

**An Archaeological Watching Brief on Works to the River Walls at
Greenwich Reach, Thames Street, London Borough of Greenwich**

Site Code: RWW05

Central National Grid Reference: TQ 3788 7777

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1 ABSTRACT

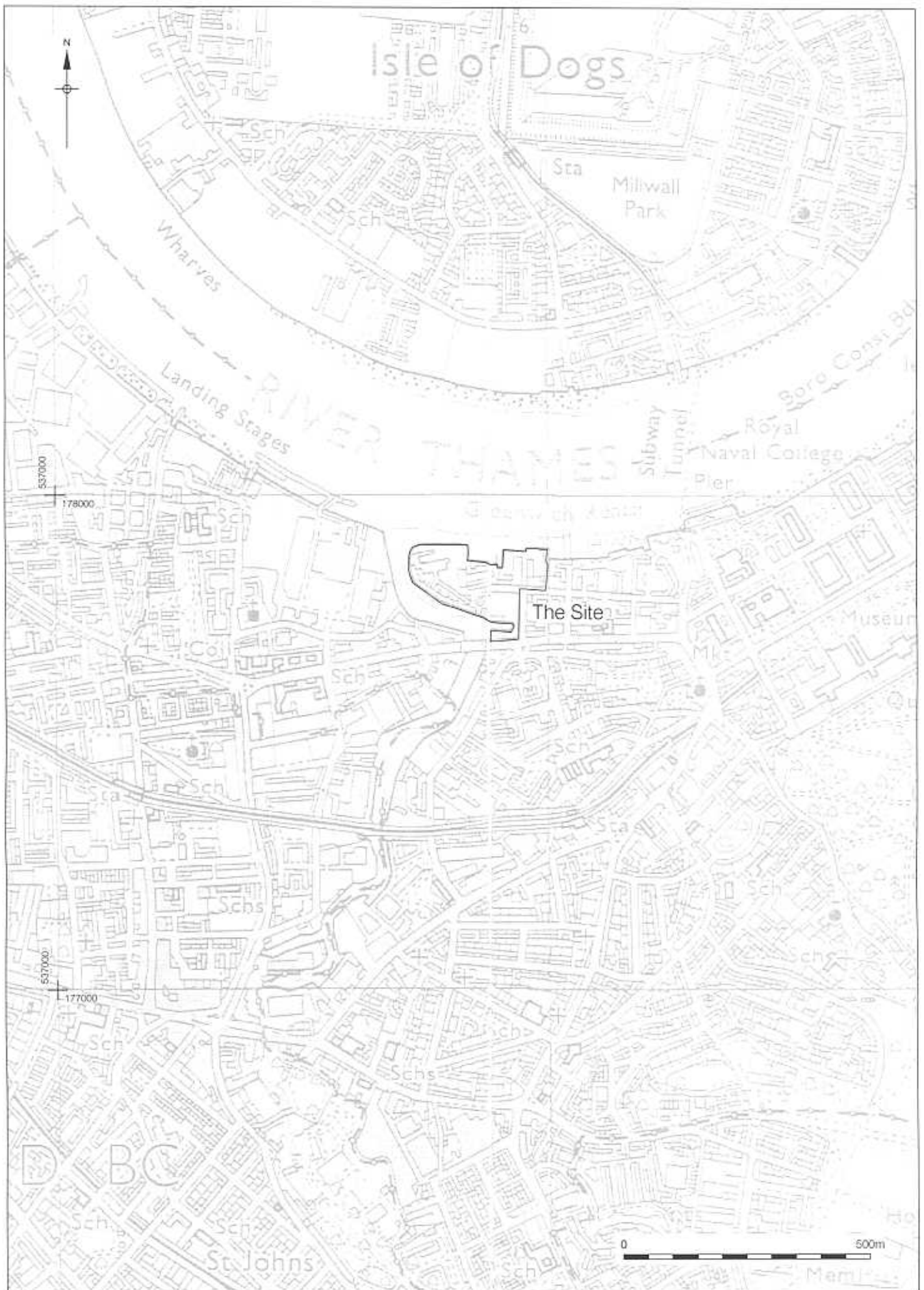
- 1.1 This report details the working methods and results of an archaeological watching brief undertaken by Pre-Construct Archaeology Limited on strengthening works to the river walls at Greenwich Reach, Thames Street, London Borough of Greenwich. The central National Grid Reference for the site is TQ 3788 7777. The watching brief was undertaken between the 17th January and 26th April 2005. The work was commissioned by Ove Arup and Partners Ltd on behalf of EC Harris Ltd.

