CANARY WHARF RIVERSIDE SOUTH, CANARY WHARF, LONDON BOROUGH OF TOWER HAMLETS

ARCHAEOLOGICAL WATCHING BRIEF

Quality Control

Pre-Construct Archaeology Limited			K1333
	Name & Title	Signature	Date
Text Prepared by:	James		April 2007
	Langthorne		
Graphics	Dave Harris		April 2007
Prepared by:			
Graphics	Josephine Brown	0001	April 2007
Checked by:		production of	
Project Manager	Chris Mayo	01-6	April 2007
Sign-off:		Call	-

Revision No.	Date	Checked	Approved

Pre-Construct Archaeology Ltd Unit 54 Brockley Cross Business Centre 96 Endwell Road London SE4 2PD An Archaeological Watching Brief of a Geotechnical Investigation at Canary Wharf Riverside South, Canary Wharf, London Borough of Tower Hamlets

Site Code: WEF 01

Central National Grid Reference: TQ 3710 8025

Written and Researched by Ashley Pooley

Pre-Construct Archaeology Limited, April 2007

Project Manager: Chris Mayo

Commissioning Client: Canary Wharf Group PLC

Contractor: Pre-Construct Archaeology Ltd

Unit 54, Brockley Cross Business Centre

96 Endwell Road

Brockley

London SE4 2PD

Telephone: Fax: 020 7732 3925 020 7732 7896

Email: Web: cmayo@pre-construct.com www.pre-construct.com

© Pre-Construct Archaeology Limited April 2007

© The material contained herein is and remains the sole property of Pre-Construct Archaeology Limited and is not for publication to third parties without prior consent. Whilst every effort has been made to provide detailed and accurate information, Pre-Construct Archaeology Ltd cannot be held responsible for errors or inaccuracies herein contained.

CONTENTS

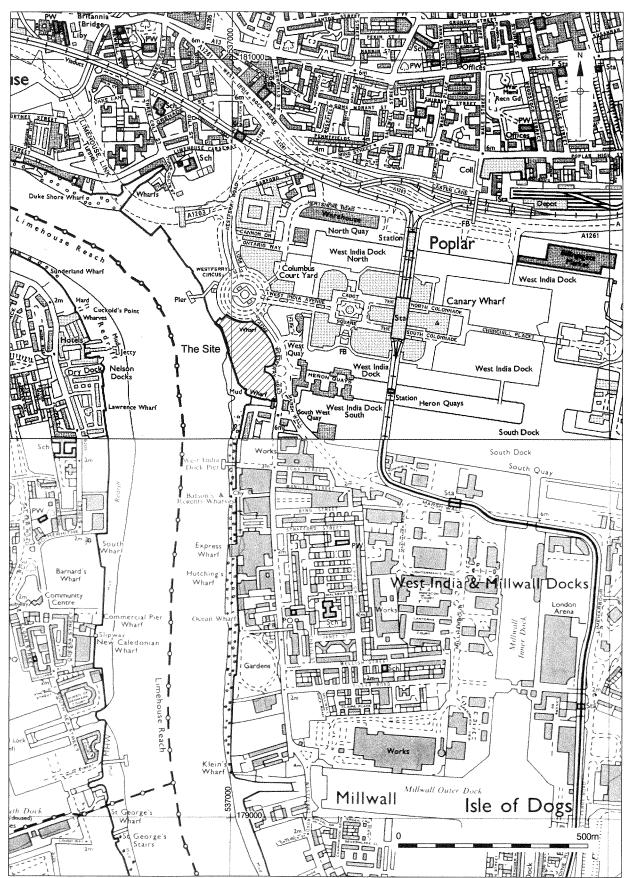
1	Abstract	3
2	Introduction	∠
3	Planning Background	7
4	Historical Background	8
5	Archaeological Methodology	10
6	Summary Of The Archaeological Sequence	12
7	Conclusions	21
8	Acknowledgements	22
9	Bibliography	23
Δηι	ppendix 1: Context Descriptions	24
Apı	ppendix 2: Oasis Report Form	26
Fig	gure 1: Site Location	5
Fig	gure 2: Trench Locations	6
Fig	gure 3: Trench Locations with 19 th Century Docks	19
Fig	gure 4: Sections	20

1 ABSTRACT

- 1.1 An archaeological watching brief was undertaken by Pre-Construct Archaeology Ltd to monitor a geotechnical investigation at Canary Wharf Riverside South, Westferry Road, London Borough of Tower Hamlets. The geotechnical work included trial pits and boreholes. The work was commissioned by Canary Wharf Contractors Ltd, and the geotechnical work undertaken by Concept Site Investigations. The watching brief was conducted discontinuously between 20th November 2006 and 21st January 2007.
- 1.2 The watching brief revealed alluvial and foreshore deposits, in addition to deposits relating to the remodelling and eventual reclamation of the docks in the 19th and 20th centuries. No structures were encountered associated with the original 18th century docks.

2 INTRODUCTION

- 2.1 An archaeological watching was conducted watching brief was conducted discontinuously between 20th November 2006 and 21st January 2007 by Pre-Construct Archaeology Limited (PCA) at Canary Wharf Riverside, Westferry Road, London Borough of Tower Hamlets. The work monitored a geotechnical investigation by Concept Site Investigations to record ground conditions and deposits, and gather samples to gauge possible contaminants.
- 2.2 The Canary Wharf Riverside site is bordered by Westferry Circus to the north, Westferry Road to the east, the disused lock giving access to West India south Dock to the south and the River Thames to the west.
- 2.3 Ten geo-technical trial pits and nineteen observation pits were excavated across the site. It was intended that ideally these be excavated to a depth of 6.00m but in practice not all of the pits could be excavated to such a depth owing to the instability of the ground or the presence of immovable concrete obstacles or services.
- 2.4 The geological, archaeological and historical background to the site has been examined in detail in an Archaeological Desk-Based Assessment (Brown, 1999) and an Arup Geotechnics engineering report (Clarkeburn, 2001.) In addition the site was the subject of an earlier watching brief in August and September 2001 on ground investigation works and the results reported by the author of this report (Pooley and Mattinson, 2002). The present report forms a supplement to the findings reported therein and does not substantially modify those conclusions or information.
- 2.5 Pre-Construct Archaeology Ltd was commissioned by Concept Site Investigations on behalf of Canary Wharf Contractors Limited. The archaeological consultant for the work was Richard Hughes of Arup. The watching brief was project-managed by Chris Mayo and conducted by the author, both of PCA Ltd. The site code assigned to the project was WEF 01.



