Archaeological Watching Brief Report

PRINCES DOCK LIVERPOOL

For Orion Heritage

Nicky Herring MA

L-P:ARCHÆOLOGY

Archaeological Watching Brief Report

PRINCES DOCK LIVERPOOL

Client:	Orion Heritage
Local Authority:	Liverpool City Council
NGR:	333676,390897
Planning App:	Pre-planning
Author(s):	N Herring
Doc Ref.	LP2447C-WBR-v1.5
Date:	October 17
Site Code:	LP2447C

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A trading name of L - P : Heritage LLP

33 Lower Bridge Street | Chester | Cheshire | CH1 IRS | +44 [0]1244 313100 | chester@lparchaeology.com

TABLE OF CONTENTS

Table of Figures

Table of Plates

Table of Appendices

Abstract

- I. Introduction
- 2. Aims & Methodology
- 3. Site Information
- 4. Results
- 5. Discussion and Conclusions
- 6. Finds & Archive

Sources Consulted

Figures

Appendices

TABLE OF FIGURES

- Figure 1 Site Location General
- Figure 2 Site Location Detail
- Figure 3 1893 OS Map
- Figure 4 1908 OS Map
- Figure 5 1954 OS Map
- Figure 6 2010 OS Map
- Figure 7 Geotechnical Trenching
- Figure 8 Section of Test Pit 106
- Figure 9 Section of Test Pit 107
- Figure 10 Section of Test Pit 109

TABLE OF PLATES

- Plate 1 The stepped north east facing section of the Sea wall in TP104B
- Plate 2 The vertical south west facing section of the Sea wall in TP104A
- Plate 3 Southeast facing section of TP105.
- Plate 4 Northwest facing section of TP110

TABLE OF APPENDICES

Appendix I - Oasis Form

Abstract

An archaeological Watching Brief was carried out during geotechnical investigations at Princes Dock, William Jessop Way, Liverpool. The Watching Brief was implemented due to the potential for archaeological remains of the historical dock infrastructure. The work was carried out by L – P : Archaeology in February 2017. This report has been prepared by Nicky Herring on behalf of Orion Heritage Ltd.

The site lies within an area of archaeological importance of the historical docklands. Evidence of the historical dock infrastructure survives above ground, notably the sandstone boundary wall running parallel with Bath Street, and the cobbled surface and rail tracks from the early to mid 19th century.

During the Watching Brief nine trial pits were excavated, and recorded. These can be divided into three areas, those located close to the dock wall, close to the sea wall on the eastern side of the site near the boundary wall off Bath Street, and the western side of the area.

During the works the historical sandstone seawall was exposed, identified and recorded. The 19th century cobbled surface and railway tracks were largely preserved in situ and during excavation through the cobbled surface the remains of a brick culvert were exposed.

The development of the docklands involved extensive land reclamation schemes. It was noted during excavation that the material used comprised of deposits and layers of what could be acquired locally, either quarry waste or 19th century demolition rubble. There was a clear distinction, dependent on which side of the seawall you stand as to which deposits were used. Quarry waste and sandy clay largely bolstered the vertical side of the wall, and a composition of dark-brown sandy clay was observed on the other side, denoting different land reclamation schemes of the docks' development.

1. Introduction

- 1.1.This report details the results of an archaeological Watching Brief carried out during geotechnical investigations at Princes Dock, William Jessop Way, Liverpool, for Orion Heritage. The local authority is Liverpool City Council.
- 1.2.The fieldwork was carried out by Nicky Herring of L P : Archaeology during February 2017. This report has been completed by Nicky Herring of L - P : Archaeology.
- 1.3.The site is located on land between Bath Street and William Jessop Way, to the east of Princes Dock, Liverpool (FIGURE 1). The site is centred on National Grid Reference (NGR) 333676,390897 (FIGURE 2). The area investigated lay to the south of the red line boundary and work was carried out to inform the understanding of the dock wall, sea wall and any other heritage assets that may extend onto the site.
- 1.4. The site code allocated by L P : Archaeology is LP2447C.
- 1.5.The work was carried out in accordance with the Code of Conduct as set out by the CIfA (2014A) and the CIfA's Standards and Guidance for an Archaeological Watching Brief (2014B).

2. Aims & Methodology

2.1.AIMS

2.1.1. The aims of the watching brief were:

- To determine the presence or absence of archaeological deposits or remains.
- To record the character, date, location and preservation of any archaeological remains on the site, and the extent of these remains on site exposed or disturbed during groundworks.

2.2.METHODOLOGY

- 2.2.1. Groundworks were undertaken using a 360° tracked excavator with a toothless ditching bucket where possible and all ground disturbances were monitored by an experienced archaeologist.
- 2.2.2. A series of nine trenches were excavated at predetermined locations across the site (FIGURE 4).
- 2.2.3. All plan and section surfaces were examined for archaeological deposits and features, with each deposit being allocated a unique identifier (context number) and recorded on standard L P : Archaeology recording sheets.
- 2.2.4. Digital photography played an integral part in the recording of this site with specific shots taken of deposits and features and general shots taken to show wider site context.
- 2.2.5. All works were carried out in accordance with the Code of Conduct as set out by the CIfA (2014A). Accordingly the site archaeologist abided by the CIfA's Standards and Guidance for an Archaeological Watching Brief (2014B).

3. Site Information

3.1.GEOLOGY

3.1.1. The British Geological Survey records the underlying bedrock as Chester Pebble Beds formation (sandstone, pebbly [gravelly]) overlain by superficial Tidal Flat Deposits of clay, silt and sand (BGS 2017).

3.2. TOPOGRAPHY

- 3.2.1. The site lies flat at an elevation of c.7.4m OD and bounded by the early 19th century perimeter wall that was constructed off Bath Street (JARVIS, 1991). The site is situated between a multi-storey carpark to the south, and Bespoke Serviced Apartments to the north.
- 3.2.2. The site lies relatively undeveloped as a vacant brownfield plot with the original 19th century cobbled surface and rail tracks preserved with areas of modern tarmac.

