1)	15
Pig		2 (1)			2
Horse	1 (1)	1 (1)		9 (1)	11
Fish		1			1
Medium mammal	4	12			16
Large mammal	2	3		12	17
Indeterminate	39	83		18	140
Total fragment count	350	111	1	41	503
Total weight (g)	9696	343	4	1131	11174

Table 6: Number of bones and weight per context

Context	Species	No. of bones (refitted)	Sum of weight (g)
204	Medium mammal	2	3
	Indeterminate	26	
206	Pig	8	24
	Indeterminate	16	
706	Horse	1	38
1106	Horse	7	980
	Large mammal	13	
	Indeterminate	10	

Context	Species	No. of bones (refitted)	Sum of weight (g)
1803	Large mammal	2	6
2407	Large mammal	1	24
3406	Cattle	1	2
5201	Sheep/goat	1	4
5303	Indeterminate	10	1
6504	Indeterminate	1	0
6604	Sheep/goat	3	9
6704	Cattle	1	50
	Sheep/goat	1	
	Indeterminate	1	
7107	Horse	2	113
	Indeterminate	5	
7109	Sheep/goat	1	12
	Large mammal	1	
7111	Sheep/goat	7	269
	Pig	1	
	Horse	1	
	Fish	1	
	Medium mammal	12	
	Large mammal	3	
	Indeterminate	12	
7117	Cattle	299	9639
	Sheep/goat	2	
	Medium mammal	2	
	Indeterminate	2	

13 APPENDIX 4 BIBLIOGRAPHY AND REFERENCES

Bates, M.R., Barnham, A.J. 1995 Holocene alluvial stratigraphic architecture and archaeology in the Lower Thames area. 85 – 98. In: Bridgland, D.R., Allen, P. and Haggart, B.A. (eds.) *The Quaternary of the Lower Reaches of the Thames. Field Guide*. Quaternary Research Association: Cambridge

Behrensmeyer, A.K. (1978) “Taphonomic and ecologic information from bone weathering”, *Paleobiology*, Vol. 4. pp. 150-162.

Biddulph, E, forthcoming The Roman Pottery from Pepper Hill, Northfleet, Kent (ARC PHL97, ARC NBR98), *CTRL Specialist Report Series*, in CTRL digital archive, Archaeology Data Service, <http://ads.ahds.ac.uk/catalogue/projArch/ctrl>

Hinton, P. 1998. The plant remains, pp. 345-9, in L. Barber (ed.) An early Romano-British salt-working site at Scotney Castle. *Archaeologica Cantiana* 118: 327-53.

Monaghan, J, 1987 *Upchurch and Thameside Roman pottery*, *Brit Archaeol Rep (Brit Ser)* 173

Murphy P. 1994. Fenland Management Project Report No. 3: charred plant macrofossils and molluscs from Morton Fen Saltern, Lincolnshire (MOS 93). (Ancient Monuments Laboratory Report New Series 42/94). London: English Heritage.

O’Connor, T. (2000) *The archaeology of animal bones*. Sutton Publishing, Thrupp, Stroud.

Oxford Archaeology 2005 Queenborough and Rushenden Regeneration Swale, Kent. Neatscourt Phase 1, Cultural Heritage Environmental Impact Assessment. Prepared by OA for SEEDA.

Oxford Archaeology 2007 Queenborough and Rushenden Regeneration, Swale, Kent. Geoarchaeological assessment and project design for further archaeological evaluation. Prepared by OA for SEEDA

Page, W. (Ed). 1926. *The Victoria County History of the County of Kent Vol.II*

Pollard, R J, 1988 *The Roman Pottery of Kent*, Kent Archaeol Soc Mono **5**, Maidstone
Wilkinson, P. 2001 *The Swale District: An Archaeological Survey Commissioned by Swale District Council*

Tyler, L. *The History of Sheppey*

Taylor, M. (Ed). 1932. *The Victoria County History of Kent. Vol. III*

Whiting, W, Hawley, W, and May, T, 1931 *Report on the excavation of the Roman cemetery at Ospringe, Kent*, Rep Res Comm Soc Antiq London **8**, London

Williams, J. and Brown, N, 1999 *An Archaeological Research Framework for the Greater Thames Estuary*

14 APPENDIX 5 SUMMARY OF SITE DETAILS

Site name: Queenborough and Rushenden Neatscourt.

Site code: QUEEN07

Grid reference: Kent - TQ 919 715

Type of evaluation: Trenching

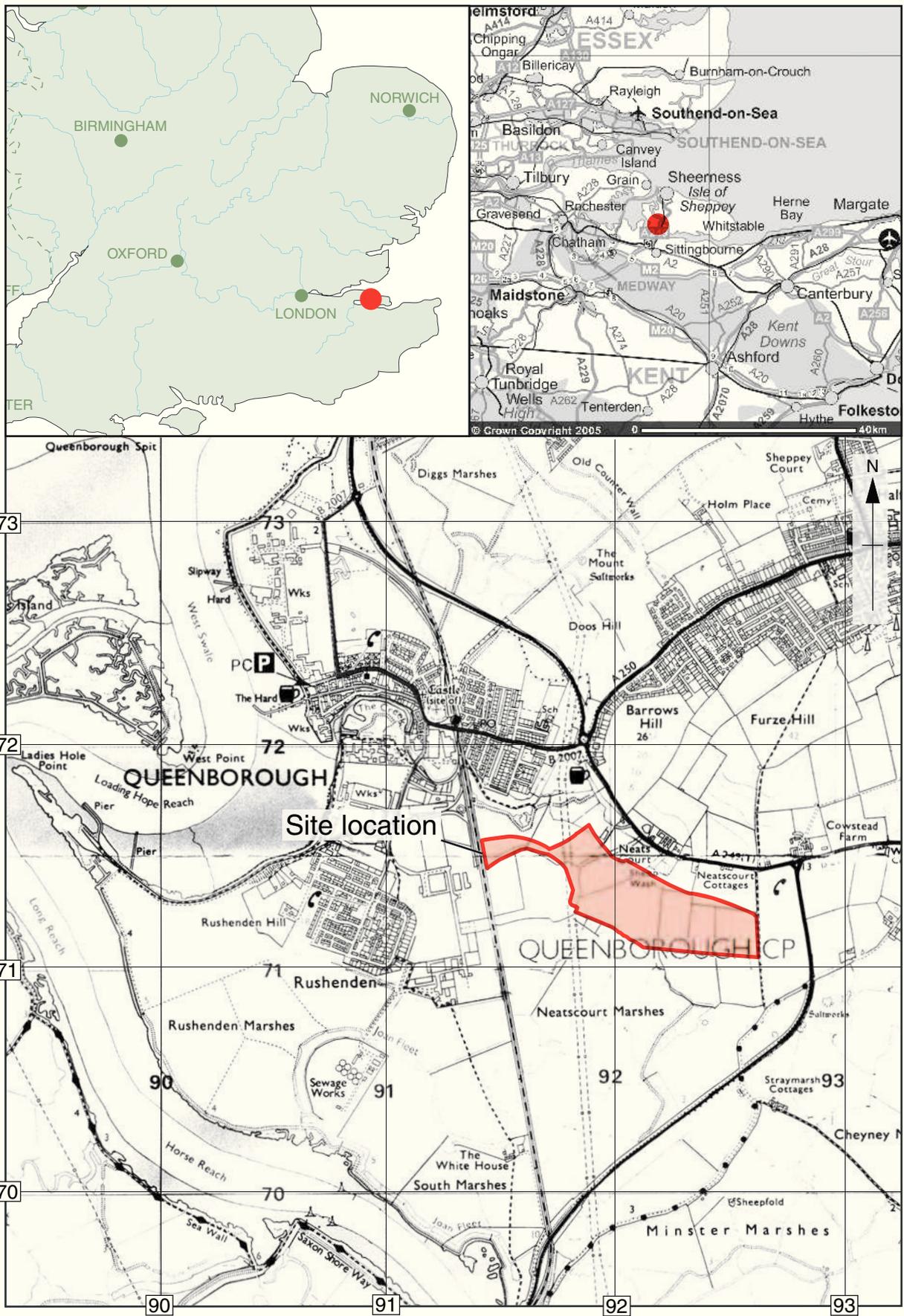
Date and duration of project: 16th May and 29th June 2007

Area of site: 24.1 Ha

Summary of results: The evaluation indicates limited evidence for later prehistoric (Bronze Age and Iron Age activity). There is more substantial evidence for activity throughout the Roman period, albeit widely dispersed and variable in character. The early Roman evidence consists mainly of 2nd century cremations (3 urned burials found at two separate) locations. Comparison with the adjacent A249 excavation suggests that these are likely to be part of larger burial groups. The late Roman evidence is concentrated in Area 1 (Trench 2 in particular) and is represented by a midden deposit located in a low-lying marsh edge environment. Post-Roman evidence is less extensive and of uncertain character, but includes several features, including a cattle burial, dated by ceramic and stratigraphic evidence to the medieval period or later. Small dumps of oyster shell were common across the site, but mostly undated. However one oyster shell deposit produced six sherds of medieval pottery (11th-13th century date).

Location of archive: The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Queenborough Guildhall Museum in due course, under the following accession code: QUEEN07.

