DOCUMENT VERIFICATION

GREENWICH REACH

EVALUATION

Quality Control

Pre-Construct Archaeology Limited			
	Name & Title	Signature	Date
Text Prepared by:	Stuart Holden		July 2006
Graphics Prepared by:	Hayley Baxter		July 2006
Graphics Checked by:	Josephine Brown		July 2006
Project Manager Sign-off:	Tim Bradley		July 2006

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Pre-Construct Archaeology Ltd
Unit 54
Brockley Cross Business Centre
96 Endwell Road
London
SE4 2PD

An Archaeological Evaluation at Greenwich Reach, Thames Street, London Borough of Greenwich

Site Code: GQR 06
Central National Grid Reference: TQ 3788 7777

Written and Researched by Stuart Holden
Pre-Construct Archaeology Limited, July 2006

Project Manager: Tim Bradley

Commissioning Client: Greenwich Reach 2000 Ltd

Contractor:
Pre-Construct Archaeology Limited
Unit 54
Brockley Cross Business Centre
96 Endwell Road
Brockley
London
SE4 2PD

Tel: **020 7732 3925**
Fax: **020 7732 7896**
E-mail: **tbradley@pre-construct.com**
Web: **www.pre-construct.com**

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1 EXECUTIVE SUMMARY

1.1 During the archaeological evaluation trenching at Greenwich Reach, six trenches were excavated across the site to provide coverage of the areas of impact of the proposed development, with no significant archaeological deposits being observed. In general, evidence of post-medieval and modern made ground was noted across the site with several archaeological features and deposits recorded which dated to the later post-medieval period. In the northeast of the site, a timber revetment of probable 19th century date was exposed which is likely to form part of the slipway of Norway Wharf indicated on the 1864 Ordnance Survey Map. Additionally a deposit of post-medieval peat was recorded in this area. A similar deposit was also recorded in a borehole sunk in a trench located near the centre of the site. The sequence of alluvial and made ground deposits was underlain by gravels across the site.

1.2 The evaluation work has been preceded by a number of archaeological watching briefs undertaken during previous groundwork. In general the results of these works augment the findings of the archaeological evaluation. However, more significant chalk foundations of possible late-medieval river revetment and timber revetments of post-medieval date were previously recorded along sections of the river walls in the northeastern part of the site (Mattison, 2005).

2 ABSTRACT

2.2 This report details the results and working methods of an archaeological evaluation undertaken by Pre-Construct Archaeology Limited of land at Greenwich Reach, Thames Street, London Borough of Greenwich.

2.3 A number of archaeological investigations have been undertaken previously on the site and together with the current works, form the mitigation for the condition imposed upon the planning permission for the proposed development of commercial and residential properties.

2.4 Six trenches were excavated across the site that in general produced evidence of post-medieval and modern made ground. In the northeast of the site, a timber revetment of probable 19th century date was exposed and a deposit of post-medieval peat was recorded. A similar deposit was also recorded in a borehole sunk in a trench located near the centre of the site. The levels of the underlying gravels were attained in each of the trenches by borehole analysis.

3 INTRODUCTION

3.1 An archaeological evaluation was conducted by Pre-Construct Archaeology Ltd. at Greenwich Reach, Thames Street, Greenwich (Figure 1), in advance of redevelopment. The work followed a desk-based assessment, evaluation and watching briefs previously undertaken on the site.

3.2 The evaluation was conducted between the 24th April and 12th May 2006 and was commissioned by Greenwich Reach 2000 Ltd.

3.3 Excavation of six trenches using a mechanical excavator was undertaken on the site under archaeological supervision (Figure 2). Where logistically possible, excavation continued to the formation level of the proposed redevelopment at +0.90mOD. Boreholes were sunk through the base of each trench to the depth of the underlying gravel.

3.4 The National Grid Reference of the site centre is TQ 3788 7777.

3.5 The site was assigned the unique code GQR 06.

3.6 The evaluation was supervised by Stuart Holden and assisted by Mark Bagwell, John Hartley, Rebecca Lythe, Des O'Donoghue and Andy Sargant, with the project managed by Tim Bradley for Pre-Construct Archaeology.