3.3.ARCHAEOLOGY AND HISTORY

- 3.3.1. The aim of this section is not to give an entire history of Liverpool but to give a summary of the archaeological and historic background specific to the site. The information is summarised from the Desk Based Assessment undertaken by Orion Heritage (SMITH 2017 QU-0397/1) on Hive City Docks.
- 3.3.2. The docklands of Liverpool were not always as commercially developed as they became during the 18th century. A number of charters for the development of the Liverpool docklands had been granted by kings since the 13th century, which promoted its commercial infrastructure and development.
- 3.3.3. In the Medieval period Liverpool or 'the Pool' was a small fishing village which was reliant on inland communications with York and Lancaster to export and import goods through the port of Chester. It was not until 1650 that it acquired a higher commercial status and became more navigable. Thus it began to rapidly prosper and grow into the port we recognise today.
- 3.3.4. Sand banks were removed, the approaches to the harbour were deepened, channels excavated and large masonry sea defence walls were constructed over

three miles along the water front (BROWN, 1843).

- 3.3.5. After the abolition of the slave trade in 1806, from which Liverpool had grown prosperous, instead of the expected decline, Liverpool continued to flourish. Merchants and ship-owners established new export and import trade links beyond the traditional Mediterranean and Baltic connections, including America, the West Indies, Asia and Egypt (IBID).
- 3.3.6. The docklands were well established prior to the construction of Princes Dock. In 1771 Georges Dock, which was associated with the American and Caribbean trade, was completed. The Kings Dock opened in 1788, which dealt with trade of tobacco from North and South America, the Levant and Europe, and the Queens Dock in 1796 followed. The latter was appropriated by ships from the West India, and the Baltic and Dutch Vessels, and largely associated with the trade of timber (IBID).
- 3.3.7. In 1799 an Act of Parliament was passed authorising the construction of Princes Dock, initially employing civil engineer William Jessop, who was a reputable canal builder to design the new dock, but in 1809 the design was undertaken by J. Rennie. John Foster was appointed 'General Surveyor and Controller of works' in 1799, and was responsible for all aspects of the construction.
- 3.3.8. The dock was initially designed to berth large ocean going vessels, but it experienced a number of obstacles during its construction, including delays due to difficulties resourcing materials, establishing loans and funds and designs flaws that rendered it inaccessible and outdated for its initial purpose (JARVIS, 1991).
- 3.3.9. Construction work started in 1810 and was completed in 1821. On the 19th July, in celebration of the coronation of King George IV the dock was publicly opened. It subsequently took over the trade connections once owned by Georges dock.
- 3.3.10.Princes Dock was the first closed dock system, enclosed within a sandstone boundary wall, approximately 5.5m high and extending for approximately 210m in length. It was built by John Foster, who designed it to provide a

secure location for the storage of goods.

- 3.3.11. The initial plan had been to build warehouses, similar to Albert Dock, but the Thomas Kaye map of 1810 shows no storage facilities. In 1822 the local merchants, ship-owners and underwriters successfully petitioned the 'Dock Committee' for the construction of four transit sheds, as they felt there was inadequate cargo facilities. It is not known what date these were completed, but the open transit sheds are shown on Gages map of 1836. Between 1822 and 1824 a fire broke out partially destroying and damaging the existing sheds.
- 3.3.12.In 1848 smaller secure transit sheds were built, as the open sheds proved inadequate for the purpose of storing the valuable goods from the East and West Indies, China and America. In 1889, the first sliding doors were installed. The cobbled surface and rail tracks, which are still preserved today, were also developed in this period, though a precise date is unknown (IBID).
- 3.3.13.It is apparent that by the 1870's the docks infrastructure and transit sheds were too outdated for purpose and took on a new role. Princes Dock had become too small for the trading ships of the day, particularly due to the small entrance into the dock. The sea wall also required updating as the hulls of the newer steam ships were squared sided and flat bottomed, unlike the shallower and more rounded draughts of the ships during the 1840's, and there was risk of damaging both the wall and ships.
- 3.3.14.Both the Georges Dock and Princes Dock area became passenger ports in the 1890's, when a land reclamation scheme was put into action and the floating landing stages were reconstructed.
- 3.3.15.A railway along the docklands was opened in 1895, in order to transport people and goods. The railway ran the extent of the water front, parallel to Bath Street and a passenger terminal called the 'Riverside Station' was constructed (BROWN, 1843).
- 3.3.16.It was not until 1904 that any major modernisation works were undertaken. A new concrete quayside, supported by concrete pillars was constructed. The sheds were repaired and new sliding doors installed. In the mid 60's the ferry

terminals were reconstructed and became a Roll on, Roll off port.

4. Results

- 4.1.This section outlines the results of the archaeological Watching Brief. Deposit numbers are given in (parentheses) and structure numbers are given in [square brackets]. All context numbers referred to in the text are illustrated, and all are in the archive.
- 4.2.Nine trial pits (TP) were machine excavated to the south of the red line boundary near the entrance to the site off Bath Street. Several of these trenches were subdivided into TPa and TPb (FIGURE 7). In general these trenches can be divided into three groups, as detailed below.
- 4.3.TP106a, 106b; TP102,104a, 104b and TP103a, 103b were located over the potential dock wall and were excavated to varying depths between 3.20-3.30m below ground level (bgl). Due to the instability of the plant and the presence of the water table excavation ceased before reaching bedrock.
- 4.4.The trial pits revealed that the sandstone seawall was relatively well preserved and were structurally solid. Minor damage to the top of the dock wall and minor deterioration was noted.
- 4.5. The southwest facing section of the wall was vertical, whilst the northeast facing section was stepped (FIGURE 8) and may have a pronounced batter, based on photographic evidence (JARVIS, 1991). Through excavation the top of the wall was exposed, seen at a width of 2m within the limits of excavation, however it is likely that the base is wider for structural support.
- 4.6.TP106a, TP106b, TP102, TP104a, TP104b, TP103a and TP103b revealed a consistent stratigraphic sequence. The 0.2m thick upper tarmac and hardcore surface was removed, the modern running surface consisted of a thin (0.05m) layer of concrete with embedded stone fragments, and a layer of crushed sandstone hardcore; with the exception of TP106, which had a layer of smooth black tarmac, and a white concreted hardcore.
- 4.7.The tarmac sealed the 19th century cobbled block surface, which was 0.2m thick, and relatively well preserved within the areas excavated but is evidently missing or in poor condition where it had been disturbed by modern service truncation.

