

Further archaeological
evaluation at Rushenden
Neatscourt

Queenborough
Swale, Kent



Archaeological Investigation Report



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Further Archaeological Evaluation at Rushenden Neatscourt, Queenborough, Swale, Kent

ARCHAEOLOGICAL EVALUATION REPORT

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SUMMARY

Oxford Archaeology (OA) carried out an eight trench field evaluation at Queenborough and Rushenden, Swale, Kent in mid October 2007. The investigation was commissioned by Campbell Reith Hill Engineers on behalf of the South East England Development Agency (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 and is located immediately to the south of the new A249 link road.

The present phase of trial trenching follows the Stage 1 Cultural Heritage Environmental Impact Assessment, a programme of geoarchaeological test pits and a main phase of archaeological evaluation. The main evaluation trenching programme comprised 71 trial trenches, mostly concentrated within the Neatscourt Phase 1 development area, and is the subject of a separate report (OA, September 2007). This report details the findings from eight further trenches, in two separate areas that were previously unavailable for evaluation due to ecological constraints. Five trenches (75, 76, 77, 78 and 79) are located along the proposed line of the Rushenden Relief Road and three (80, 81 and 82) are at the western end of Neatscourt Phase 1, on the site of a series of proposed drainage ponds.

Rushenden Relief Road

The evaluation identified only one area of archaeological significance: Trenches 78 and 79, located along the line of the proposed Rushenden Relief Road, revealed an alluvial layer containing burnt flint, bone, Roman tile and pottery ranging from the mid to late Iron Age through to the late Roman period.

These deposits probably relate to a similar finds-rich layer discovered in Trench 2 during the main evaluation (OA, September 2007) - Trench 2 lies c.30m to the south of 78 and 79, and the finds are of similar date. The surface of the artefact spread appears to dip down quite sharply from south to north (perhaps reflecting a former creek edge?).

A small number of Roman pottery sherds were also found during trenching for an electrical service diversion, immediately to the north of Trench 79, from a similar grey clay horizon, at a depth of c. 1m below ground level. Pottery was not found anywhere else during the watching brief, although visibility was variable.

The nature of the activity within the Rushenden Relief Road area remains enigmatic at present. The finds spread is tentatively interpreted as a reworked late Roman domestic midden deposit, associated with a buried land surface and containing residual later prehistoric artefacts. The finds perhaps derive from the known later prehistoric and Roman site, located c.300m to the east (excavated prior to construction of the A249 Link Road - CgMs Consulting, pers. comm.). Overall, the artefact spread covers an area at least 60m in diameter, although the material in Trenches 78 and 79 is considerably less dense and more patchy than in Trench 2.

Neatscourt Phase 1 drainage ponds

The trenches located in the area of the drainage ponds in Neatscourt Phase 1, revealed greater depth in the alluvial sequence than elsewhere on the site, but no archaeological evidence. The soil sequence in the area is as predicted in the test pit report, comprising topsoil, overlying two layers of alluvial clay, overlying weathered London Clay.

Significance

None of the archaeological deposits discovered in this evaluation are considered to be of national importance, but may be considered of moderate regional or local importance.

1 INTRODUCTION

1.1 Location and scope of work

- 1.1.1 Oxford Archaeology carried out a field evaluation at Rushenden Neatscourt, Queenborough, Swale, Kent, between 22nd October and 24th October 2007 (Fig. 1). 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 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 NGR 592230 171350.
- 1.1.2 The current phase of evaluation, consisting of eight trial trenches, follows the Stage 1 Cultural Heritage Environmental Impact Assessment, a programme of geoarchaeological test pits, and a main phase of trial trenches. The Cultural Heritage review incorporated preliminary desk-based assessment of potential cultural heritage impacts while the geoarchaeological test pits were used to model sub-surface deposit sequences in order to identify areas where significant prehistoric and later archaeology could be buried under alluvium at the edge of the floodplain.
- 1.1.3 The main evaluation trenching programme, conducted in Summer 2007, comprised 71 trenches focussed predominantly within the Neatscourt Phase 1 development area and is the subject of a separate report. The additional eight trial trenches that form the focus of this report lie along the centreline of the proposed Rushenden Relief Road and drainage ponds within Neatscourt Phase 1. Both areas were previously unavailable during the main phase of evaluation due to ecological constraints.
- 1.1.4 The combined results of both phases of 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.
- 1.1.5 In addition to the evaluation, OA conducted an intermittent watching brief on service diversions throughout the development area between September and December 2007. The conclusions of this watching brief will also be presented within this report.

1.2 Topography and geology

- 1.2.1 The site is situated within Neatscourt marshes and is overlooked by Furze and Barrow Hill to the north-east. Part of the marshes were converted to hardstanding in the 1970s and used for car pounds. To the north-west is Queenborough Conservation

Area with its associated Listed Buildings and the Queenborough Castle, a Scheduled Ancient Monument (SAM 23030), while to the west lies the Sheerness railway, Swale foreshore and tidal flats, parts of which were widely developed as industrial complexes in the late 19th century and remain extensively occupied by factory buildings and areas of hardstanding. The site is bordered to the north-east by the A249.

- 1.2.2 The topography of the proposed development area rises from west to east. The western extent of the proposed development lies at *c* 2.5m OD and its eastern extent lies at *c* 9.85m OD.
- 1.2.3 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) and is summarised below.
- 1.2.4 The underlying bedrock across the site is identified as London Clay, which outcrops under Queenborough, Rushenden and the slopes of Barrow and Furze Hill (British Geological Survey sheet 272). In the test pits it was generally recorded as stiff grey structureless clay and produced elevations between 4.00 and -3.00m OD reflecting a sharp drop in the bedrock surface across the site from south-east to north-west.
- 1.2.5 Weathered London Clay in the form of stiff reddish brown clay with occasional inclusions of mudstone and pockets of coarse sand was identified at elevations between 2.5m and -1.3m OD. This deposit was identified in test pits from the middle to the north-west of the site varied in thickness from 0.10 - 2.10m, with the thickest deposits located to the north-west.
- 1.2.6 An organic horizon *c* 0.10m thick was identified in a number of test pits to the north of site (OA TP10, 11, 12, 13, 14, 15, 16, 17, 18 and 23). This mid/dark brown organic silty clay produced charcoal, pottery, burnt clay and flint and was observed at elevations between 1.98 and 2.53m OD.
- 1.2.7 Two alluvial deposits were identified across the site and have been classed as Alluvium I and Alluvium II. Alluvium I, a bluish grey silty clay and clay silt, was encountered in two test pits (OA TP 10 and 11) to the north-west of the site along the proposed Rushenden Relief Road. The deposit ranged in thickness from 0.10 - 0.20m and was encountered at elevations between 1.30- 1.70m OD. This deposit contained varying amounts of organic material and may indicate that a range of different depositional environments could have existed at the same time and any archaeological material associated with this deposit is likely to have been redeposited within this depositional sequence.
- 1.2.8 Alluvium II extends across the western part of the site and is characterised by a yellow brown silty clay and clay silts with evidence of root action and weathering at the upper surface. It ranges in thickness from 0.20 - 0.70m and was encountered at elevations of 1.45 - 3.10m OD. This deposit represents the most recent episode of sedimentation within the Thames floodplain and the fine-grained nature indicates low