- 1.2 Four trenches were mechanically excavated immediately behind the existing river walls along the River Thames and Deptford Creek. These excavations were observed by the on site archaeologist.

2 INTRODUCTION

- 2.1 An archaeological watching brief was conducted by Pre-Construct Archaeology Ltd on strengthening works to the river walls at Greenwich Reach, Thames Street, London Borough of Greenwich. The watching brief was undertaken between the 17th January and 26th April 2005. The work was commissioned by Ove Arup and Partners Ltd on behalf of EC Harris Ltd.
- 2.2 The site was located on the peninsula of reclaimed land¹ at the convergence of Deptford Creek and the River Thames. It is bounded to the east by a combination of Norway Street, Thames Street and Wood Wharf, and to the south by Creek Road (Fig 1).
- 2.3 The works consisted of four trenches excavated under archaeological observation. For reasons of health and safety it was not possible to enter the excavated trenches. Therefore, sketch sections were drawn and black and white and colour slide photographs taken of sections that illustrated the archaeological sequence.
- 2.4 Levels were obtained from the site engineer.
- 2.5 The National Grid Reference for the site is: TQ 3788 7777.
- 2.6 The watching brief was carried out by the author and the project manager was Gary Brown.
- 2.7 The completed archive comprising written, drawn and photographic records, and artefacts will be stored by Pre-Construct Archaeology Ltd until their eventual deposition in LAARC.

¹ Norwest Holst, Ground Investigation Report – Greenwich Reach, London 1997



Reproduced from Ordnance Survey 1:25,000. Crown Copyright 1993.