Reproduced from the Ordnance Survey 1:10,000 map with the permission of Her Majesty's Stationery Office, © Crown Copyright Pre-Construct Archaeology, Unit 54, Brockley Cross Business Centre, 96 Endwell Road, Brockley, London SE4 2PD. ALD 51984A0001

© Pre-Construct Archaeology Ltd

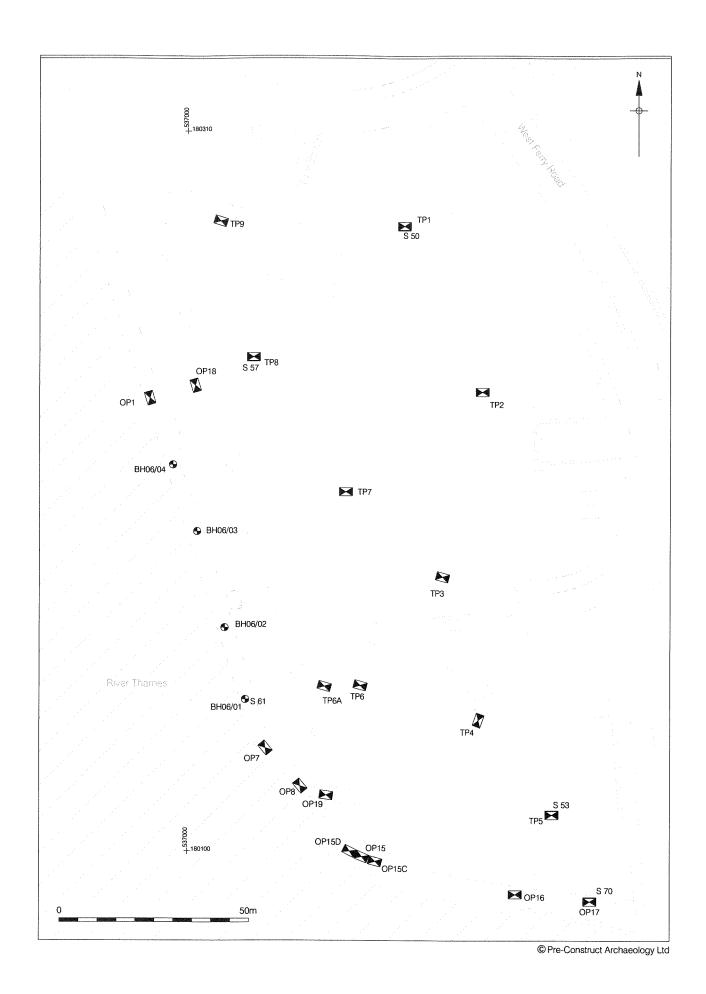


Figure 2 Trench Locations 1:1,000 at A4

3 PLANNING BACKGROUND

3.1 The site is located within an area defined in the London Borough of Tower Hamlets' Unitary Development Plan as an Archaeological Priority Zone. English Heritage's Greater London Archaeological Advisory Service has recommended that proper provision be made for the archaeological implications of any proposed development of the site. These considerations follow policies set out in PPG 16 and the London Borough of Tower Hamlet's own archaeological planning policy.

4 HISTORICAL BACKGROUND

- Prior to the first attempts to reclaim land and maintain the riverbank, the area of the site was a low lying and marshy riverside environment. Evidence for prehistoric activity on adjacent sites however, suggests that the area was not entirely inhospitable during this period. Flint artefacts have been found at two neighbouring sites, which suggests that exploitation of the riverfront occurred in the prehistoric period. Peat has formed during a number of marine regressions, notably during the Bronze Age, and these deposits may contain evidence of human activity up to the post medieval period.
- 4.2 Reclamation of land may have begun in the Saxon period. Documentary evidence for riverbank maintenance dates as early as 1298, which indicates that the process was begun before this date. The Isle of Dogs throughout the medieval period was pasturage, with no permanent settlements being recorded.
- 4.3 In 1660 a section of the river wall was breached, and a large part of the Isle of Dogs flooded. Further inland, around a large floodwater incursion called the Great Gut, or Poplar Gut, new flood defences were constructed.
- 4.4 The foreshore formed by the Breach was used for laying up timber until 1707, when a large site was reclaimed for a shipbuilding yard, called the Breach Dockyard. This comprised two timber-lined docks, two building slips and a mast and timber laying dock in the remnants of the Breach to the south.
- In 1818 the dockyard lease was transferred, and a new phase of land reclamation and development began. The dockyard became known as the Union Docks. The docks were enlarged and new ones constructed. These stayed in use until 1925 when the dockyard was closed. All of these were backfilled in the 1930s and the Union Dry Dock constructed on the same site as the Lower Dry Dock, although on a different alignment.
- The Union Dry Dock and its related slipways were requisitioned for wartime use from 1940 to 1951. In 1955 the dry dock was converted into a double slipway for the building of tugs and barges, which went out of use and was filled in 1965 when the site was taken over by concrete and dredging companies.
- 4.7 A more detailed description can be seen in the archaeological desk-based assessment concerning the Canary Riverside (Phases 2 & 3) redevelopment (Brown,

1999), with much relevant material also to be found in the Arups' buried obstructions report (Clarkeburn, 2001.)