- 4.8.On either side of the sea wall varying deposits were recorded, this reflects mention by Jarvis (1991) of difficulties in securing material for land reclamation; that during creation for the land reclamation scheme materials were sourced according to their availability in order to complete construction quickly.
- 4.9.The deposits on the stepped southwest side of the dock wall (13), (16) and (21) were a series of dark grey-brown clayey sand, with frequent, unsorted sub-round and sub-angular fragments of red and yellow sandstone quarry waste up to 0.5m in size.



Plate 1 – The stepped north east facing section of the Sea wall in TP104B

4.10.Underlying (13), (16) and (21) there was evidence of 19th and 20th centuries building demolition rubble, and hardcore, including red bricks up to 0.16m in size and fragments of metal. This deposit became waterlogged at approximately 3.20m bgl.

4.11.On the vertical southwest face of the dock wall, the deposits used to build up the ground level consist of crushed, fragmented sandstone (9), (14), (22) overlaying a yellow-brown sandy clay (11) and (23). In TP103 this distinction was less defined, though it became sandier towards the base.



Plate 2 – The vertical south west facing section of the Sea wall in TP104A

- 4.12.Overall, there was limited material culture recovered from the investigations, however, the ceramic pipe fragments (thought to be remnants of service pipe) and sherds of 19th century fineware pottery were noted from the lower yellow-brown sandy clay deposits (11) and (23).
- 4.13.A 20th century metal drainage pipe (PLATE 2) aligned northwest to southeast and measuring approximately 0.20m in diameter is present within trial pit TP104A but the extent of this pipe remains unknown.
- 4.14.TP101, TP105, and TP107 were located on the edge of the carpark excavated through the raised grass verge on the west side of the east quay. These three trial pits excavated to varying depths between 3.20-3.50m bgl, hitting the water table at 3.20m bgl.

- 4.15.Previous excavations on the east quay were found archaeology at a depth of 0.70m bgl (ADAMS, 2016), no archaeological features of significance were identified within these trial pits.
- 4.16.During the re-construction of the docks in 1929, when they extended and rebuilt the quayside using the concrete pillars as structural supports, it can be suggested the dock wall was truncated. Further investigation is required to determine the location of this wall and if it is preserved *in situ*.



Plate 3 – Southeast facing section of TP105.

- 4.17.The 0.3m thick grass turf and 50mm thick tarmac were removed to expose a layer of crushed sandstone hardcore (6), with a layer of terram separating the hard core from a deposit of backfilled material for land reclamation.
- 4.18. The deposit is similar to that found on the southwestern side of the seawall, notably a dark grey-brown silty sand, with frequent and randomly sorted fragments of sandstone and previous building demolition waste, such as bricks, metal, and ceramic pipes, that date from the 19th and early 20th centuries. Again, it was not possible to reach the bedrock within the limits of the excavations.
- 4.19.TP108, TP109 and TP110 were located within the area of the preserved cobbled surface and railway track on the eastern side of the development site. No archaeological features of significance were discovered in TP108, but within TP109 and TP110 the top of a culvert was discovered at approximately 0.90m bgl.

4.20. The upper layer of the 19th century cobbled surface was 0.2m thick and overlay a

white concrete hardcore layer measuring 0.2m thick. The hardcore sealed a 0.5m thick deposit of light red-brown silt sand, with crushed yellow and red sandstone inclusions with occasional brick fragments.

4.21.This deposit was cut by a brick culvert, which ran northwest to southeast through both trial pits. The brick culvert was constructed to 0.47m in height and was exposed by 0.44m in width within TP110. It was found in good structural condition and is likely preserved *in situ* further along its extent, which remains unknown (PLATE 4).



Plate 4 - Northwest facing section of TP110

5. Discussion and Conclusions

- 5.1.An archaeological watching brief was carried out on geotechnical investigations at Princes Dock, William Jessop Way, Liverpool.
- 5.2. The test pits were undertaken outside of the site boundary, in order to contribute to the understanding of the dock walls, sea walls and any other assets within the site and immediate area.
- 5.3.The works comprised of excavating nine trial pits to the south of the red line boundary. The excavations revealed the location of the 19th century Princes Dock wall running northwest to southeast, through TP103, TP104 and TP106, approximately 0.3-0.6m bgl.
- 5.4. The dock wall is preserved in relatively good condition *in situ*, with minor evidence of damage on the upper course of the wall. During this investigation it was measured to be 2m wide at the top, which initially stepped down vertically to a depth of 3.4m bgl. The full depth of the wall was not determined as an alternative method is required to reach the depth of the bedrock below.
- 5.5.Beneath the preserved cobbled 19th century surface on the eastern side of the quay, at the depth of 0.9m bgl of TP109 and TP110, a brick constructed culvert running northwest to southeast was exposed and recorded. The extent of its length remains unknown, but the culvert appears in fairly good condition and is likely to be preserved *in situ* further across the site.
- 5.6.Further geotechnical investigation are planned to determine both the full depth of the bedrock and structural features exposed within these works, as well as attempting to locate the sea wall.

6. Finds & Archive

6.1.FINDS

6.1.1. A total of one glass sherd and five ceramic sherds were recovered form the trial pits. A single oyster shell was also recovered. The following section details the finds assemblage by trial pit and context.