\\Server\invoice codes\1 thru q\Q_codes\QURUNEV\Queenborough and Rushenden\MD\Amd GS*03.09.07



Scale 1:25,000

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Figure 1: Site location

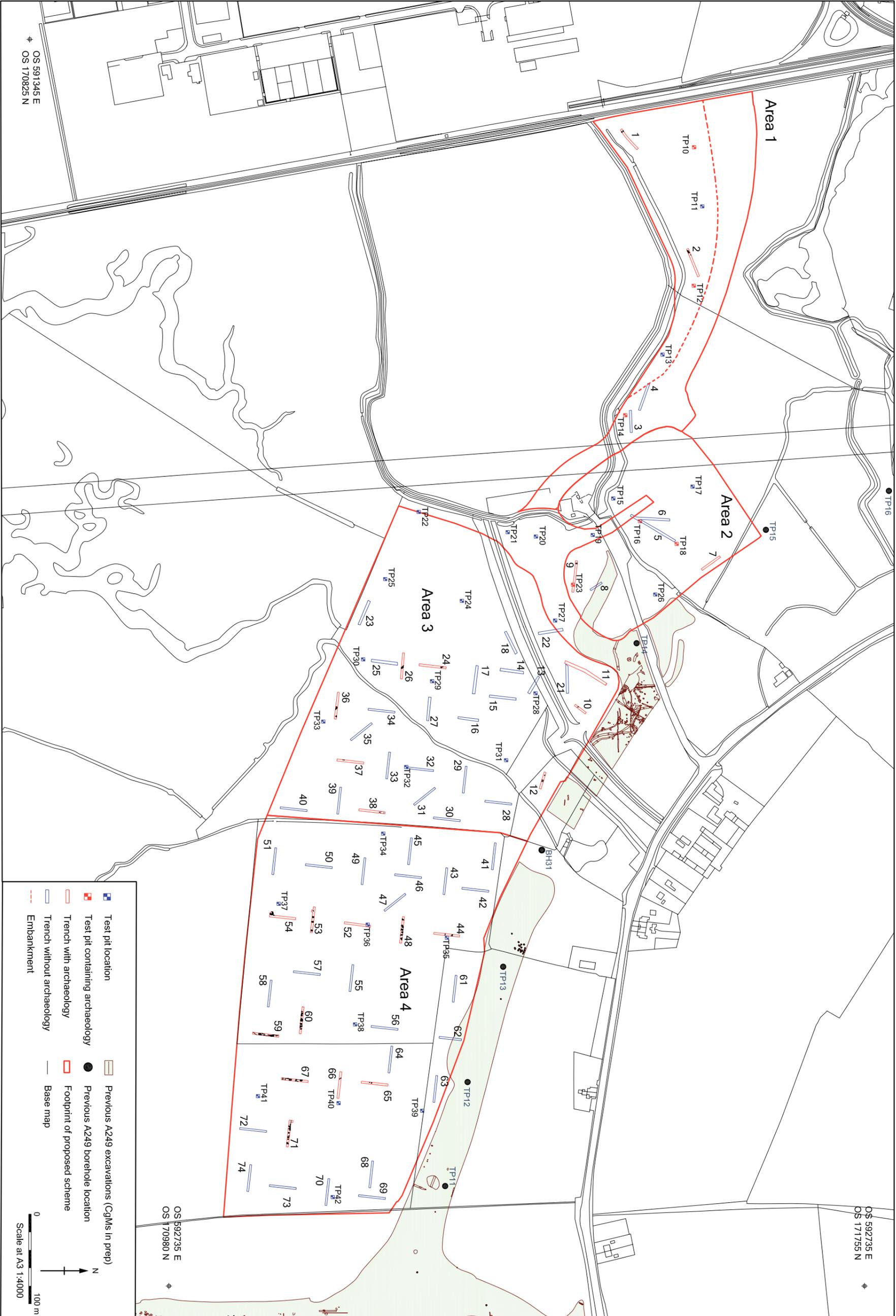


Figure 2: Evaluation trench and test pit locations

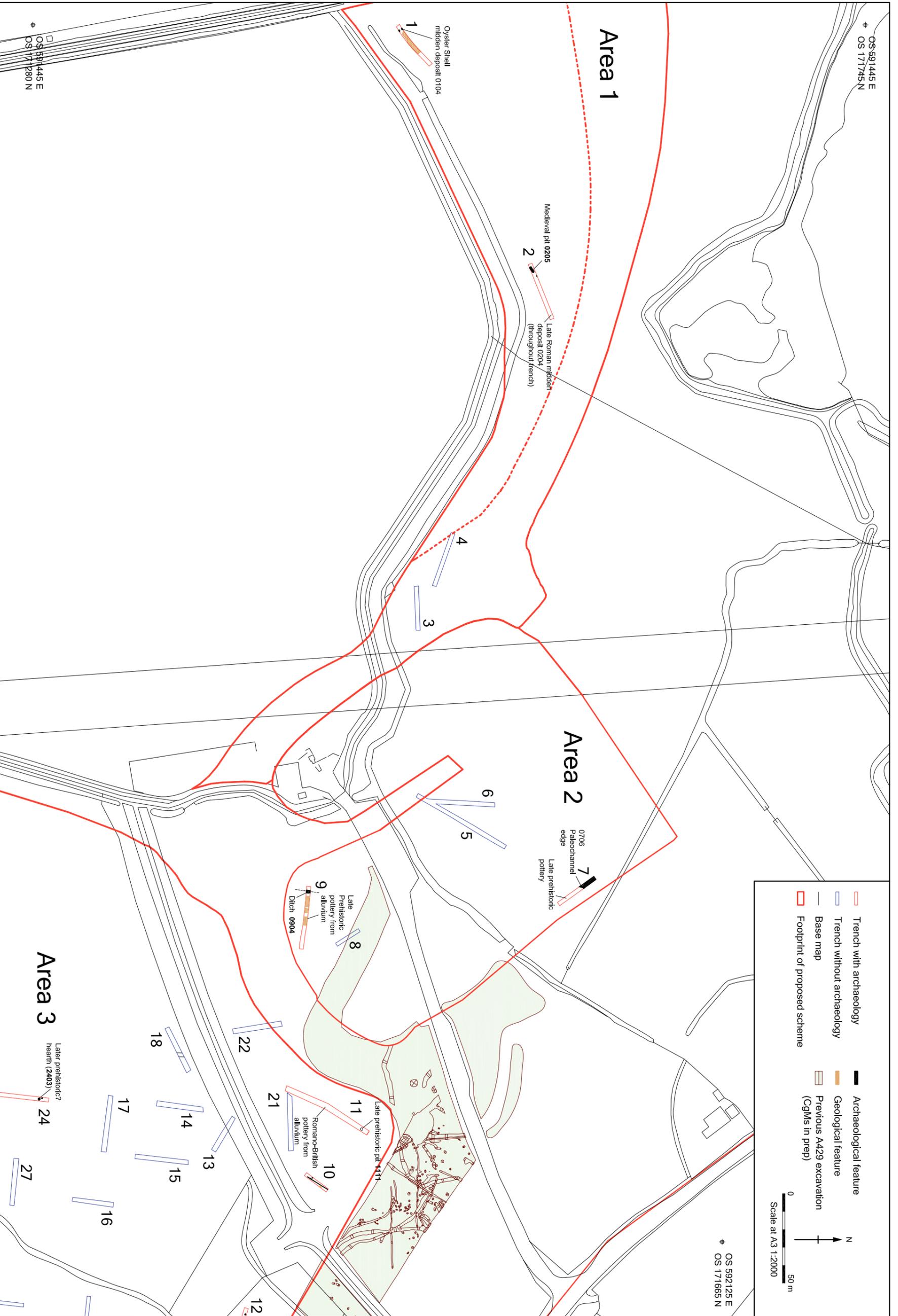
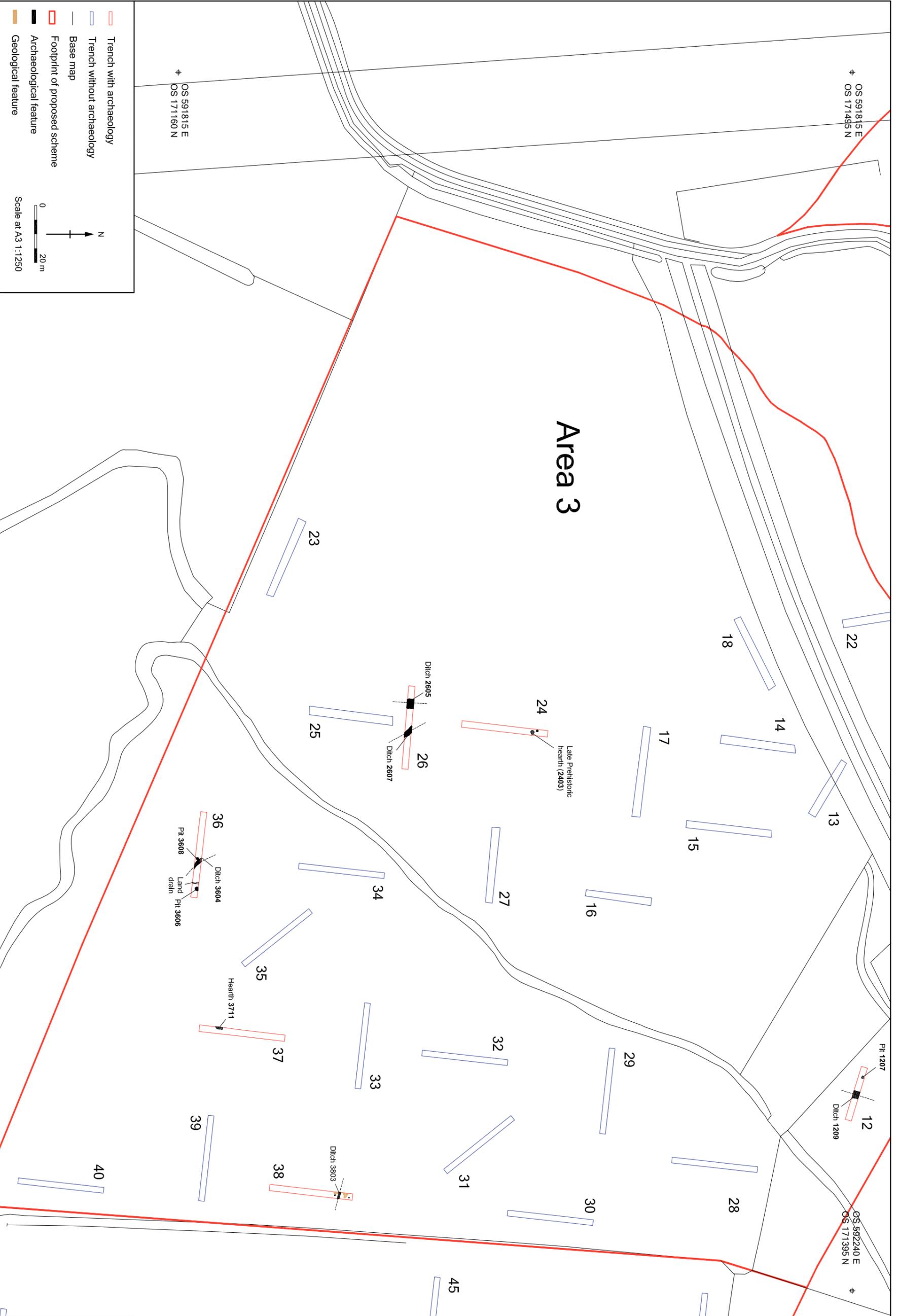