Figure 1
Site Location
1:10,000

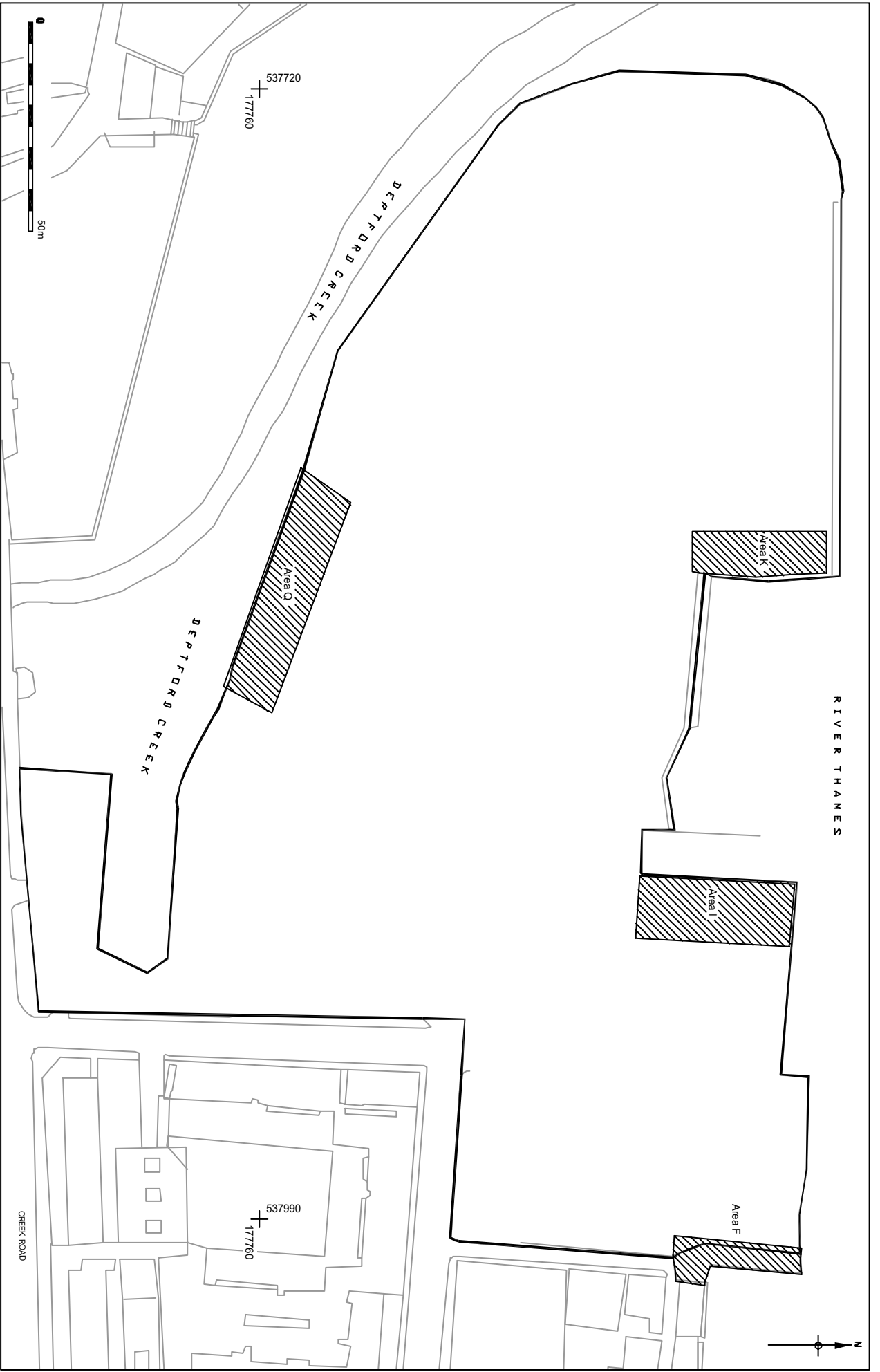


Figure 2
 Approximate Extent of Observed Areas
 1:1250

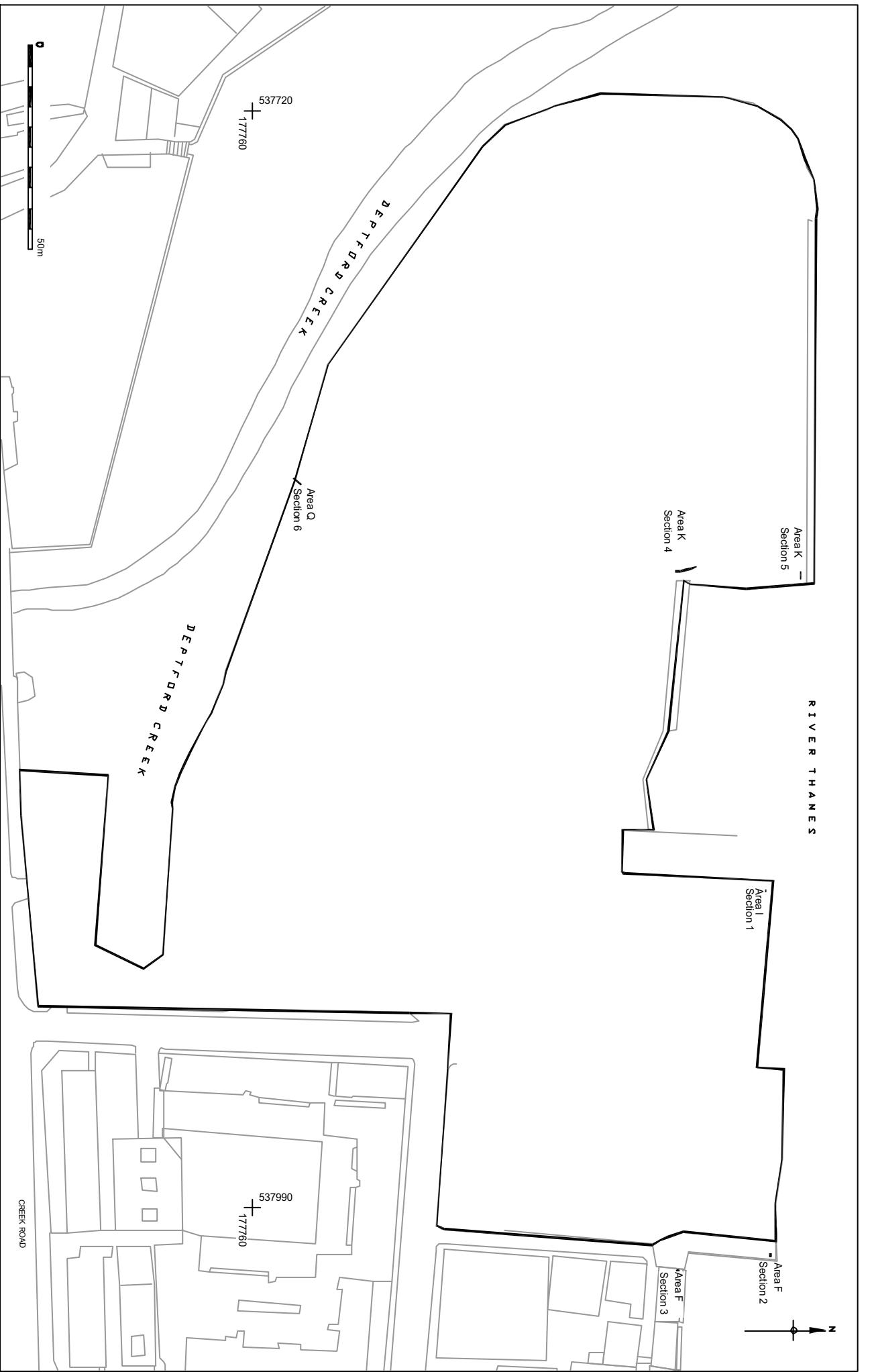


Figure 3
Section Locations
1:1250

3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 Introduction

3.1.1 The main archaeological and historical background appears in the initial watching brief report as authored by Tim Carew, 1997² and Ken Bazley, 2004³. A more detailed examination can be found in the desktop assessment written by Gary Brown, 1994³.

3.2 Pre-Roman

3.2.1 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).

3.2.2 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.

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

3.3 Roman

3.3.1 Roman finds from the vicinity have been plenty. 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.

² Carew, T., An Archaeological Watching Brief at Greenwich Reach, Thames Street, Greenwich, SE10. Pre-Construct Archaeology unpublished report 1998.

³ Brown, G., An Archaeological Desktop Assessment for Greenwich Reach Development, Greenwich, SE10, Pre-Construct Archaeology unpublished report 1994.

3.3.2 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.

3.4 Saxon and Medieval

3.4.1 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 origin¹

3.4.2 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.

3.4.3 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.

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

3.5 Post-Medieval

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

3.5.2 The 1777 Medclafe Estate Map shows that the area was known as Brooks Marsh, indicating its condition. On the land are a general wharf and a boat building workshop as well as a house and cottages. There were also two low-lying areas of oziars (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 general wharf.

