## NATIONAL MUSEUMS LIVERPOOL

An Archaeological Watching Brief on Land at Princes Half-Tide Dock, Liverpool.
Site Investigation Works.

Sarah Pevely & M.H. Adams

Prepared for City Lofts

June 2006

National Museums Liverpool,
Liverpool Museum Field Archaeology Unit,
GWR Building,
Mann Island,
Liverpool
L3 1DG

Tel: 0151 478 4260 Fax: 0151 478 4040

©Trustees of the National Museums and Galleries on Merseyside

#### **Non-Technical Summary**

This report describes the results of an archaeological watching brief conducted during the excavation of geotechnical test-pits at the Princes Half-Tide Basin, Princes Dock, Liverpool. The test-pits found that the deposits beneath the present ground surface consist primarily of make-up deposited during the construction of the basin in the 1820s and its subsequent remodelling in the 1860s. The most significant items recovered were fragments of sugar mould which can be dated to 1787-1820. Below these deposits were layers of silts and clays likely to represent the pre-dock foreshore.

In addition to the below ground deposits a photographic record was made of the existing dock furniture consisting of bollards, idler wheels, fence posts, rail tracks and signalling gear. Most of this is to standard patterns found through-out the central docks area. The only exception was a single bollard which had been modified by the addition of a collar.

### Contents

1. Introduction	1
2. Methodology	1
3. Results	2
3.1 Test Pit 1 3.2 Test Pit 2 3.3 Test Pit 3 3.4 Test Pit 4 3.5 Test Pit 5 3.6 Test Pit 6 3.7 Test Pit 7 3.8 Test Pit 8 3.9 Test Pit 9 3.10 Test Pit 10 3.11 Test Pit 11 3.12 Test Pit 12 3.13 Test Pit 13 3.14 Hand-dug Pit 1 3.15 Hand-dug Pit 2	233334444555
4. Finds	6
5. Notes on the Surviving Dock Infra-Structure	6
6. Conclusions	7
7. Recommendations for Mitigation	8
8. Bibliography	9
9. Figures	10
10. Plates	22
11. Catalogue of Finds	33
12. Photographic Register4	10

# An Archaeological Watching Brief on Land at Princes Half-Tide Dock, Liverpool. Site Investigation Works.

#### 1. Introduction

This report describes the results of an archaeological watching brief conducted at the Princes Half-Tide Basin, Princes Dock, Liverpool, Merseyside. The project was conducted in advance of the construction of domestic accommodation (apartment block). The present site is located in the south-eastern corner of the Half-Tide Basin (Figure 1).

Previous work on the archaeology of the site was confined to an archaeological desk-based assessment (Adams 2005). This found that until the 18th century, the site was situated on the foreshore of the Mersey estuary, just north of the then town of Liverpool. There was no evidence for settlement pre-dating the medieval period, though it is likely that the site was used for depositing rubbish and possibly for ship-building during the latter part of the period.

In the late 18th century, a fort was constructed south of the site on an area now forming part of Princes Dock. The fort was destroyed during the construction of Princes Dock in the early 19th century.

Princes Dock was named after the then Prince Regent and when first built was a 'state of the art facility'. However, rapid changes in technology and failure to invest resulted in the Dock's rapid decline in the mid-19th century. Substantial changes were made in the 1860s including remodelling of the Half-Tide Basin. The Dock then entered a period of relative prosperity before falling into decline again in the 20th century.

Few of the Dock's original features survive and the layout of the site prior to development was largely of the 1860s with 19th and 20th century additions. However, the site lies within the Buffer Zone to the World Heritage Site. The Dock Wall and Gates are also listed buildings and hence afforded statutory protection.

In addition to the built heritage, borehole data suggested that the Dock structure was underlain by deposits of alluvium pre-dating its construction. These deposits had the potential to contain evidence relating to the environment pre-dating the Dock.