4.8 The watching brief carried out in 2001 identified a number of areas containing archaeologically interesting features. The oldest remains found comprised the original buried foreshore of 17th or 18th century date, prior to the construction of the Union docks. This appeared between and to the east of the dock basins where truncation had not occurred and sloped downwards from east to west towards the river. A Trial Pit at the northern end of the site, adjacent to Westferry Circus, encountered a probably 18th century brick wall aligned north to south. The top of this lay at 2.10m AOD, buried beneath 3.20m of more recent material. It might be accompanied by a brick or tile floor, since the base of this wall was not exposed (Pooley and Mattinson, 2001, p. 18.) Timber structures were also found, apparently largely confined to posts and timber floors of uncertain date. Although no definite traces of revetments or river walls were found, it should be borne in mind these would be difficult to identify in the narrow deep trenches observed in this exercise. The latest archaeological features observed date from the period from 1818 until 1965 when the Union Docks occupied the site. These mainly comprise the original dock basins, and alterations subsequently carried out. Although four dock basins are frequently discussed (the three original Union Docks and the Union Dry Dock from the 1930s until 1965) there were several smaller docks and a host of other features such as slipways and repair yards. The 2001 watching brief demonstrated that much of this material is probably simply buried beneath later reclamation dumps rather than having been destroyed through demolition.

5 ARCHAEOLOGICAL METHODOLOGY

- The watching brief was conducted in accordance with method statements (Hughes 2006; Mayo 2006) which were approved by David Divers of the Greater London Archaeological Advisory Service, English Heritage, on behalf of the London Borough of Tower Hamlets.
- 5.2 The attending archaeologist monitored the excavation of nine of the ten geo-technical trial pits (designated TP) excavated across the site, using a 360° tracked excavator (Figure 2). TP4 was not monitored. The trial pit dimensions were:

Table	1:	Trial	Pit	Dimensions
		-,,		

TP number	Dimension 1	Dimension 2	Max depth
TP1	3.90m NE to SW	0.70m NW to SE	5.20m
TP2	4.30m NE to SW	0.70m NW to SE	6.00m
TP3	3.00m NE to SW	0.70m NW to SE	4.80m
TP5	5.00m NW to SE	0.70m NE to SW	6.00m
TP6	3.70m NE to SW	0.70m NW to SE	3.00m
TP6a	6.00m NE to SW	0.70m NW to SE	4.00m
TP7	4.20m NE to SW	0.70m NW to SE	6.00m
TP8	4.00m NE to SW	0.70m NW to SE	6.00m
TP9	3.60M NE to SW	0.70m NW to SE	4.00m

- 5.3 The nature and depth of these trial pits precluded any examination of features or deposits by hand below a depth of approximately 1.00m depending upon ground conditions; deeper deposits were recorded from the top of the trench. It was, therefore, practical only to record a long section for each TP.
- In addition, it was originally intended to excavate a further nineteen geo-technical Observation Pits (designated OP1 to OP19) on the western and southern areas of the site alongside the current river wall (OPs 1 to 14, and OPs 18 and 19) and the lock giving access to West India Dock South (OPs 15 to 17) (Figure 2). In practice, this methodology was modified due to obstructions above ground on the site, the need to avoid damage to the river wall and lock structures (which form part of the local network of flood defences) and the changing priorities of the site investigation arising from conditions encountered in OPs excavated as part of this scheme of works. OP15 was subdivided into OP15a, b, c and d in order to investigate in greater detail ground conditions around the mouth of the lock. These aimed to evaluate the current condition of the river wall fronting the Thames and the lock structure, which forms part

of the local system of flood defences. In order to avoid damaging the present river wall, OPs 1 to 4 were drilled as boreholes and also designated BH06/01 to BH06/04. OPs2 and 9 to 14 were abandoned. The OP dimensions were as follows:

Table 2: OP Dimensions

OP number	Dimension 1	Dimension 2	Max depth
OP1	Approx. 2.50m N to S	1.30m E to W	2.15m
OP2	Abandoned		
OP3	Re-designated BH06/04 a	nd drilled to a depth of	4.75m
OP4	Re-designated BH06/03 a	nd drilled to a depth of	4.75m
OP5	Re-designated BH06/02 a	nd drilled to a depth of	4.90m
OP6	Re-designated BH06/01 ar	nd drilled to a depth of	6.60m
OP7	3.00m NW to SE	0.70m NE to SW	1.80m
OP8	2.80m NW to SE	1.55m NE to SW	0.90m
OP9	Abandoned		
OP10	Abandoned		
OP11	Abandoned		
OP12	Abandoned		
OP13	Abandoned		
OP14	Abandoned		
OP15b	2.90m E to W	0.70m N to S	2.30m
OP15c	3.25m E to W	0.70m N to S	1.75m
OP15d	3.90m E to W	0.70m N to S	2.30 m
OP16	2.15m E to W	0.90m N to S	0.55m
OP17	2.50m E to W 0.70m N to S 2.80m		2.80m
OP18	4.30m NE to SW	4.00m NW to SE	3.00m
OP19	2.05 E to W 0.70m N to S 1.40m		1.40m