TP102

6.1.2. Context (11) from TP102 produced a partial upper valve from an oyster. Three sherds of late Post Medieval ceramics were recovered from (11). These included a fragment of salt glazed drain from the late 19th century, a base sherd of black glazed ceramics, dating from the 19th century, and a fragment of 20th century ceramic drain pipe. It is possible that the 20th century drain is intrusive and represents contamination from the way in which the trial pits were excavated.

TP104a

6.1.3. TP104a produced a single glass find, the base of a green glass bottle dating from the 19th century. This also came from the yellow sandy clay defined as (11) in both trenches. Two ceramic sherds were recovered from (11) within TO104a, a base sherd from a white glazed plate and the rim of a brown glazed up, with a black decorative tree motif. Both ceramic sherds are thought to be late 19th century in date.

6.2.ARCHIVE

- 6.2.1. The paper archive consists of:
 - 1 x Photographic Register
 - l x Context Register
 - 4 x Context sheets
- **6.2.2.** A limited number of late Post Medieval and Modern finds, including ceramic drain pipe fragments, ceramic fragments, glass and a rubber sole safety boot, with leather upper, were recovered from site. On site discard of 20th century

finds was carried out.

6.2.3. The archive is to be deposited with the Maritime Archives and Library at Merseyside Maritime Museum.

SOURCES CONSULTED

DOC REF: LP2447C-WBR-v1.5

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BIBLIOGRAPHIC

- BRITISH GEOLOGICAL SURVEY, 2017. 'British Geological Survey GeoIndex'. Available at: http://www.bgs.ac.uk/geoindex/.
- BROWN, A. 1843, 'Smith's Strangers' guide to Liverpool, its environs, and part of Cheshire, for 1843'. Printed and published by Benjamin Smith.

CHARTERED INSTITUTE FOR ARCHAEOLOGISTS, 2014A. 'Code of Conduct'.

- CHARTERED INSTITUTE FOR ARCHAEOLOGISTS, 2014B. 'Standard and guidance for an Archaeological Watching Brief'.
- JARVIS, A. 1991, Princes Dock, A Magnificent Monument of Mural Art. Birkenhead Press Limited.
- ADAMS, M. 2016, An Archaeological Watching Brief During Ground Investigation works at Princes Dock, Liverpool, Unpublished Report.