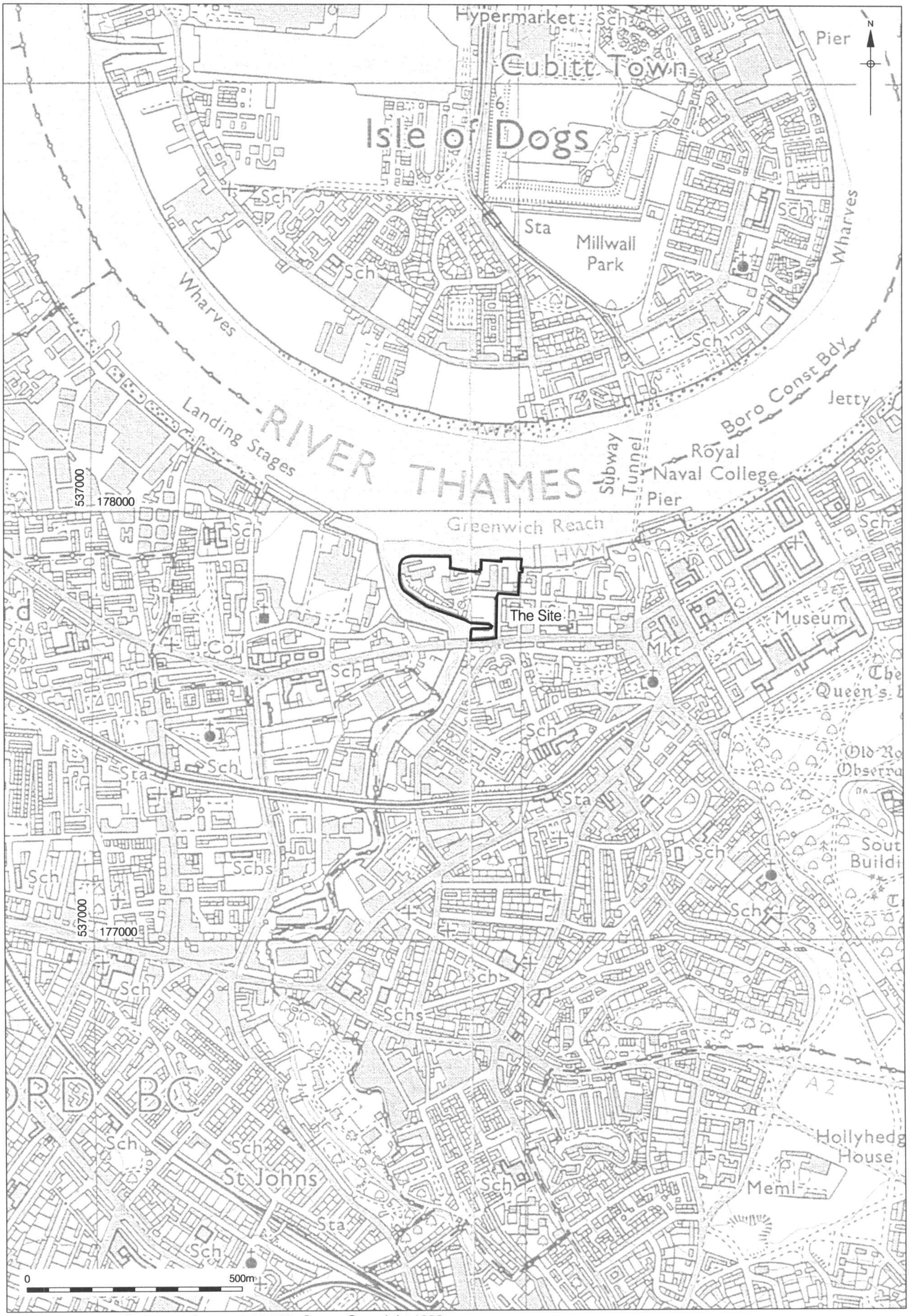


Figure 1
Site Location
1:12,500

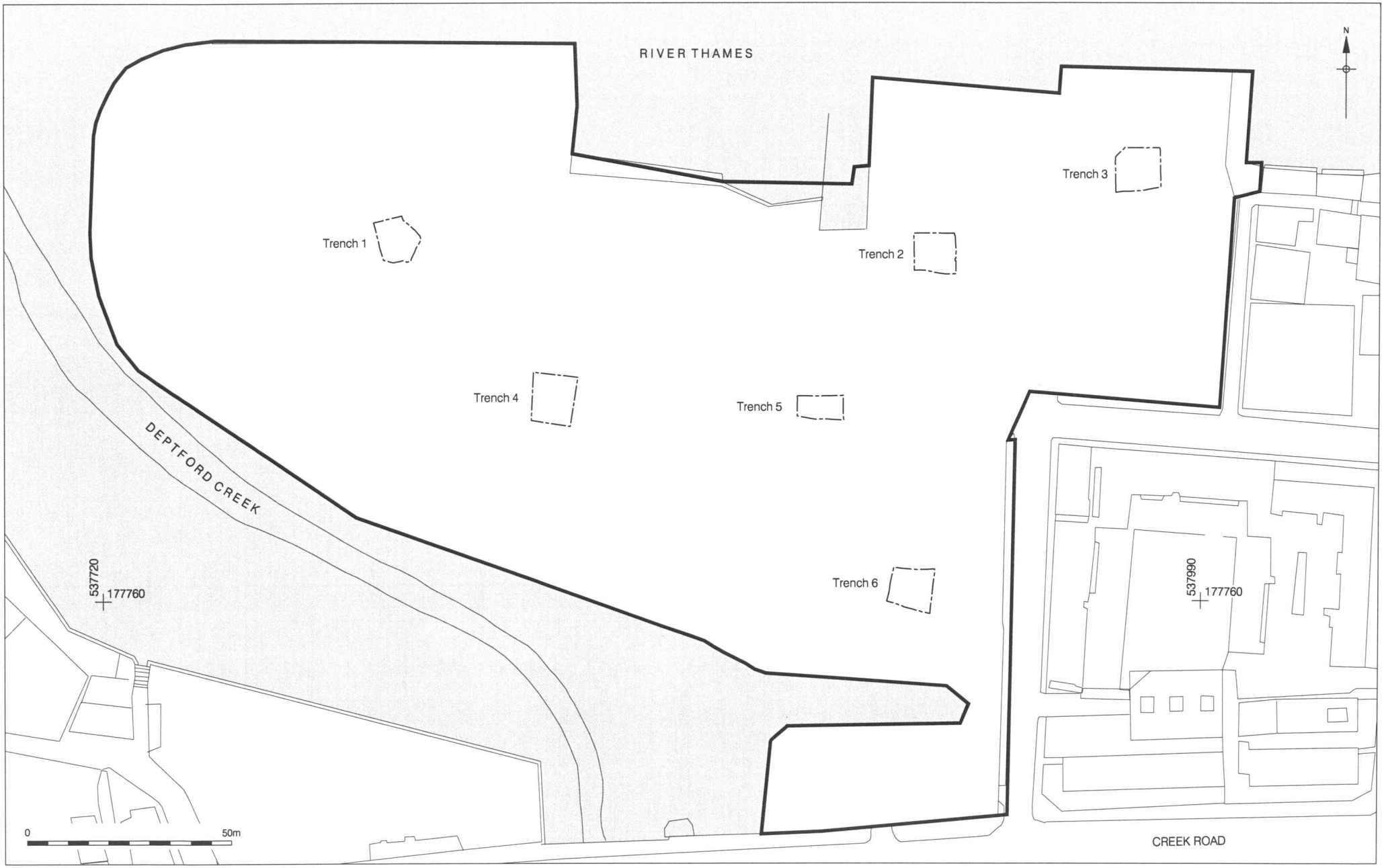


Figure 2
Trench Location
1:1250

4 PLANNING BACKGROUND AND RESEACH OBJECTIVES

4.1 Planning background

4.1.1 In November 1990 the Department of the Environment issued Planning Policy Guidance Note 16 (PPG16) 'Archaeology and Planning'. It provided guidance for planning authorities, property owners, developers and others on the preservation and investigation of archaeological remains.

4.1.2 The advice states 'the desirability of preserving an ancient monument and its setting is a material consideration in determining planning applications whether that monument is scheduled or unscheduled. Developers and local authorities should take into account archaeological considerations and deal with them from the beginning of the development control process' (paragraph 18).

4.1.3 It also states 'where nationally important archaeological remains, whether scheduled or not, are affected by proposed development there should be a presumption in favour of their physical preservation' (paragraph 8).

4.2 Archaeology in Greenwich and the Unitary Development Plan (UDP)

4.1.1 The study aims to satisfy the objectives of the London Borough of Greenwich, which fully recognises the importance of the buried heritage for which they are the custodians. The Borough's deposited second draft 'Unitary Development Plan' 2004 contains policy statements in respect of protecting the buried archaeological resource.

4.1.2 The proposed development of the site is subject to the Council's Archaeology Policy:

Archaeology

D29a At identified sites of known archaeological remains of national importance, including scheduled monuments, there will be a presumption in favour of the physical preservation of the remains in situ and to allow for public access and display. For sites of lesser importance the Council will seek to preserve the remains in situ, but where this is not feasible the remains should be either investigated, excavated and removed from the site, or investigated, excavated and recorded before destruction. Appropriate conditions/legal agreements may be used to ensure this is satisfied.

D29b The Council will expect applicants to properly assess and plan for the impact of proposed developments on archaeological remains where they fall within 'Areas of Archaeological

Potential' as defined on the constraints Map 10. In certain instances preliminary archaeological site investigations may be required before proposals are considered. The Council will seek to secure the co-operation of developers in the excavation, recording and publication of archaeological finds before development takes place by use of planning conditions/legal agreements as appropriate.

Reason

6.49 PPG16 gives guidance on how archaeological remains should be preserved or recorded. It recommends that UDPs should include policies for the protection, enhancement and preservation of sites of archaeological interest and of their settings, as well as a map defining where these policies apply. The Borough's archaeological heritage represents a local community asset which is desirable to preserve and utilise both as an educational and recreational resource. The objectives of new development can often conflict with the need to preserve, or to remove and record such remains. Potential developers should be alerted early on in the planning process of likely remains so as to secure their preservation. The support of local archaeological groups is essential to this process. The potential for discovery of significant remains in large areas of the Borough is high, whilst the opportunity to record and preserve such finite resources is usually restricted to none occasion.

6.50 The Council will also:

i. Pursue land use policies which are sensitive to the potential threat development can pose to archaeological remains and adopt a flexible approach to the design of new development in areas where the preservation of archaeological remains is paramount.

ii. Encourage co-operation amongst landowners, developers and archaeological groups by promoting the principles laid down in the British Archaeologists and Developers Liaison Group Code of Practice.

iii. Encourage developers to allow an appropriate level of archaeological investigation where significant remains are unexpectedly discovered during construction, and if applicable make provision for the preservation or recording of such finds by a recognised archaeological organisation.

4.3 Research Objectives

4.1.1 The 1997 brief, which was relevant for this stage of the work set out the following requirements:

- An assessment of the historic fabric which reflects the maritime character of the site, including walls, docks and marine furniture.
- An assessment of medieval and later flood protection and land drainage systems.
- An assessment of artefact groups that occur within archaeological strata and reworked deposits overlying natural sub-soils. Samples should be of sufficient size to allow dating and degree of residuality to be accurately determined.
- The examination of features cut into natural deposits, to identify and record prehistoric and later features, in particular date density and stratigraphic relationships.

- If early archaeological remains are present, to consider the potential for defining the environmental context to the activities of early populations, and arranging for analysis to determine the influence of these activities on the local environment.

4.1.2 The following research aims were addressed in the specification:

- Are there any high gravel islands that may have been exploited in the prehistoric or early historic eras or do the gravels shelve gentle towards the river.
- Does the peat in the vicinity of Boreholes 7 & 7C as identified in the 1997 watching brief (and possibly elsewhere) have archaeological significance, either in terms of its palaeoloenviromental information or as an ancient landscape?
- Is it possible to determine at what date the low-lying lands were protected from water inundation? Is it possible to establish a dated sequence of river defences? If so, are there similar defences along both the Ravensbourne and Thames frontages?
- What evidence do we have for land uses within the interior, i.e. on the landward side of river defences?
- Are there any *in situ* deposits of archaeological significance within the made ground or is it all of 19th/20th century dump and make-up deposits?
- What is the date and significance of the redeposited alluvium?
- To what building or range of buildings does the chalk wall/footing identified in the 2005 watching brief belong?

4.4 Mark Stevenson, English Heritage Greater London Archaeological Advisory Service (GLAAS) inspected and monitored the archaeological works on behalf of the London Borough of Greenwich.

4.5 There were no Scheduled Ancient Monuments within the footprint of the development.

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

5.1 Introduction

5.1.1 The following section is taken from the initial watching brief reports authored by Carew (1998) and Mattison (2005). A more detailed examination can be found in the desk-based assessment (Brown, 1994).

5.2 Prehistoric

5.2.1 There has been little in the way of solid evidence linking the earliest peoples to this part of the Thames valley. Although both Palaeolithic and Mesolithic finds have been made, the likelihood for them to have been found *in situ* is less than that of later stone tools. Neolithic cultural materials on the other hand, have been found on the site (polished stone axehead) or close by (flint flakes in a pit at Deptford Broadway).

5.2.2 Marshy deposits on both sides of the River Thames have revealed an abundance of Bronze Age materials and timber trackways are not uncommon. Of evidence from this particular area, a flanged axe and palstave were recovered nearer to the head of the River Ravensbourne (Deptford Creek). It is thought, however, that this activity represents seasonal exploitation rather than occupation.

5.2.3 The only recorded Iron Age find is that of a saddle quern fragment at Deptford Broadway.

5.3 Roman

5.3.1 Roman finds from the vicinity have been plentiful. Examples include a coin from the Power Station site (SOA96) and various bronze artefacts including a lamp from nearby Deptford Broadway. Roman materials have been found all along the Thames estuary at different levels including some from beneath peat deposits at Woolwich.

5.3.2 The site is close to the Roman thoroughfare known as Watling Street. However, the exact position of the road between Shooters Hill to the east and Southwark to the west is a matter of some dispute.

5.4 Saxon and Medieval

5.4.1 There are no recorded finds in the vicinity from before the Norman Conquest, though there is a pre-Domesday Book reference for a settlement – Meretun – either near to Deptford Strand or Deptford Broadway. Excavations at the Broadway produced a Saxon grave with grave goods. Saxon pottery was immediately to the west of St. Nicholas Church, which itself may be of Saxon origin.

5.4.2 According to a 10th century charter, land to the east of the Ravensbourne was lost to Vikings and in 1016, Edward the Confessor promised he would recover the lost land.

5.4.3 Post-Domesday records seem to show that much of the land held by abbeys in the area was falling into a poor state. This was primarily due to repeated inundation and general lack of maintenance. There are in fact, no recorded details of land management at that time.

5.4.4 It is generally believed that land next to the banks of the Ravenbourne and Thames in the vicinity was used primarily as meadow or pasture as no evidence of medieval or early post-medieval buildings have found.

5.5 Post-Medieval

5.5.1 Map regression techniques demonstrate the sequence of land-use post-1746. Rocque's map from this year shows no development east of the Ravensbourne.

5.5.2 A programme of archaeological observation and recording was undertaken in 2005 at Wood Wharf, adjacent to the eastern boundary of the subject site (Compass Archaeology, 2005). An east-west orientated drainage channel 4 to 5m wide was found, running through the centre of the site that may have been dug in the early- to mid- 17th century. This underwent stages of timber revetment through the early-18th century, gradually becoming contracted to around 1m in width before being filled in, probably some time between 1730 and 1750. By the time of Searles map of the Medclafe Estate 1777, this site is occupied by a boat building yard and annotated as *Wood Wharf*.

