

QUEBEC WAY Canada Water London SE16

London Borough of Southwark

Evaluation and Watching brief report

July 2014



**QUEBEC WAY
Canada Water
London Borough of Southwark
SE16 7LF**

Site Code QBW13

Report on archaeological evaluation and watching brief

Sign-off History:

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1	20.09.2013	Kasia Olchowska	Craig Halsey Project Manager	Draft for client review
2	22.07.2014	Adrian Miles	Craig Halsey Project Manager	Updated with second phase of evaluation

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Summary (non-technical)

This report presents the results of an archaeological evaluation and watching brief carried out by Museum of London Archaeology (MOLA) on the site of Quebec Way, Canada Water, Southwark, London, SE16 7LF. The report was commissioned from MOLA by Quadrant Construction Ltd.

Following the recommendations of Southwark Council a number of evaluation trenches and geotechnical pits were excavated on the site.

Seven trenches (1 – 7) were excavated during the evaluation in order to establish the nature and thickness of alluvium, as well as to ascertain the presence of archaeological deposits, structures or artefacts. In all the trenches no archaeology was observed. Approximately 2.4 to 3.80 m of modern made ground was recorded in the trenches overlaying alluvial clays and silts. In trench 1 a concrete obstruction was encountered at c 3.5m below ground level (bgl).

Additionally, three geotechnical pits (A – C) were excavated by the client and monitored by MOLA. Their primary objective was to locate and expose the Russia Dock wall. The dock wall was not encountered in any of the geotechnical pits. The geotechnical pits revealed modern made ground down to a depth of c 2–3 m bgl.

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1 Introduction

1.1 Site background

The evaluation took place at Quebec Way, Canada Water, Southwark, London, SE16 7LF, hereafter called 'the site' (Fig 1). The site comprises Quebec Way Industrial Estate, Quebec Way in the London Borough of Southwark. The site is bounded by Quebec Way to the west, 24-26 Quebec Way to the north, Russia Dock Woodland to the east and Redriff Road to the south. The OS National Grid Ref. for centre of site is 536090 179450. The existing buildings are not basemented. Modern pavement level near to the site lies at c 5.5m OD. The site code is QBW13.

A desk-top *Archaeological Assessment* was previously prepared that covers the whole area of the site (Heritage Collective LPP, 2011). The *Assessment* document should be referred to for information on the natural geology, archaeological and historical background of the site, and the initial interpretation of its archaeological potential.

The first phase of the archaeological field evaluation, consisting of four evaluation trenches and three geotechnical testpits, was carried out between 26 August and 13 September 2013.

The second phase of the evaluation took place between 25 February and 19 March 2014 and consisted of the excavation of Trenches 5, 6 and 7 located on the northern part of the site.

1.2 Planning and legislative framework

The legislative and planning framework in which the archaeological exercise took place was summarised in the *Written Scheme of Investigation (WSI)*, which formed the project design for the evaluation (see Section 1, MOLA, 2013).

The development received planning permission on 30th March 2012 and included Condition No's 4, 5, 6 and 7 in relation to archaeology on the site. Details of the consented development are available at <http://planningonline.southwark.gov.uk/>.

The evaluation was carried out in accordance with the WSI in order to address Condition 4 which stated;

'Before any work hereby authorised begins, the applicant shall secure the implementation of a programme of archaeological evaluation works in accordance with a written scheme of investigation shall be submitted to and approved in writing by the local Planning Authority.'

'Reason: In order that the applicants supply the necessary archaeological information to ensure suitable mitigation measures and/or foundation design proposal be presented in accordance with saved policy 3.19 of the Southwark Plan 2007 and policy 12 of the Core Strategy 2011'

The evaluation was also intended to supply information to support condition 7 which stated;

'Before any work hereby authorised begins, a detailed scheme showing the complete scope and arrangement of the foundation design and all ground works shall be submitted to and approved in writing by the Local Planning Authority and the development shall not be carried out otherwise than in accordance with any such approval given.'

'Reason: In order that details of the foundations, ground works and all below ground impacts of the proposed development are detailed and accord with the programme of archaeological mitigation works to ensure the preservation of archaeological remains by record and in situ in accordance with saved policy 3.19 of the Southwark Plan (July 2007) and policy 12 of the Core Strategy 2011.'

1.3 Origin and scope of the report.

This report was commissioned by Quadrant Construction Limited and produced by Museum of London Archaeology (MOLA). The report has been prepared within the terms of the relevant Standard specified by the Institute for Archaeologists (IFA, 2001).

Field evaluation, and the *Evaluation report* which comments on the results of that exercise, are defined in the most recent English Heritage guidelines (English Heritage, 1998) as intended to provide information about the archaeological resource in order to contribute to the:

- formulation of an appropriate response or mitigation strategy to planning applications or other proposals which may adversely affect such archaeological remains, or enhance them; and/or
- formulation of a proposal for further archaeological investigations within a programme of research

1.4 Aims and objectives

All research has been undertaken within the priorities established in the Museum of London's *A research framework for London Archaeology, 2002*

The following research aims and objectives were established in the *Written Scheme of Investigation* for the evaluation (Section 2.2):

- What is the nature of any surviving alluvial sequence, and can the environments of deposition be inferred from the sedimentology?
- Are there associated palaeo-environmental proxy indicators that may allow the sequence of alluvial deposits to be characterised and dated?
- What is the level and profile of the underlying natural sands and gravels on the site?
- What are the earliest deposits identified?
- Is there any evidence of prehistoric, particularly Bronze Age activity or land management on the site?
- Was the site subject to marine transgression and rising river levels during the Roman, Saxon or medieval periods?