6 SUMMARY OF THE ARCHAEOLOGICAL SEQUENCE

- 6.1 TP1 (Located between 19th century Middle and Upper Union Dock basins.)
- 6.1.1 An alluvial or foreshore deposit [401] was encountered at 3.06m AOD and exposed for a thickness of 2.70m. Since this contained occasional brick intrusions, it can be assumed that this was formed at least partly in the 18th century prior to the development of the site as docks. Of course, its formation as a whole can be assumed to have been a long, drawn-out process of gradual accumulation, interrupted by periods of flooding causing rapid accumulation of sediment. Above this, at 4.66m AOD, there was a very dark grey to black sandy silt layer [400] interpreted as arising from late 19th or 20th century remodelling of the docks. Given the presence of ceramic water pipe fragments as inclusions within this deposit, a date later in this range may perhaps be postulated. Above this lay modern made ground and the present tarmac surface of the site at 5.56m AOD.
- 6.2 TP2 (Located between 19th century Middle and Lower Union Dock basins.)
- 6.2.1 An alluvial deposit [402] was encountered at 3.59m AOD and exposed for a thickness of 3.80m. Above this, at 4.79m AOD was a layer of re-deposited alluvium interpreted as 19th century made ground associated with dock construction. Above this lay modern made ground and concrete and tarmac surfaces at 5.79m AOD.
- 6.3 TP3 (Located within 1930s Union Dry Dock basin.)
- 6.3.1 A mid grey clay silt deposit [404] was exposed at 2.18m AOD. The presence within it of brick and concrete rubble, metal fragments and York Stone paving fragments, its depth and its dissimilarity to any alluvial deposits encountered elsewhere, suggests that this may relate to the infilling of one of the docks located on the site and therefore have been deposited in the 20th century. Above this lay additional layers of probable dock reclamation deposits and modern made ground relating to the present tarmac surface of the site at 5.18m AOD.
- 6.4 TP4
- 6.4.1 Not monitored or recorded archaeologically.

6.5 TP5 (Located south of the 1930s Union Dry Dock.) (Figure 4)

6.5.1 At 4.48m AOD an alluvial or foreshore deposit [407] was encountered and exposed to a thickness of 4.10m. As with that recorded in TP1, this contained brick fragments in approximately the top 1.00m, as well as horsehair, wood and chalk fragments, suggesting that this stopped forming in the 18th century when the docks were first developed. Above this, at 5.98m AOD were two layers of 19th and 20th century made ground [405] and [406], which were in turn sealed by modern services and surfaces at 6.38m AOD.

6.6 TP6 (Located on the 19th century dockside south of the Union Lower Dock.)

6.6.1 TP6 contained only a dumped sand and gravel layer associated with 20th century dock reclamation arising from post-war redevelopment. Above this lay the present tarmac surface of the site (at 5.10m AOD) and its layer of bedding sand and gravel.

6.7 TP6a (Located on the 19th century dockside south of the Union Lower Dock.)

6.7.1 A loose waterlogged sandy gravel deposit [408] was found at 3.10m AOD, possibly arising from reclamation of the docks or perhaps from reclamation of the foreshore. The latter possibility arises from the possible presence of alluvial silts at approximately 2.00m AOD, which unfortunately owing to lack of space due to modern intrusions could not be investigated further. The docks are thought to have had brick floors and, in addition, these silts do not look as though they formed on the floor of a working dock: they appear free of, for instance, inclusions or contaminants arising from shipbuilding or repair. Above this, at 4.20m AOD lay the post-war reclamation dump encountered in TP6 to the east. The rest of the trench up to the present ground surface was composed of modern made ground and the tarmac surface at 5.10m AOD.

6.8 TP7 (Located within 19th Union dock basin, north of Union Dry Dock.)

6.8.1 A dark bluish grey clay silt deposit [410] was found at 2.86m AOD. Since it was found to extend downwards beyond 6.00m depth, and contained bricks, concrete fragments, steel reinforcing bars and other modern material, it is suggested that this dates to the remodelling or infilling of the docks in the 19th or 20th centuries. Above this lay additional deposits of modern made ground, including further dock in-filling layer [409] overlain by the present tarmac site surface at 5.26m AOD.

6.9 TP8 (Located within 19th century Middle Union Dock basin.) (Figure 4)

[413] was uncovered. Gradually with depth this could be seen to change colour to a dark greyish blue, more in keeping with alluvial silts uncovered elsewhere on this site. Inclusions included slate or carbon rods (tentatively and variously identified as slate pencils or components of batteries) and even a fragment of medieval pottery (identified as South Hertfordshire Grey Ware, dated to 1170-1350.) However, since this OP is located above the Middle Union Dock basin this material must be residual and date from the 1930s when the Union Docks were filled in and the Union Dry Dock built. This material need not have travelled far since it could be derived from the excavations of the Dry Dock, possibly to the east towards or under Westferry Road. The succeeding deposit of made ground [412] was also found to contain concrete. More modern made ground deposits, including reclamation layer [411] and the modern tarmac surface filled the rest of the trench, the top of which lay at 5.42m AOD.

6.10 TP9 (Located within 19th century Upper Union Dock basin.)

- 6.10.1 A deposit of mid brownish grey clayey silt [415] was encountered at 2.43m AOD and exposed to a depth of 4.00m whereupon excavation ceased. Given the presence within it of brick fragments, this is probably a 19th century, or even perhaps mid 18th century, land reclamation deposit encroaching upon and beyond the original foreshore. Intriguingly, the overlying deposit [414], comprising a mixture of brick rubble and mortar, contains fragments of moulded oolitic limestone, which may well have formed cornices and pediments of an elaborate dockside building. Traces of a mid 18th century wall were exposed nearby in the 2001 watching brief which, along with cartographic evidence, suggests that elements of the original architectural ensemble may survive buried under later reclamation dumps and demolition debris.
- 6.10.2 The top 1.10m of the trial pit were formed of modern made ground and the present tarmac ground surface, which lay at 5.33m AOD.

6.11 OP1 (Located in mouth of 19th century Middle Union Dock basin.)

6.11.1 Only modern deposits backfilled behind (i.e. to the east of) the present river wall were exposed to a depth of 2.15m below the present ground surface (which lay at 6.63m AOD.) Above this lay the present tarmac surface of the Riverside footpath.