¹ Divers, D., "Excavations at Deptford on the Site of the East India Dockyards and the Trinity House Almshouses, London", *Journal of Post-Medieval Archaeology* Vol 38/1 p.20., 2004

- 3.5.3 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.
- 3.5.4 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.

4 GEOLOGY AND TOPOGRAPHY

4.1 Geology

- 4.1.1 The site is underlain by alluvium over Flood Plain Gravel. These in turn overlie Woolwich and Reading Beds and Thanet Beds of Eocene age².

4.2 Topography

- 4.2.1 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.
- 4.2.2 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.
- 4.2.3 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 nearer to 7m OD.

² British Geological Survey 1:50000 series Sheet 270

5 ARCHAEOLOGICAL METHODOLOGY

- 5.1 As part of a watching brief overview of the entire site four trenches that were mechanically excavated immediately behind the existing river walls were archaeologically observed. Any exposed archaeological deposits were recorded from a standing point on the surface by an archaeologist. For reasons of health and safety the trenches were not entered.
- 5.2 Sketch sections were drawn and black and white and colour slide photographs were taken where appropriate to record the deposits.
- 5.3 Sections were located, and levels O.D. determined, by the site engineer using a total station.
- 5.4 Because it was not possible to make hand measurements of exposed deposits all dimensions and most of the levels are estimated only.

6 ARCHAEOLOGICAL SUMMARY

This section contains a table or tables for each trench briefly outlining the nature of deposits and/or structures noted within it.