energy deposition and any archaeological material within this deposit is likely to have undergone low levels of lateral movement. It is possible that some of this material along the eastern boundary has formed through colluvial action.

- 1.2.9 Encountering peat deposits is always a possibility within waterlogged environments. Although no peat was encountered during the geoarchaeological and trial trenching phase, peat was identified along the north-western edge of the proposed Rushenden Relief Road within two geotechnical test pits (GSG TP 11 and 12) at elevations of 0.50 - 1.50m OD. Although a precise age has yet to be confirmed by radiocarbon dating, these elevations are consistent with Roman peat recorded elsewhere in the Lower Thames. Peat is a low energy deposit and any archaeological material associated with this deposit is likely to have undergone little disturbance and is likely found near place of deposition.
- 1.2.10 Topsoil levels across the site were generally consistent and ranged between 0.20 and 0.40m in thickness. The deposit was recorded as silty clay with frequent roots and occasional round pebble inclusions.

1.3 Archaeological and historical background

- 1.3.1 There are a number of known sites with archaeological remains adjacent to the development area. While several sites take the form of cropmarks perhaps indicating post-medieval drains and former field systems, the most extensive indicator of archaeological remains is demonstrated by the results of the 2004 open area excavations conducted by Northampton Archaeology along the line of the A249 Queenborough to Iwade Link Road immediately to the north of the development area. Detailed reports are not yet available however, draft specialist assessment reports and site summaries provided by CgMs Consulting demonstrate remains ranging in date from late Neolithic through to the medieval period including 40 Roman cremation burials, many with associated burial goods, dating from c 1st-2nd century AD. Results of the main phase of trial trenching, conducted by OA in early 2007, is consistent with the findings from the 2004 excavations.
- 1.3.2 The development area has been subject to a previous desk-based assessment, carried out as part of the Cultural Heritage and Environmental Impact Assessment (OA, 2006), summarised below.

Palaeolithic/Mesolithic

- 1.3.3 Although North Kent is recognised to have a high concentration of Palaeolithic remains, only a single hand axe has been discovered c 2 km to the north west of the study area and no Mesolithic finds or sites have been identified within the study area. Palaeolithic and Mesolithic remains are generally ephemeral in nature and where present are likely to be deeply buried by layers of alluvial deposits. If present these sites are likely to be located to the western part of the development area. 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 development area means that organic structural elements and deposits such as trackways, boats and fish traps may be well preserved in waterlogged conditions.

Neolithic (c 4500 - c 2000 BC) - Bronze Age (c 2000 - c 700 BC)

- 1.3.4 Limited late Neolithic or early Bronze Age archaeological remains were identified in the 2004 excavations along the new route of the A249 and were concentrated at the western end of the new road. Bronze Age pottery was also recovered from the alluvium within a number of geotechnical test pits and trial trenches excavated in 2007 in the west of the development area. This may suggest a prehistoric land surface is buried beneath the alluvium along the margins of the former marsh.
- 1.3.5 During the Bronze Age sea levels were higher than that of today and in all probability the lower lying areas of the development would have been inundated. On the higher land to the east, outside the development area, evidence for large-scale organisation of the landscape has been recorded, indicating a strong presence in this area. If present, settlement evidence is likely to survive on the higher margins in the east of the area as suggested by the A249 excavations. The prehistoric pottery assemblage from this site includes a few abraded sherds of possible Grooved Ware and a larger assemblage of Beaker pottery, possibly from several vessels albeit within a single context.

Iron Age (c 700 BC - c AD 50)

- 1.3.6 Evidence for Iron Age occupation was identified in both the 2007 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. The irregular enclosures are 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 and charred plant remains suggest domestic occupation on or close to the site. The identified features were cut into subsoil and sealed by c 0.20 - 0.40m 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.
- 1.3.7 The 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.
- 1.3.8 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.

- 1.3.9 The development of a widespread salt-making industry within and adjacent to coastal marshland may be first attributed to the Iron Age. A number of salterns and saltings are present within 1.5 km 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.

Romano-British (c AD 50 - c AD 410)

- 1.3.10 The pattern of later Iron Age settlement continues into the Roman period with an apparent intensification of agriculture in river valley locations. Settlement generally favoured lower slope locations and this is corroborated by the presence of excavated Roman occupation deposits and enclosures on the line of the new A249. These remains are concentrated in the same area as Iron Age features perhaps indicating some degree of continuity in settlement or land use.
- 1.3.11 The most prominent Romano-British remains identified in the A249 excavations immediately to the north of Neatscourt Phase 1 are the five cremation cemetery groups containing 40 cremation burials. Most groups were located on the rising ground immediately to the north and east of Neatscourt Phase 1 with the largest containing approximately 20 burials. Many of the cremation burials contained pottery grave goods dating from the 1st - 2nd century AD. Three cremation burials with associated grave goods also dating from the 1st - 2nd century AD have subsequently been discovered within Neatscourt Phase 1 development area during the main phase of trial trenching. The three burials were located in two trenches (53 and 66) widely separated on the higher ground to the east of the development, perhaps suggesting the cemetery extends from the A249 excavation south into the eastern part of Neatscourt Phase 1. Other Roman burials within the wider area are limited to an inhumation c 2 km to the north-east at Sheppey High School.
- 1.3.12 A significant Roman salt industry has been identified on the Isle of Sheppey and it is probable that this may have extended towards Queenborough. It is possible that some of the salterns identified within the wider area may be ascribed a Roman date. 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.