Figure 3: Detailed trench location plan, showing archaeological and geological features



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Figure 4: Detailed trench location plan, showing archaeological and geological features

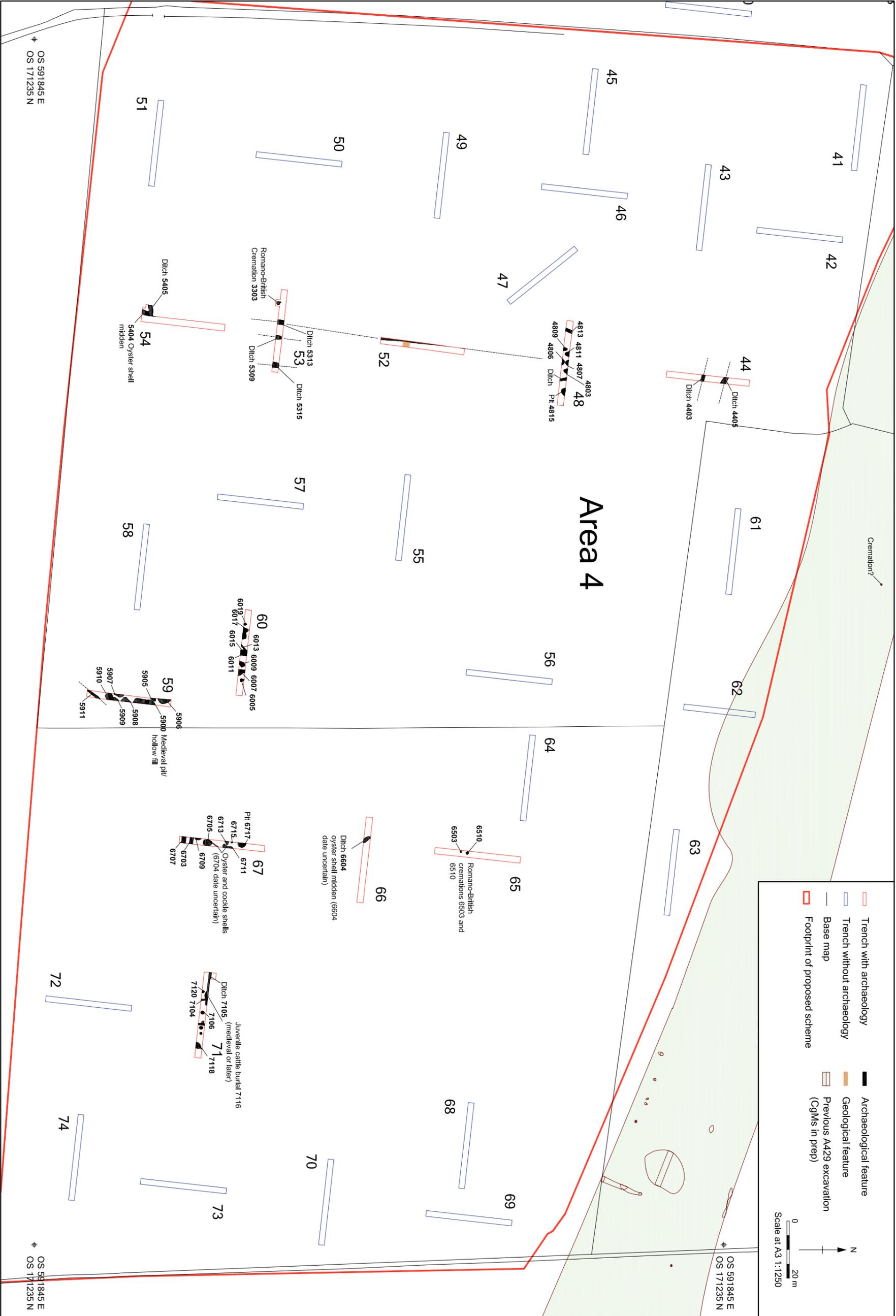


Figure 5: Detailed trench location plan, showing archaeological and geological features

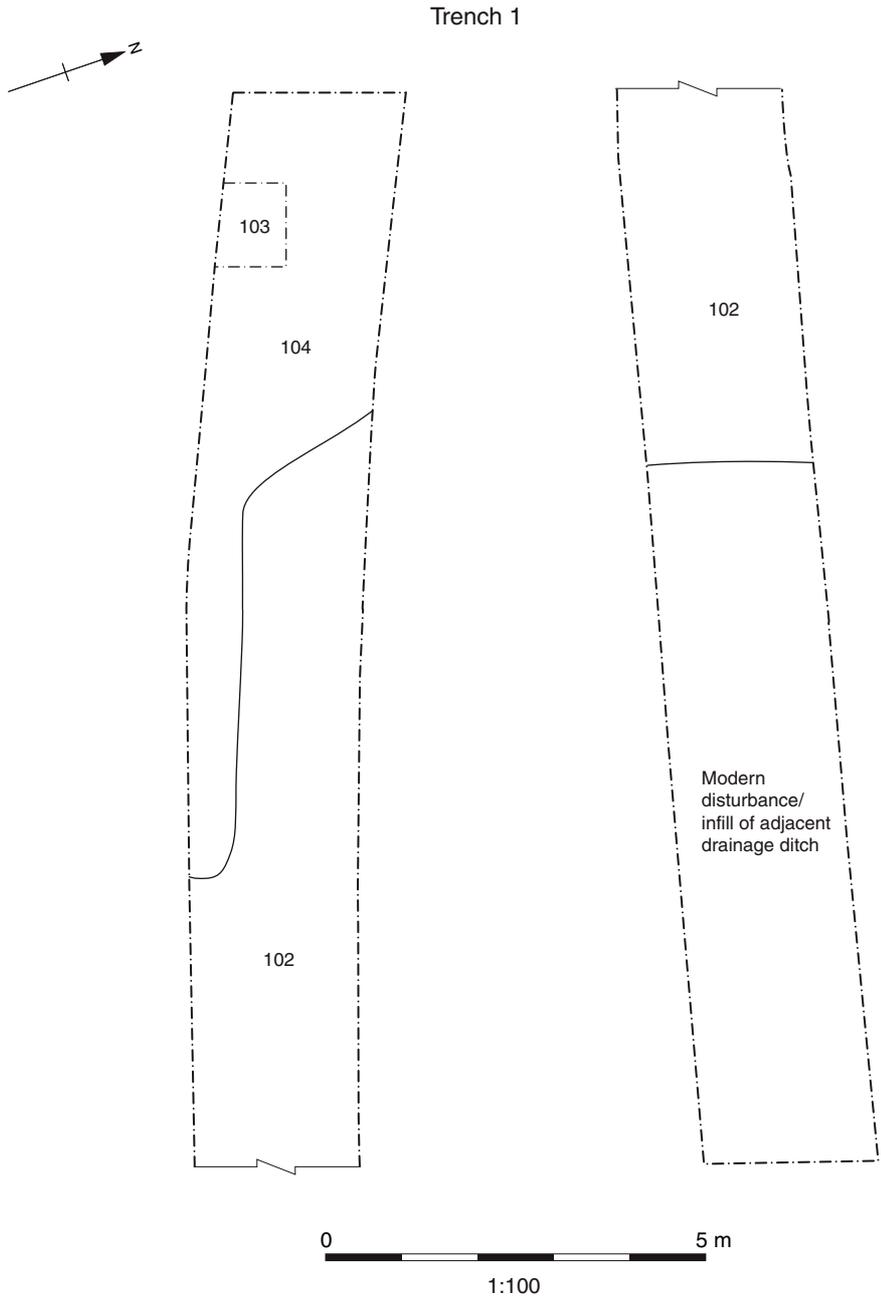
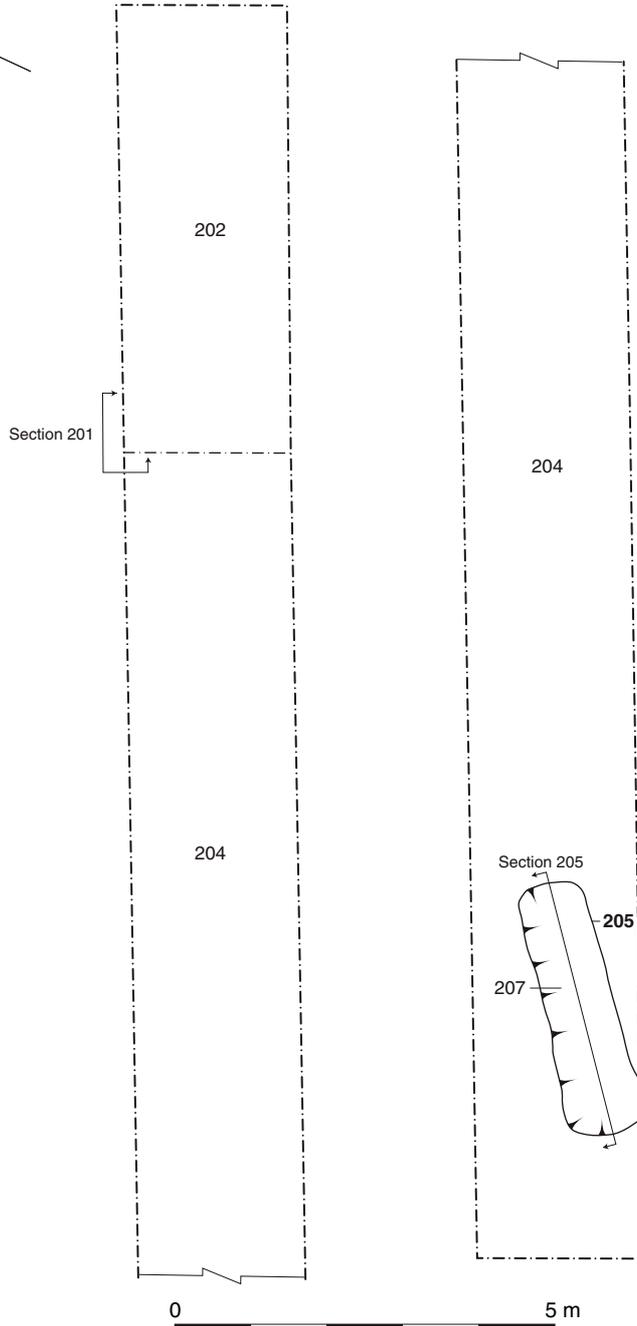