6.1 Tr. 1 Area I

context no	type	area	section	description
1	timber	I	1	vertical revetting
2	layer	I	1	concrete
3	timber	I	1	horizontal revetting
4	masonry	I	1	concrete pile
5	masonry	I	1	concrete pile
6	masonry	I	1	chalk wall/footings
7	timber	I	1	timber pile
8	layer	I	1	alluvial silt/clay

Situated at the north end of Area I was section 1. The earliest exposed deposit, [08], was a layer of dark grey alluvial silt/clay lying below an estimated level of -0.44m O.D. Immediately above this was [06], the remains of a chalk wall or foundations comprising of irregular blocks of random uncoursed chalk of an estimated size of up to c.300x200mm extending for approximately 2.0m x 1.0m. It had a maximum height of 1.37m O.D. This must represent either the remains of the earliest river wall or its foundations. Immediately above lay horizontal timber revetting, [03], comprised of

rectangular timbers with an estimated extent of c.1300 x 2000mm. They had a highest estimated level of 3.38m O.D. and must constitute a part of the secondary phase of the river wall. Driven down to the south of [03], to the rear of the river wall, was [07], a broken timber pile with an estimated length of 3440mm and an estimated width of 300mm. It had an estimated highest level of 1.52m O.D. Whilst the timber had a superficial similarity to the timbers comprising [03] it is not possible to conclude if they represent the same phase of construction or if it was driven in at a later date. Clearly its purpose was to strengthen the extant phases of construction, including [03]. Capping [03] was a deposit of coarse grey/green concrete, [02], with an approximate thickness of 0.40m and an estimated height of 3.79m O.D. Immediately above this was [01], a revetment of vertical rectangular timbers with an estimated extent of c.1300 x 1500mm and an estimated maximum level of 5.29m O.D. forming the latest phase of construction in the river wall at this point. Driven into the alluvium, [08], and supporting all the earlier phases of construction were two re-inforced concrete piles, [04] and [05], with an estimated length of at least 7.37m and estimated width of 0.30m. The estimated highest levels for them were 5.43m O.D. and 5.50m O.D. respectively.

6.2 Tr. 2 Area F (north end)

context no	type	area	section	description
9	masonry	F	2	concrete
10	timber	F	2	vertical revetting
11	masonry	F	2	concrete pile
12	timber	F	2	timber pile
13	layer	F	2	shaley silt
14	layer	F	2	laminated silt
15	layer	F	2	alluvial silt

Situated at the north end of Area F was section 2. The earliest exposed deposit was [15], a greenish mid grey alluvial silt with a thickness above project level of c.1.0m lying below a maximum estimated level of 1.25m O.D. Immediately above this was [14], a layer of laminated mid and dark grey silt containing shell. It had an estimated thickness of c.1.55m and an estimated maximum height of 2.75m O.D. Lying above [14] was [13], a layer of dark grey shaley silt with an estimated thickness of c0.90m and an estimated maximum height of 3.63m O.D. [13] and [14] represent re-deposited layers of alluvial silt though it was not determinable whether they were re-deposited through human or natural processes. Immediately above [13] was [10], a revetment of vertical rectangular timbers with an extent of approximately 1280 x 1000mm and an estimated highest level of 4.63m O.D. This forms part of a post-

medieval river wall construction. Above [10] was [9], a capping of concrete slab and its make-up with a total thickness of c.1.0m and a maximum level of 5.73m O.D. Driven into the alluvial silt, [15], re-inforcing the earlier phases of construction were a re-inforced concrete pile, [11], and a timber pile, [12]. These had estimate lengths of c. 4.90m and c.4.66m, estimated widths of c.0.30m and estimated maximum heights of 5.13m O.D. and 4.89m O.D. respectively. The timber pile, [12], was broken but as both extended above the bottom of the concrete cap, [09], it can be inferred that both were of Twentieth Century date.

6.3 Tr. 2 Area F (south east corner)

context no	type	area	section	description
16	masonry	F	3	brick foundation
17	timber	F	3	revetting
18	masonry	F	3	chalk wall/footings
19	layer	F	3	alluvial silt

In the south east corner of Area F was section 3. The earliest exposed deposit was mid grey alluvial silt [19]. It had an estimated thickness of 1.30m above project level and an estimated highest level of 0.19m O.D. Immediately above this was [18], a wall or foundation of irregular random uncoursed chalk blocks with an estimated size of up to 200 x 300mm and an estimated highest level of 0.89m O.D. It represents the earliest phase of construction of the river wall, equating to [06] in section 1. Above this was [17], comprising horizontally and vertically aligned rectangular timbers forming a secondary phase of river wall construction. It extended for more than 1.0m n/w by approximately 1.30m in height with a maximum estimated level of 2.37m. Overlying [17] was [16], the Twentieth Century walls of a building on property to the immediate east of the site.