Medieval (c AD 410 - c AD 1530)

- 1.3.13 No sites or finds of early medieval date have been identified within the study area and only one possible late medieval site lies within the development area; a possible saltworking.
- 1.3.14 There is a general lack of archaeological evidence for the period following the decline of Roman infrastructure in the 5th to 6th centuries AD and the collapse of regional potteries seems to have heralded a period of relatively aceramic settlement. 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.
- 1.3.15 The Swale is likely to have remained an attractive waterway and anchorage during the early medieval period. By the 10th century the North Sea herring fisheries had become established and may 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.
- 1.3.16 The easy approaches and sheltered water with easy grounding may also have led to the Swale becoming utilised as a semi-permanent base of operations for Danish raiders, Halstead indicates Sheppey had become a base of sorts by AD 832 (Halstead 1797). The presence of a Danish fort established in AD 893 has been suggested in the location of the later Queenborough Castle (Tyler). Ringworks were a typical Scandinavian form and it is not impossible that the circular form of the later medieval castle was in part owed to a pre-existing structure.
- 1.3.17 Edward III instructed the construction of Queenborough Castle in 1361. In 1366 he 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”, meaning an eyot within a marsh (Tyler).
- 1.3.18 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 and oyster dredging is recorded as an important economic activity in the town from at least the late medieval period.
- 1.3.19 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 potentially be the earliest documented chemical factory in Britain. The location of the original works is unknown but may potentially lie under the remains of the Sheppey Glue works to the north-west of the development area.

Post-medieval (c AD 1530 - c AD 1850)

- 1.3.20 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.
- 1.3.21 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.

Modern (c 1850 - present)

- 1.3.22 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.

2 EVALUATION AIMS

2.1.1 The 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.

3 EVALUATION METHODOLOGY

3.1 Scope of fieldwork

- 3.1.1 Eight trenches were excavated in total, comprising five along the centreline of the proposed Rushenden Relief Road, and three on the site of proposed drainage ponds in the Neatscourt Phase1 development (Figs. 2 and 3). An intermittent watching brief was also conducted on service diversions connected with the Rushenden Relief Road.

3.2 Fieldwork methods and recording

- 3.2.1 All evaluation trenches were excavated using a 20 ton 360 degree mechanical excavator fitted with a flat toothless bucket. The trenches were approximately 2m wide and 20m long and machined in 0.20 m spits to the first significant archaeological horizon, if present, or otherwise to the weathered London Clay, . Topsoil and subsoil were kept separate and reinstated in sequence. Trench locations were set out by a surveyor from Oxford Archaeology's Geomatics Department and all setting out was carried out in accordance with the Written Scheme of Investigation.
- 3.2.2 The trenches were cleaned by hand where necessary and the revealed features were sampled to determine their extent and nature, and to retrieve finds and environmental samples where appropriate. All archaeological features were planned and where excavated their sections drawn at scales of 1:20. All features were photographed using colour slide film and a digital camera. Recording followed procedures laid down in the *OAU Fieldwork Manual* (ed. D Wilkinson, 1992).

3.3 Finds

- 3.3.1 Finds were recovered by hand during the course of the excavation and bagged by context.

3.4 Palaeo-environmental evidence

- 3.4.1 No deposits suitable for the recovery of palaeo-environmental samples were uncovered during the evaluation. The exposed alluvial layers were found not to be suitable for the preservation of waterlogged material at the excavated level, nor were there significant levels of charred remains suitable for further examination.

3.5 Presentation of results

- 3.5.1 Factual results from the evaluation and watching brief are described in Section 4. Trenches containing archaeological material are described in trench number order. Sample plans sections are illustrated in Figure 4. Context descriptions, and the deposit sequence in each trench, are tabulated in Appendix 1.

4 RESULTS: GENERAL

4.1 Distribution of archaeological deposits

- 4.1.1 No significant cut features were identified (other than modern land drains and service trenches). However, a significant artefact scatter was found in alluvial deposits along the route of the proposed Rushenden Relief Road, in Trenches 78 and 79. Finds from this layer included animal bone, burnt flint, Roman tile and pottery, ranging in date from mid-late Iron Age, through to the late Roman period.
- 4.1.2 No archaeological remains were present in any other trench, although a probable tree throw was recorded in Trench 82.

5 RESULTS: DESCRIPTIONS

See Appendix 1, the Context Inventory for deposit depths in trenches with no archaeology

5.1 Trench 78

- 5.1.1 Trench 78 (Rushenden Relief Road, Fig.3) was excavated to a depth of 1.20 m OD (1.20 m below present ground level). A sondage was excavated at the eastern limit to a depth of 1.50 m OD and the western end of the trench was disturbed by a modern intrusion, a disused electric cable trench (surface at 1.36 m OD).
- 5.1.2 The London Clay (7804) was overlain by three alluvial layers (7803, 7802 and 7801) and the modern topsoil (7800, Fig. 4). Although layers 7803 and 7801 contained no finds, 7802 contained fragments of burnt flint, one worked flint flake, and five fragments of mid to late Iron Age pottery spread throughout the deposit. This layer was described as mid blue grey clay, 0.20 m thick, with no visible natural inclusions and was c. 0.60 m below the present ground level.

5.2 Trench 79

- 5.2.1 Trench 79 (Fig. 4, Rushenden Relief Road) was excavated to a depth of 1.07 m OD (1.40 m below present ground level) and also contained three alluvial layers (7903, 7902 and 7901) overlying the weathered London Clay.
- 5.2.2 Only one deposit (7903), located at the eastern end of the trench, produced archaeological evidence. This dark brown grey clay, 0.10 m thick, contained animal bone, CBM (including a large fragment of Roman tegula), two fragments of what may be quern stones, and 19 fragments of pottery dating from the late Roman period (3rd to 4th century AD). This layer was c. 1m below present ground level.