5.5.3 Searles map shows that the area subject site is partially located upon what was known as Brooks Marsh, indicating its waterlogged condition. At the western end of the peninsula and on the eastern side of the bend in Deptford Creek are two low-lying areas of oziers (productive reed beds). Laurie's 1821 map then shows the emergence

of a street pattern, with Norway, Creek and Thames Streets being shown. A timber yard has also now appeared replacing the boat building yard and extending onto the subject site. The timber yard is also present on Greenwood's map of 1826.

5.5.4 The Phoenix Gas Works appears in 1838, occupying most of the east side of the site. It is presumed that around this time revetted river defences were constructed as land-use became much heavier. By the time of the 1864 Ordnance Survey map the gas works had been extended and is joined by an iron ship building yard on the north of the site and an ironworks on the south side. In 1893 there was a large coal depot towards the centre of the site.

5.1.1 The Phoenix Gas Works was replaced by aggregate production and storage after the Second World War and since then the site has been home to industries such as scrap metal merchants and vehicle mechanics.

5.6 **Previous work**

5.6.1 The watching brief undertaken by PCA in 1997 under the sitecode NWS 97 (Carew, 1998) constituted the archaeological monitoring of seventeen test pits and seven boreholes. This work identified that beneath several metres of 19th and 20th century made ground, alluvial deposits were present that had the potential to contain archaeological material either within or on top of them. Layers of peat were identified and the level of the natural gravels recorded within the boreholes.

5.6.2 A watching brief was undertaken by PCA in 2004 during the excavation of geotechnical test pits (Bazley, 2004). Of the fifty-seven excavated, fourteen were monitored archaeologically with made ground recorded in each of them. River wall tie-backs and two instances of 20th century river wall were also revealed.

5.6.3 The watching brief, also undertaken by PCA, in 2005 under the sitecode RWW 05 (Mattison, 2005), constituted the archaeological monitoring of the insertion of new river walls and repairs to those extant. Chalk foundations of possible late-medieval river revetment and timber revetments of post-medieval date were recorded along sections of the river walls in the northeastern part of the site.

6 METHODOLOGY

6.1 The fieldwork was conducted according to the Method Statement (Bradley, 2005) that was designed to assess the presence or absence of significant archaeological remains, which may require further investigation.

6.2 The excavation of six trenches was agreed with the Mark Stevenson, English Heritage Greater London Archaeological Advisory Service (GLAAS) on behalf of Greenwich Borough Council. Permission for the excavation of a further trench at the southern end of the site, adjacent to Deptford Creek, was declined by the Environment Agency due to the proximity to the river walls.

6.3 Due to the formation level of the proposed redevelopment being at considerable depth below ground, trench support works, in the form of stepped edges, were emplaced in order to make the excavations safe for working. These consisted of nominally a 1.2m wide step for every 1.2m depth.

6.4 Due to the high levels of hazardous materials identified on the site (asbestos, heavy metals, hydrocarbons) suitable personal protective equipment was worn by all personnel likely to come into contact with the contaminated land. In addition, a gas monitoring kit was used to highlight any potentially fatal changes to the atmospheric conditions within the working environment.

6.5 Under archaeological supervision, a mechanical excavator fitted with a flat ditching bucket was used to remove unproductive soils down to the highest archaeological horizon or the top of the alluvial sequence or to a depth at which ground water was present, which ever was the highest. At this point the faces of the trenches were cleaned and the sections and archaeological features recorded. Boreholes were sunk to a depth at which the underlying gravels were attained. Where logistically possible, the trenches were then further excavated to the proposed formation level and the resultant sections recorded.

6.6 The features identified within the trenches were then cleaned and investigated by hand. Investigation was limited to identifying the extent and nature of the deposits and to recover dating evidence.

6.7 Archaeological features (stratigraphical layers, cuts, fills, structures) were recorded as necessary in plan and in section using standard recording methods. A photographic

record using 35mm colour transparencies, black and white print film and digital mediums was also made as appropriate.

6.8 The levels of the deposits relating to Ordnance Datum were calculated using the height of survey station ‘1A’ located on the northern river wall, value 5.73mOD.

6.9 The work was undertaken following English Heritage (GLAAS) guidelines (English Heritage 1998).

6.10 Following the completion of the archaeological investigation, the boreholes were sealed using ‘bentonite’ to prevent contamination of the underlying deposits and water table. The remainder of the trenches were backfilled using the excavated material by Erith Contractors.

7 GEOLOGY AND TOPOGRAPHY

7.1 Geology

7.1.1 The British Geological Survey 1:50,000 Series Sheet 270 (South London) indicates that the site is likely to be underlain by alluvium over Flood Plain Gravel. These in turn overlie Woolwich and Reading Beds and Thanet Beds of Eocene age.

7.2 Topography

7.1.1 The topography of the surrounding area is generally flat, being situated on the Thames Valley floor. It begins to rise sharply to the south and east as the most recent of the Pleistocene terraces – the “Kempton Park” terrace – is encountered.

7.1.2 Greenwich Reach is situated on the spur of land immediately to the east of the convergence of the River Ravensbourne (Deptford Creek) and the River Thames.

7.1.3 Topography of the site itself is varied due to demolition having previously taken place. Height varies generally between 5m OD and 6m OD but in some places is closer to 7m OD.

8 ARCHAEOLOGICAL SEQUENCE

8.1 Summary

8.1.1 A general sequence of gravel overlain by alluvium and layers of post-medieval and modern made-ground was present in each of the trenches excavated. In two of the trenches (Tr 3 and Tr 4) peat formations were recorded. Within trench 3, timber revetment structures of probable 19th century date were encountered.

8.2 Trench 1 (Figure 3 & Figure 7: Section 1)

8.1.1 This trench measured 12m east-west by 11m north-south, cut from a height between 3.85m OD and 4.05m OD and positioned centrally within the peninsula of land extending out to the west. The excavation of the trench was hindered by the presence of substantial concrete piles that could not be removed. Augering was undertaken from a level of 1.47mOD.

8.1.2 Natural sandy gravels [97] were reached at a maximum height of –1.83mOD. These were overlain by a sequence of alluvial silty clay layers interspersed with sandy lenses in the lower reaches (highlighted) **[96]**, [95], **[94]**, [93], [92], [91], [90] [89], and [104] with the top of the sequence at 2.15mOD. Alluvial silty clay layer [103] contained within its composition a moderate quantity of organic material such as roots and plant debris, suggesting that it formed during a period of marginality between the land and waters edge. Searles map of the survey of the Medclafe estates, dated 1777 shows this part of the site within an area marked *Oziers* (osiers), which were cultivated reed beds producing willows used in basket weaving. From layer [104], a sherd of developed cream ware dated 1760-1830 was recovered whilst from [103], a sherd of Staffordshire slipware dated 1660-1870 was found.

8.1.3 A 0.55m thick layer of redeposited alluvium [102], present at a maximum height of 3.42mOD is likely to represent the first event of land reclamation within this trench. This was overlain by a 0.15m thick layer of indurated sandy silt [101] followed by loose silty sand and gravel [100] forming a sub base for sandstone slabs [99] that are likely to represent a floor surface to a 19th century workshop. These were regularly cut to form a smooth surface, each measuring nominally 620mmx480mmx95mm and jointed with a silty sand mortar. The concrete piles mentioned previously punctured this floor surface, whilst loose brick rubble and a concrete slab of 20th century date completed the sequence.

8.3 **Trench 2** (Figure 7: Section 2)

8.1.1 This trench measured 10.4m east-west by 10.0m north-south, cut from a height between 5.21mOD and 5.26mOD through a concrete slab and positioned centrally at the north of the site. Augering was undertaken from a level of 2.09mOD.

8.1.2 Natural gravels [67] were reached at a depth of –1.77mOD overlain by alluvial silty clay [66] to a height of 1.19mOD that contained within its composition occasional organic material such as waterlogged wood fragments. These organic inclusions may hint towards the osiers beds mentioned in 7.2.2.

8.1.3 Alluvial silty clay [65] (same as [68] from which a sherd of post-medieval red ware dated 1580-1900 was recovered) was occasionally flecked with chalk, charcoal and very occasionally cbm (ceramic building material) intimating that the material had been redeposited as made ground. Silty clay layer [64] was up to 1.71m thick and present to a height of 3.61mOD containing pottery fragments of sugar cone moulds dating to 1580-1900 although the slip present on one suggests a date after 1650.

8.1.4 A sequence of made ground deposits and levelling layers were recorded, some of which appeared to comprise of industrial waste. Made ground layer [63] contained sherds of post-medieval red ware dated 1580-1900 although the forms suggest a17th or 18th century date. Similarly, made ground layer [56] produced a sherd of transfer printed ware dated 1780-1900. Both these deposits were towards the lower reaches of the sequence.

8.1.5 Through the south facing section, a deep cut was visible that is likely to have been an earlier test pit.

8.4 **Trench 3** (Figure 4 & Figure 7: Section 3)

8.1.1 This trench measured 11.7m east-west by 11.0m north-south, positioned in the northeast corner of the site. Augering was undertaken from a level of 2.00mOD.

8.1.2 The natural gravels [71] were reached at a height of –2.14mOD and were overlain by a 3.50m thick layer of silty clay alluvial deposits [70]. Within the borehole, these were sealed by a 0.50m thick layer of peat [37], from which sherds of post-medieval red ware were recovered dated 1580-1900 as well as tiles used as kiln furniture. It is

known that pottery was produced in Deptford from 1660-1961 and it is likely that this material is waste resulting from this manufacture.