6.12 OP3 (BH06/04) (Located in mouth of 1930s Union Dry Dock basin.)

6.12.1 A sandy silt deposit [423] was encountered at 2.52m AOD. This seemed to have been deposited through alluvial processes, yet contained brick fragments. Since this borehole was located over the mouth of the Union Dry Dock, it appears that this represents natural silting (or just possibly backfilling) of that feature after its disuse in the mid 1960s. This dock is known to have had a solid brick or concrete floor, which was not encountered in this borehole, suggesting that this deposit lies above that. The rest of the borehole comprised reclamation dumps and deposits associated with the current river wall between 5.72m AOD and the present Thames Riverside Path surface at 6.72m AOD.

6.13 OP4 (BH06/03) (Located in mouth of 1930s Union Dry Dock basin.)

6.13.1 Dark greenish grey silt gravel [418] was encountered at around 2.70m AOD below ground surface. This probably represents the reclamation through infilling of the Dry Dock in the mid 1960s. Subsequent dock backfilling and deposits relating to the present river wall lay between this and the current ground level at 6.72mAOD.

6.14 OP5 (BH06/02) (Located on 19th century dockside south of Union Dry Dock.)

6.14.1 At around 0.78m AOD lay a soft dark greenish grey clayey silt deposit [422.] Above this, appearing at 1.54m AOD, was a very dark grey to light greyish green silt sand [421.] Both of these deposits contained no anthropogenic material and appeared to have been deposited through natural alluvial processes. Given their depth, it would appear that they represent alluvial deposition prior to the construction of the docks and within the Thames channel proper, rather than representing a relict foreshore. At 2.43m AOD below the surface lay a light greenish brown coarse sandy gravel deposit [420] and at 3.03m AOD a light yellowish brown silt gravel deposit [419.] The former contained brick fragments and both are assumed to relate to the reclamation of the dockside area, and attendant encroachment west into the river associated with the construction of the union Dry Dock in the 1930s. Between 3.45m AOD and the present Thames Riverside path at 6.80m AOD lay additional reclamation deposits and material related to the present river wall.

6.15 OP6 (BH06/01) (Located on 19th century dockside south of Union Dry Dock.) (Figure 4)

6.15.1 Mid greenish grey clayey silt [417] was found at 2.58m AOD below ground level.

Although this seemed to have been deposited through natural alluvial processes, its

relatively shallow depth and the presence within it of brick flecks suggests that this reflects silting of the 19th dockside, probably subsequent to disuse in the late 19th/early 20th century. Above this, at 2.93m AOD lay a very dark grey to black silt deposit [416], probably derived from the same processes and at the same time as [417] below. Above this up to modern ground level lay reclamation deposits and material related to the current river wall.

6.16 OP7 (Located on 19th century dockside south of Union Dry Dock.)

6.16.1 Re-deposited alluvium associated with the construction of the present river wall was encountered 5.84m AOD below the present ground surface and exposed for a thickness of 0.85m. The rest of the OP, up to the present ground level at 6.79m AOD, comprised the present tarmac riverside footpath surface and its bedding layer.

6.17 OP8 (Located on 19th century dockside south of Union Dry Dock.)

6.17.1 Modern deposits, associated with the present river wall and the riverside footpath at 6.63m AOD, were encountered to a maximum excavation level of 5.73m AOD.

6.18 OP15c (Located north of 19th century lock.)

A brick wall was partially exposed in section at the eastern end of the OP, at 5.16m AOD, and surviving for a height of 1.15m. To the west lay an associated concrete slab at 4.02m AOD, whose exact function remains unclear. It might perhaps be a floor slab for a 19th century building, although given the concrete intrusions encountered in OP15d it may represent a structure connected to the lock or related to drainage. However, given the materials used in its construction (particularly the concrete) and the inclusion of plastic fragments in the material overlying it, it probably post-dates the initial construction and usage of the lock structure. Re-deposited alluvial silt, which proved to be 1.15m thick, was encountered at 5.16m AOD abutting the wall and overlying the concrete slab. Above this, and also overlying the wall, lay the tarmac riverside footpath surface at 5.76m AOD and its associated bedding material.

6.19 OP15d (Located north of 19th century lock.)

6.19.1 A concrete intrusion comprising a possible pillar (at 4.64m AOD and surviving to a height of 1.10m) and concrete slab at 3.54m AOD are probably related to the structure encountered in OP15c. These were overlain by the re-deposited alluvial silts, deposited as made ground in the later 20th century, which were exposed in OP15c. Present ground level lay at 5.84m AOD.

6.20 OP16 (Located north of 19th century lock.)

6.20.1 OP16, excavated to a maximum level of 5.77m AOD, contained just modern services, concrete and made ground. Current ground level was at 6.32m AOD.

6.21 OP17 (Located north of 19th century lock.) (Figure 4)

6.21.1 An alluvial deposit [425] was encountered at 4.00m AOD. As this was exposed for a thickness of just 0.10m it was impossible to determine whether this deposit was in situ (representing part of the buried foreshore or riverside environment) or had been re-deposited as part of the construction of the lock to the south; no anthropogenic material was observed within it. This was sealed by a deposit of dumped gravel and sand [424] (exposed at 5.30m AOD), which may well date from the early 19th century construction of the lock. This was in turn partially sealed by a concrete slab which lay at 5.70m AOD, and was overlain by late 19th/ early 20th century made ground, the surface of which lay 0.80m below present ground level. The present tarmac footpath surface and its associated bedding material made up the rest of the trench.

6.22 OP18 (Located within 19th century Middle Union Dock basin.)

6.22.1 This OP was located towards the mouth of the Middle Union Dock. A sheet pile structure, aligned north to south and associated with the disuse and backfilling of the dock in the early 20th century, was encountered along with reclamation dumps deposited as part of this episode. These remains lay between 5.84m AOD and 5.78m AOD below the current ground surface. Modern made ground and the tarmac forming the present ground surface at 6.48m AOD formed the rest of the trench.