5.3 Trench 82

- 5.3.1 Trench 82 (Neatscourt Phase 1 drainage ponds, Fig. 2) was excavated to 1.33m OD (1.30 m below present ground level). The London Clay was overlain by two stiff grey clay alluvial deposits (8202 and 8201) and the modern topsoil. A single feature (8204) was observed towards the eastern end of the trench, sealed by layer 8201. This irregular feature was 3.30m wide, 0.70m deep and extended beyond the limits of excavation to the north. It contained no finds and is interpreted as a tree throw hole.

5.4 Finds

Pottery

Table 1: Pottery recovered during additional trenching

Ctxt	Prehistoric		Roman		Ceramic date/comment
	No sherds	Wt (g)	No sherds	Wt (g)	
7802	5	12			5 fragments, 1 vessel, everted rim in black sandy fabric - ?M-LIA
7903			19	380	Mixed group, but probably mid 3rd century or later

- 5.4.1 The mixed group of pottery in context 7903 is of some interest. There is a single fine micaceous oxidised sherd, but the remaining sherds are reduced. These include a range of fabrics from fine Upchurch to coarse sand-tempered. One sandy sherd has an almost metallic sheen suggestive (but not conclusive) of overfiring in the kiln. Also present are seven flint-tempered sherds, presumably early Roman, including the rim of a large bead-rim jar. There are in addition three sherds with hard grog and sand inclusions in the 'native coarse ware' tradition, thought by Pollard (1988, 154) to have been in decline by the late 3rd century, but surviving up to the mid 4th. Present here is a rim sherd of a bead and flanged bowl, the type more common eg in late grog-tempered ware (cf. Pollard 1988, 159 no 205). This vessel must date at least to the mid 3rd century and more probably a little later. The group as a whole is therefore AD 250 onwards, but more likely early-mid 4th century, though clearly with some earlier, residual components.

6 DISCUSSION AND INTERPRETATION

6.1 Reliability of field investigation

- 6.1.1 The field investigation covered two small areas in this additional phase of trenching work. The trenches provide additional information on low-lying areas of the Rushenden Relief Road and Neatscourt Phase 1 developments, which were previously inaccessible for trenching due to ecological constraints.
- 6.1.2 The trenching follows an earlier phase of geoarchaeological test-pitting, the conclusions of which are briefly reviewed and up-dated below, where relevant. In addition to the evaluation trenches, watching briefs on electrical and water service diversion trenches allowed further observation of the soil sequence in the Rushenden Relief Road area, which was particularly useful in defining the extent of the artefact spread seen in Trenches 78 and 79.

6.2 Overall interpretation

Rushenden Relief Road

- 6.2.1 The evaluation identified only one area of archaeological significance: Trenches 78 and 79, located along the line of the proposed Rushenden Relief Road, revealed an alluvial layer containing burnt flint, bone, Roman tile and pottery ranging from the mid to late Iron Age through to the late Roman period.
- 6.2.2 These deposits probably relate to a similar finds-rich layer discovered in Trench 2 during the main evaluation (OA, September 2007) - Trench 2 lies c.30m to the south of 78 and 79, and the finds are of similar date. However the deposits occur at different levels in each trench: The upper surface of the layer lies at 2.4mOD in Trench 2, 1.5mOD in Trench 78 and 1.1mOD in Trench 79. The finds from Trench 2 were discovered immediately below topsoil, with no covering of alluvium, while the finds in Trench 78 and 79 lie 0.6m and 1.0m below ground level, respectively. If the layers are stratigraphically equivalent, the surface of the artefact spread must dip down quite sharply from south to north (perhaps reflecting a former creek edge?).
- 6.2.3 A small number of Roman pottery sherds were also found during trenching for an electrical service diversion, immediately to the north of Trench 79, from a similar grey clay horizon, at a depth of c. 1m below ground level. Pottery was not found anywhere else during the watching brief, although visibility was variable.
- 6.2.4 Later prehistoric pottery sherds were recovered during the geoarchaeological assessment from several test pits along the Rushenden Relief Road, from a distinct organic grey silty clay layer, which was then interpreted as a Bronze Age buried land surface. In TP12 this layer was found at c. 0.7m below ground level. The results from the additional evaluation trenches suggest that this horizon should probably be

equated with the late Roman horizon discussed above, which contained a high proportion of residual later prehistoric sherds.

- 6.2.5 The nature of the activity within the Rushenden Relief Road area remains enigmatic at present. Overall, the artefact spread covers an area at least 60m in diameter, although the material in Trenches 78 and 79 is considerably less dense and more patchy than in Trench 2. The finds spread is tentatively interpreted as a reworked late Roman domestic midden deposit, associated with a more extensive buried land surface and containing residual later prehistoric artefacts. The finds perhaps derive from a known later prehistoric and Roman site, located c.300m to the east (excavated prior to construction of the A249 Link Road in 2004 - CgMs Consulting, pers. comm.).

Neatscourt Phase 1 drainage ponds

- 6.2.6 The trenches located in the area of the drainage ponds in Neatscourt Phase 1, revealed greater depth in the alluvial sequence than elsewhere on the site, but no archaeological evidence. The soil sequence in the area is as predicted in the test pit report, comprising topsoil, overlying two layers of alluvial clay, overlying weathered London Clay.

Significance

- 6.2.7 None of the archaeological deposits discovered in this evaluation are considered to be of national importance, but may be considered of moderate regional or local importance.

6.3 Archaeological mitigation

- 6.3.1 In light of the findings of this report, combined with the earlier phase of evaluation and geoarchaeological test-pitting, several areas requiring archaeological mitigation have been identified. These are illustrated and discussed in a detailed Archaeological Project Design:

Neatscourt Phase 1, Queenborough and Rushenden Regeneration, Swale, Kent, Archaeological Project Design (OA, January 2008).