FIGURES



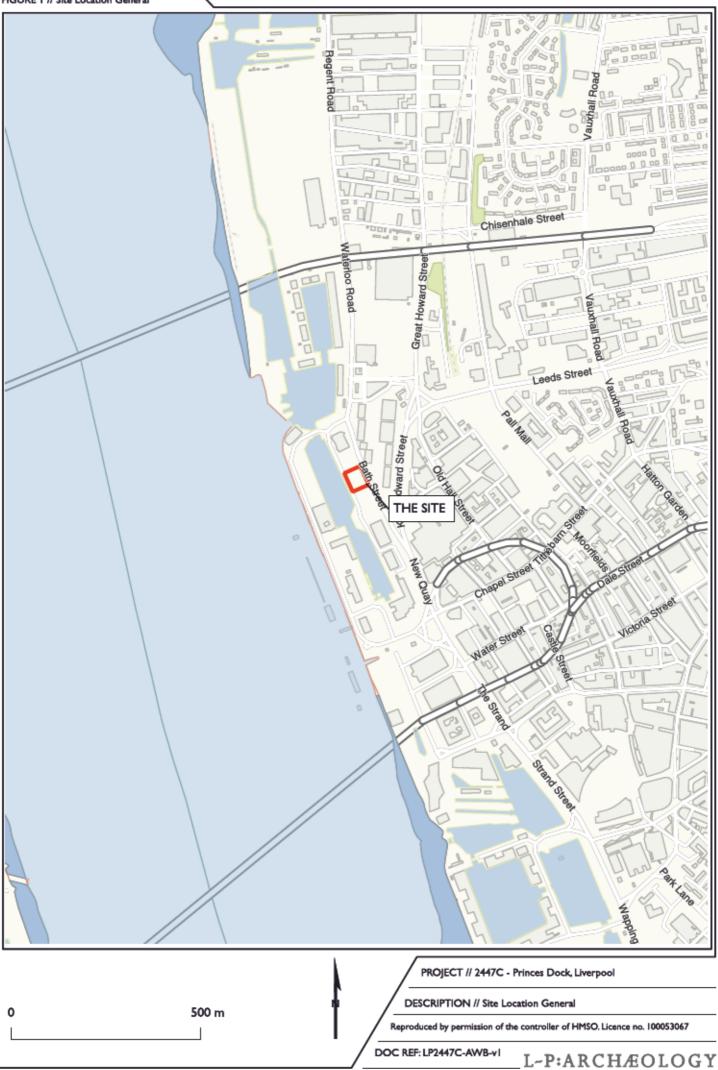
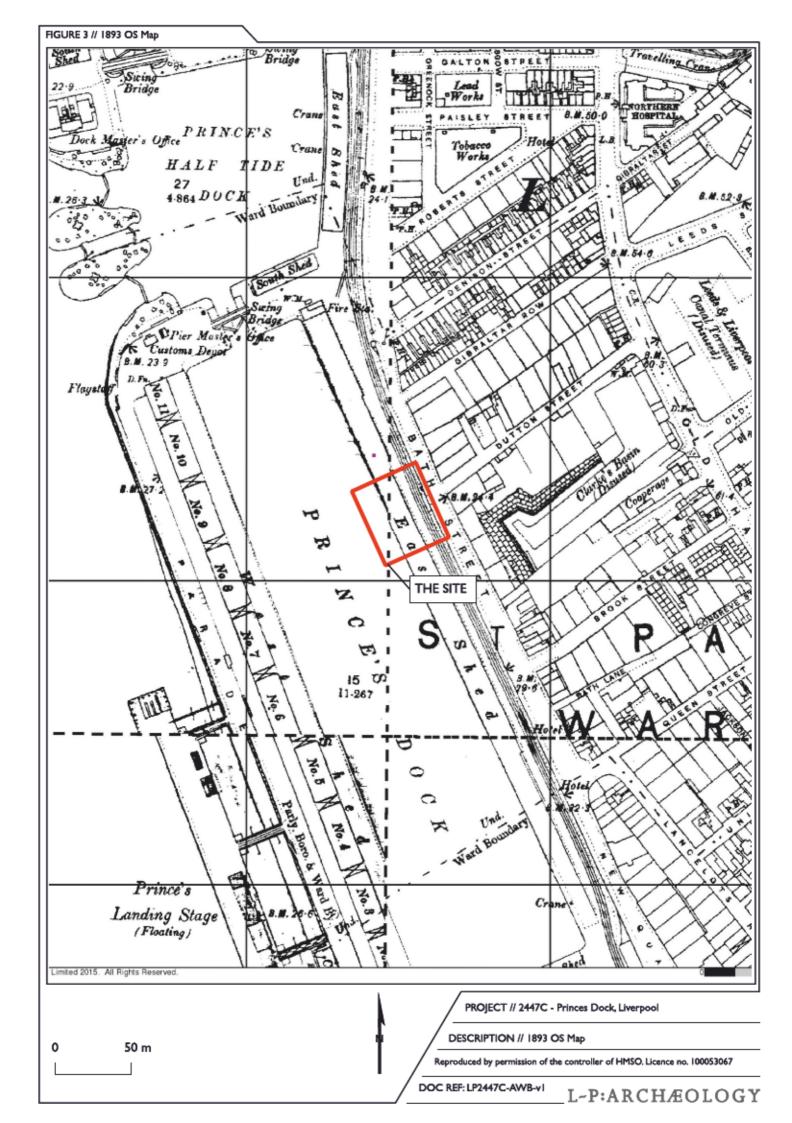