Figure 6: Plan of trench 1

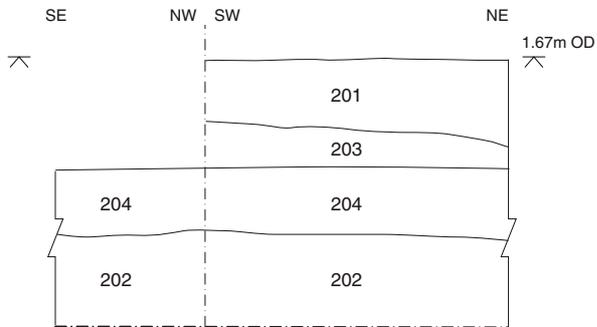


Trench 2

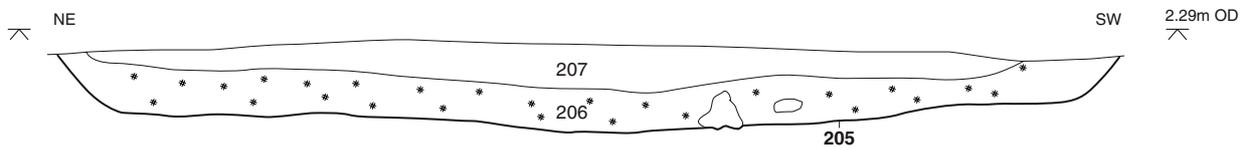


0 5 m
1:100

Section 201



Section 205



* Charcoal

0 1 m
1:25

Figure 7: Plan and sections of trench 2

Trench 9

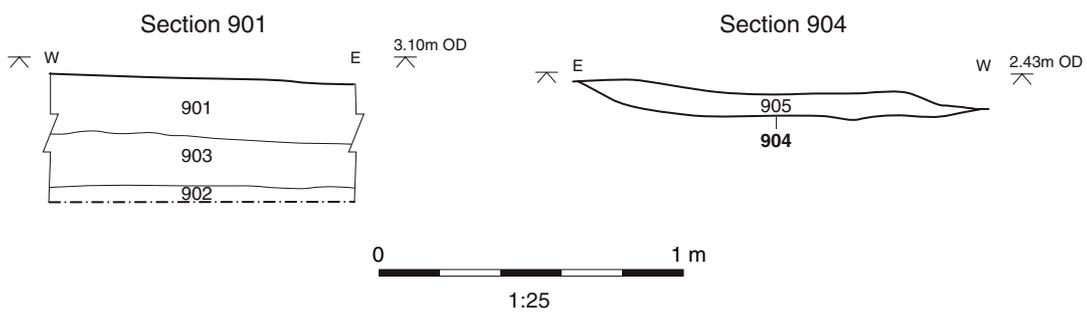
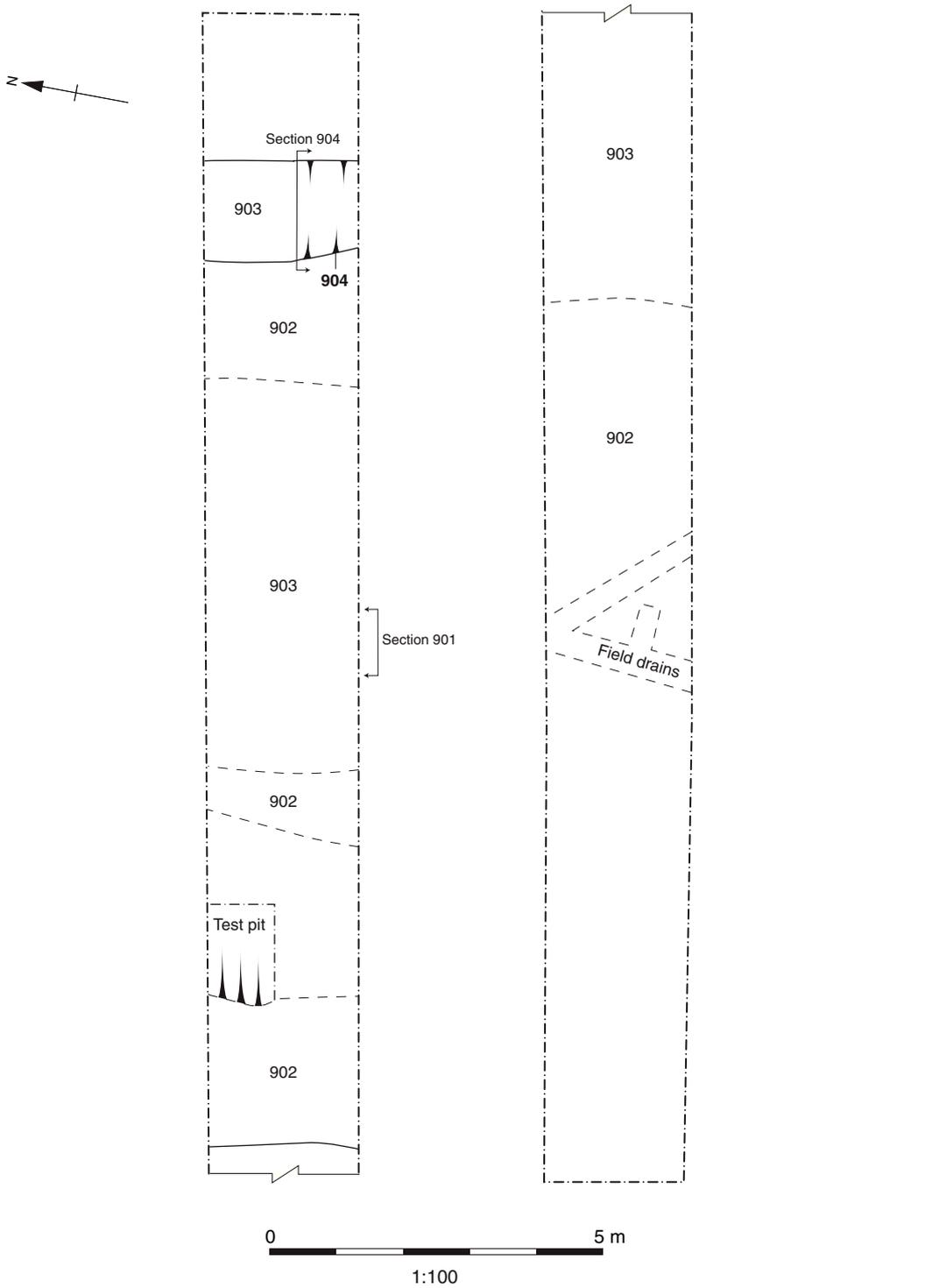