6.23 OP19A (Located north of 19th century lock.)

6.23.1 This OP was intended to examine the connection between the early 19th century lock and Union Docks riverside wall and the present sheet pile riverside wall, which represents a further late 20th encroachment out into the Thames. An external inspection revealed that the sheet piling had been cut to fit onto the battered Union Docks wall. It was therefore expected that the excavation of OP19 would reveal the latter wall to continue behind but roughly parallel to the later sheet piling. However, excavation of OP19 revealed that the Union Docks wall had been at least partially demolished. It is unclear whether this represents a localised breach or whether a more substantial stretch has been removed. Since the surviving top of the wall appeared at 5.08m AOD and excavation ceased at 4.58m AOD, it is also uncertain

whether the Union Docks wall survives in a truncated form lower down. Also unknown is why this demolition took place; no structure was found within this truncation, but it may well be connected with the mid 1960s dredging and concrete business occupying the site. The material immediately above this wall appeared to very modern (it included fragments of plastic) suggesting that the demolition of this wall occurred in the recent past.

6.23.2 The truncated dock wall was sealed by 1.70m of modern made ground, concrete and topsoil, the top of which lay at 6.78m AOD.

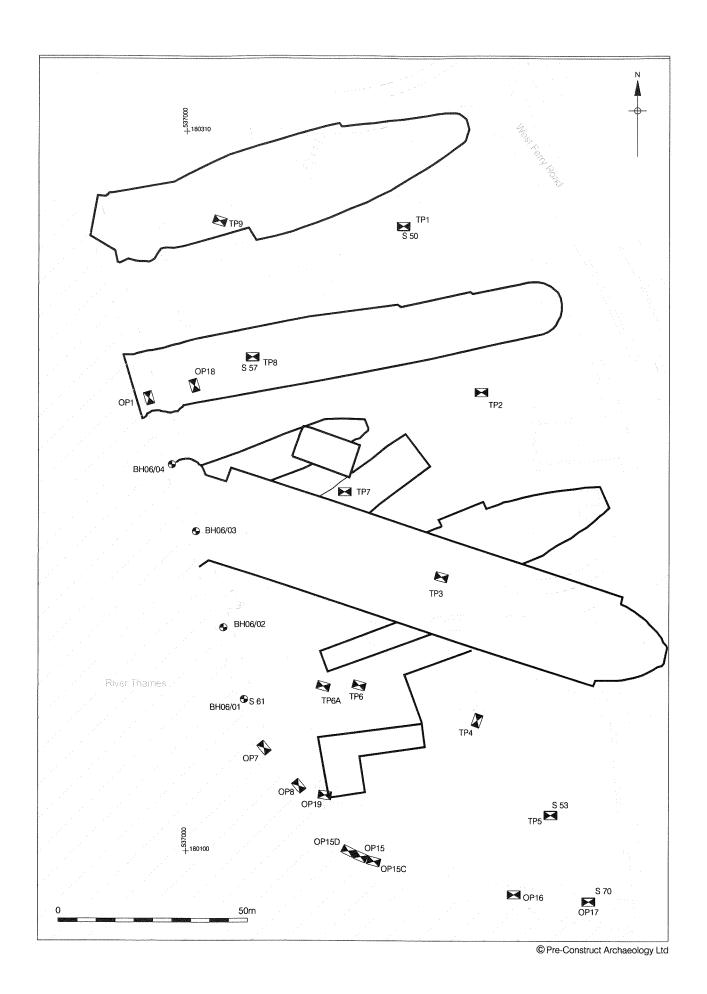
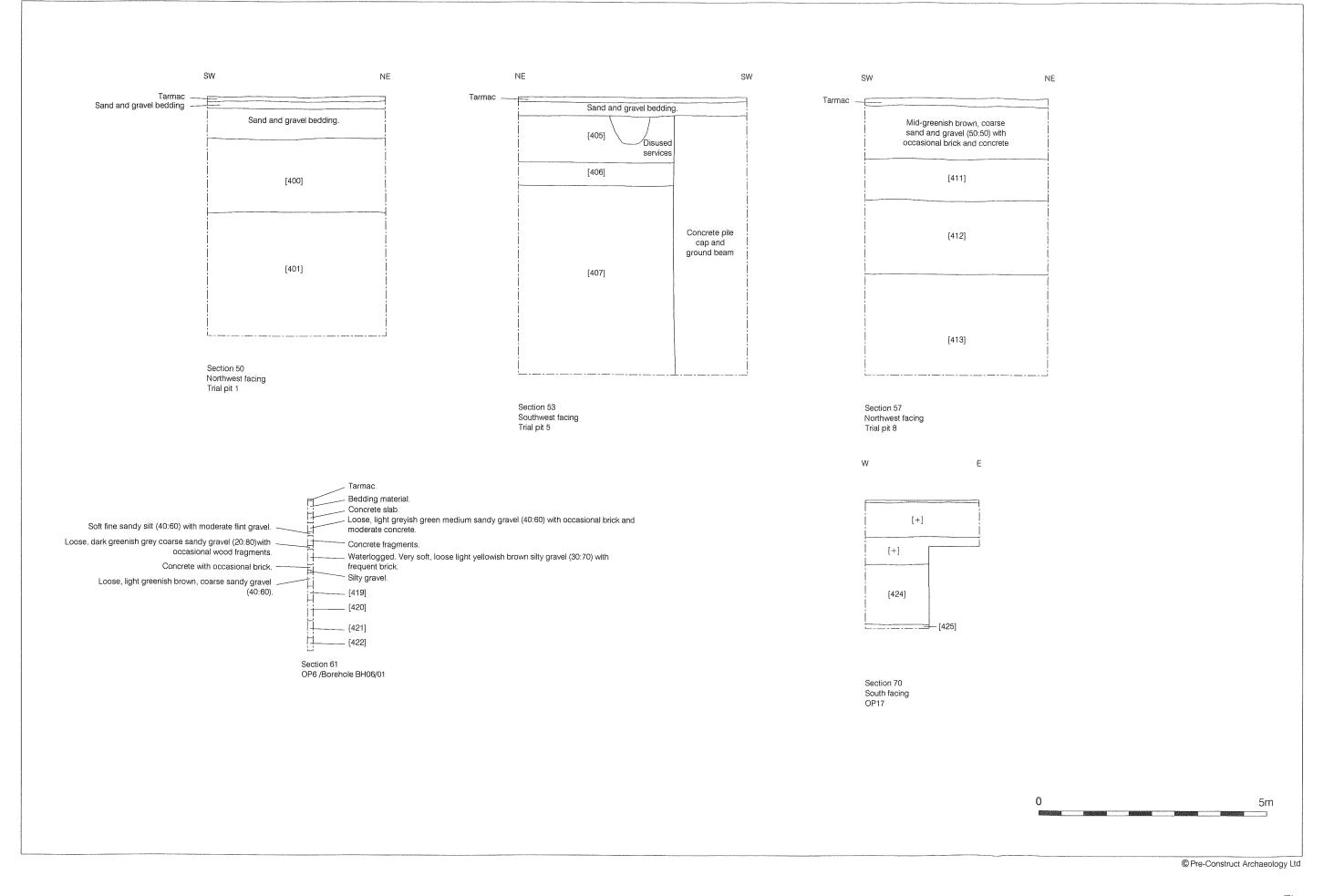