8.1.3 Within the deepest excavated part of the trench, a timber plank [34] was exposed running approximately north-south. To the east of this a layer of cbm [39] was found at a height of 1.10mOD beneath alluvium [38] and the peat, suggesting that it may lay within a cut revetted by the timber and backfilled with the excavated alluvium and peat. The depth of the excavation prohibited complete recording due to health and safety concerns. The cbm consisted of floor tile fragments in an orange sandy fabric that could date to the late-medieval period but are likely to be of 17th or 18th century date.

8.1.4 Running east-west across the trench was structure [35], lying within a cut [128] through the peat. This consisted of a brick core [45] with a skin of timber planks [26]-[28] laid on edge horizontally on the northern side. To the north of these, were two rectangular posts [42] and [43] to which the planks are likely to have been fixed, although the limit of excavation prevented confirmation of this. In the western section of the trench, the structure was recorded to a maximum height of 2.98mOD.

8.1.5 A second structure [36] running northwards from [35] at the western section of the trench was also constructed in timber and consisted of planks laid on edge horizontally ([22], [24] & [25]) and fixed to a vertical post [21] with iron nails. Three planks were recorded although the base of the structure was not reached.

8.1.6 These two timber structures may have formed the dock, indicated on Weller's map of 1862, although in little detail, and the 1864 Ordnance Survey Map as Norway Wharf- a ship building yard. Deposit [69] was recorded in the northwest corner of the excavation lying against structures [35] and [36] to a height of 1.89mOD and consisted of compact sand and gravel that may have been the foreshore within the dock, or an instance of backfilling once the dock went out of use.

8.1.7 Made ground deposit [20] lay against [35] on its southern side and fragments of sugar cone moulds of 19th century form were recovered from this deposit. In the western section, [20] was succeeded by layers [19], [18] and [17]. From the latter, a sherd of post-medieval redware was recovered that was possibly of local origin as it was an unusual form- possibly a syrup collecting jar intimated by the narrow neck, dated 1580-1900. Layer [16] was deposited across [17] and over structures [35] and [36], suggesting that they stood proud of the surrounding landward ground. A timber post

or stake [33] was driven down through [16] implying that it formed a land surface for a period of time.

8.1.8 A series of made ground layers [15], [14], [13], [12], [11] and [10] raised the level of this part of the site further and were cut by [8], a construction cut for a building in which sub-base layer [7] and concrete floor surface [6] were laid. At the southern end of [6] brick wall [5] was built. It appears that this building was later extended towards the north with concrete floor surface [4]. At the end of its life, two further made ground layers [2] and [1] were deposited and capped with concrete slab [1].

8.5 **Trench 4** (Figure 6: Section 4)

8.1.1 This trench measured 11.2m east-west by 11.9m north-south, positioned towards the centre of the site. Excavation through modern backfill revealed the presence of a large brick structure, most likely a gas holding tank, prevented full excavation of this trench. The archaeological sequence was recorded through the sinking a borehole in the southeast corner of the trench, away from the intrusion. Augering was undertaken from a level of 3.00mOD.

8.1.2 Natural gravels were present at a height of –3.20mOD [127], overlain by alluvial silty clay layer [126]. Two deposits of silty clay alluvium [125] and [124] contained fragments of organic matter and were overlain by a 0.50m thick layer of slightly silty peat [123], present at a height of –0.20mOD. A further four layers of alluvial deposits were recorded [122], [121], [120] and [119] to a height of 1.95mOD and were proceeded by a 0.50m thick layer of peaty silty clay [118]. Two layers of redeposited alluvium [117] and [116], completed the borehole sequence.

8.1.3 Peaty silty clay deposit [118] may correspond to the osier beds, whilst the earlier deposit of peat [123] could be filling a palaeolchannel. An environmental sample was taken from this deposit, although as recovered from the auger gouge, the low volume of material recover may limit the information that could be gained from analysis.

8.6 **Trench 5** (Figure 6: Section 5)

8.1.1 This trench measured 11.4m east-west by 6.0m north-south, and was positioned towards the east of the site, in line with Thames Street. Augering was undertaken from a level of 0.65mOD.

8.1.2 Natural gravels were present at a height of –2.95mOD overlain by a 2.60m thick deposit of silty clay alluvium, banded with greenish brown lenses. An alluvial silty clay deposit containing occasional small fragments of organic matter was present at a height of –0.15mOD. Silty clay alluvium layer [112] completed the auger sequence and was the same as [111], the latter being recorded in the trench section.

8.1.3 Alluvial silty clay layers [109] and [110], present to a maximum height of 2.38mOD, comprised 10-20% of organic material as well as fragments of ridge tile of post-medieval date, pottery sherds including developed cream ware dated 1760-1830 and a fragment of clay tobacco pipe stem with HP stamped on the heel, possible Henry Prick who is recorded as operating in Greenwich in 1704. These may represent the first instances of land reclamation, although the presence of the cultural material could be from discarding of material into the area which is denoted on the 1777 Searle map as Brook's Marsh.

8.1.4 A 0.25m thick deposit recorded as being of broken roof tile [108] is likely to be the first comprehensive evidence of made ground as land reclamation. On closer inspection, the sample of material recovered proved to be sugar cone moulds of post-medieval red ware, whilst the pottery sherds recovered from this context included cream wares, transfer printed wares and pearl wares dated 1770-1830 with one sherd of pearl ware having a rococo edge dating 1790-1810. This was overlain by a layer of redeposited alluvium [107] to a height of 2.83mOD. A 1.12m thick layer of made ground [106] and concrete [105] forming the road surface running through the site completed the sequence.

8.7 **Trench 6** (Figure 6: Section 6)

8.1.1 This trench measured 11.0m east-west by 11.0m north-south, positioned in the southeast of the site, close to Deptford Creek and cut from between 6.52mOD and 6.40mOD. Augering was undertaken from a level of 2.44mOD.

8.1.2 Natural gravels [88] were present at a height of –1.55mOD overlain by a 2.49m thick layer of alluvial silty clay [87] and alluvial silty clay [85] 0.29m thick and at a height of 1.23mOD. Layer [85] and subsequently [84] were the first made ground deposits recorded, the latter containing occasional flecks of cbm within its composition and at a maximum height of 2.10mOD.

8.1.3 Layers [83], [82], [81], [80], [79] and [78] formed successive deposits of made ground to a height of 3.62mOD. Layers [78] and [82] both produced sherds of post-medieval

red ware dated 1580-1900 whilst [81] contained a sherd of Staffordshire type white stoneware dated 1720-1780. Across this sequence of deposits, a probable road or floor surface formed of granite sets was constructed [77] to a height of 3.94mOD. This was visible in the southern section of the trench but did not extend farther than 1m to the north. A 0.22m thick reinforced concrete floor slab [76] was laid upon the sets and extended across the trench. Brick rubble and made ground layers [75], [74] and [73] were dumped upon the concrete slab with 1.1m of modern detritus completing the sequence.