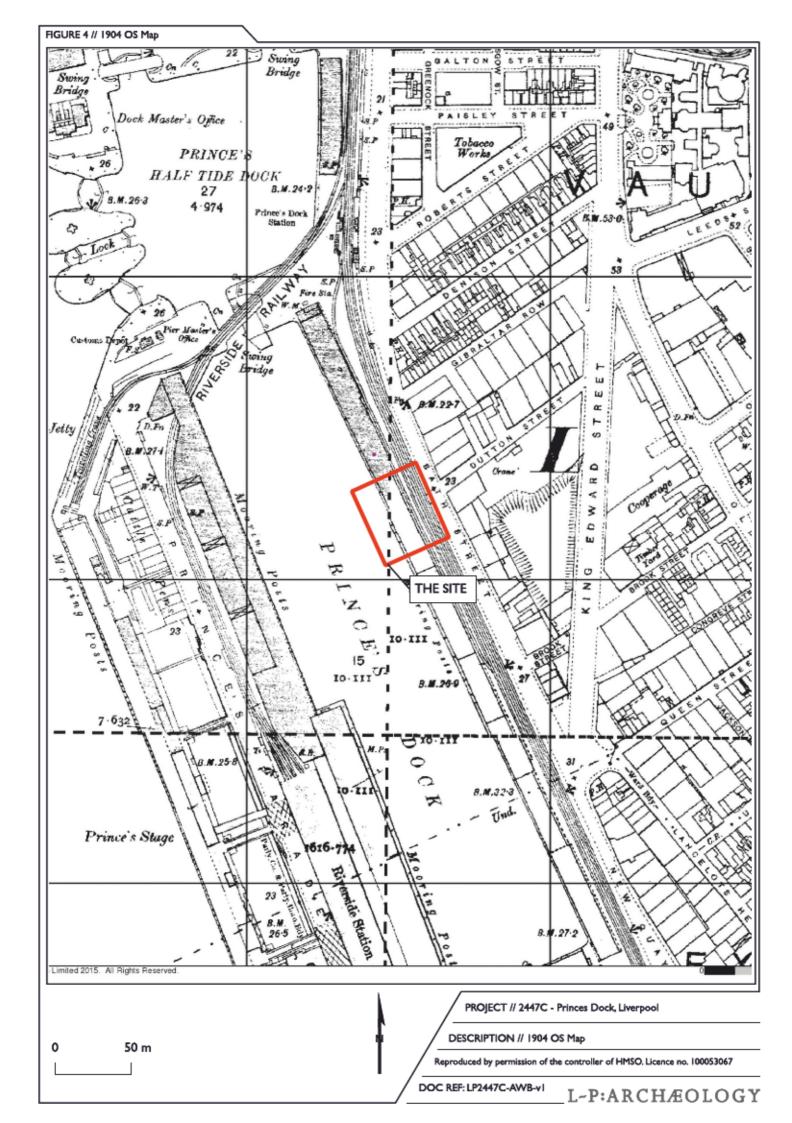
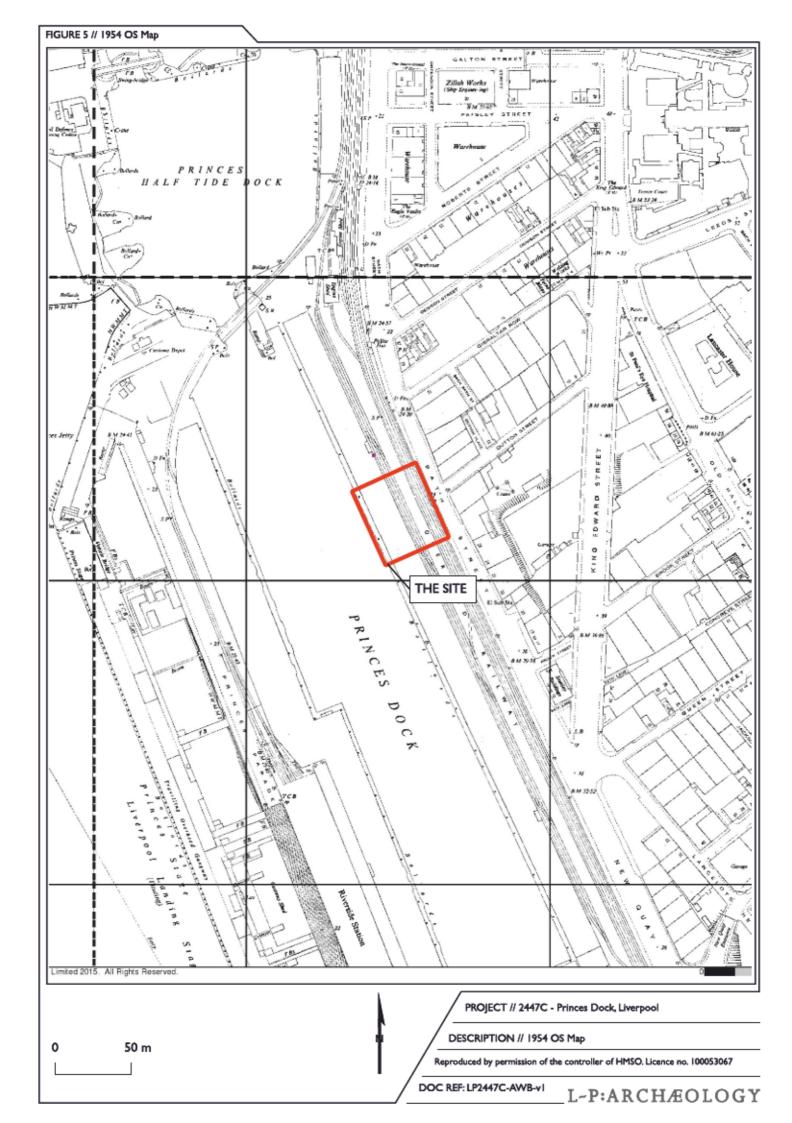
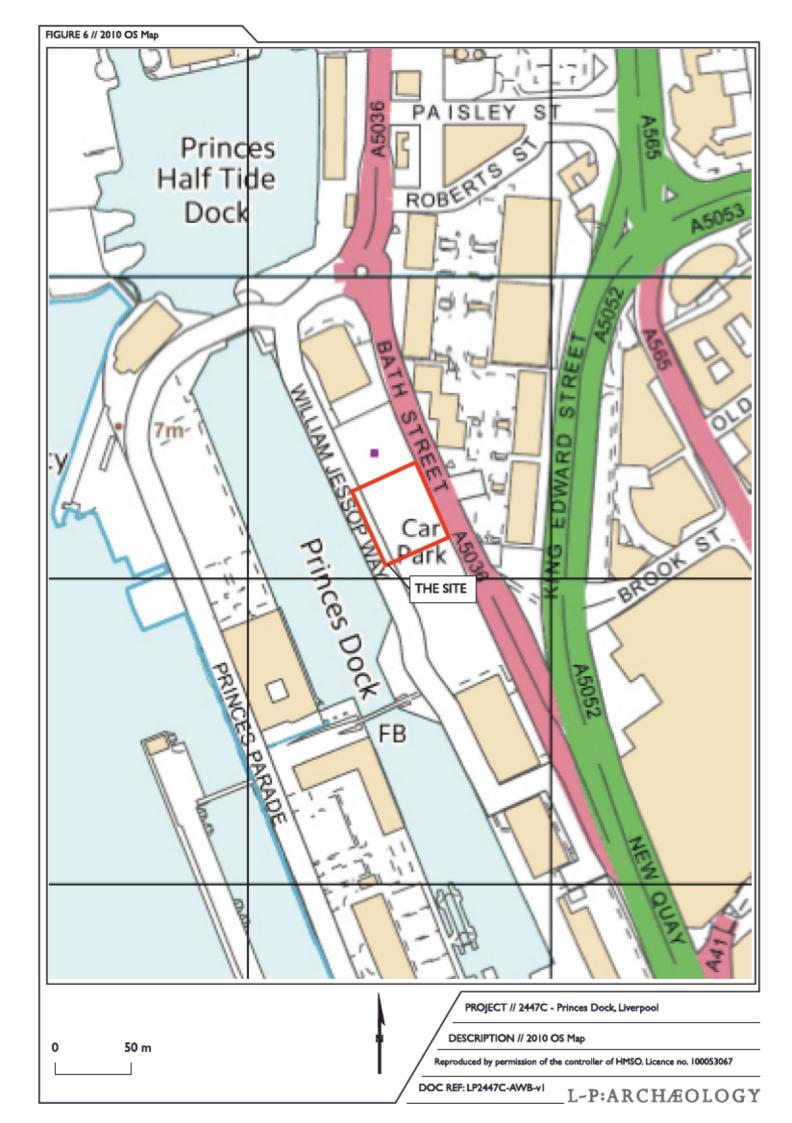