Figure 8: Plan and sections of trench 9

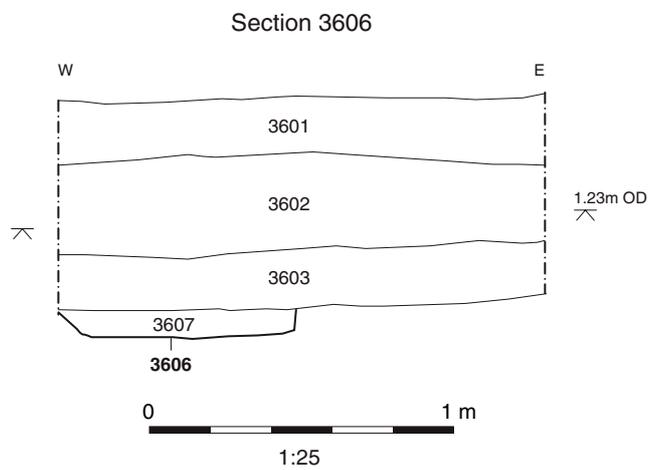
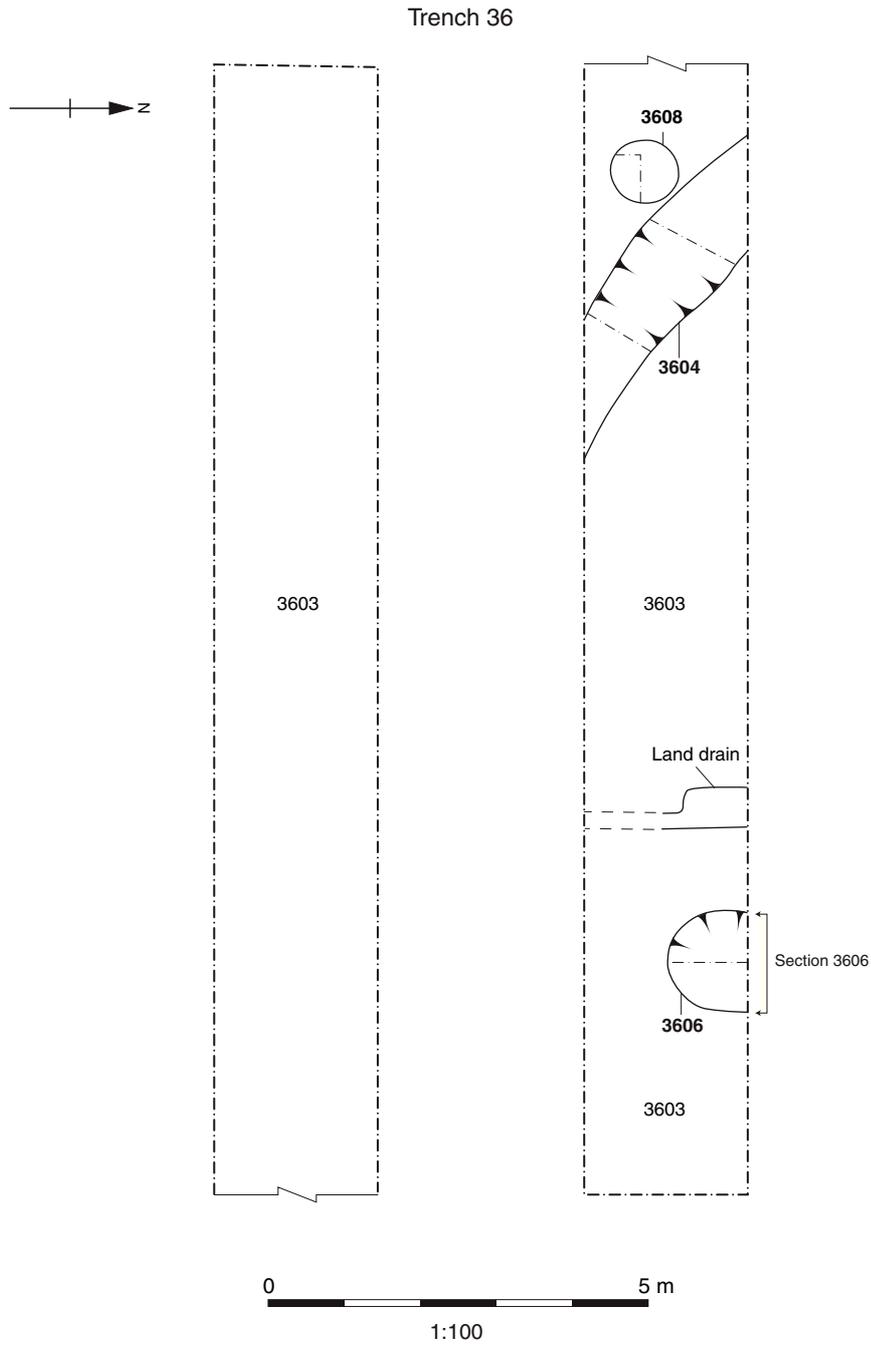
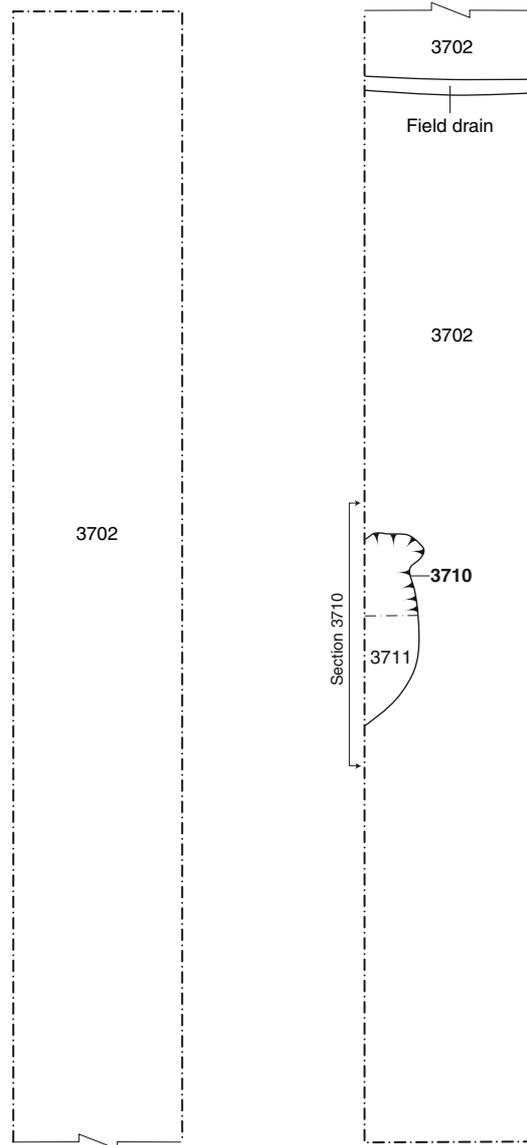