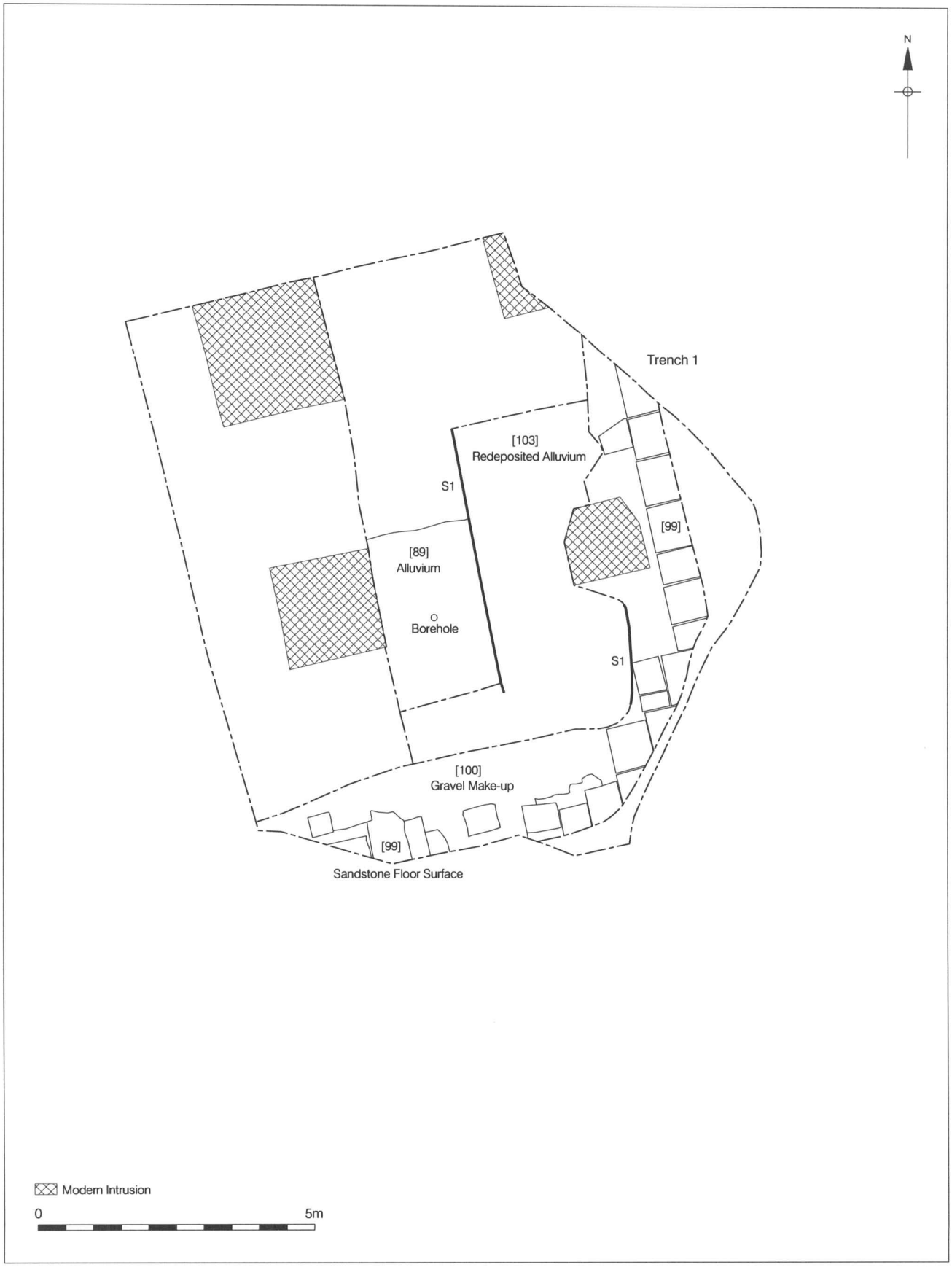


Figure 3
Trench 1
1:100

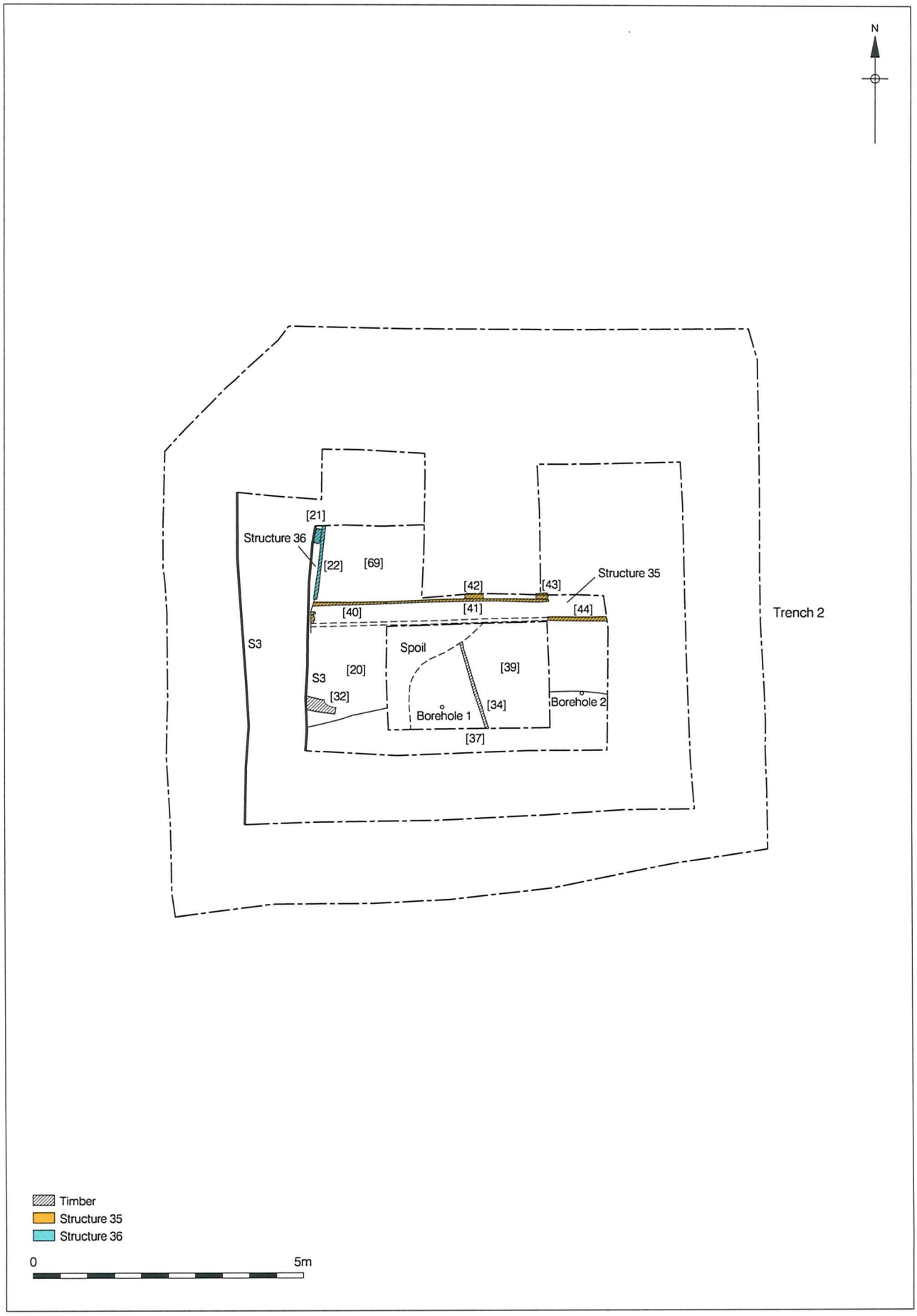


Figure 4
Trench 3
1:100

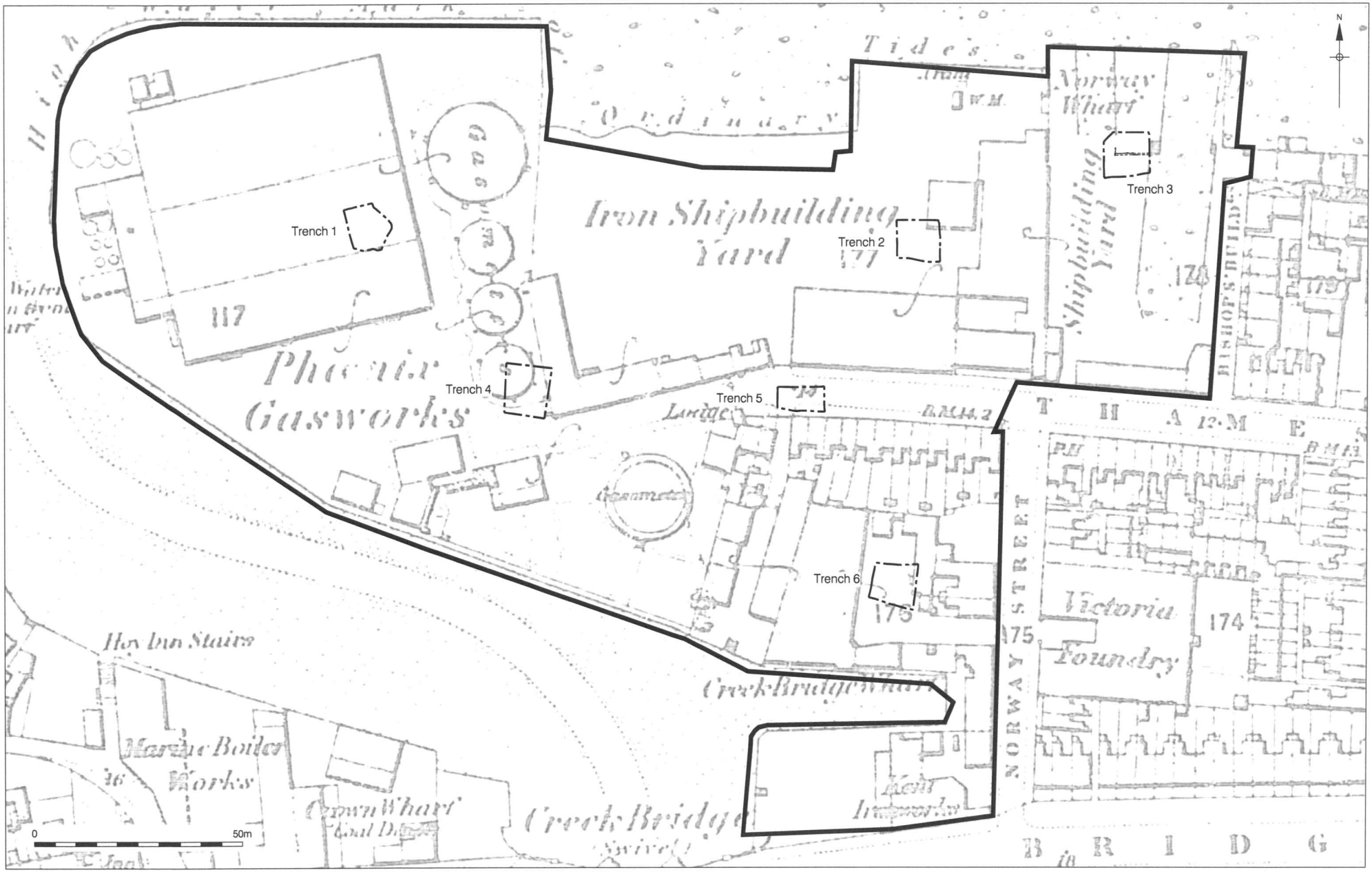