6.4 Tr. 3 Area K (south west corner)

context no	type	Area	section	Description
20	masonry	K	4	brick wall
21	layer	K	4	alluvial silt

Situated in the south west corner of Area k was section 4. The earliest exposed deposit was [21], a dark grey alluvial silt with an exposed thickness of 3.00m and a maximum height of -2.62m O.D. This was likely to have been substantially truncated by the structure, [20], above. This comprised of a wall of grey Nineteenth Century brick with a course stretchers with occasional headers. Its exposed curvilinear remains extended for some 5.25m north/south and an estimated height of 6.0m with a maximum level of 3.38m O.D. It represents the remains of one of the Phoenix Gasworks gasometers though it is surprising to find it in such close proximity to the Thames foreshore.

6.5 **Tr. 3 Area K** (north end)

context no	type	area	section	description
22	masonry	K	5	brick wall

Situated at the north end of Area K was section 5. The only deposit exposed was a remnant of brick wall constructed of yellow and brown frogged brick extending for more than 2.00m east/west and an estimated exposed thickness of c.3.00m. It represents the remains of Nineteenth Century river wall.

6.6 **Tr. 4 Area Q**

context no	type	area	section	description
23	masonry	Q	6	concrete/brick wall
24	fill	Q	6	backfill
25	masonry	Q	6	brick wall
26	layer	Q	6	alluvial silt
27	cut	Q	6	Construction cut

At the west end of Area Q, next to Deptford Creek, was situated section 6. The earliest exposed deposit was [26], a mid grey alluvial silt. It was exposed for approximately 0.80m north/west and an estimated thickness of 3.22m. It had a maximum estimated height of 3.72m O.D. This was truncated by [27], a construction cut for the river wall. This was vertical with an estimated height of 4.22m above project level and a maximum estimated level of 4.22m O.D. Constructed within [27] was [25], a wall of red and grey brick running east/west with an estimated width of 0.50m and an estimated height of 4.00m above project level. It ran the entire length of the trench and represents the remains of Nineteenth Century river wall. Within the construction cut behind [25] was a backfill of brick rubble, [24], rising from project level to a maximum estimated height of 4.52m O.D. Facing Deptford Creek to the south of the Nineteenth Century wall was a 20th Century wall, [23], constructed of concrete and brick. It had an estimated thickness of c.0.80m and stood c.4.0m from project depth to a height 4.50m O.D.