#### 2. Methodology

The watching brief methodology is described in detail in the project design (Appendix A), the following summarises the key elements. After initial breaking out of the tarmac and concrete surface layers with a hydraulic breaker, all the test pits were excavated by tracked 6 ton excavator fitted with a toothed bucket. Initially, eight test pits were excavated with a further two smaller pits excavated to the South-West of the main site (Figure 2). Subsequently a further three test pits were excavated against the back of the original dock wall, with the intention of examining its construction. Two hand-dug pits were also excavated in the North-Eastern corner of the site. Subsequent to this a further machine excavated trench was dug immediately behind the dock wall in order to investigate its structure.

Due to the unstable nature of most of the deposits, it was impossible to measure the thickness deposits accurately or examine them *in situ*. Therefore the measurements given for the depth and thickness of deposits and the size of the test pits are approximate. In some instances it was not possible to provide anything other than general observations of the character of the deposits.

In addition to the watching brief on below ground deposits the project also included provision for photographic recording of extant elements of dock furniture including railway tracks, signalling, bollards and other items. These were recorded with measured sketches, colour digital and back & white photography.

#### 3. Results

Test pits (TP) are described and numbered in the order in which they were excavated. Locations are given in Figure 2. All depths were measured from the present ground surface.

#### 3.1 Test Pit 1

TP 1 was situated in the far North West corner of the site. Due to the friable nature of the deposits, the sides of this test pit had a tendency to collapse frequently and it was therefore difficult to record the measurements accurately (Plate 1). A mid-brown sandy deposit (Context 1) lay immediately below the concrete, which included fragments of brick, angular stones and slate (Figure 3). This was mixed with pockets of light brown-yellow silty sand (Context 2) that contained fewer inclusions. Below this was a thick layer of very loose light brown sand (Context 3) mixed with large sandstone blocks and slabs measuring up to approximately 0.5 m by 0.3 m by 0.2 m. A layer of dark blue grey clay (Context 4) was revealed at 3.8 m below the surface. This contained few inclusions apart from one fragment of china and was approximately 0.20 m thick. A fine yellow sand (Context 20) was found below the dark clay at 4 m. Excavation was terminated at this point.

The only finds were the china mentioned above and one fragment of black glaze ware which could not be located to a specific context.

#### 3.2 Test Pit 2

TP2 was located to the East of TP1, close to the road side dock wall. It measured approximately 2 m by 5 m and was excavated to a maximum depth of 4.3 m. Tarmac and cobbles (Context 22) were excavated to a depth of 0.45 m (Figure 3), revealing a greyish brown mixed sand with angular and sub angular stones (Context 23). Below this was a thin layer of brick rubble (Context 24), the depth of which could not be measured accurately due to the collapse of the sides of the pit but which was approximately 1.5 m below the surface. The main deposit below this was a loose mid brownish red sand mixed with yellow brown sand (Context 5) which is possibly the same deposit as Context 3. This deposit was very friable and contained large sandstone blocks and slabs measuring up to approximately 0.5 m by 0.3 m by 0.2 m. Within this context, approximately 2.5 m from the surface, was a large ceramic pipe visible in the section and running north-south. A layer of dark blue grey clay (Context 19), similar to Context 4 in TP1 was visible near the base of the pit. Water and sandy mud obscured the base of the pit at 4.3m. No finds were recovered from this test pit.

#### 3.3 Test Pit 3

TP 3 was located to the south of TP 1 and 2. It measured approximately 2 m by 5 m and was 3.3 m deep. Below the tarmac there was a thick section of banded layers of alternate grey, yellow and red stony sand (Figure 4), approximately 1 m thick (Context 25). The main fill below this was a mixed red brown sand (Context 6) with large sandstone blocks and slabs measuring up to approximately 0.5 m by 0.3 m by 0.2 m (Plate 2). Small fragments of white china and orange ceramic were recovered, as well as half an oyster shell from the base of the pit. This pit was excavated to sandstone bedrock at 3.3m.