APPENDICES

APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY

<i>Trench</i>	<i>Arch. Present</i>	<i>Ctxt No</i>	<i>Type</i>	<i>Thick. (m)</i>	<i>Comment</i>	<i>Finds</i>	<i>No./ wt</i>	<i>Date</i>
75								
	No	75000	Layer	0.30	Modern Topsoil.			
		75001	Layer	0.80	Mid grey brown silty clay. No visible inclusions. Alluvial deposit.			
		75002	Layer		Mid blue grey clay. Natural			
76								
	No	76000	Layer	0.38	Modern Topsoil.			
		76001	Layer	0.80	Light brown grey silty clay. No visible inclusions.			
		76002	Layer		Grey brown silty clay. Natural.			
77								
	No	77000	Layer	0.27	Modern Topsoil			
		77001	Layer	0.25	Light grey brown clay. No visible inclusions. Alluvial deposit.			
		77002	Layer	0.35	Light brown grey clay with patches of frequent shell. Alluvial deposit.			
		77003	Layer		Light blue grey clay. Natural.			
78								
	Yes	78000	Layer	0.26	Modern Topsoil			
		78001	Layer	0.40	Mid brown grey clay. No visible inclusions.			
		78002	Layer	0.20	Mid blue grey clay. No visible inclusions.	Pottery Burnt flint Struck flint	5/12 g 2/111 g 1/10	Mid - Late Iron Age.

<i>Trench</i>	<i>Arch. Present</i>	<i>Ctxt No</i>	<i>Type</i>	<i>Thick. (m)</i>	<i>Comment</i>	<i>Finds</i>	<i>No./ wt</i>	<i>Date</i>
		78003	Layer	0.40	Mid orange brown clay with rare inclusions of small rounded stones.			
		78004	Layer		Mid brown grey clay. Natural			
79								
	Yes	79000	Layer	0.40	Modern Topsoil			
		79001	Layer	0.80	Mid brown grey silty clay. No visible inclusions.			
		79002	Layer	0.30	Mid grey brown silty clay. No visible inclusions.			
		79003	Layer	0.10	Dark brown grey silty clay.	Pottery CBM Quern? stone Animal bone	19/380 g 3/743 g 2/43 g 17/185 g	3rd - 4th century. Romano -British
		79004	Layer		Mid grey brown silty clay. Natural.			
80								
	No	80000	Layer	0.30	Modern Topsoil.			
		80001	Layer	0.25	Mid brown grey clay. No visible inclusions.			
		80002	Layer	0.26	Mid grey brown clay with inclusions of rare small stones.			
		80003	Layer	0.30	Mid brown grey clay. No visible inclusions.			
		80004	Layer		Mid brown grey clay with inclusions of degraded sandstone. Natural.			
81								
	No	81000	Layer	0.32	Modern Topsoil.			
		81001	Layer	0.30	Mid brown grey clay. No visible inclusions.			
		81002	Layer	0.35	Mid brown grey clay with inclusions of rare very small rounded			

<i>Trench</i>	<i>Arch. Present</i>	<i>Ctxt No</i>	<i>Type</i>	<i>Thick. (m)</i>	<i>Comment</i>	<i>Finds</i>	<i>No./ wt</i>	<i>Date</i>
					stones.			
		81003	Layer	0.23	Mid grey brown clay with inclusions of rare small rounded stones.			
		81004	Layer		Mid grey brown clay with rare small to medium rounded stones and rare degraded stone.			
82								
	Yes	82000	Layer	0.40	Modern Topsoil.			
		82001	Layer	0.60	Dark grey brown silty clay with rare inclusions of manganese and small sub-angular stones.			
		82003	Layer		Brown clay with rare inclusions of small stones.			
		82004	Cut	0.70	Irregular feature likely a tree throw.			
		82005	Fill	0.70	Fill of 82004. Dark blue grey silty clay with rare inclusions of small stones.			

APPENDIX 2 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 Repoort 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
- 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 Antiqs London **8**, London
- Williams, J. and Brown, N, 1999 *An Archaeological Research Framework for the Greater Thames Estuary*
- Wilkinson, P. 2001 *The Swale District: An Archaeological Survey Commissioned by Swale District Council*

APPENDIX 3 SUMMARY OF SITE DETAILS

Site name: Queenborough and Rushenden Neatscourt

Site code: QURUN 07

Grid reference: NGR 592230E 171350N

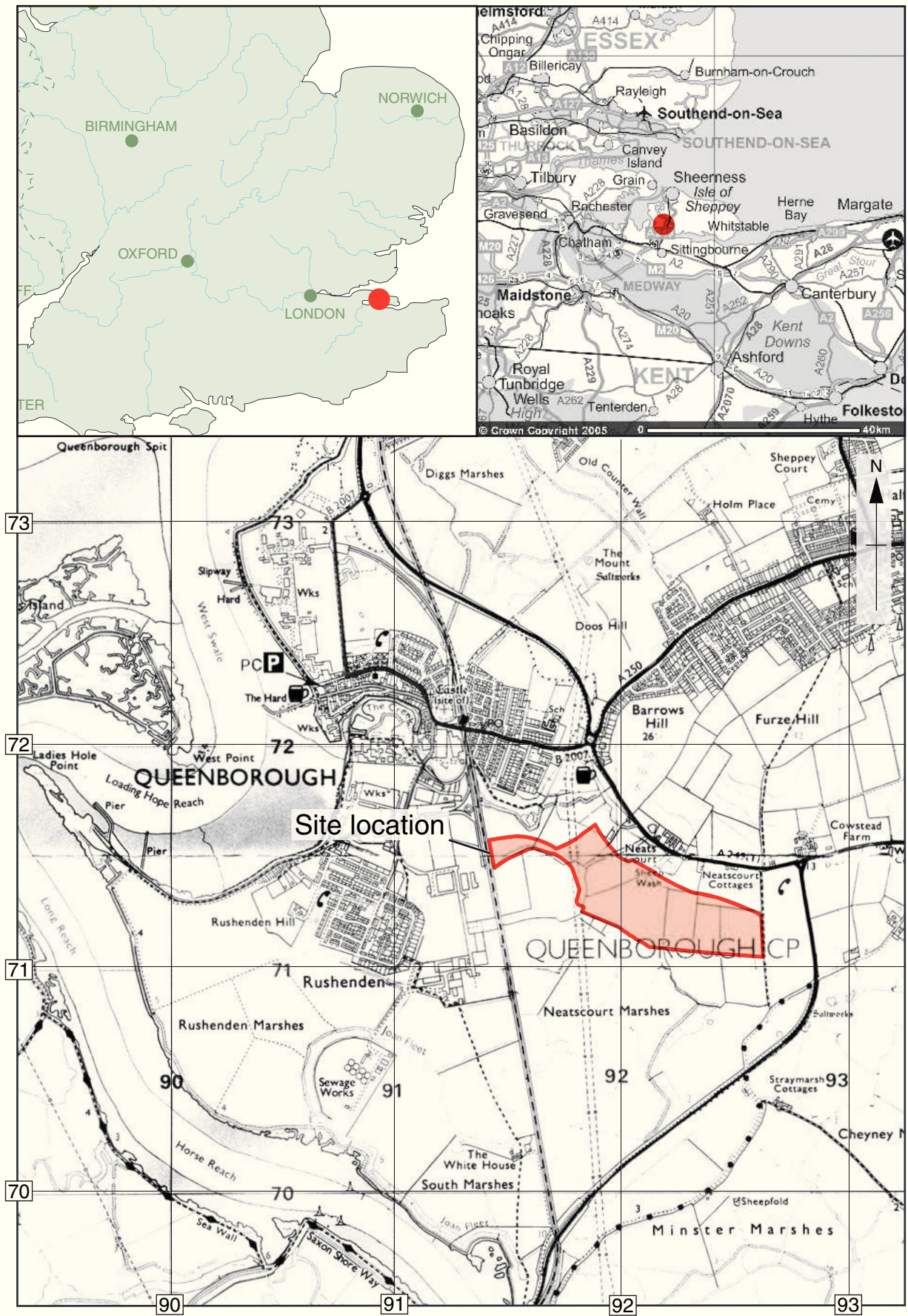
Type of evaluation: Eight 20 m long and 2 m wide evaluation trenches