Figure 9: Plan and section of trench 36



Trench 37



0 5 m

1:100

Section 3710



** Charcoal

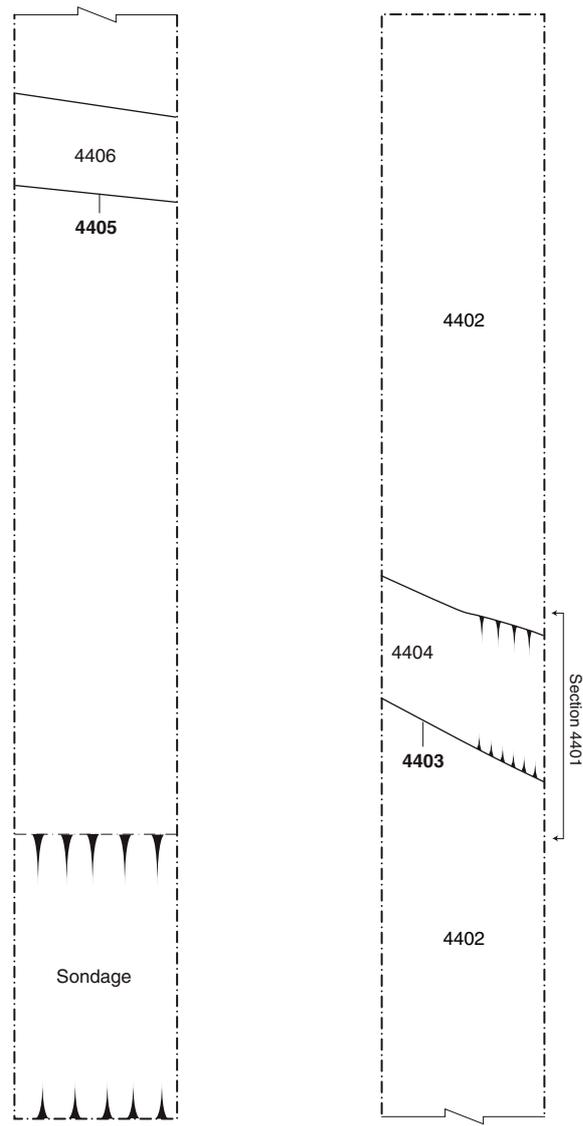
0 1 m

1:25

Figure 10: Plan and section of trench 37



Trench 44



Section 4401

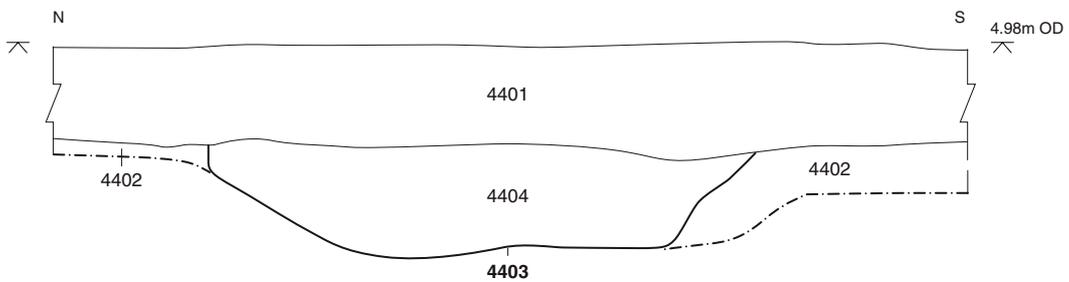
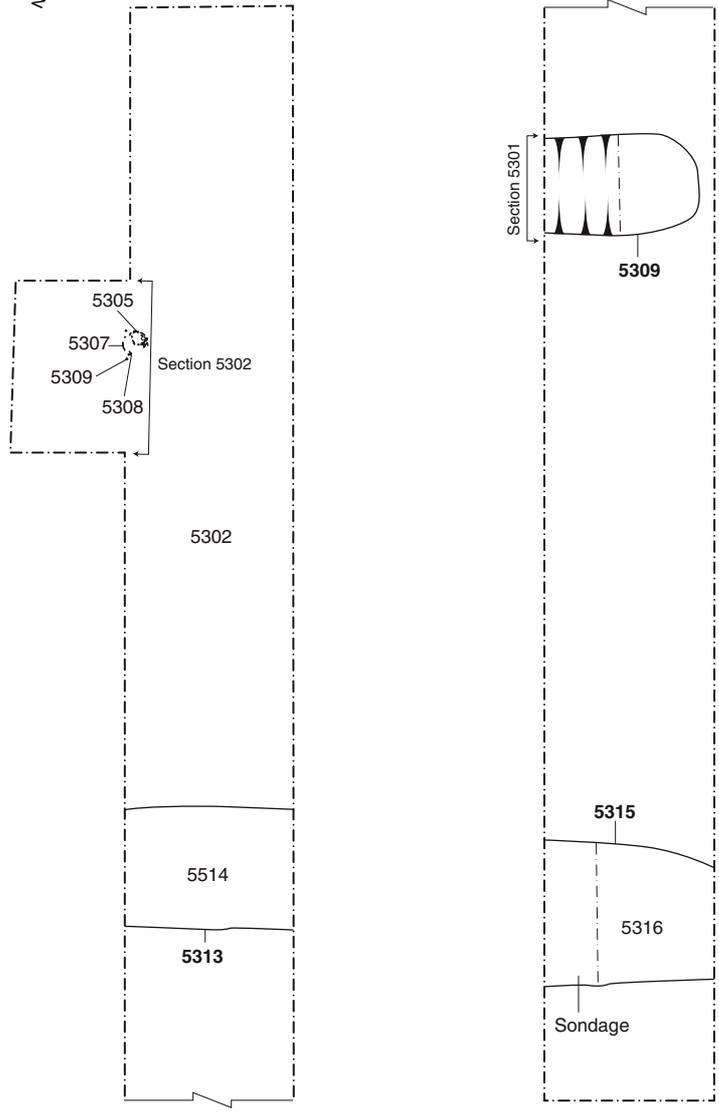


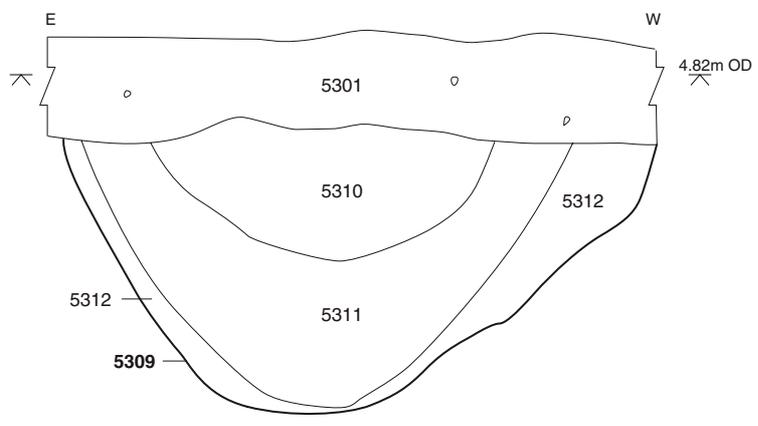
Figure 11: Plan and section of trench 44



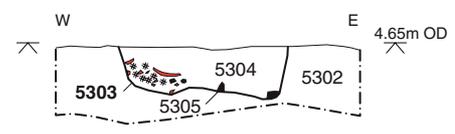
Trench 53



Section 5301



Section 5302



- * Charcoal
- ☪ Pottery
- Cremation urn

Figure 12: Plan and sections of trench 53

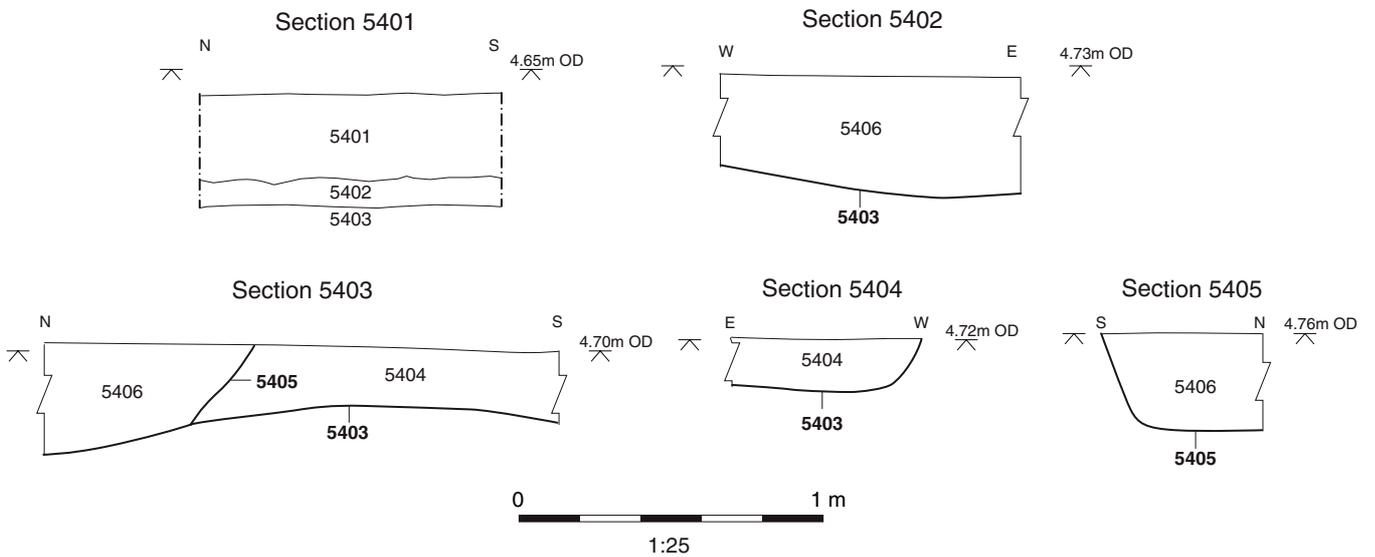
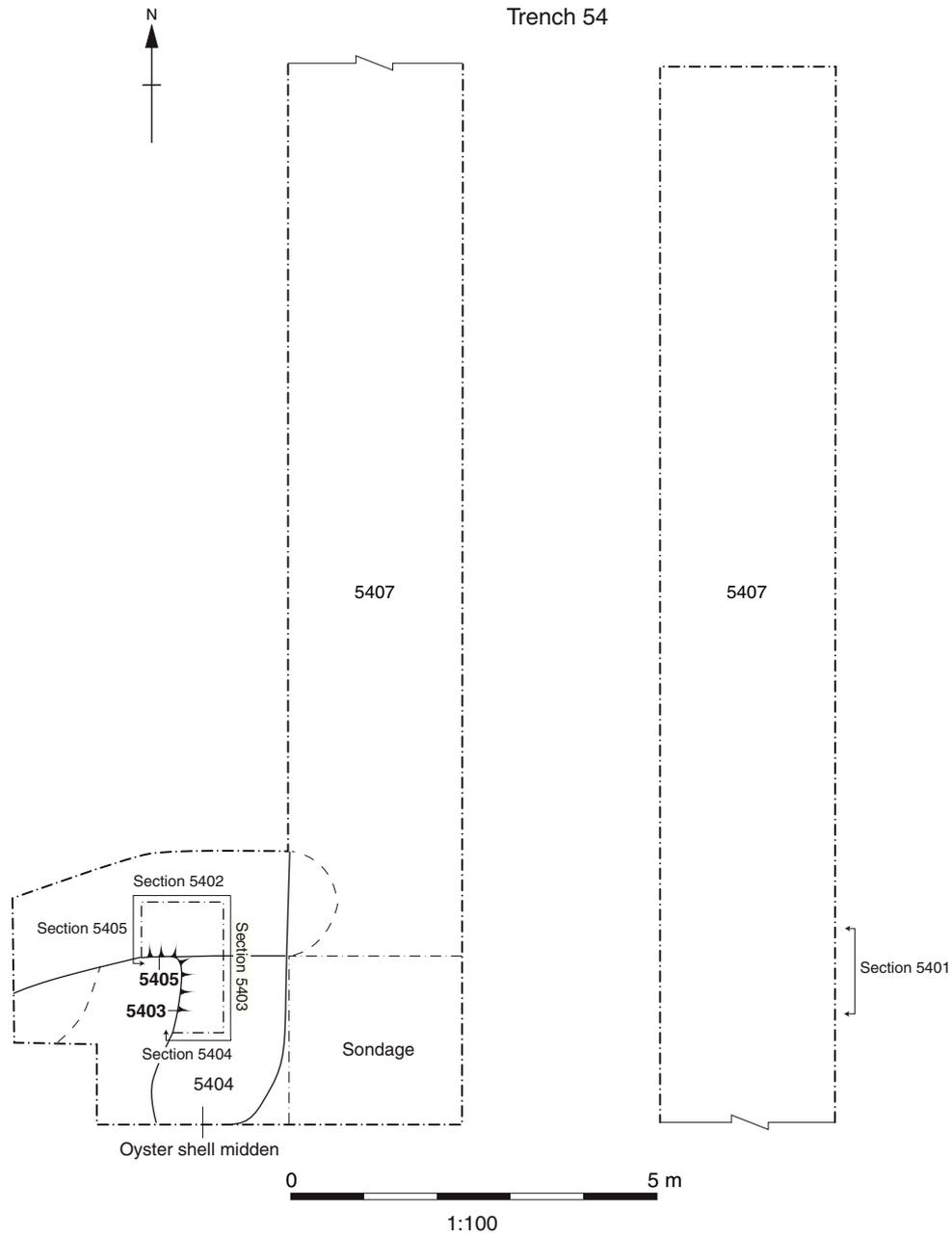