- When was the site first developed?
- Does any evidence of the early 19th-century development of the docks survive on the site?
- What structural evidence of the Russia Dock wall is present at the east of the site?
- Is there any evidence of surviving dock-side structures or activity on the site?
- What other post-medieval activity is present on the site?
- What are the latest deposits identified?
- What is the extent of modern disturbance?

2 The evaluation

2.1 Methodology

All archaeological excavation and monitoring during the evaluation was carried out in accordance with the preceding *Written Scheme of Investigation* (MOLA, 2013).

Trenches 1 and 4 were located on open areas; Trench 1 in the southern part of the site, and Trench 4 in the centre of the site in the car park. Trench 3 was located inside the warehouse building situated in the centre of the site, while Trench 2 was located in the former church building. Geotechnical pits A, B, and C were excavated along the eastern limit of the site. Trench 5 was located in the loading bay at the northern limit of the site, while Trenches 6 and 7 were located inside the warehouse situated on the northern part of the site. Trench 5 was relocated from its original position due to the presence of several live services.

Deep machine slots (sondages) were excavated in Trenches 1, 2, 3 and 4 (one in each trench) in order to determine the nature and depth of the alluvium and possible presence of artefacts. Additionally, 5 auger holes (AH 1, 1a, 2, 3 and 4) were drilled with a Cobra Pneumatic power auger at the base of the trenches to provide an accurate record of the alluvial stratigraphy. The trench and auger hole locations are illustrated in Fig 2. The auger hole logs are presented in Section 7. Auger holes were also drilled through trenches 5, 6 and 7 from the top of the alluvium. The logs for these are presented in Section 8.

The slab/ground was broken out and cleared by contractors under MOLA supervision. Trenches and pits were excavated by machine by the contractors, and monitored by a member of staff from MOLA.

The locations of evaluation trenches were recorded by MOLA surveyors. This information was then plotted onto the OS grid.

A written and drawn record of deposits encountered was made in accordance with the preceding *Written Scheme of Investigation* (MOLA, 2013). The level information for all locations was provided by MOLA surveyors.

The site has produced: 7 trench sheets, 46 photographs and 8 sheets of permatrace with plans and sections (in scale 1:20 and 1:50). No finds were recovered from the site.

The site records can be found under the site code QBW13 in the MoL archive.

2.2 Results of the evaluation

<i>Evaluation Trench 1 (see figs 3 & 4)</i>	
Location	Southern area of the site, in the car park
Dimensions	11.30 m by 2.20 m by 3.50 m depth
Modern ground level/top of slab	4.85 – 4.95 m OD

Base of modern fill/slab	1.45 m OD
Depth of archaeological deposits seen	None observed
Level of base of deposits observed and/or base of trench	n/a
Natural observed	1.45m OD

The earliest feature recorded in Trench 1 was a modern concrete surface situated at 1.45 m OD. It was partially observed in a sondage excavated to c 2m depth from the base of the trench. Its full extent or function is unknown. The auger holes attempted within the trench (AH's 1 and 1a) hit this obstruction at c 2m depth from the base of the trench, suggesting that the concrete did extend across at least the majority of the trench length. The concrete slab may be the floor of a deep storage tank associated with former dockside structures.

The concrete slab rested below c 2m of variable made ground consisting of dark grey silty clays containing gravel and fragments of concrete and brick. The deposits are likely to represent an episode of deliberate backfilling following the disuse of the structure associated with the concrete slab.

The upper subsurface deposits consisted of a modern consolidation layer overlain with concrete and thin sand bedding for the modern brick paving. No archaeological structures or deposits were observed.

<i>Evaluation Trench 2 (see figs 5 & 6)</i>	
Location	Southern/central area of the site, inside the church building
Dimensions	10.30 m by 2.30 m by 4.50 m depth
Modern ground level/top of slab	5.22 – 5.24 m OD
Base of modern fill/slab	2.30 m OD
Depth of archaeological deposits seen	None observed
Level of base of deposits observed and/or base of trench	n/a
Natural observed	2.30 m OD

The basal deposits in Trench 2 consisted of a fine to medium densely packed gravel at – 0.52 m OD. It was only reached in AH2, and not in the 3 m deep sondage excavated in the base of the trench. This gravel deposit represents the Shepperton floodplain gravels, deposited approximately 15–10,000 years ago within a braided river channel during the Late Devensian glacial period.

The gravels were overlain by a layer of greenish grey fine to medium sand with occasional gravel. These were observed in the auger hole at –0.34 m OD. The sands are fluvial in origin and were likely to have been deposited within a single threaded or anastomosing channel during the Lateglacial to Early Period c 10,000 years ago. The next deposit in the recorded sequence was a light greenish grey silty clay, at 2.30 m OD, tending towards a dark grey colour towards the base. These deposits probably represent the formation of mudflats and salt marsh within an intertidal fluvial regime, and probably date from the Late Prehistoric (i.e. Iron Age) to historic (i.e. medieval) periods. An organic clay band measuring 0.20m thick was observed at c 1.43m OD. The organics may represent the development of a semi terrestrial vegetated horizon

that developed in channel marginal conditions following a short period of channel abandonment or migration.

Within this deposit a band of dark bluish grey sandy clay with a small lens of light grey sand was observed in the sondage, at approximately 1.33 m OD. The change in clast size from finer clays and silts to sands probably represents episodic increases to channel flow velocity, entraining and depositing coarser bed load deposits. The alluvial sequence measured c 2.70m in total thickness. It was overlain by a layer of dark grey to black sand with occasional lumps of clay (at 3.04 m OD). This material represents disturbed/redeposited alluvium.