Date and duration of project: 22/10/2007-24/10/2007

Area of site: Part of c 20 hectare development. Trenches were located along the proposed Rushenden Relief Road and Neatscourt Phase 1 drainage ponds.

Summary of results: This additional trial trenching completes a planned series of trenches across the Neatscourt Phase 1 development at Queenborough and Rushenden, Swale, Kent. No distinct archaeological features were discovered in the course of the additional evaluation. Archaeological deposits were limited to an alluvial layer revealed along the route of the proposed Rushenden Relief Road (Trenches 78 and 79), which produced animal bone, burnt flint, Roman tile, and pottery ranging in date from the mid-late Iron Age through to the late Roman period. This deposit may be equivalent to an artefact concentration discovered in Trench 2 during the previous phase of works. It is suggested that the artefacts are part of a relatively localised reworked late Roman midden deposit. (the pottery assemblage is very fragmented and includes a substantial residual later prehistoric component). The material perhaps derived from a known contemporary site discovered along the route of the current A249, c. 300m to the east.

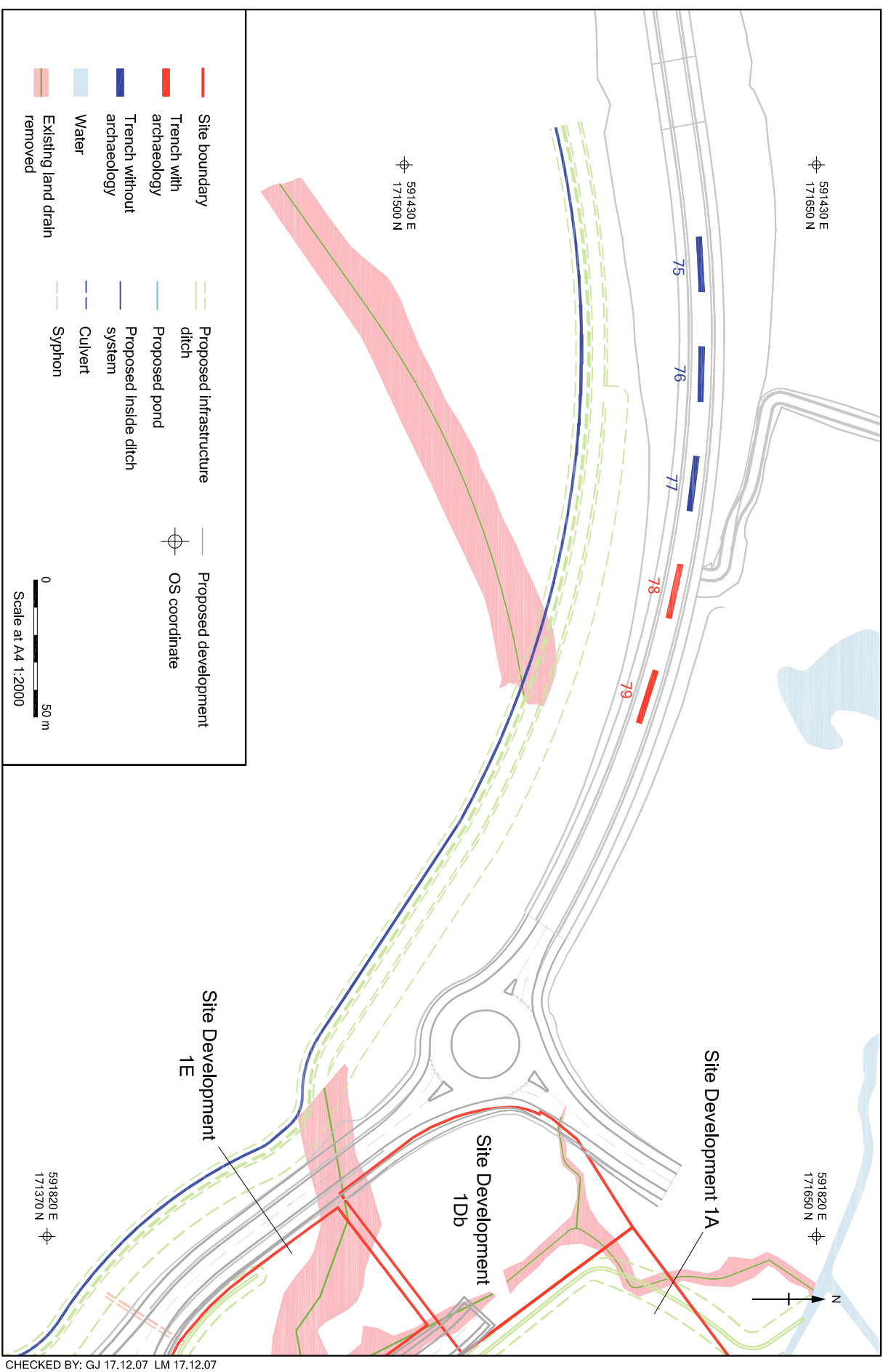
Location of archive: The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Queenborough Guildhall Museum in due course, under the following accession number: QUEEN07.