Figure 5
Ordnance Survey Map, 1869
1:1250

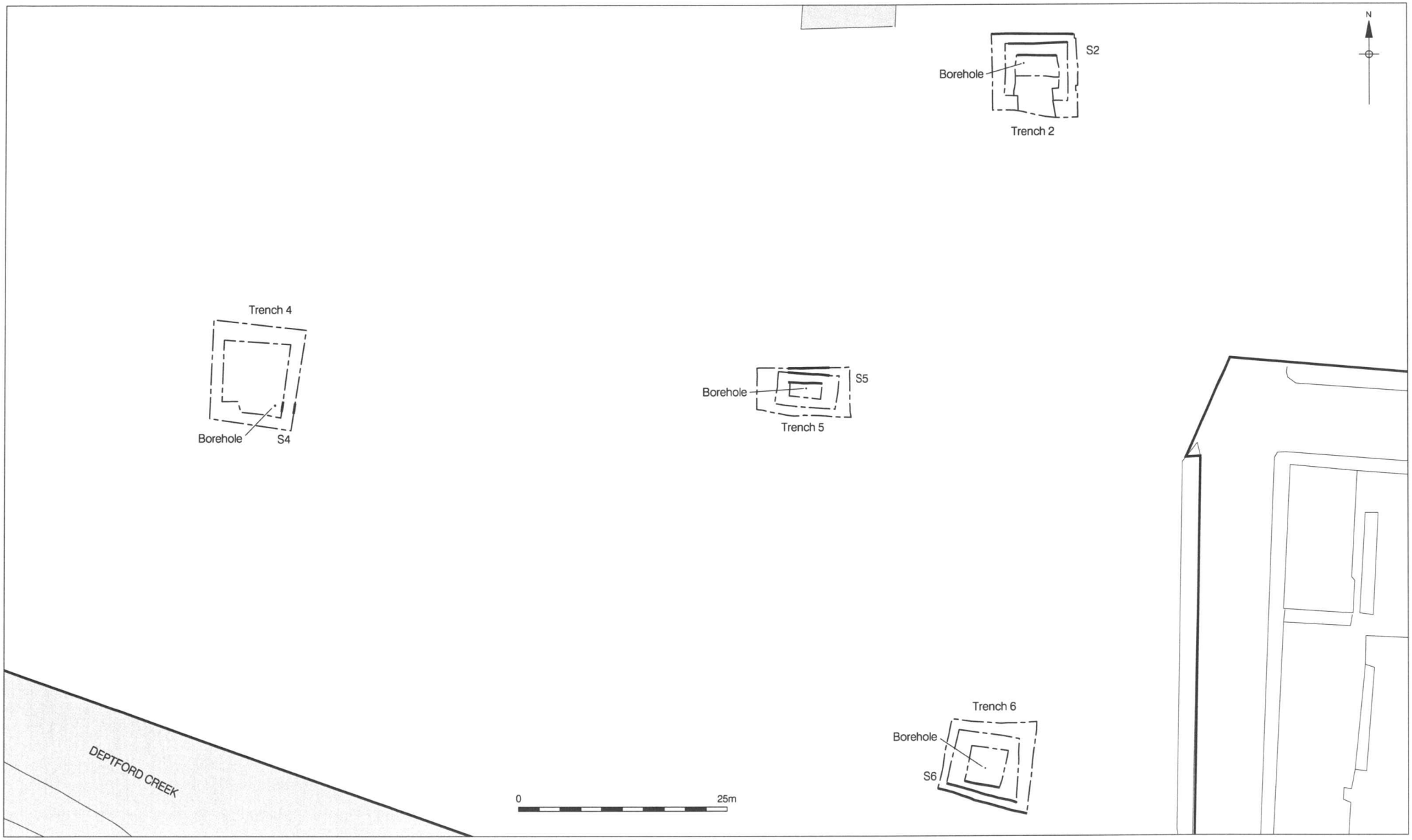
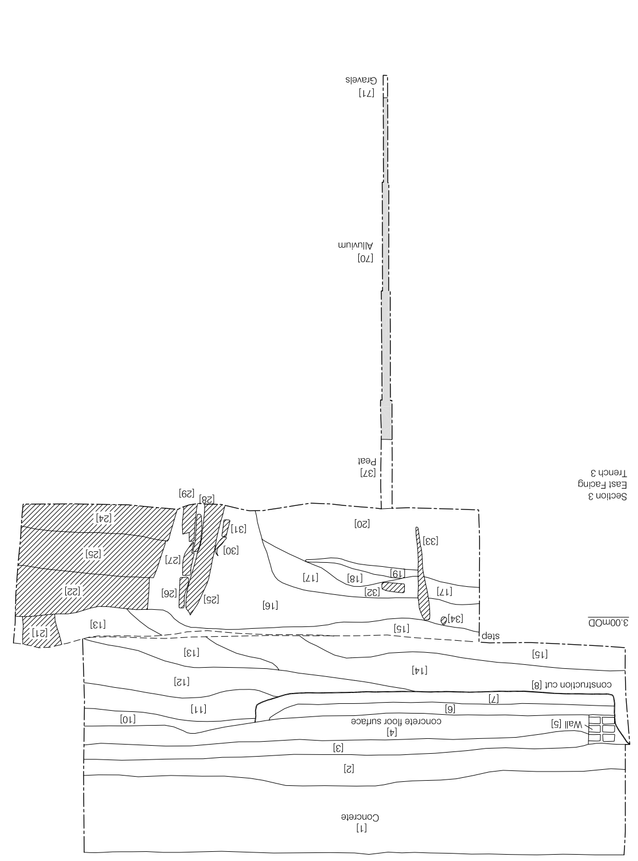
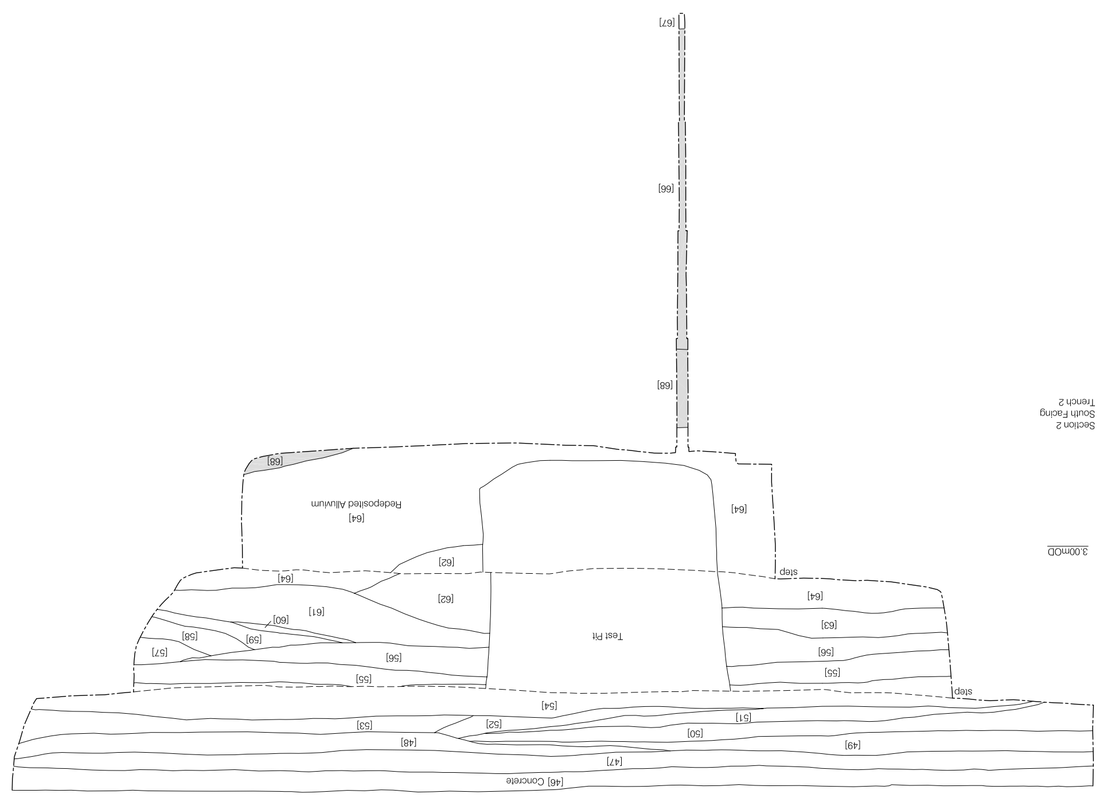