The natural sequence was overlain by several layers of modern made ground (c. 1.75m thick in total) which included; mid yellow brown silty sand and gravel with occasional fragments of mortar (from 0.30 to 0.70 m thick). This was truncated by a small concrete stanchion (0.90 m long, 0.40 m wide and 0.70 m high; at 4.54 m OD; continued below the limit of excavation) as well as a modern intrusion filled with dark grey silty sandy clay with gravel, fragments of ceramic building material, fragments of concrete and occasional timber. This was overlain by 0.3m of concrete crush and sealed by a reinforced concrete slab c 0.20m thick.

No archaeological deposits or structures were observed.

<i>Evaluation Trench 3 (see fig 7)</i>	
Location	Centre of the site, inside the warehouse building
Dimensions	10.25 m by 2.80 m by 2.60 m depth
Modern ground level/top of slab	5.20 – 5.21 m OD
Base of modern fill/slab	1.44 m OD
Depth of archaeological deposits seen	None observed
Level of base of deposits observed and/or base of trench	N/a
Natural observed	1.44 m OD

The basal deposit in Trench 3 consisted of the floodplain Shepperton Gravels, which occurred at –0.59m OD. This was overlain by a 0.9m thick unit of greenish grey sands occurring at 0.31 m OD. The sands here were higher than observed in Trench 2, suggesting that the sands formed a channel bar feature. The sands were overlain by a 1.1m thick unit of mid grey silty clay, occurring at c 1.41 m OD. As with the fine grained units observed in Trench 2 these deposits mostly likely accumulated within intertidal mudflat or salt marsh environments. All the above deposits were observed in the auger holes (AH3) only.

The natural floodplain sequence was overlain by a c 1.60m thick deposit of redeposited alluvial material containing fragments of ceramic building material and mortar. The upper surface of the deposit occurred at 3.01m OD. The deposit was observed in the sondage and AH3. This deposit was overlain by a 1.70 m thick deposit of dark brown sandy silty clay with frequent fragments of ceramic building material, lenses of yellow sand and light greenish grey clay. This rested directly below a make-up of crushed concrete and brick for the floor surface of the existing building in the form of reinforced concrete slab (0.50 m thick in total).

No archaeological structures or deposits were identified.

<i>Evaluation Trench 4 (see fig 8 & 9)</i>	
Location	Centre of the site, in the car park on the northern side of the warehouse building
Dimensions	10.30 m by 2 m by 3.30 m depth
Modern ground level/top of slab	5.03 m – 5.05 m OD
Base of modern fill/slab	2.65 m OD
Depth of archaeological deposits seen	None observed
Level of base of deposits observed and/or base of trench	N/a
Natural observed	2.65 m OD

The basal deposits recorded in Trench 4 consisted of the Shepperton Gravels occurring at –0.49 m OD. These were overlain by a dark brown, slightly organic fine to medium sand that tended towards an inorganic light greenish grey sand towards the base. The top of the sands was observed at c 0.59m OD. The sands were overlain by a dark grey silty clay that tended towards an organic silty clay towards the base of the unit. Occasional molluscs were observed throughout. This unit was observed at 2.65 m OD.

The presence of organics within the top of the underlying sands and the base of the finer silty clays is indicative of semi terrestrial vegetated horizons forming within channel marginal areas. The sands on this part of the site were higher than observed elsewhere suggesting a general increase in the elevation of the topography towards the northern part of the site. As mentioned previously it is likely that the elevated sands formed a channel bar feature. Following a reduction in discharge rates, due to the amelioration of the climate during the Lateglacial/Early Holocene transition, the surface of this channel bar feature probably became exposed for prolonged periods of time allowing vegetation to colonise the upper surface of the channel bar.

The alluvial stratigraphy was overlain by modern made ground, at 4.63 m OD, in the form of a thick deposit of dark grey alluvial clay mixed with black sand, brick fragments, and occasional large fragments of sandstone. The uppermost deposits consisted of 0.40 m thick concrete make-up, overlain with a thin layer of sand supporting the brick paving.

No archaeological structures or deposits were recorded.

<i>Evaluation Trench 5 (see fig 8 & 9)</i>	
Location	Northern limit of the site, in the former Boots loading bay
Dimensions	10.0m by 2 m by 2 m depth
Modern ground level/top of slab	4.97m OD
Base of modern fill/slab	4.63m OD
Depth of archaeological deposits seen	None observed
Level of base of deposits observed and/or base of trench	N/a
Natural observed	4.63m OD

The basal deposits consisted of the Shepperton floodplain gravels observed at 0.12m OD. These were overlain by a thin band of sand that may represent Early Holocene in-

channel sediments. These in turn were overlain by c 4m of minerogenic deposits interspersed with lenses of humified organic material. The top of the alluvial unit occurred at c 4.63m OD. The alluvial stratigraphy was observed primarily within the auger hole undertaken at the base of the trench. The auger hole log with a full interpretation on the alluvial sediments is presented Appendix 8.

The alluvial stratigraphy was overlain by modern made ground, at 4.63 m OD, in the form of a thick deposit of dark grey alluvial clay mixed with black sand, brick fragments, and occasional large fragments of sandstone. The uppermost deposits consisted of 0.40 m thick concrete make-up, overlain with a thin layer of sand supporting the brick paving.

No archaeological structures or deposits were recorded in the evaluation trench.