Figure 3
Trench Locations with 19th Century Docks
1:1,000 at A4



7 CONCLUSIONS

- 7.1 Inevitably, given the limited nature of any archaeological intervention thus far coupled with the great complexity of a site such as this (occasioned by the building-up of parts of the site as successive land reclamation, encroachment and dock infilling episodes, and the truncation of other areas as part of progressive dock construction, aside from what is probably a complex sedimentary sequence of alluvial episodes prior to this), any comments here are extremely tentative. However, the results of this watching brief, suggest that parts of the foreshore exposed until the mid 18th century survive buried underneath subsequent ground-raising dumps and between the later dock basins.
- 7.2 They also indicate the potential survival of mid 18th century dockside buildings (evidenced by demolition deposits), probably constructed of brick with stone decorative elements, at the northern end of the site. However, it is important to note that, at the moment, the level of truncation in this area is not known in any great detail.

8 ACKNOWLEDGEMENTS

- 8.1 Pre-Construct Archaeology Ltd would like to thank Concept Site Investigations for commissioning this work on behalf of Canary Wharf Group who kindly funded it. We would also thanks Richard Hughes and Adel Enderson of Arup for their help and assistance, and to David Divers of GLAAS who monitored the work on behalf of the LB Tower Hamlets.
- The author would like to thank Concept Site Investigations for their help on site, Dave Harris for the illustrations and Chris Mayo for his project management and editing.

9 BIBLIOGRAPHY

- Brown, G. 1999. 'A Rapid Desk Based Assessment of the Archaeological Potential of a Development Site at Canary Riverside (Phases 2 & 3), London Borough of Tower Hamlets', Pre-Construct Archaeology Ltd. Unpublished Report
- Clarkeburn, J. 2001. 'Riverside South. Buried Obstructions Investigation', Arup Geotechnics.

 Unpublished Report
- Hughes, R. 2006. 'Proposed Engineering Site Investigation November-December 2006 For Riverside South, London Borough of Tower Hamilets Archaeological Watching Brief Specification', Arup Geotechnics. Unpublished Report
- Mayo, C. 2006. 'Method Statement For An Archaeological Watching Brief At Canary Wharf Riverside South, Westferry Road, London Borough Of Tower Hamlets', unpub rep for Pre-Construct Archaeology Ltd
- Pooley, A. and Mattinson, R. 2002. 'An Archaeological Watching Brief at Canary Wharf Riverside (Phase 2), Canary Wharf, London Borough of Tower Hamlets', Pre-Construct Archaeology Ltd