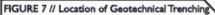
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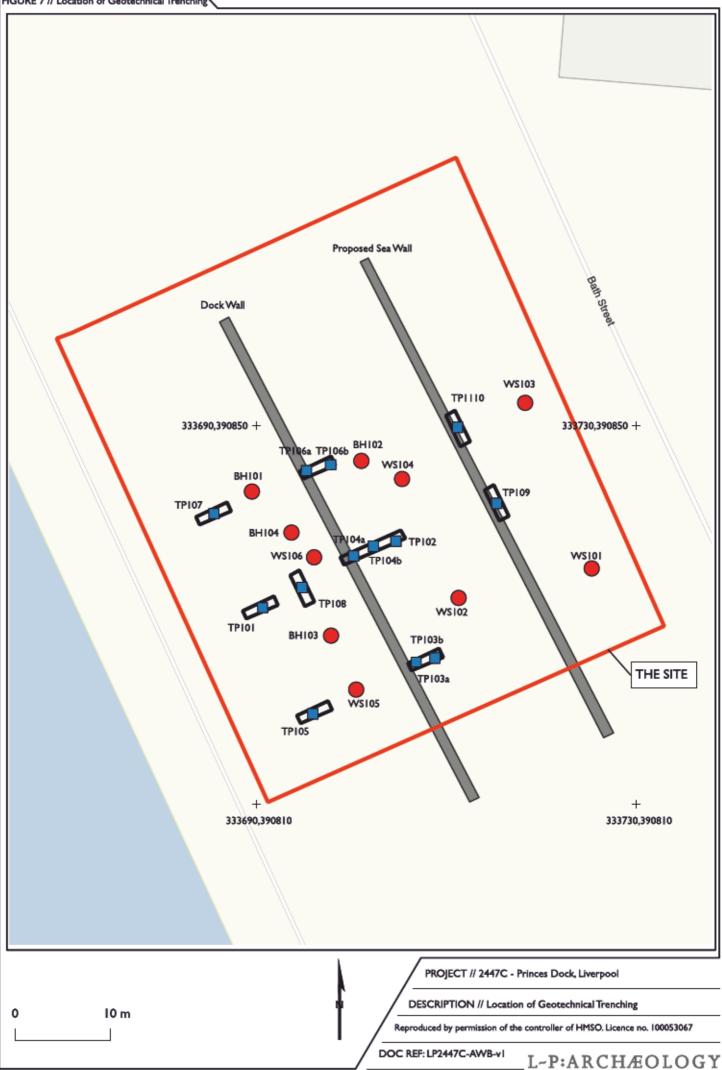