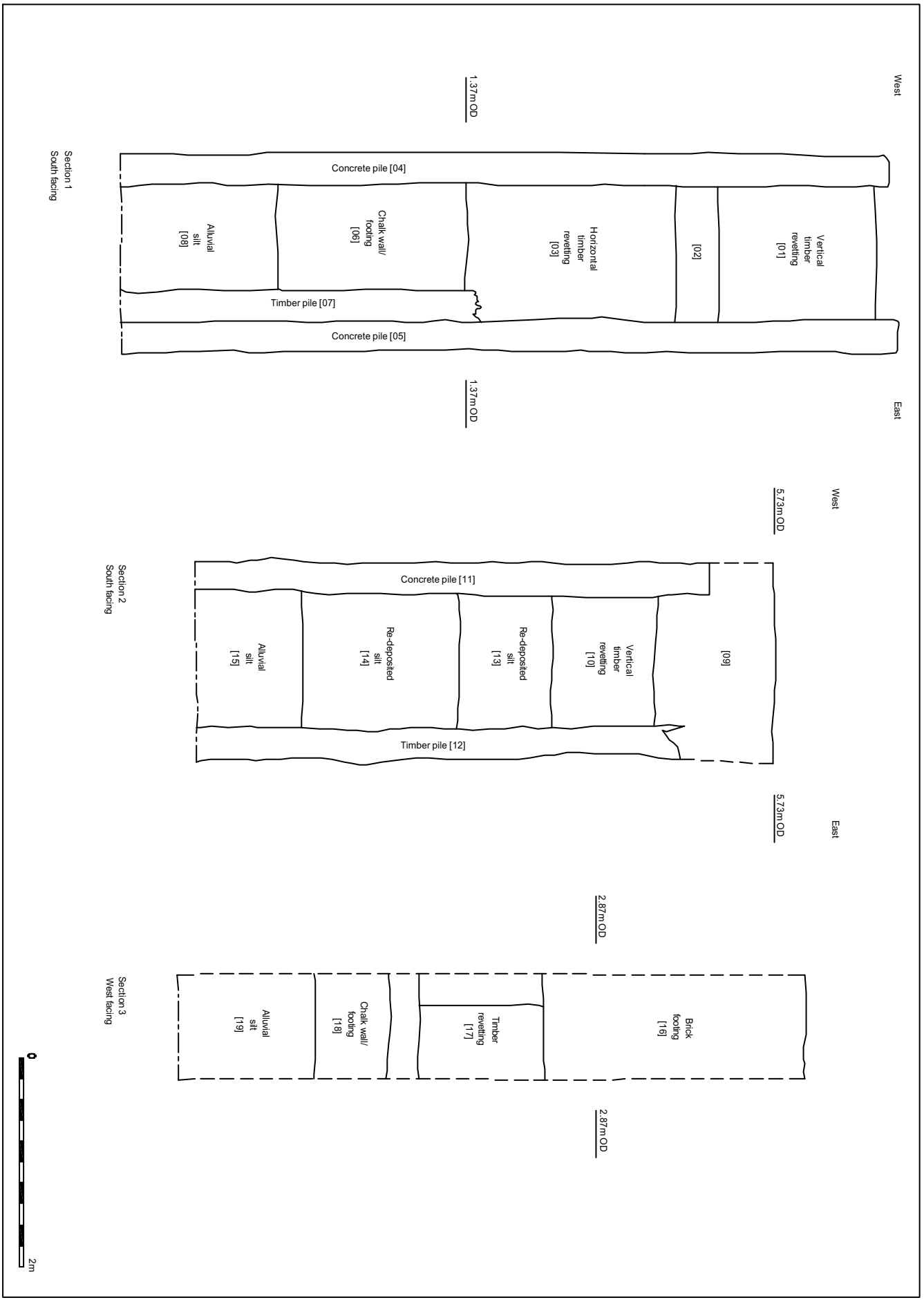


Figure 4
Sketch Sections 1-3
1:50

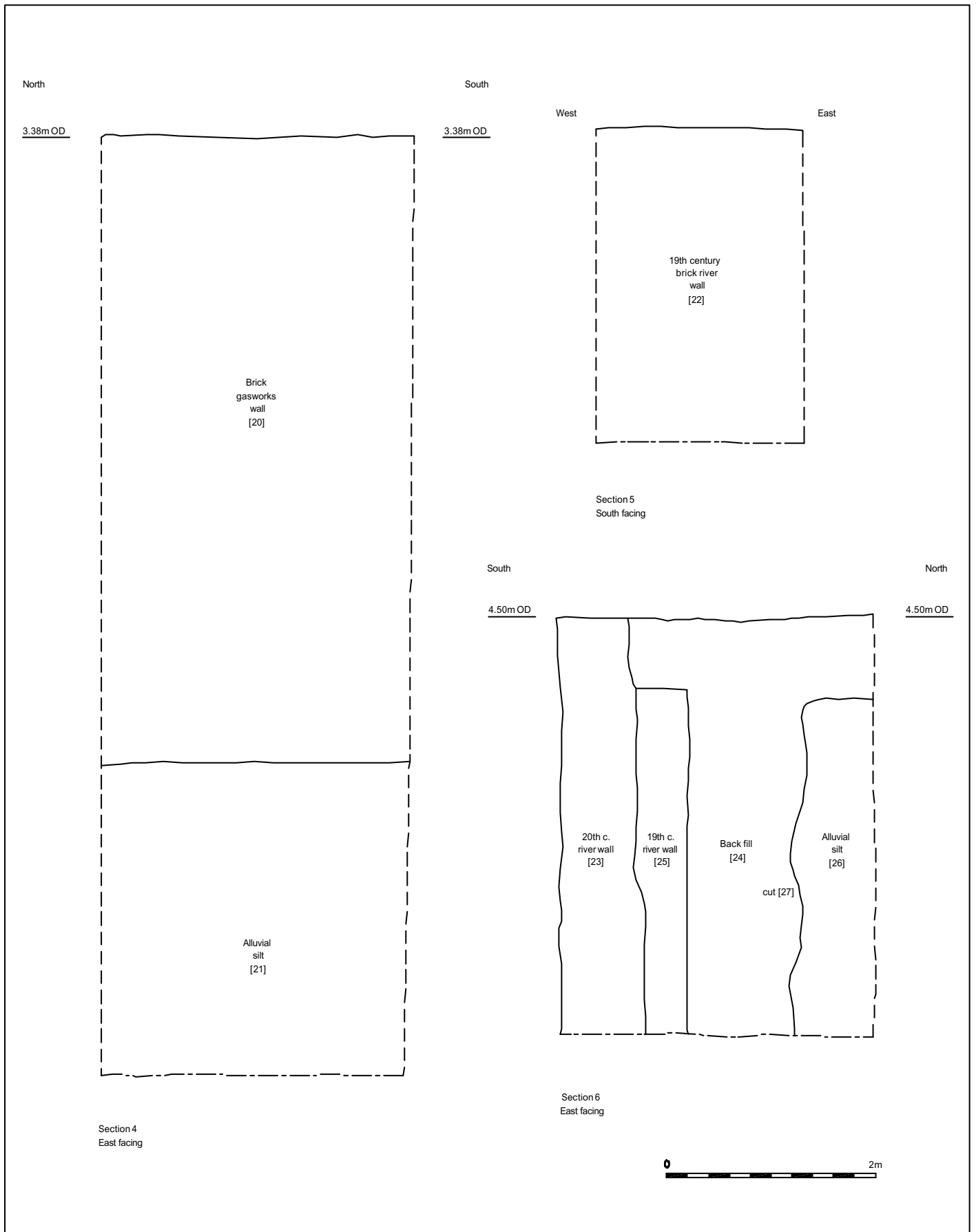


Figure 5
 Sketch Sections 4-6
 1:50

6 CONCLUSIONS

- 6.1 The works were carried out for the purposes strengthening the river walls.
- 6.2 Archaeological deposits exposed in four trenches immediately behind the existing river walls revealed the presence of alluvial silt in all four trenches at estimated levels ranging from –0.44m O.D. at the most northerly extension of the river walls into the Thames foreshore (Area I) to 3.72m O.D. along Deptford Creek. This probably reflects, in part, the natural incline of the river foreshore. (The estimated level of –2.62m O.D. for the south end of Area K was truncated by a gasometer of the Phoenix gasworks).
- 6.3 In Area I and the south east corner of Area F (along the Thames waterfront) the earliest phase of construction in the river walls consisted of chalk wall or foundations. Whilst no artefacts were recovered from any deposits to assist in the dating of structures or deposits the use of chalk as a building material suggests a date range from the late Medieval to the Eighteenth Century.
- 6.4 Sections in Areas F and I revealed timber revetting above the chalk construction showing later re-builds with a tentative dating to the Eighteenth or early nineteenth Centuries. Above these were found either cappings of concrete or Twentieth Century brick with either concrete or timber piles driven behind the river walls to re-inforce earlier phases of construction.
- 6.5 In Area K (further west along the Thames waterfront), the massive extant curvilinear Nineteenth Century brick wall must surely represent the remains of one of the gasometers of the Phoenix Gas Works though its location so close to the Thames foreshore is a surprise.