APPENDIX 1: CONTEXT DESCRIPTIONS

Context No	Trial Pit	Context Description
400	TP1	Soft very dark grey to black sandy silt (20:80) with very frequent lenses of brick and mortar rubble, sub-rounded to very rounded flint pebbles and cobbles (up to 0.20m) and occasional slate, chalk pebbles, tile fragments, wood fragments, metal coal, slag and fragments of ceramic water pipe. 19th/20th century made ground.
401	TP1	Soft mid to dark greyish blue clayey silt (20:80) with occasional brick fragments and sub-rounded to very rounded flint pebbles (up to 50mm.) Alluvium.
402	TP2	Firm mid greyish blue clayey silt (30:70) with very frequent black organic flecks. Alluvium
403	TP3	Friable coarse sand and gravel (50:50) with moderate brick and concrete rubble. 20th century made ground.
404	TP3	Firm mid grey clayey silt (40:60) with occasional brick and concrete rubble, wood, metal and York stone paving fragments, and moderate sub-rounded to very rounded flint pebbles (up to 0.10m.) 19th/20th century dock backfill?
405	TP5	Mixed firm very dark grey and dark brown clayey silt (20:80) with frequent brick and concrete fragments, moderate sub-rounded to very rounded flint pebbles and occasional metal and slate fragments. 20th century made ground.
406	TP5	Loose dark greenish grey sandy gravel (20:80) with frequent silt (well-mixed with rest of deposit) and occasional brick. 19th century made ground.
407	TP5	Firm mid greenish bluish grey clayey silt (30:70) with occasional subrounded to very rounded flint pebbles (up to75mm) and reed fragments throughout; occasional horsehair, wood, chalk and brick fragments in top 1.00m; occasional light greyish green fine sandy lenses (up to 50mm thick in bottom 3.00-4.00m. Alluvium.
408	TP6a	Waterlogged loose very dark grey to black sandy gravel (40:60) with occasional bone, brick rubble, stone boulders (up to 0.25m) and slag. 19th century dock backfill or reclamation deposit.
409	TP7	Very dark bluish grey clayey silt with occasional brick, concrete, mortar, oyster shell, oolitic limestone fragments, slate, lenses of light bluish green medium silt sand (40:60); moderate lenses of light yellowish brown coarse sand, wood, steel reinforcing bars, glass, tile, slag and bone. 20th century dock backfill?
410	TP7	Very dark brownish grey sandy clayey silt (20:30:50) with moderate brick and concrete, and steel reinforcing bars. 20th century made ground.
411	TP8	Firm dark brownish greenish grey clayey silt (30:70) with moderate brick fragments and occasional sub-rounded to very rounded flint pebbles (up to 0.10m.) 20th century made ground.
412	TP8	Mixed weakly cemented brick rubble and mortar with occasional slate, wood fragments, copper wire; moderate concrete and tile. 19th/20th century made ground.
413	TP8	Mid greenish greyish brown, mid reddish brown and dark greyish blue silt clay (40:60) with occasional sub-rounded to very rounded flint pebbles (up to 50mm) throughout; and wood, brick, pot and slate fragments in top 1.00m. 20th century dock backfill.
414	TP9	Loose brick rubble and mortar with occasional York stone paving fragments, slate, metal fragments, wood, moulded oolitic limestone fragments. 19th century demolition debris?
415	TP9	Mid brownish grey clayey Silt (20:80) with frequent mortar, occasional brick and sub-rounded to very rounded flint pebbles (up to 75mm). 18th/19th century reclamation deposit?
416	BH06/02	Waterlogged very soft very dark grey to black silt with moderate very rounded to sub-rounded flint gravel (up to 75mm) and frequent coarse sand. Late 19th/early 20th century silting of Lower Union Dock?
417	BH06/02	Very soft mid greenish grey clayey silt (20:80) with frequent black silt lenses and occasional brick flecks. Late 19th/early 20th century silting of Lower Union Dock?
418	BH06/03	Loose/very soft dark greenish grey silt gravel (40:60). Mid 20th backfill of Union Dry Dock

Context No	Trial Pit	Context Description
419	BH06/01	Loose light yellowish brown silt gravel (40:60). Early 20th century dockside backfill
420	BH06/01	Loose light greenish brown coarse sandy gravel (40:60) with frequent brick fragments. Early 20th century dockside backfill
421	BH06/01	Friable very dark grey to light greyish brown silt sand (20:80) with occasional shell fragments and moderate coarse grit. Early 20th century dockside silting or 19th century foreshore
422	BH06/01	Soft dark greenish grey clayey silt (30:70) with moderate organic particles and lenses of fine sand, and occasional coarse grit. 19th century foreshore?
423	BH06/04	Soft very dark grey to black medium sandy silt (30:70) with occasional shell fragments and frequent brick. Mid-20th century silting of Union Dry Dock.
424	OP17	Loose/friable light yellowish brown and mid brownish red gravely sand (40:60) with occasional brick and patches of light brownish grey clayey silt (30:70.) Early 19th century ground-raising deposit or possibly fill of stepped trench? Associated with lock construction?
425	OP17	Soft dark bluish grey (with dark brownish red patches) silt with frequent roots and twig fragments and occasional shell fragments. 18th/early 19th century foreshore.

APPENDIX 2: OASIS REPORT FORM

OASIS ID: preconst1-22775

Project details

Project name Canary Wharf Riverside South

Short description of the project

From November 2006 to early January 2007, an archaeological watching brief was carried out at Canary Wharf Riverside on geo-technical trial pits and boreholes. A maximum of 4.10m thickness of alluvium and foreshore deposits were exposed, in addition to deposits relating to the remodelling and eventual reclamation of the docks in the 19th and 20th centuries. No structures were encountered associated with the original 18th century docks, nor was any peat exposed which might be indicative of conditions conducive to prehistoric

Project dates Start: 20-11-2006 End: 21-01-2007

Previous/future

Yes / Yes

work

Any associated project reference WEF01 - Sitecode

codes

Type of project

Recording project

Site status

Area of Archaeological Importance (AAI)

Current Land use

Vacant Land 1 - Vacant land previously developed

Monument type

DOCKYARD Post Medieval

Monument type

DOCKYARD Modern

Investigation type 'Watching Brief

Prompt

Direction from Local Planning Authority - PPG16

Country

England

Site location

GREATER LONDON TOWER HAMLETS POPLAR Canary Wharf Riverside

South

Postcode

E14 1XX

Study area

13200.00 Square metres

Site coordinates

TQ 3710 8025 51.5040306837 -0.024405192103 51 30 14 N 000 01 27 W Point

Project creators

Name of Organisation Pre-Construct Archaeology Ltd

Project brief

Arup Associate

originator Project design

ARUP

originator

Project

Chris Mayo

director/manager

Project supervisor Ashley Pooley

Type of

Development Corporation

sponsor/funding

body

Name of sponsor/funding Canary Wharf Contractors Ltd

body

Project archives

Physical Archive

recipient

LAARC

Physical Contents 'Ceramics', 'Industrial'

Digital Archive

recipient

LAARC

Digital Contents

'other'

Digital Media available

'Spreadsheets', 'Survey', 'Text'

Paper Archive

recipient

LAARC

Paper Contents Paper Media

'other' 'Context

available

sheet', 'Correspondence', 'Drawing', 'Map', 'Matrices', 'Report', 'Section', 'Survey

','Unpublished Text'

Project

bibliography 1 Publication type

Grey literature (unpublished document/manuscript)

Title

An Archaeological Watching Brief of a Geotechnical Investigation at Canary

Wharf Riverside South, Canary Wharf, London Borough of Tower Hamlets

Author(s)/Editor(s) Pooley, A

Date

Issuer or publisher Pre-Construct Archaeology Ltd

Place of issue or

London

publication

A4 document Description

Entered by

archivist (archive@pre-construct.com)

Entered on

1 May 2007