<i>Evaluation Trench 6 (see fig 8 & 9)</i>	
Location	Northern part of the site, inside the former Boots warehouse building
Dimensions	10.0 m by 2 m by 1.2m depth
Modern ground level/top of slab	5.56m OD
Base of modern fill/slab	3.26m OD
Depth of archaeological deposits seen	None observed
Level of base of deposits observed and/or base of trench	N/a
Natural observed	3.26m OD

The basal deposit consisted of the Shepperton Floodplain gravels, encountered at – 0.39m OD. These were overlain by c 0.25m of possible Early Holocene in-channel sand deposits. The sands were sealed by c 3.4m of fine grained alluvium. These floodplain deposits were overlain by c 1.5m of variable made ground. All these units were observed within the auger holes. The auger hole log with a full interpretation on the alluvial sediments and anthropogenic deposits is presented in Appendix 8.

The auger hole sediments were overlain by further modern made ground deposits, in the form of a thick deposit of dark grey alluvial clay mixed with black sand, brick fragments and occasional large fragments of sandstone. The uppermost deposits consisted of 0.75 m thick mixed dumped make-up, overlain by a 0.35m thick concrete slab.

No archaeological structures or deposits were recorded in the evaluation trench.

<i>Evaluation Trench 7 (see fig 8 & 9)</i>	
Location	Northern part of the site, inside the former Boots warehouse building
Dimensions	10.0 m by 2 m by 1 m depth
Modern ground level/top of slab	5.56m OD
Base of modern fill/slab	2.61m OD
Depth of archaeological deposits seen	None observed
Level of base of deposits observed	N/a

and/or base of trench	
Natural observed	2.61m OD

The basal deposit consisted of the Shepperton floodplain gravels encountered at – 0.19m OD. These were overlain by c 0.15m of possible Early Holocene fluvial sands. The sands were overlain by c 2.65m of fine grained alluvial sediments. The alluvial sequence was overlain by c 2.1m of variable made ground. All these deposits were observed within the auger holes. The auger hole log with a full interpretation on the alluvial sediments and anthropogenic deposits is presented in Appendix 8.

The auger hole sediments were overlain by further modern made ground, in the form of a 0.35m thick deposit of dark grey alluvial clay mixed with black sand, brick fragments and occasional large fragments of sandstone. The uppermost deposits consisted of 0.25 m thick mixed dumped make-up, overlain by a 0.4m thick concrete slab.

No archaeological structures or deposits were recorded in the evaluation trench.

<i>Test Pit A</i>	
Location	By the eastern limit of the site, short distance from the church building
Dimensions	3.50 m by 1 m by 2.30 m depth
Modern ground level/top of slab	4.88 m OD
Base of modern fill/slab	2.58 m OD
Depth of archaeological deposits seen	None observed
Level of base of deposits observed and/or base of trench	N/a
Natural observed	Not observed

Layers of modern made ground and a modern concrete intrusion were observed in TP A. No archaeological structures or deposits were recorded.

<i>Test Pit B</i>	
Location	By the eastern limit of the site, north of TP A
Dimensions	3.50 m by 1 m by 2 m depth
Modern ground level/top of slab	4.79 m OD
Base of modern fill/slab	2.79 m OD
Depth of archaeological deposits seen	None observed
Level of base of deposits observed and/or base of trench	N/a
Natural observed	Not observed

Layers of modern made ground and a modern concrete intrusion were observed in TP B. No archaeological structures or deposits were recorded.

<i>Test Pit C</i>	
Location	By the eastern limit of the site, north of TP C
Dimensions	4.50 m by 1 m by 2 m depth
Modern ground level/top of slab	5.05 m OD
Base of modern fill/slab	3.05 m OD
Depth of archaeological deposits seen	None observed
Level of base of deposits observed and/or base of trench	N/a
Natural observed	Not observed

Layers of modern made ground and a modern concrete intrusion were observed in TP C. No archaeological structures or deposits were recorded. The ground surface in this area was formed by a layer of crushed concrete.

2.3 Conclusions

To summarise; no archaeological deposits or structures were observed in the evaluation trenches. Similarly, no archaeology was recorded in the geotechnical test pits. The concrete intrusion observed in the geotechnical test pits consisted of poured concrete conglomerates. The exact function of this is uncertain, but it may represent an attempt to consolidate loose backfill material. Interestingly the intrusion does extend along the projected line of the dock wall. This obstruction was probably the feature identified during the previous geotechnical works (Card Geotechnics 2011) and misinterpreted as the dock wall.

Within the archaeological trenches the sequence below the present ground surface consisted of modern made ground deposits (from c 2.20 m to 3.80 m thick), situated either directly on top of truncated natural alluvial deposits or disturbed alluvium. The surviving alluvium was up to c 4m thick at its greatest extent. The auger holes noted a rise in the surface elevation of the sands and gravels from south to north. On the southern part of the site the gravels were encountered at c –0.5m OD rising to c 0.1m OD towards the north. The overlying alluvial deposits contained a slightly higher frequency of organic material further towards the north, suggesting that the northern part of the site developed into a semi-terrestrial wetland adjacent to an active channel area on the southern part of the site.

3 Archaeological potential

3.1 Realisation of original research aims

The extent to which the evaluation has answered the research questions is stated below.

- *What is the nature of any surviving alluvial sequence, and can the environments of deposition be inferred from the sedimentology?*

The auger holes identified a fairly uniform sequence across the site consisting of Shepperton Gravels, overlain by Lateglacial/Early Holocene fluvial sands, overlain by fined grained silts and clays indicative of mudflat and/or saltmarsh environments. The organic content of the fine grained alluvial deposits was found

to increase towards the north of the site suggesting the formation of semi-terrestrial horizons in channel marginal areas.

- *Are there associated palaeo-environmental proxy indicators that may allow the sequence of alluvial deposits to be characterised and dated?*

No plant macro fossils suitable for radiocarbon dating were observed in the deposits. Molluscs were noted in low numbers within the alluvial deposits in AH4. The palaeoenvironmental reconstruction potential of the deposits is thought to be low based on the lithological data and initial observations.