Scale 1:25,000

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Figure 1: Site location



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Figure 2: Additional trench location plan - Rusheden Relief Road

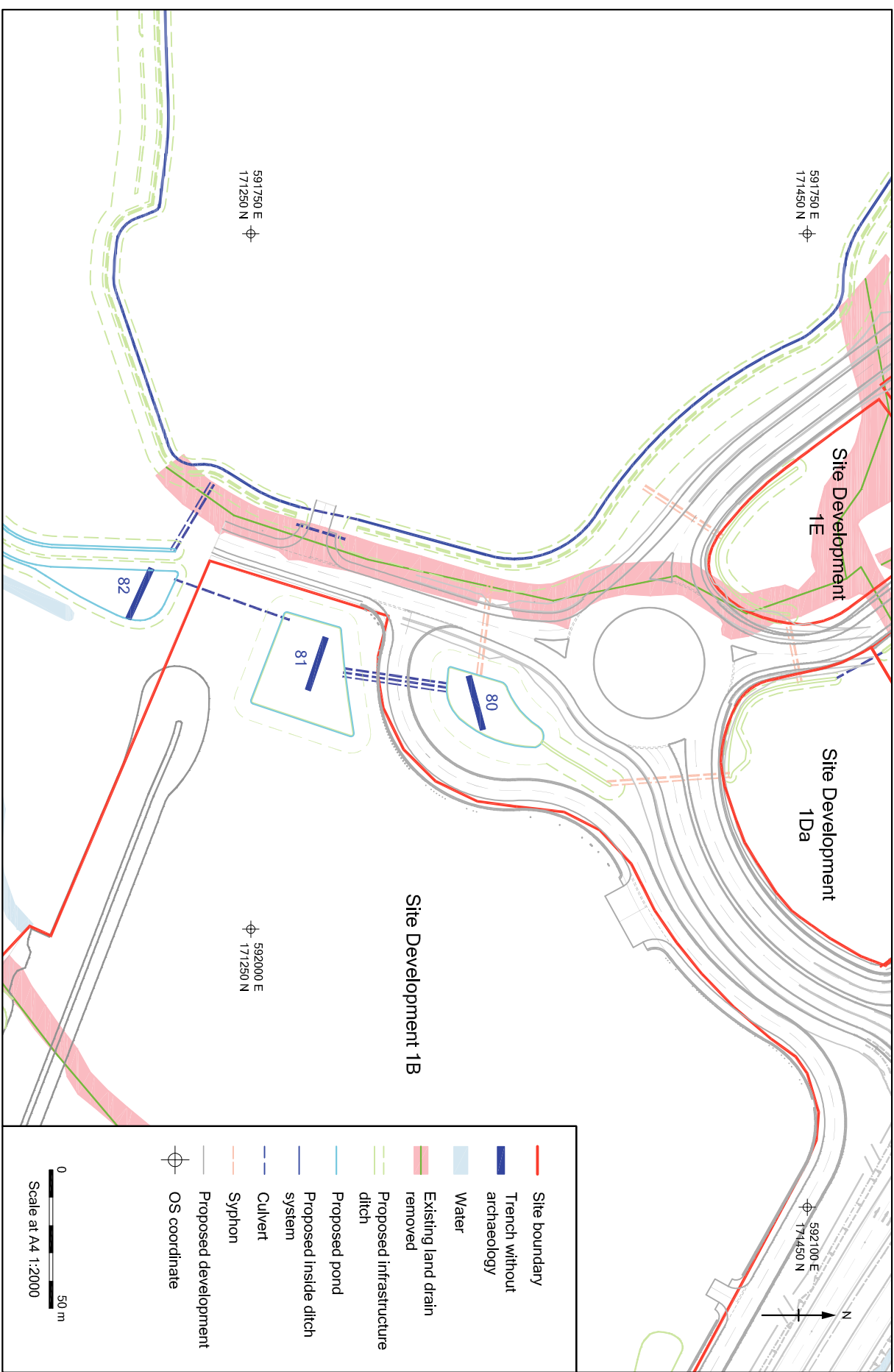


Figure 3: Additional trench location plan - Neatscourt Phase 1 Ponds