#### 3.4 Test Pit 4

TP 4 was located to the south-east of TP 6, close to the road entrance gates. It measured approximately 1.3 m by 5 m and was excavated to a maximum depth of 4.2 m (Figure 4). A layer of dark brown topsoil below the tarmac,0.30 m thick (Context 47) was excavated to a layer of mixed yellow brown gravely sand (Context 7) 1.2 m thick. Below this there was a thin layer of dark grey clayey sand (Context 18) 0.20 m thick, with small brick fragments. The layer below this was a light yellow/grey sandy gravel (Context 16), approximately 0.25 m thick and contained a number of finds including fragments of 19<sup>th</sup> century ceramic, bottle fragments, shell, bone and shoe leather. The deposit below this was a brown sand (Context 48).

#### 3.5 Test Pit 5

TP 5 was located South of TP2 and on a similar alignment, closer to the Dock Road wall. It measured approximately 1m by 4m and had a maximum depth of 4.4 m but did not reach bedrock (Figure 5). The surface layers of tarmac and concrete were 0.8m thick (Context 26). Below this, the West facing section showed a layer loose red sand and sandstone fragments up to c. 0.25 m across (Context 8) to 1.2 m below the surface. The main deposit below this was loose brown/grey sand with occasional pockets of clay (Context 9). This contained some ceramic fragments including sugar mould and clay tobacco pipe, including one stem stamped 'T. UNWIN LIVERPOOL'. A layer of loose light yellow sand (Context 10) was revealed below Context 9 at 2.5 m below the surface. This contained a number of oyster shell halves and large amounts of fragments of orange ceramic, cockleshell, black glaze ware and clay pipe. At 3.5m below the surface there was a layer of stiff black coal rich clay (Context 11) that contained small fragments of brick and fired clay, shell and some ceramic fragments. The North facing section of this pit showed Context 11 to be much thicker and had a thin layer of red sand immediately below it, above the yellow sand (Context 10).

#### 3.6 Test Pit 6

TP 6 was located South West of TP 5 and on the same East-West alignment as TP 3. It measured approximately 1.5 by 5 m and was 4.3 m deep but did not reach bedrock (Figure 5). The tarmac and brown topsoil (Context 27) was 0.53 m thick and below this was a deposit of thin, banded layers of yellow and dark grey sand to 1.10 m from the surface (Context 28). Below this, the section showed a layer of red sand and sandstone fragments, approximately 0.5m thick (Context 29). Below this there was a very mixed layer of light brown sand, sandstone fragments and yellow sand (Context 49). At 2.10 m there was a layer of dark grey clay (Context 17). The remainder of the pit was composed of mixed yellow brown sand (Context 12) with occasional pockets of red sand to 4.3m deep. Most of the finds from this pit came from Context 12 and included numerous fragments of sugar mould.

#### 3.7 Test Pit 7

TP 7 was located to the South-West of the Dock Road gates and measured 1.2 by 4.5m and was 3.9 m deep (Figure 6). Below the tarmac there were layers of red brown sandy topsoil and yellow sand to 1.5 m deep (Context 30). Below this there was a thick layer of very dark grey clay to 2.10 m below the surface (Context 31). The section showed a light brown yellow sand below the clay, with shell, pottery fragments and sandstone fragments (Context 32). Towards the base of the pit there was a light grey sandy grit (Context 13) with fragments of yellow sandstone. Context 13 contained the most finds, with large amounts of orange ceramic and some black glaze ware and some Oyster shell. At 3.9 m there was a dark grey sandy clay (Context 21) visible and a thin band of yellow sand at the base of the pit but it was not excavated further as the machine could not reach any further.

#### 3.8 Test Pit 8

TP 8 was located to the South-West of TP 7 and was the furthest West of the initial eight test pits. It measured 1.5 m by 5 m and was 3.8 m deep but did not reach the bottom of made ground (Figure 6). A brown/yellow soil (Context 33) was revealed below the concrete, approximately 0.5m deep, with thin, banded layers of red, black and yellow sand underneath. A layer (Context 34) approximately 1m thick of reddish orange sand with large sandstone blocks was uncovered below this and then a layer of gritty mixed sand 1.5m thick (Context 35). Another band of thin layers of red and black sands was visible in the section (Context 36) and below this there was a layer of mixed brown yellow sand (Context 14) 0.75m thick, with brick fragments, rounded pebbles and angular stones. Large quantities of sugar mould were recovered, mainly from Context 14.