Figure 13: Plan and sections of trench 54



Trench 65

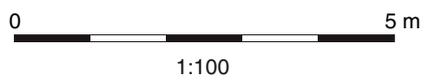
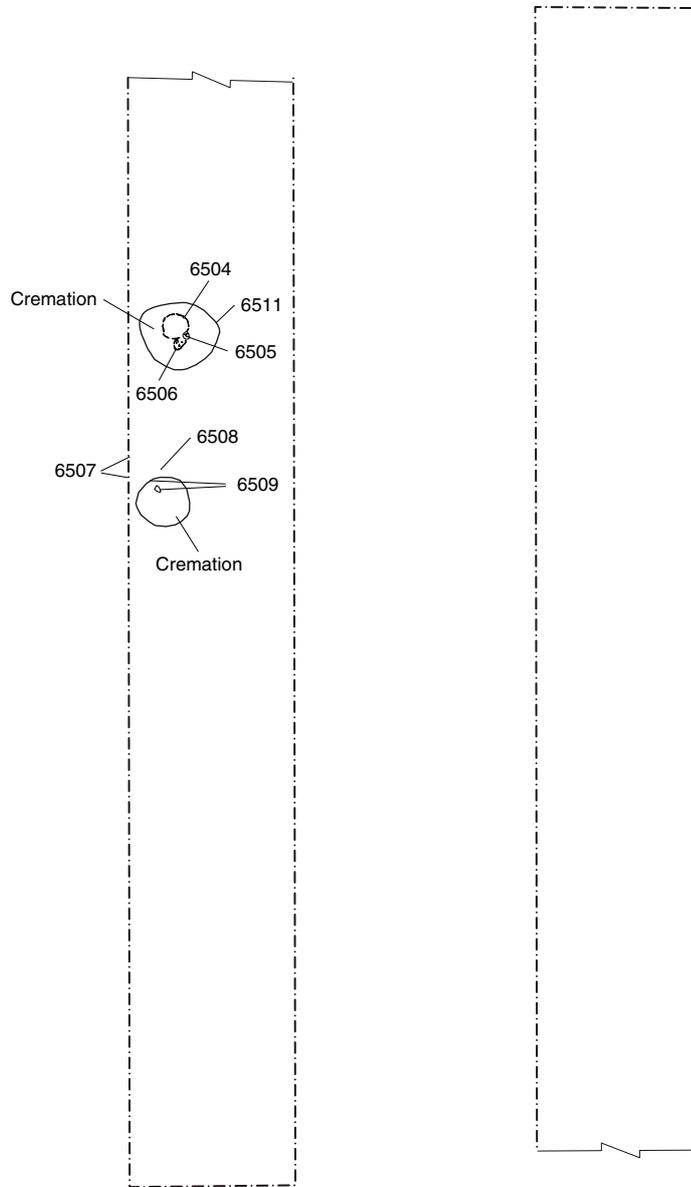


Figure 14: Plan of trench 65

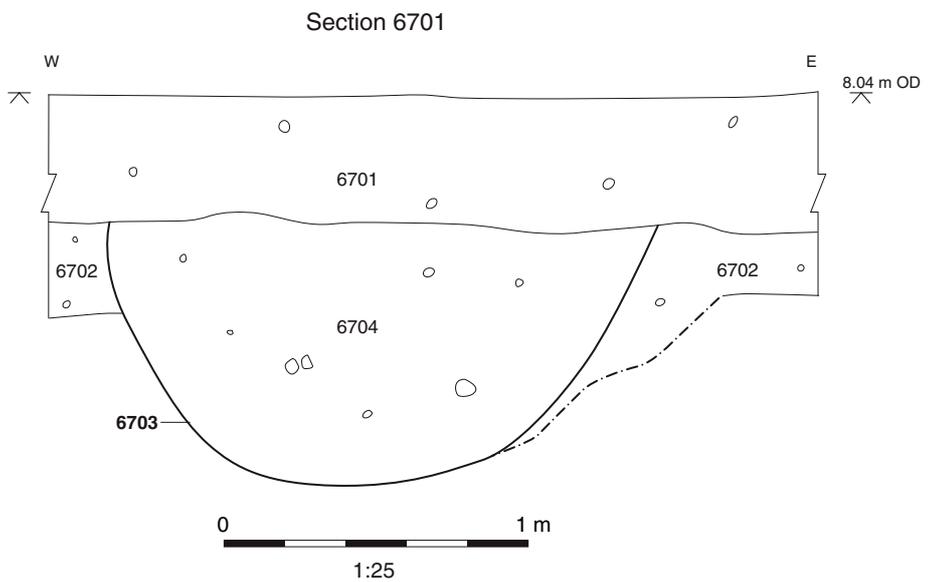
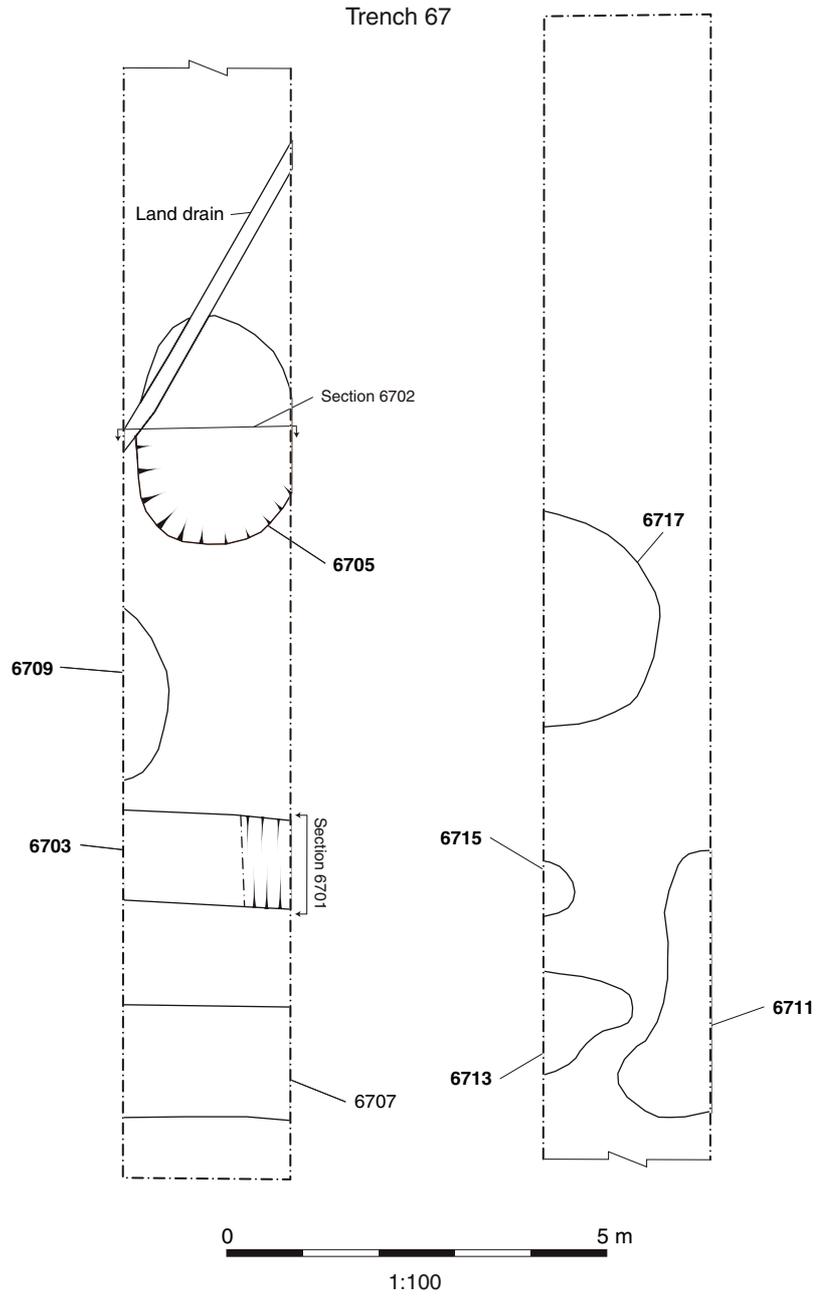
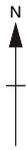