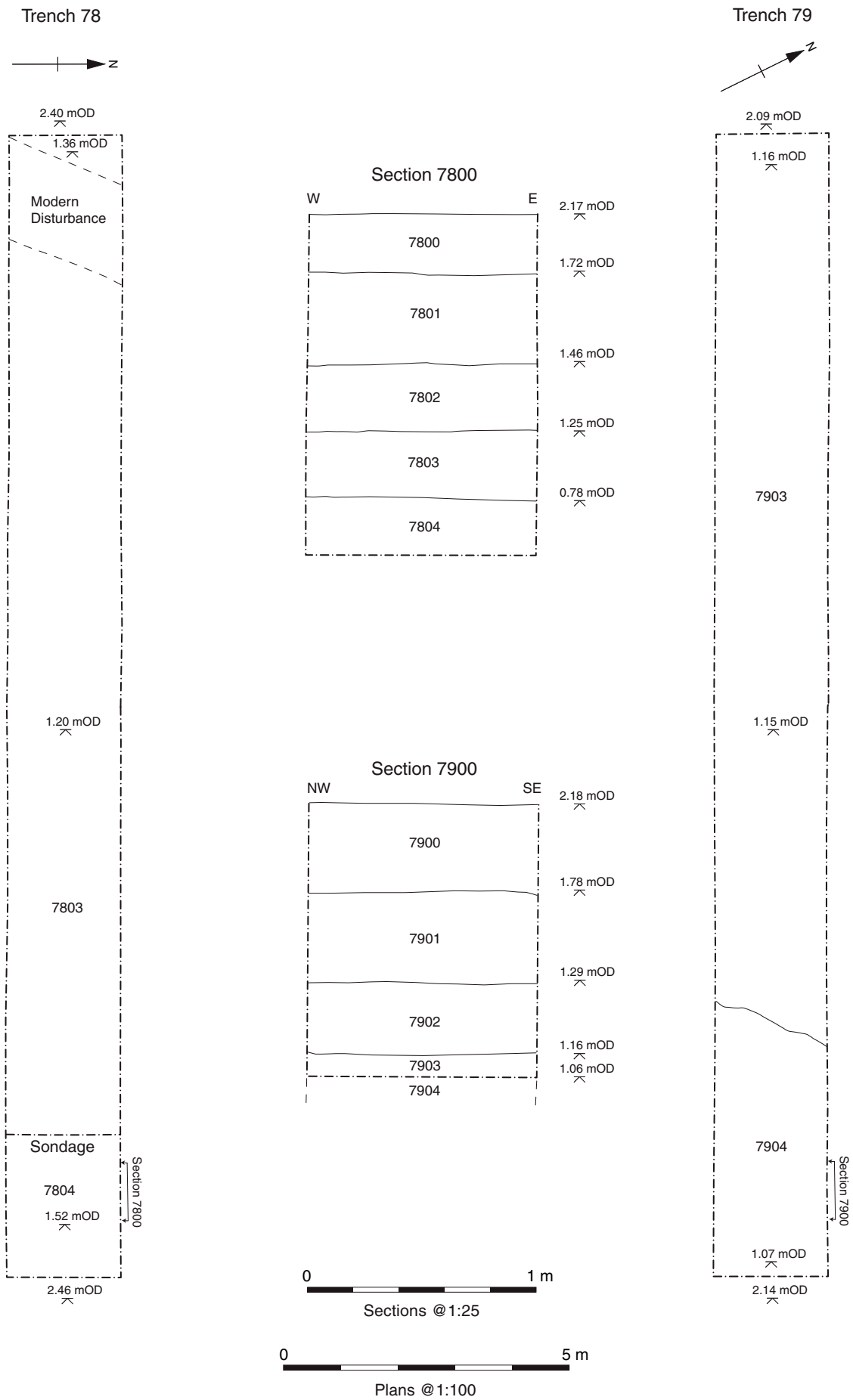


Figure 4: Plans 78 and 79 and Sections 7800 and 7900

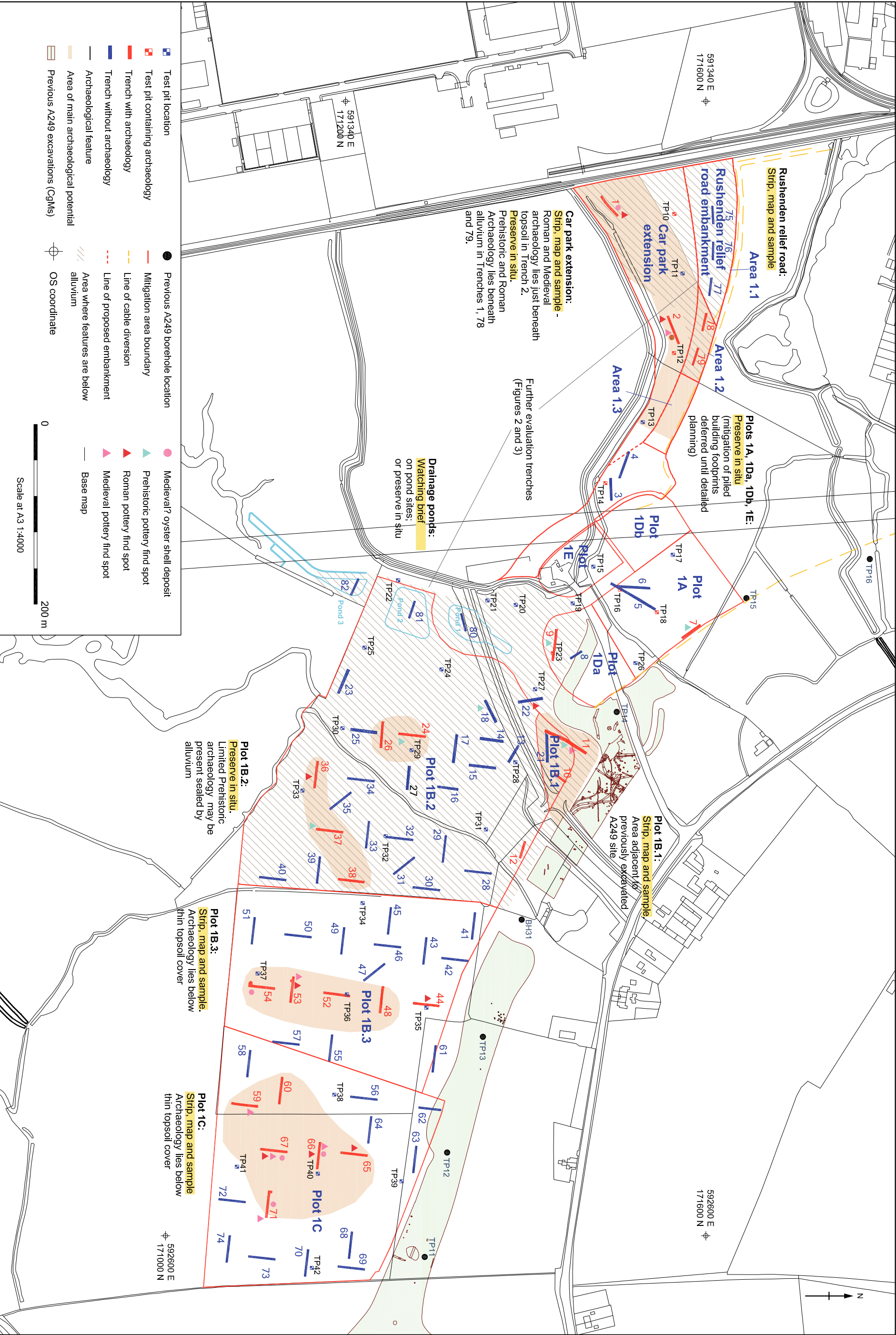


Figure 5: Archaeological mitigation areas showing all current and previous investigations



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