#### 3.9 Test Pit 9

TP 9 was located near to the corner of the dock wall and measured 0.4m by 0.4m. This was hand-dug to a depth of 0.4m; the only deposit encountered was a brown sandy topsoil below the concrete and cobbles (Context 36).

#### 3.10 Test Pit 10

This was the furthest South of the test pits and was located next to the junction of Princes Parade. It measured 5m by 2m and was 2.9m deep (Figure 7). The deposits were composed of layers of sandstone and red sand (Context 37) below the concrete and layers of dark grey and yellow sandstone (Context 38) at 2.1 m. Below this there was a layer of mixed grey brown sand (Context 39). There were very few finds from this test pit.

#### 3.11 Test Pit 11

TP 11 was located to the South-West of TP1 next to the back of the dock wall. The rear dock wall is constructed of squared red and yellow sandstone blocks, most measuring c. 1.5 m across by 1 m high but others were smaller, only 0.30 m by 0.20 m (Figure 7). A brick culvert for a water pipe was laid into a step on the dock wall, 0.95 from the back of the wall and 0.95 m below current ground surface. The bricks extend 1.10m out from the dock wall. The dock wall itself was 2.4m wide at this point and the dock water level within the basin was 3 m from the top of the dock wall. TP 11 was excavated to a depth of 4.5m down to sandstone bedrock. The fill below the brick culvert was a loose yellowish brown sand with sandstone fragments (Context

40). Below this there were thin layers of black red and yellow sands (Context 41). The deposit below this was a brown sandy clay with bricks and brick fragments (Context 42). There were few finds from this test pit.

#### 3.12 Test Pit 12

TP 12 was situated next to the dock wall to the South of TP 11. Here the dock wall was 1.52m at the top and the culvert was 0.68m wide (Figure 8). The dock wall was 2.2m wide in total. The main deposit within this test pit was a loose brown yellow sand (Context 15) with very large blocks of yellow and grey sandstone, as well as bricks and brick fragments. The pit was excavated to 3.6m down to bedrock. The bedrock appeared to undulate and the maximum depth was 4m. There were few finds from this test pit.

#### 3.13 Test Pit 13

This was the furthest South of the dock wall test pits and was located almost parallel to TP 4. When exposed, the step in the dock wall containing the water pipe and brick culvert was 1m from the surface and the top of the dock wall (Figure 8). Here the dock wall was 3.66 wide in total and 1.55 m from the brick culvert to the front of the wall. Water level within the basin was 2.9 m below the top of the dock wall and the test pit was excavated to bedrock at 4. 6m.

The main deposit was a mid brown grey clayey sand with large blocks of yellow and some red sandstone as well as bricks and brick fragments (Context 43). Most of the sandstone was sub-angular and angular, the largest examples measuring; 0.42m by 0.3m by 0.2m, 0.3m by 0.27m by 0.15m and 0.5 by 0.3 by 0.24m. There were few finds from this test pit.

TP 13 was extended to the North and South to expose the corners of a buttress that was revealed after further investigation. The dock wall including the buttress was 3.66m wide. The dock wall on the North side of the buttress was 2.46m and on the South side was 2.25m. The buttress projected 1.4m out from the dock wall on the North side and 1.3m on the South side. The buttress itself was 2.5m long an appeared to be composed of two large blocks of sandstone wide by two blocks long. It was not clear whether the buttress butted against the dock wall or was tied into the construction of the wall.