Figure 6
Location of Sections 2, 4, 5 & 6
1:625





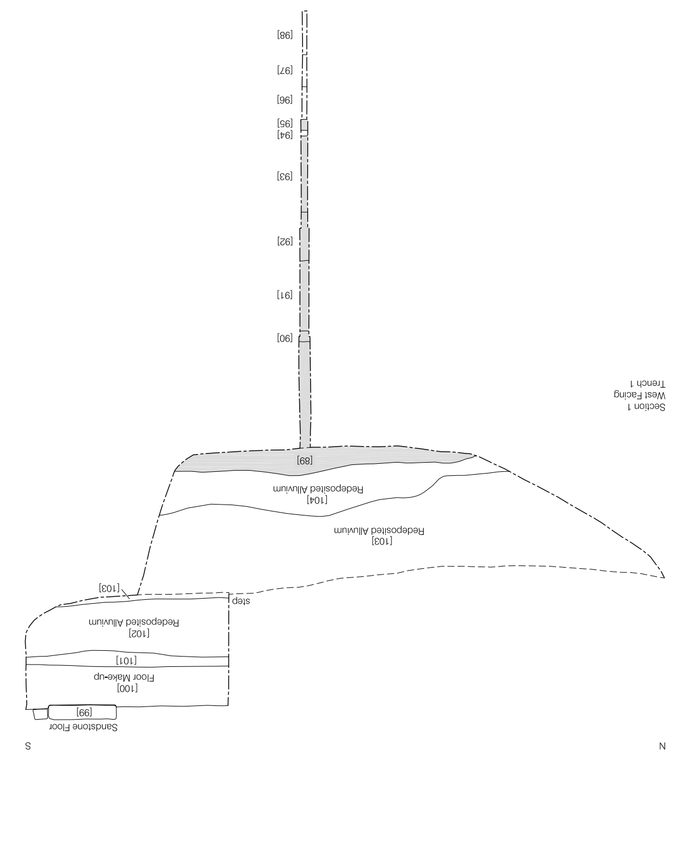
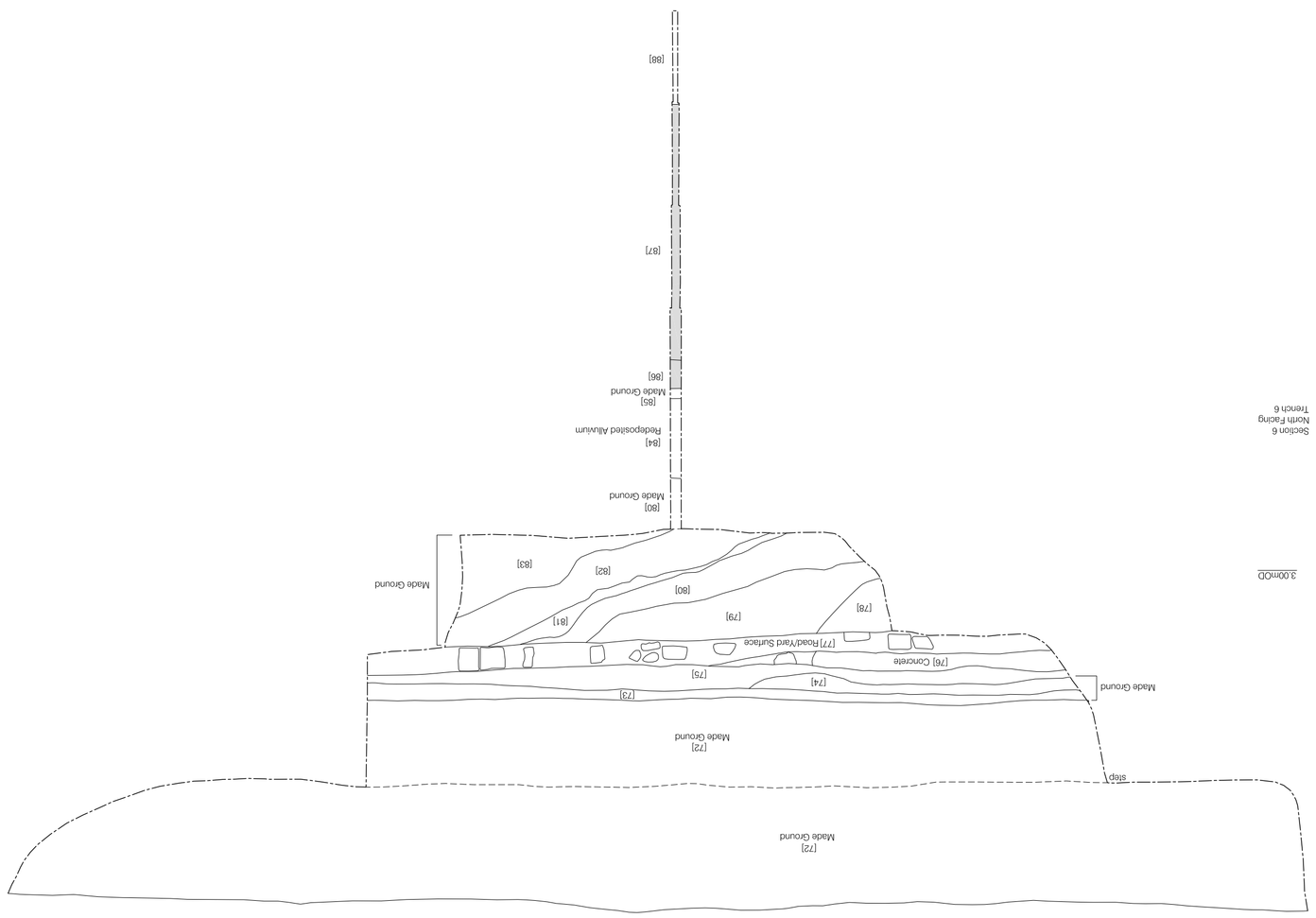
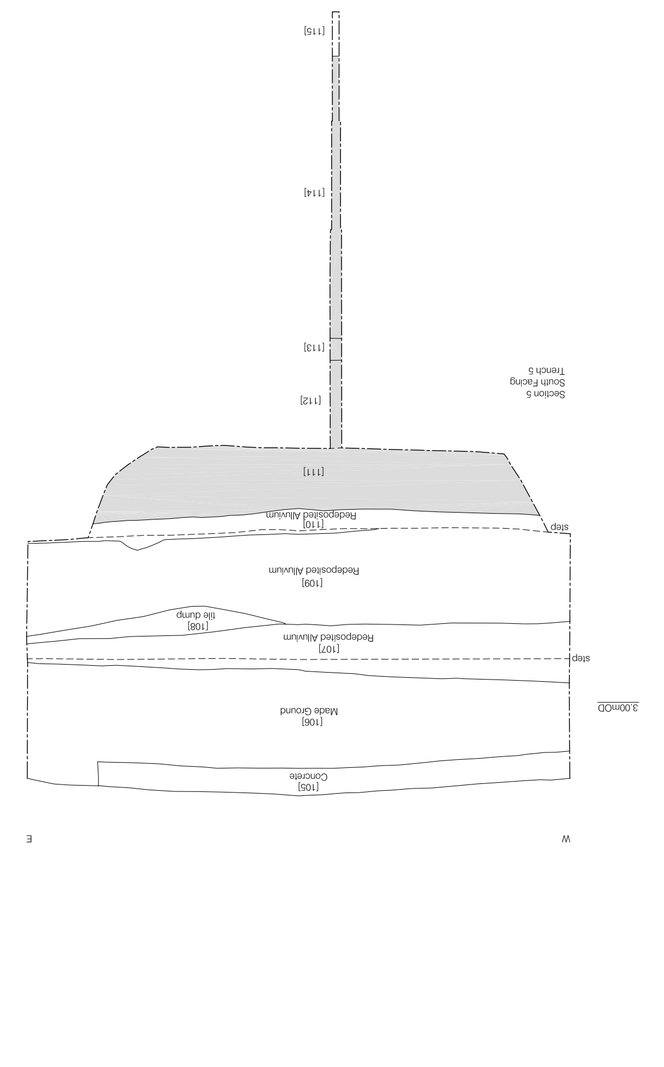


Figure 7
Sections 1 - 3
1:40





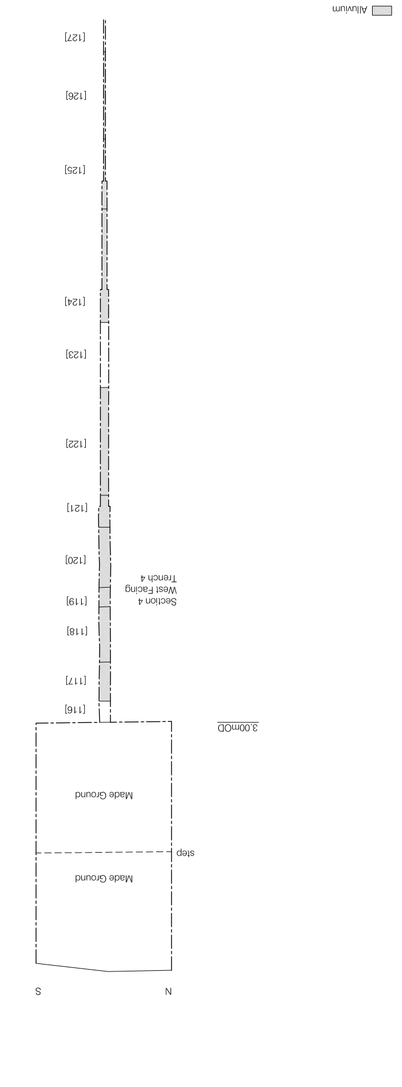


Figure 8
Sections 4 - 6
1:40

9 CONCLUSIONS

9.1.1 The evaluation provided further information on the levels at which the underlying gravels are present, from which a palaeotopographic model could be extrapolated. The sequence of alluvial deposits could also offer information on the natural accumulation of water lain material since the gravels were formed.

9.1.2 The presence of peat recorded low down in the sequence of the borehole sunk in Trench 4 may indicate a palaeochannel. Borehole 7c, monitored during the watching brief on the geological exercises in 1997, also recorded peat at a comparable depth and thickness: -0.90mOD and 0.50m thick in 1997 and –0.20m and 0.50m thick during the current evaluation.

9.1.3 The presence of organic material within the upper reaches of the alluvial deposits, as well as the presence of later peat deposits, give evidence for the site being in an waterlogged marshy area as indicated on the Searle map of 1777. The finds recovered from the redeposited alluvium layers and the made ground shed light on the first instances of land reclamation in the later post-medieval period. Although much of these dateable artefacts have broad production date ranges, the developed cream ware from [104] in Trench 1 dates 1760-1830, the brick fragment from [55] in Trench 2 dates late-18 to early-19th century, the pearl wares, cream wares and transfer printed wares from [108] in Trench 5 date 1770-1830, whilst the clay tobacco pipe from [111] also in Trench 5 dates 1700-1770. As a whole, these suggest that a date of the late-18th or early-19th century, as indicated by the cartographic evidence, is the period in which the land starts to be reclaimed.

9.1.4 No structures or earthworks such as the sea walls or ditches indicated on Searles map were encountered, neither was the timber revetted channel recorded to the east of the subject site at Wood Wharf. Trench 1, positioned to the north of the approximate alignment of this channel revealed two timber structures, one orientated east-west and one north-south. It likely that these formed part of the slipway of Norway Wharf indicated on the 1864 Ordnance Survey Map.

9.1.5 The made ground deposits of later 19th and 20th century date are of little intrinsic archaeological value.

10 ACKNOWLEDGEMENTS

10.1 Pre-Construct Archaeology Limited would like to thank Greenwich Reach 2000 Ltd, for commissioning the work, EC Harris for project management and Mark Stevenson for his archaeological advice and for monitoring the evaluation. Ove Arup were very helpful in advising on the contamination issues regarding the site. Thanks to Steve Ellwood, GLAAS SMR Officer for help with information on Wood Wharf.

10.2 The author would like to thank Mark Bagwell, John Hartley, Becky Lythe, Des O'Donoghue and Andy Sargent for their work on site, especially considering the unpleasantness of the ground conditions. Thanks also to Erith Contractors for their assistance throughout the excavations. Fiona Keith-Lucas surveyed the trenches, Hayley Baxter produced the drawings and Chris Jarrett and John Brown provided the spot dates whilst Tim Bradley undertook the project management and editing.