- *What is the level and profile of the underlying natural sands and gravels on the site?*

The surface of the sand was found to gradually increase to the north of the site. This change in topography influenced later environments of deposition. The deposits that accumulated across the elevated sands were found to be slightly more organic than those towards the south, suggesting that the elevated sands later formed an area of channel marginal semi-terrestrial wetlands adjacent to an active channel further towards the south.

- *What are the earliest deposits identified?*

The earliest deposits consisted of the Late Devensian Shepperton Floodplain Gravels.

- *Is there any evidence of prehistoric, particularly Bronze Age activity or land management on the site?*

There was no evidence of prehistoric activity within the alluvial sequence. The alluvial sediments are all fluvial or channel marginal in nature and would therefore not have formed dry land surfaces suitable for prolonged periods of occupation.

- *Was the site subject to marine transgression and rising river levels during the Roman, Saxon or medieval periods?*

The sedimentological evidence and comparative data from other sites in the area would suggest that the site was subjected to marine transgressions, rising river levels and the formation of saltmarsh and mudflats environments indicative of intertidal river regimes. However, there was no dating evidence to provide a chronology to the deposit sequence.

- *When was the site first developed?*

The upper made ground deposits would suggest that the site was first developed during the 20th century.

- *Does any evidence of the early 19th-century development of the docks survive on the site?*

There was no evidence of 19th-century development on the site.

- *What structural evidence of the Russia Dock wall is present at the east of the site?*

There was no evidence for the Russia Dock wall being present on the site.

- *Is there any evidence of surviving dock-side structures or activity on the site?*

The only evidence for possible dock side structures on the site consisted of a concrete stanchion in Trench 2, and a deep concrete slab in Trench 1 that may represent the base of a storage tank. There was no firm evidence to date these features.

- *What other post-medieval activity is present on the site?*

There was no evidence for post-medieval activity on the site.

- *What are the latest deposits identified?*

The latest deposits consisted of modern made ground.

- *What is the extent of modern disturbance?*

The extent of modern disturbance varies across the site from 2.4m bgl (Trench 4) to 3.79m bgl (Trench 1). Only natural alluvial deposits were present below the level of modern disturbance.

3.2 General discussion of potential

The evaluation has shown that the potential for the survival of ancient to late 19th/early 20th century ground surfaces (horizontal archaeological stratification) on the site is low. Only natural alluvial deposits were found to survive below the levels of modern truncation. The environments of deposition for the alluvial deposits, as inferred from the sedimentology, would suggest the area consisted of active channels in the Early Holocene, and intertidal mudflats, saltmarshes and marginal semi terrestrial horizons through the Late prehistoric to medieval periods.

3.3 Significance

No archaeological deposits of significance were identified on the site. However, the alluvial deposits, although of low archaeological/palaeoenvironmental potential and significance, do contribute to understanding the local topography and landscape formation processes during the Holocene period (i.e the last 10,000 years).

4 Acknowledgements

The author would like to thank Jason Newbold, Harish Vekaria and Paul Beavis of Quadrant Construction Ltd for their assistance during the site work.

5 Bibliography

Heritage Collective LPP, 2011, *Archaeological impact assessment*

MOLA, 2013, *Quebec Way, Canada Water, London Borough of Southwark, SE16 7LF. Written scheme of investigation for an archaeological evaluation and watching brief*

6 OASIS form

OASIS ID: molas1-159292

Project details	
Project name	Quebec Way, Canada Water, Southwark, London, SE16 7LF
Short description of the project	Seven evaluation trenches were excavated in order to establish the nature and thickness of alluvium as well as ascertain the presence, or lack of thereof, of archaeological deposits, structures or artefacts. In all the trenches no archaeology was observed. Approximately 2m of modern made ground was recorded in all but one of the trenches overlaying alluvial clays and silts. In trench 1 a concrete obstruction was encountered at c 4m below ground level (bgl). Additionally, three geotechnical pits (A - C) were excavated by the Client and monitored by MOLA. Their primary objective was to locate and expose the Russia Dock wall. The dock wall was not encountered in any of the geotechnical pits. The geotechnical pits revealed modern made ground down to a depth of c 2-3 m bgl.
Project dates	Start: 01-08-2013 End: 13-03-2014
Previous/future work	No / No
Any associated project reference codes	QBW13 - Sitecode
Type of project	Field evaluation
Site status	Local Authority Designated Archaeological Area
Current Land use	Industry and Commerce 4 - Storage and warehousing
Monument type	NONE None
Significant Finds	NONE None
Methods & techniques	"Sample Trenches"
Development type	Urban residential (e.g. flats, houses, etc.)
Prompt	Direction from Local Planning Authority - PPS

Position in the planning process After full determination (eg. As a condition)

Project location

Country England

Site location GREATER LONDON SOUTHWARK BERMONDSEY
ROTHERHITHE AND SOUTHWARK Quebec Way, Canada
Water, Southwark, London, SE16 7LF

Postcode SE16 7LF

Study area 500.00 Square metres

Site coordinates TQ 536090 179450 50 0 50 56 23 N 000 11 11 E Point

Height OD / Depth Min: 0.74m Max: 5.24m

Project creators

Name of Organisation MOLA

Project brief originator Quadrant Construction Ltd

Project design originator MOLA

Project director/manager Craig Halsey

Project supervisor Kasia Olchowska

Project supervisor Adrian Miles

Type of sponsor/funding body Developer

Project archives

Physical Archive Exists? No

Digital Archive recipient LAARC

Digital Media available "GIS","Images raster / digital photography","Survey","Text"