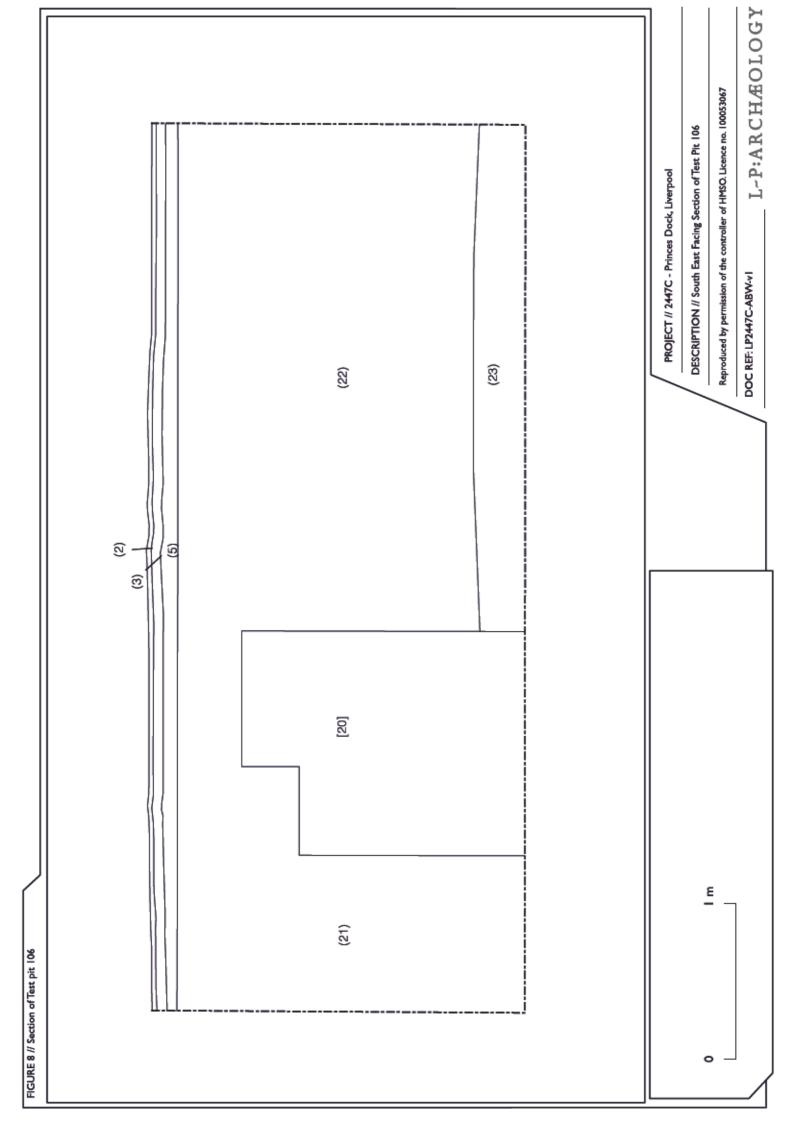


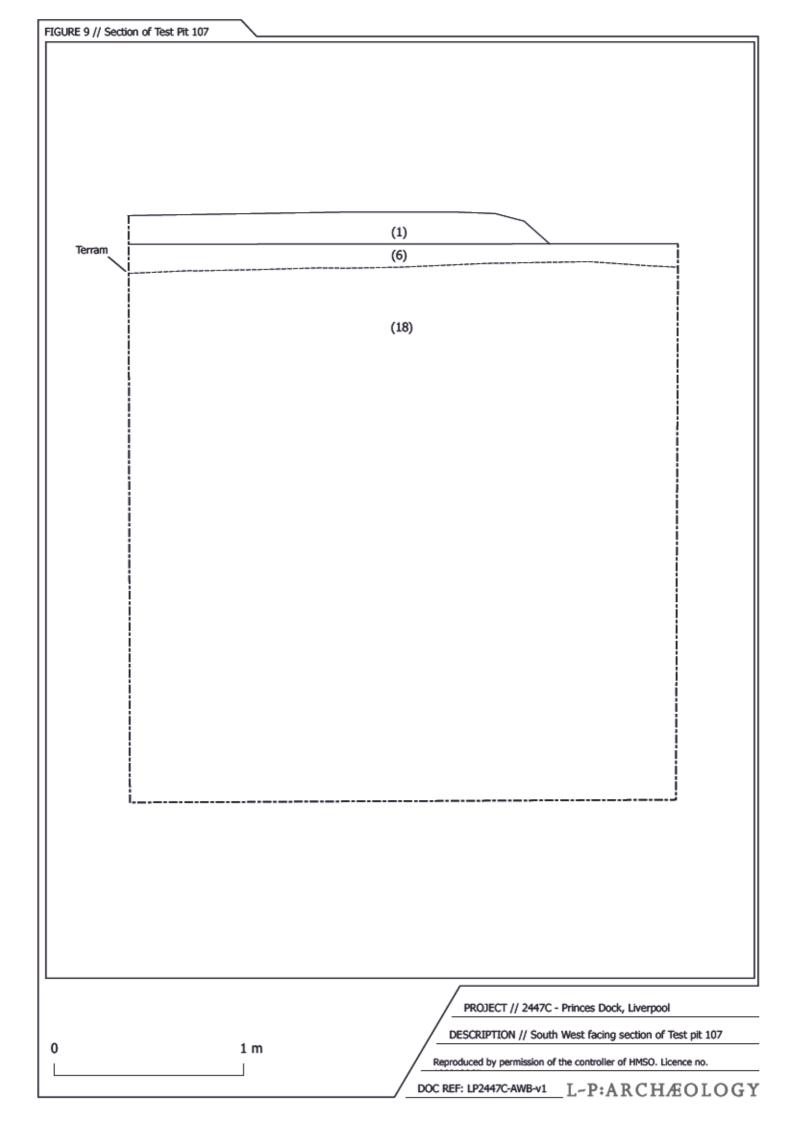


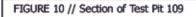


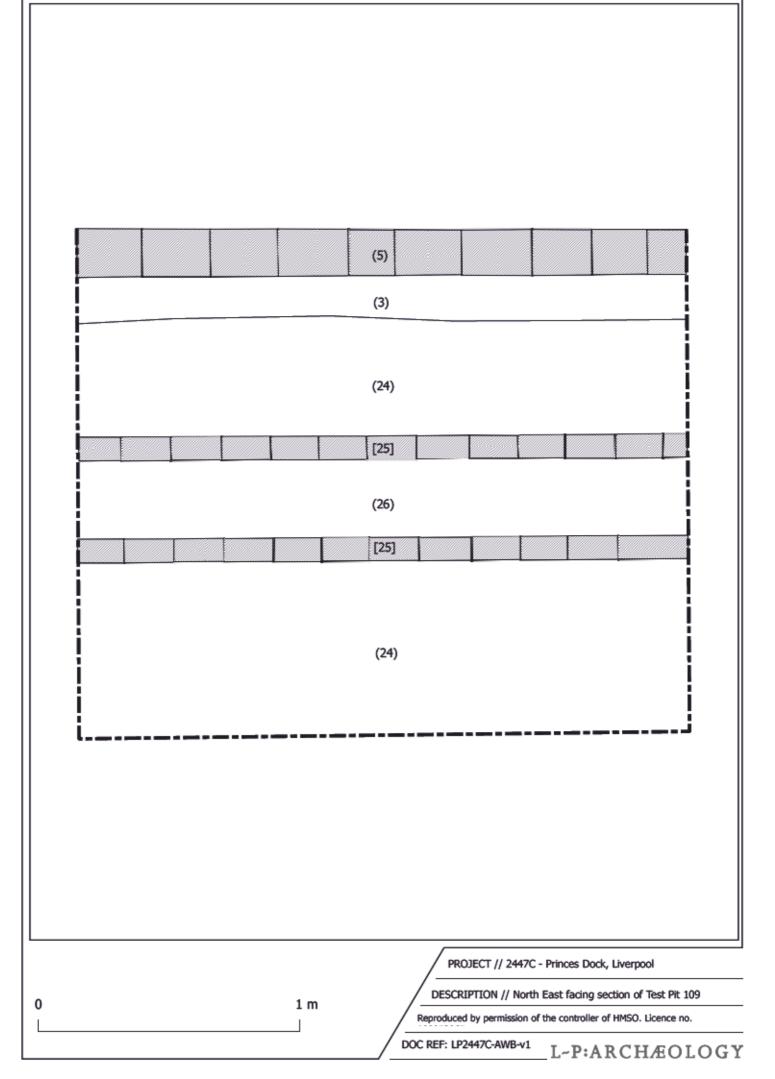












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OASIS ID: Iparchae1-279836

Project details

Project name	Princes Dock, Liverpool
Short description of the project	Monitoring of geotechnical investigations on the site of Princes Dock.
Project dates	Start: 01-02-2017 End: 20-03-2017
Previous/future work	No / Not known
Any associated project reference codes	LP2447C - Sitecode
Type of project	Recording project
Site status	Area of Archaeological Importance (AAI)
Current Land use	Other 13 - Waste ground
Monument type	WALL Post Medieval
Significant Finds	NONE None
Investigation type	"Watching Brief"
Prompt	Voluntary/self-interest

Project location

Country	England
Site location	MERSEYSIDE LIVERPOOL LIVERPOOL Princes Dock
Postcode	L3 1ED
Study area	100 Square metres
Site coordinates	SJ 333676 390897 52.94473687224 -2.991721259677 52 56 41 N 002 59 30 W Point
Height OD / Depth	Min: 7m Max: 8m

Project creators

Name of Organisation	Orion Heritage
Project brief originator	Consultant
Project design originator	Orion Heritage
Project director/manager	Blair Poole
Project supervisor	Nicola Herring
Type of sponsor/funding body	Developer
Name of sponsor/funding body	Orion Heritage

Project archives

Physical Archive recipient	Liverpool Maritime Museum
Physical Archive ID	LP2447C
Physical Contents	"Ceramics", "Leather"
Digital Archive Exists?	No
Paper Archive recipient	Liverpool Maritime Museum
Paper Archive ID	LP2447C
Paper Contents	"none"
Paper Media available	"Context sheet", "Drawing", "Report", "Section"

Project bibliography 1

	Grey literature (unpublished document/manuscript)
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20 March 2017

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