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APPENDIX 1: CONTEXT DESCRIPTIONS

Context	Type	Trench	Description	Max OD	Min OD	Finds	Date Range	Description
1	Layer	3	Concrete	4.89	4.87			
2	Layer	3	Made ground	4.56	4.39			
3	Layer	3	Made ground	4.32	4.16			
4	Layer	3	Concrete	4.19	4.05			
5	Masonry	3	Wall	4.17	4.16			
6	Layer	3	Concrete	3.95	3.89			
7	Layer	3	Levelling for [6]	3.97	3.77			
8	Cut	3	For [4], [5], [6]	4.17	3.69			
9	Layer	3	Made ground	4.17	3.72			
10	Layer	3	Made ground	4.08	3.97			
11	Layer	3	Made ground	3.96	3.84			
12	Layer	3	Made ground	3.75	3.62			
13	Layer	3	Made ground	3.49	3.20			
14	Layer	3	Made ground	3.72	3.18			
15	Layer	3	Made ground	3.49	2.93			
16	Layer	3	Made ground	3.15	2.94			
17	Layer	3	Made ground	2.90	2.66	POT	1580-1900	Post-medieval redware (PMR) poss local as unusual form- poss a syrup collecting jar.
18	Layer	3	Made ground	2.74	2.50			
19	Layer	3	Made ground	2.65	2.49			
20	Layer	3	Made ground	2.72	2.28	POT	1580-1900	Sugar cone moulds of 19th century form
21	Timber	3	Post	3.28	3.24			
22	Timber	3	Plank	2.99	2.91			
23	Timber	3	Plank	2.64	2.52			
24	Timber	3	Plank	2.31	2.17			
25	Timber	3	Post	2.98				
26	Timber	3	Plank	2.92				
27	Timber	3	Plank	2.62				
28	Timber	3	Plank	2.40				
29	Timber	3	Post	2.30				
30	Timber	3	Plank	2.45				
31	Timber	3	Plank	2.26				
32	Timber	3	Plank	2.78	2.75			
33	Timber	3	Post	3.03				
34	Timber	3	Spar	3.08				
35	Structure	3	E-W River wall	2.98				
36	Structure	3	N-S River wall	3.28				
37	Layer	3	Peat	2.00	1.50	POT	1580-1900	Includes tiles used as kiln furniture. Pottery made at Deptford from 1660-1961.
38	Layer	3	Alluvium	1.55	1.10			
39	Layer	3	CBM dump	1.10	1.05	CBM	l-med-p-med	Floor tile, orange sandy fabric. prob 17-18th century
40	Timber	3	Plank	2.13				
41	Timber	3	Plank	2.13	2.10			
42	Timber	3	Post	2.40				
43	Timber	3	Post	2.36				
44	Timber	3	Plank	2.02				
45	Masonry	3	Brick core to [35]			CBM	l-17th-e-19th	Fabric 3032 all surfaces heavily vitrified poss 2nd or burr. Prob 18th Century
46	Layer	2	Concrete	5.26	5.21			
47	Layer	2	Made ground	5.09	5.03			
48	Layer	2	Made ground	4.97	4.88			
49	Layer	2	Made ground	4.92	4.80			
50	Layer	2	Made ground	4.81	4.70			

51	Layer	2	Made ground	4.75	4.45			
52	Layer	2	Made ground	4.78	4.50			
53	Layer	2	Made ground	4.81	4.51			
54	Layer	2	Made ground	4.60	4.44			
55	Layer	2	Made ground	4.29	4.06	CBM	18th-e-19th	Fabric 3032 brick fragment
56	Layer	2	Made ground	4.20	3.85	POT	1780-1900	Transfer Printed Ware
57	Layer	2	Chalk Dump	4.10	4.00			
58	Layer	2	Grey alluvium	3.90	3.84			
59	Layer	2	Made ground	3.96	3.65			
60	Layer	2	Redeposited alluvium	3.89	3.70			
61	Layer	2	Made ground	3.95	3.60			
62	Layer	2	Made ground	3.80	3.43			
63	Layer	2	Made ground	3.85	3.75	POT	1580-1900	PMR prob 17th/18th Century
64	Layer	2	Redeposited alluvium	3.61	3.00	POT	1580-1900	Slip on sugar cone mould suggests post-1650
65	Layer	2	Redeposited alluvium	1.91				
66	Layer	2	Grey alluvium	1.19				
67	Layer	2	Gravel	-1.77				
68	Layer	2	Redeposited alluvium	2.35	2.11	POT	1580-1900	PMR
69	Layer	3	Backfill of ?dock	1.89				
70	Layer	3	Alluvium	1.36				
71	Layer	3	Gravel	-2.14				
72	Layer	6	Made ground	6.42	6.32			
73	Layer	6	Black	4.32	4.22			
74	Layer	6	Brick rubble	4.22	4.15			
75	Layer	6	Made ground	4.17	4.02			
76	Layer	6	Concrete	3.98	3.92			
77	Layer	6	Road surface?	3.94	3.77			
78	Layer	6	Made ground	3.62	3.60	POT	1580-1900	PMR
79	Layer	6	Made ground	3.72	3.08			
80	Layer	6	Made ground	3.73	2.92			
81	Layer	6	Made ground	3.74	2.64	POT	1720-1780	Staffordshire type white stoneware
82	Layer	6	Made ground	3.75	2.64	POT	1580-1900	PMR
83	Layer	6	Made ground	3.47	3.60			
84	Layer	6	Redeposited alluvium	2.10				
85	Layer	6	Made ground	1.32				
86	Layer	6	Alluvium	1.23				
87	Layer	6	Alluvium	0.94				
88	Layer	6	Gravel	-1.55				
89	Layer	1	Alluvium	1.75				
90	Layer	1	Alluvium	0.52				
91	Layer	1	Alluvium	0.42				
92	Layer	1	Alluvium	-0.23				
93	Layer	1	Alluvium	-0.68				
94	Layer	1	Sand lense	-1.38				
95	Layer	1	Alluvium	-1.43				
96	Layer	1	Sand lense	-1.53				
97	Layer	1	Sand and gravel	-1.83				
98	Layer	1	Gravel	-2.13				
99	Masonry	1	Sandstone floor surface	4.07	3.95			
100	Layer	1	Bedding for [99]	4.00	3.82			
101	Layer	1	Indurated layer	3.52	3.49			
102	Layer	1	Redeposited alluvium	3.42	3.37			
103	Layer	1	Redeposited alluvium	2.88		POT	1660-1870	Staffordshire slipware
104	Layer	1	Redeposited alluvium	2.15	1.71	POT	1760-1830	Developed Cream Ware

105	Layer	5	Concrete	3.86	3.70			
106	Layer	5	Made ground	3.77	3.45			
107	Layer	5	Redeposited alluvium	2.83	2.63			
108	Layer	5	Tile dump	2.46	2.28	POT	1770-1830	Peal wares including rococo edge dating 1790-1810, cream ware and transfer printed wares.
109	Layer	5	Redeposited alluvium	2.38	2.13	POT	1760-1830	Developed Cream Ware
110	Layer	5	Redeposited alluvium	1.60	1.22	CTP	1570-1800	Pipe stem
111	Layer	5	Alluvium	1.36	1.27	CTP	1700-1770	Stamped HP on heel- possibly Henry Prick operating in Greenwich 1704
112	Layer	5	Alluvium	0.65				
113	Layer	5	Alluvium	-0.15				
114	Layer	5	Alluvium	-0.35				
115	Layer	5	Gravel	-2.95				
116	Layer	4	Redeposited alluvium	3.00				
117	Layer	4	Alluvium	2.80				
118	Layer	4	Alluvium	2.45				
119	Layer	4	Alluvium	1.95				
120	Layer	4	Alluvium	1.75				
121	Layer	4	Alluvium	1.20				
122	Layer	4	Alluvium	0.90				
123	Layer	4	Peat	-0.20				
124	Layer	4	Alluvium	-0.70				
125	Layer	4	Alluvium	-1.75				
126	Layer	4	Alluvium	-2.40				
127	Layer	4	Gravel	-3.20				
128	Cut	3	Cut for [35]					

APPENDIX 2: OASIS FORM

OASIS ID: preconst1-15454

Project details

Project name	Greenwich Reach: An Archaeological Evaluation
Short description of the project	Six trenches were excavated across the site that revealed redeposited alluvial layers and made ground dating to the late-18th or early-19th century over naturally deposited alluvium sealing gravels. Further made ground layers of later 19th and 20th century date were also present across the site. In the north east corner of the site two timber revetments were located that are likely to represent parts of a slipway shown on the 1864 Ordnance Survey map.
Project dates	Start: 24-04-2006 End: 12-05-2006
Previous/future work	Yes / Not known
Associated project reference codes	GQR 06 - Sitecode RWW 05 – Sitecode NWS 97 - Sitecode
Type of project	Field evaluation
Site status	Local Authority Designated Archaeological Area
Current Land use	Other 13 - Waste ground
Monument type	TIMBER REVETTMENT Post Medieval

Project location

Country	England
Site location	GREATER LONDON GREENWICH GREENWICH Greenwich Reach
Postcode	SE10
Study area	56000.00 Square metres
NGR	TQ 3788 7777 Point
Height OD	Min: -2.95m Max: -1.55m

Project creators

Name of Organisation	Pre-Construct Archaeology Ltd
Project brief originator	Greater London Archaeological Advisory Service
Project design originator	Pre-Construct Archaeology Ltd
Project director/manager	Tim Bradley

Project supervisor	Stuart Holden
Sponsor or funding body	Greenwich Reach 2000 Ltd
Project bibliography	
Publication type	Grey literature (unpublished document/manuscript)
Title	An Archaeological Evaluation at Greenwich Reach, Thames Street, London Borough of Greenwich
Author(s)/Editor(s)	Holden, S
Date	2006
Issuer or publisher	PCA Ltd
Place of issue or publication	London
Description	Unpublished archaeological report
Entered by	Stuart Holden (sholden@pre-construct.com)
Entered on	2 June 2006