Paper Archive recipient	LAARC
Paper Media available	"Notebook - Excavation"," Research"," General Notes","Report","Unpublished Text"
Paper Archive notes	A4 report

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Quebec Way, Canada Water, Southwark, London, SE16 7LF. Report on archaeological evaluation and watching brief
Author(s)/Editor(s)	Olchowska, K
Author(s)/Editor(s)	Miles, A
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7 Appendix: Geoarchaeological Auger hole logs (1st Phase)

AH1 (Trench 1) 538098.09 179332.54
 Top of augerhole at: 3.45 m. OD

Depth below ground level		Elevation m OD		Description	Interpretation	Unit
Top	Base	Top	Base			
0.00	0.30	3.45	3.15	Moderately firm dark grey silty sand and gravel with occasional fragments of concrete and brick. Terminated on indurate surface.	Made Ground	1.1

AH1A (Trench 1) 536098.29 179328.58
 Top of augerhole at: 3.45 m. OD

Depth below ground level		Elevation m OD		Description	Interpretation	Unit
Top	Base	Top	Base			
0.00	0.20	3.45	3.25	Moderately firm dark grey silty sand and gravel with occasional fragments of concrete, CBM and wood.	Made Ground	1A.1
0.20	0.80	3.25	2.65	Firm dark grey silty clay with occasional gravel	Made Ground	1A.2
0.80	2.00	2.65	1.45	Firm, dark grey to black silty sand with gravel and discrete patches of grey silty clay. Some occasional brick fragments.	Made Ground	1A.3
2.00	2.10	1.45	1.35	Concrete slab (hole terminated)	Slab/floor	1A.4

AH2 (Trench 2) 536087.95 179332.54
 Top of augerhole at: 3.94 m. OD

Depth below ground level		Elevation m OD		Description	Interpretation	Unit
Top	Base	Top	Base			
0.00	0.90	3.94	3.04	Loose, greyish green coarse sand and gravels with discrete patches of grey silty clay.	Made Ground	2.1
0.90	1.64	3.04	2.30	Firm dark grey to black fine sands with occasional discrete patches of grey silty clay	Disturbed natural alluvium	2.2
1.64	4.28	2.30	-0.34	Soft light greenish grey silty clay with organic band at 2.5 to 2.7m BGL becoming dark and manganese stained from 4m bgl	Channel silting-up deposit (natural alluvium; late prehistoric/historic)	2.3
4.28	4.46	-0.34	-0.52	Firm, fine to medium sand with occasional gravel.	Early Holocene channel deposit	2.4
4.46	4.50	-0.52	-0.56	Firm consolidated, fine to medium greenish sand and gravel	Floodplain gravel (Pleistocene)	2.5

AH3 (Trench 3) 536086.35 179444.46
 Top of augerhole at: 3.91 m. OD

Depth below ground level		Elevation m OD		Description	Interpretation	Unit
Top	Base	Top	Base			
0.0	2.5	3.91	1.44	Loose, grey coarse sand and gravels with discrete patches of grey silty clay, CBM and mortar.	Made Ground	3.1
2.5	3.6	1.44	0.31	Firm mid grey silty clay becoming sandy toward base	Gradual channel silting-up deposit (natural alluvium; late prehistoric/historic)	3.2
3.6	4.5	0.31	-0.59	Dense light, becoming dark green, laminated fine sand.	Early Holocene edge of channel deposit	3.3
4.5	4.6	-0.59	-0.69	Firm consolidated, fine to medium greenish sand and gravel	Floodplain gravel (Pleistocene)	3.4

AH4 (Trench 4) 536083.85 179485.83
 Top of augerhole at: 3.51 m. OD

Depth below ground level		Elevation m AOD		Description	Interpretation	Unit
Top	Base	Top	Base			
0.00	0.86	3.51	2.65	Made Ground	Made Ground	4.1
0.86	1.08	2.65	2.43	Firm, dark greyish brown silty clay slightly organic with occasional mollusc fragments.	Channel silting-up deposit (natural alluvium; late prehistoric/historic)	4.2
1.08	1.70	2.43	1.81	Void	Poor recovery	4.3
1.70	2.80	1.81	0.71	Firm, dark grey silty clay with manganese mottling and occasional mollusc fragments; becomes light greenish grey between 2.3m and 2.7m bgl then progressively more organic toward base.	Channel silting-up deposit gradually inundating possible landsurface; progressively stagnating (natural alluvium; late prehistoric/historic)	4.4
2.80	4.00	0.71	-0.49	Moderately firm, dark brown, organic fine to medium sand becoming light greenish grey toward base.	Early Holocene edge of channel deposit; possible landsurface (river edge / high ground)environment	4.5
4.00	4.10	-0.49	-0.59	Firm consolidated, fine to medium greenish sand and gravel	Floodplain gravel (Pleistocene)	4.6

8 Appendix: Geoarchaeological Auger hole logs (2nd Phase)

Quebec Way (QBW13) Borehole AH5 Trench 5 (north-eastern corner)						
OD height:	4.17	Easting:	536040.14		Northing:	179575.31
from (m BGL)	to (m BGL)	from (mOD)	to (mOD)	Thickness	Deposit description	Interpretation
0.00	4.00	4.17	0.17	4.00	Soft grey silty clay with occasional bands of organic material/humified peat at 1.25m, 1.50m and 3.45m bgl	Channel silting up interspersed with periods of marsh development (late prehistoric/early historic)
4.00	4.05	0.17	0.12	0.05	Dark firm olive green fine sands	Early Holocene channel deposit
4.05	4.75	0.12	-0.58	0.70	Olive green sands and gravels	Floodplain gravel (Pleistocene)