Figure 15: Plan and section of trench 67

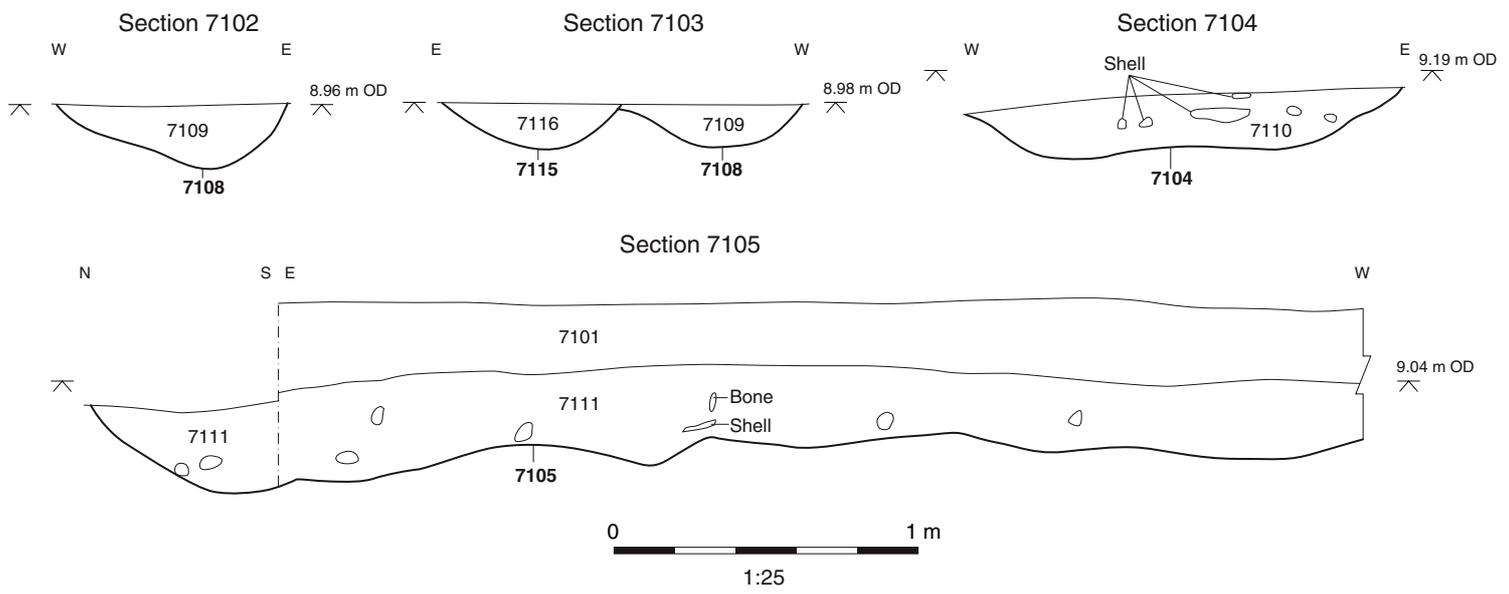
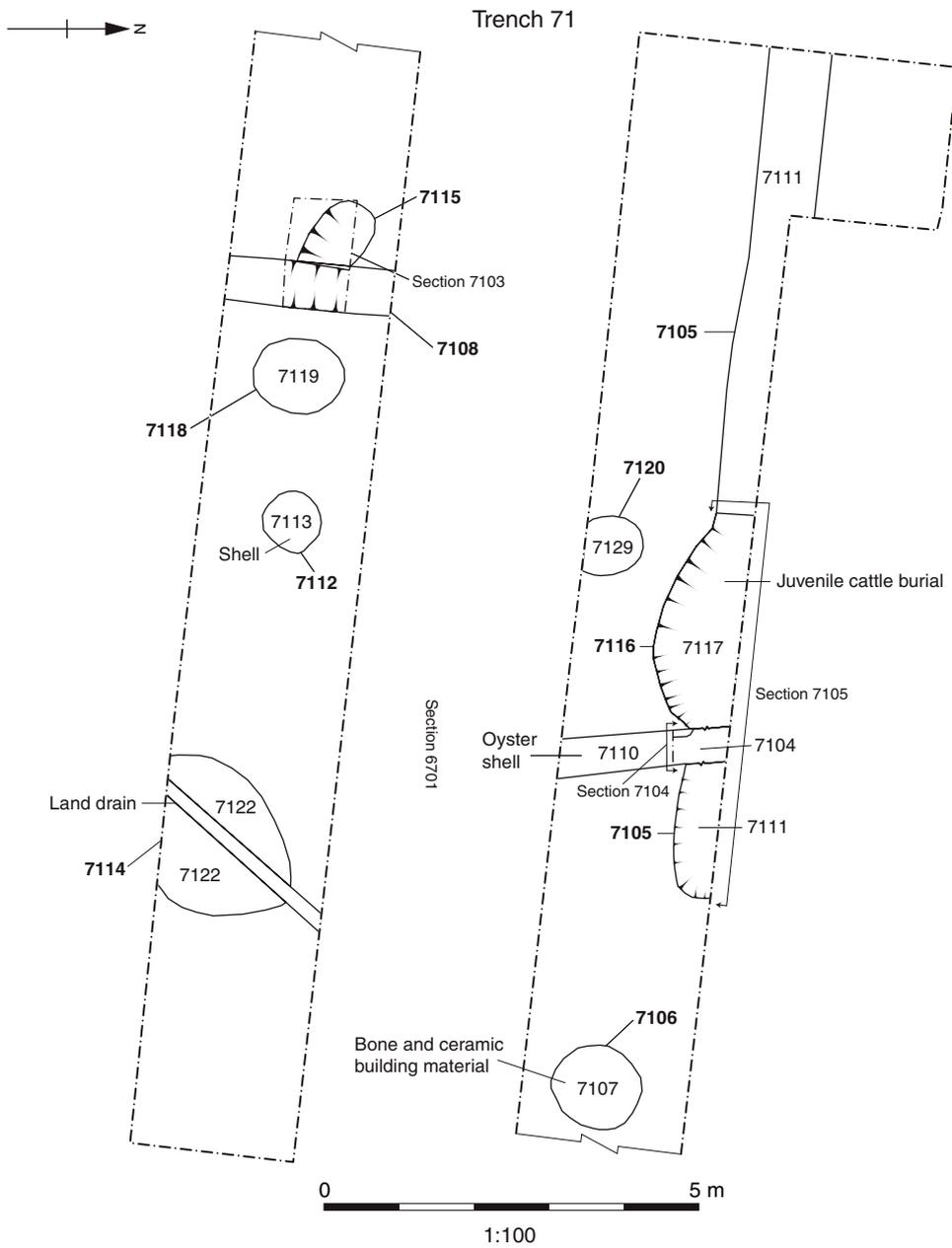
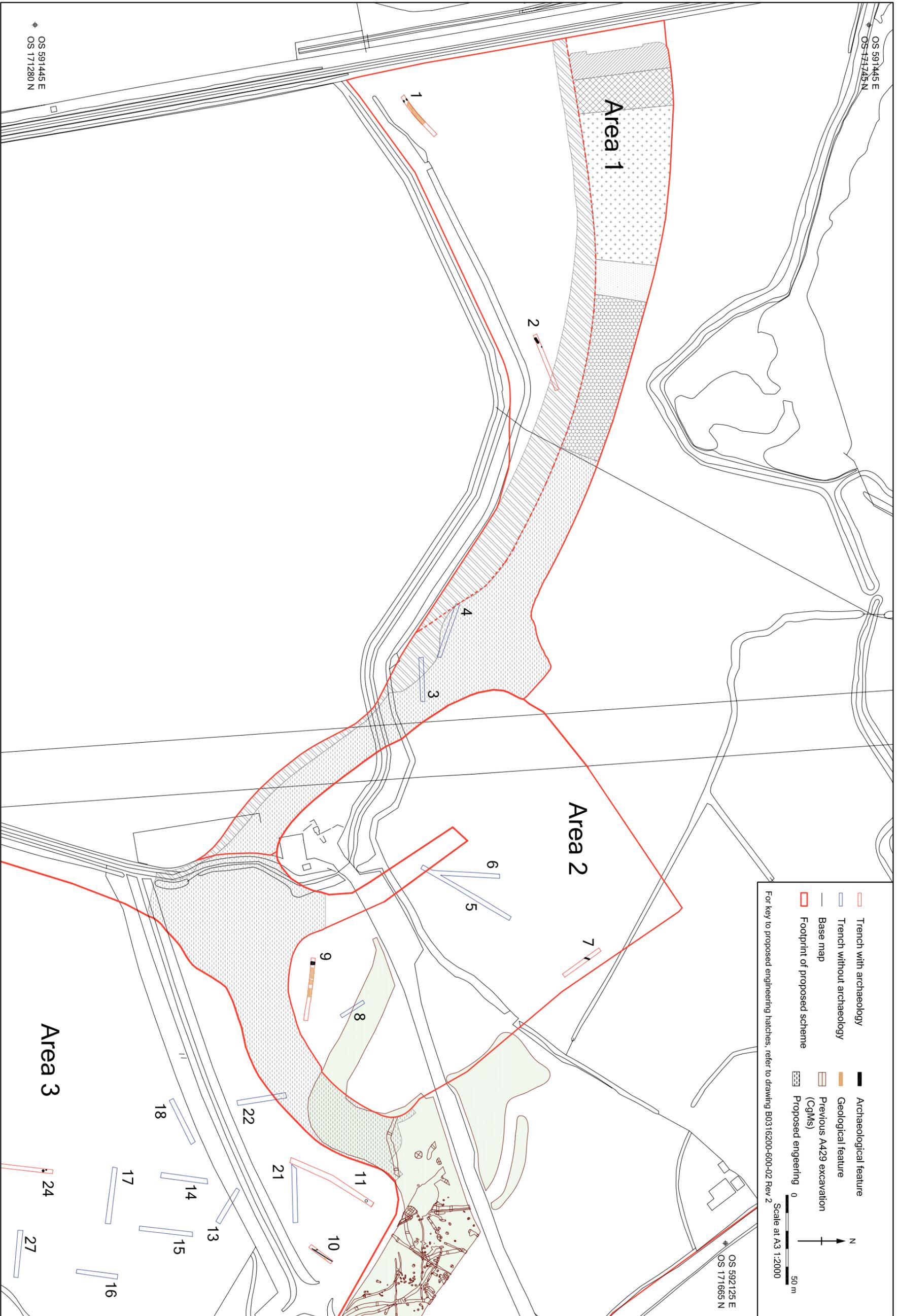


Figure 16: Plan and sections of trench 71



Figure 17: Main areas of archaeological potential



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Figure 18: Queenborough and Rushenden Neatscourt, Archaeological trench and test pit locations, overlaid on proposed link road plan



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