- 6.6 The Works alongside Deptford Creek (Area Q) revealed the presence of a Nineteenth Century river wall cutting alluvial silt, faced by a Twentieth Century wall. Both walls extended to below project level and appear to have truncated any earlier phases of construction.

7 SUGGESTIONS FOR FUTURE WORKS

- 7.1 Areas of the site not truncated by structures from the Gasworks or existing river walls retain potential to indicate the location, extent and levels of alluvial deposits which could potentially provide valuable information about the natural environment and reasons for peoples exploitation of it.⁵ Any works liable to impact on untruncated alluvial deposits may be worth an archaeological watching brief.
- 7.2 Any works in close proximity to parts of the river walls that have not already been subject to a watching brief may have the potential to reveal further structures and revetments and may, again, warrant an archaeological watching brief. In particular, any artefactual or other dating evidence obtained for the structures of the river walls would be enlightening.

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Norwest Holst; Ground Investigation Report, Greenwich Reach, London. December 1997.
Author unknown.

8 ACKNOWLEDGEMENTS

- 8.1 Pre-Construct Archaeology Limited would like to thank Ove Arup and Partners Ltd who commissioned the work on behalf of EC Harris Ltd.

- 8.2 The author would like to thank Gary Brown for project management, Adrian Nash for the digitised illustrations,

8. LOCATION OF ARCHIVES

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Notes ✓

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Norwest Holst., Ground Investigation Report, Greenwich Reach, London. Dcember 1997.
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