Quebec Way (QBW13) Borehole AH6 Trench 6 (north-eastern corner)						
OD height:	4.76	Easting:	536062.93		Northing:	179553.49
from (m BGL)	to (m BGL)	from (mOD)	to (mOD)	Thickness	Deposit description	Interpretation
0.00	0.90	4.76	3.86	0.90	Dense tan medium sand with frequent gravels	Made Ground
0.90	1.50	3.86	3.26	0.60	Dark grey medium sands and gravels	
1.50	4.90	3.26	-0.14	3.40	Grey soft silty clay with manganese throughout, organic horizons at 4.55-4.60 and 4.75-4.80m bgl (both sampled)	Historic alluvium, interspersed with periods of marsh development
4.90	5.15	-0.14	-0.39	0.25	Dark grey clayey fine sand	Early Holocene channel deposits
5.15	5.70	-0.39	-0.94	0.55	Sands and gravels	Floodplain gravel (Pleistocene)

Quebec Way (QBW13) Borehole AH7 Trench 7						
OD height:	4.71	Easting:	536091.72		Northing:	179547.29
from (m BGL)	to (m BGL)	from (mOD)	to (mOD)	Thickness	Deposit description	Interpretation
0.00	0.50	4.71	4.21	0.50	Soft dark orangey brown coarse sand with frequent gravels	Made ground
0.50	0.80	4.21	3.91	0.30	Dark grey soft coarse sands and gravels	
0.80	2.10	3.91	2.61	1.30	Very dark grey soft slightly clayey sand with frequent gravels	
2.10	4.75	2.61	-0.04	2.65	Soft dark grey silty clay with an organic lenses at 4.00-4.05m bgl	Channel silting-up deposit with ephemeral marsh development (natural alluvium; late prehistoric/historic)
4.75	4.90	-0.04	-0.19	0.15	Soft dark olive green clayey fine sand	Early Holocene channel deposit
4.90	5.00	-0.19	-0.29	0.10	Sands and gravels	Floodplain gravel (Pleistocene)



Fig 1 Site location

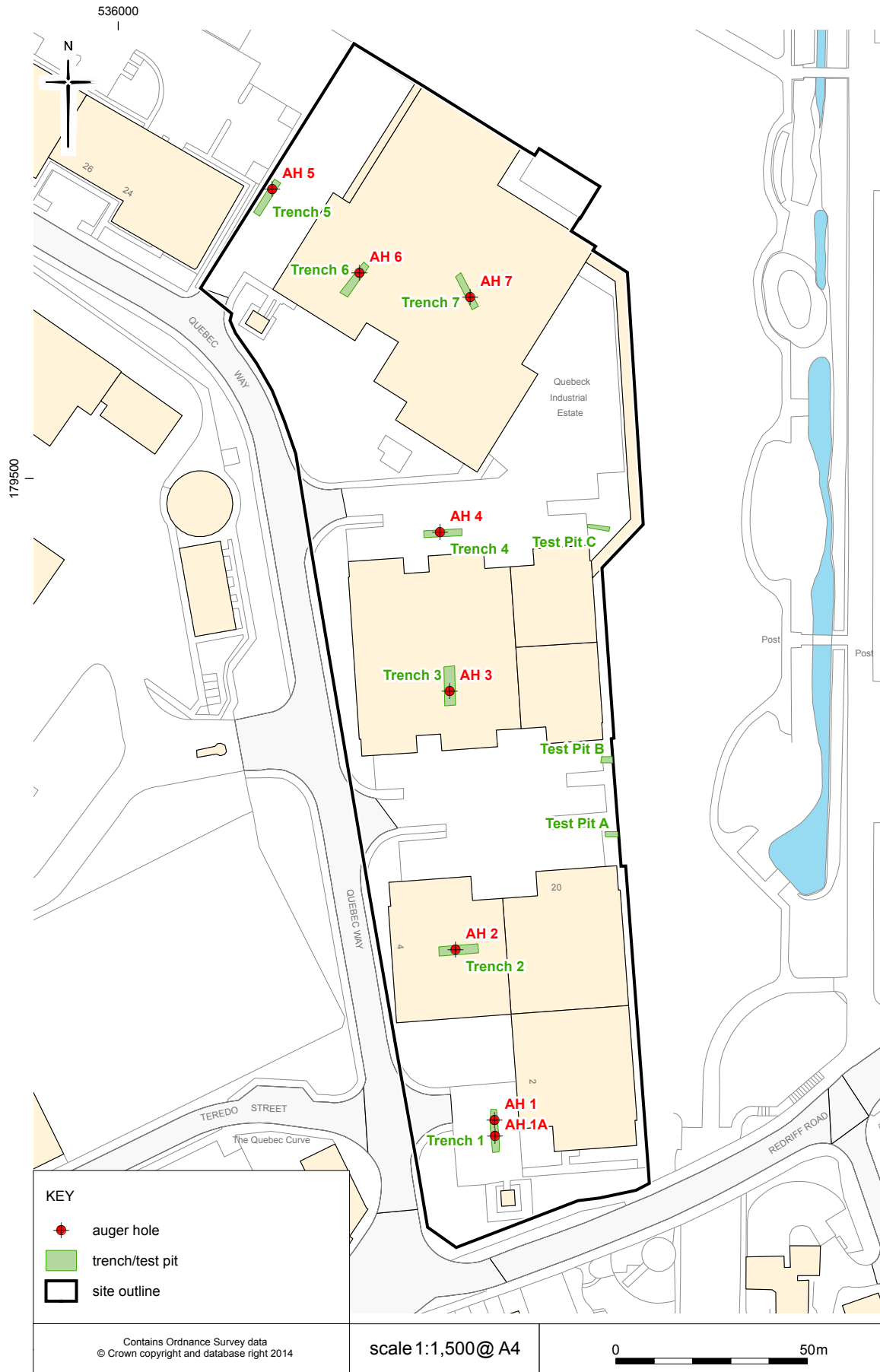


Fig 2 Trench locations



Fig 3 Trench 1, general view; facing SE



Fig 4 Machine slot in Trench 1; facing E

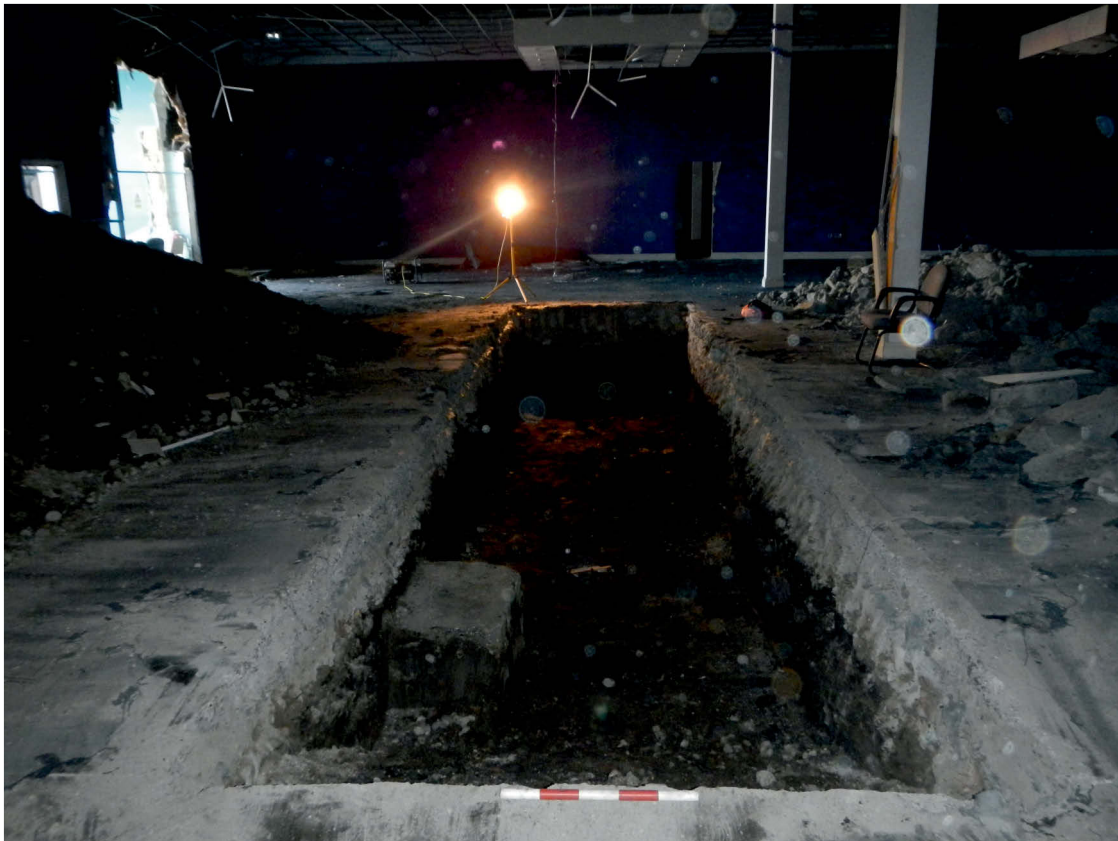


Fig 5 Trench 2, general view; facing E

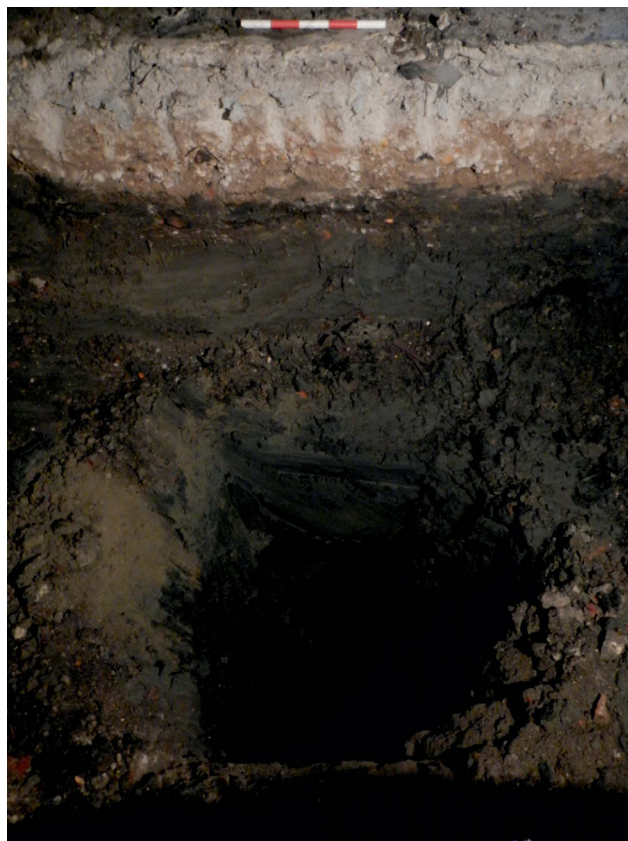


Fig 6 Machine slot in Trench 2; facing N



Fig 7 Trench 3, general view; facing N



Fig 8 Trench 4; general view; facing W



Fig 9 Machine slot in Trench 4; facing W