#### 3.14 Hand-dug Pit 1

This was situated in the far North-East corner of the site against the Dock Road wall. It measured 1.2m from the wall and 0.7m wide and was excavated to 1.2m deep. Below the concrete there was a mid brown sandy soil with fragments of brick, slate and red sandstone (Context 44). Yellow sand was revealed below this and contained three utility cables (Context 45). A brick plinth for the wall was exposed at 0.76m and was 0.10m wide. A piece of purple/brown glaze ware was recovered from the sandy brown deposit at the base of the pit.

#### 3.15 Hand-dug Pit 2

This was located to the South of Pit 1 against the Dock Road wall. It measured 0.9m by 1m and was 1.4m deep. The brick plinth was 0.7m from the surface and was 0.14m thick by 0.10m wide. The main deposit was a brown sandy soil with large builders of stone, bricks and slate (Context 46). Finds included a few fragments of china and the top of a ceramic bottle.

#### 4. Finds

All of the finds recovered from the watching brief date to the late 18<sup>th</sup> or early 19<sup>th</sup> centuries. The largest group of material was a collection of sugar moulds recovered from TP's 4, 5, 6, 7 and 8, principally Contexts 12 and 32 in TP's 6 and 7.

Sugar moulds were unglazed conical vessels with thickened rims, straight sides and a hole in the pointed base (Figure 9) and were used with part glazed earthenware jars in which the waste syrup was collected (see below). Fragments of both types of vessel are present within the assemblage which represents a significant collection of this type of material from a securely dated context (i.e. pre-1820).

Eighteen fragments from clay tobacco pipes were recovered including seventeen stems and one bowl. Most can only be given a broad date in the late 18th or 19th centuries, though one is stamped 'T. Unwin: Liverpool'. Oswald (1975) lists a Thomas Unwin in Liverpool in 1787. Thomas then appears in Gore's directories from 1796 through to 1805. In 1796 his "pipe manufactory" is listed as being at 2 Breck Street (this appears to have been renamed Brick Street by the production of the 1800 directory). His residence is listed as being in Trafford Lane, King Street, but in 1805 the address of the "manufactory" is given as 10 Trafford Lane and there is no reference to a property in Brick Street. Thomas Unwin no longer appears in directories after 1805 and so may have ceased trading (D. Higgins pers. comm.)

A single fragment of North Devon Smooth Ware was recovered from TP 13 though unfortunately was otherwise unstratified. This type of pottery was produced in the late 17<sup>th</sup> century and this find provides valuable evidence of trade between Liverpool and the South-West at this date. Its presence on this site may relate to the disposal of domestic waste in this area documented from the late 16<sup>th</sup> century (Adams 2005).

The other finds consist of a mix of stonewares, earthenwares, china and darkwares characteristic of late 18<sup>th</sup> and 19<sup>th</sup> century domestic refuse.

#### 5. Notes on the Surviving Dock Infra-Structure

In addition to the watching brief on below ground deposits a record of above ground features was also specified. This consisted of measured sketch plans and other drawings of items of dock furniture supplemented by a photographic record in 35 mm Black & White Photography. Digital photographs were also taken.

The following items were present.

Idler Wheel: Cast iron on a cruciform cast iron base set into granite (Plate 3). This is identical in form to NWSIAH (1981-2) Type T1. These were used to re-direct the rope from a ship to a capstan when warping it through a passage and this form is common through out the central docks area.

Handrail Stanchions: These are all of NWSIAH (1981-2) Type H, a standard pattern found throughout the Central Docks (Plate 4). They are tapered cast iron cylinders with a slot at the top through which the chain passed. They are only present at the southern end of the site and the chains have been removed.

Bollards: Two types of bollard are present. The commonest are NWSIAH (1981-2) Type B1 in cast iron. It has been suggested (ibid) that these are to a design by Jesse Hartley (Plate 5). Some have had wrought iron brackets welded to their heads (Plate

6) and it appears that these are later additions. The second type is a further modification to a Type B1 which has had an iron(?) 'collar fitted to the widest point (Plate 7) and not noted on the NWSIAH survey. The function of the collar is unclear but is presumably associated with securing the rope.

Rail Tracks: Cast iron rails set within granite sets (Plates 8 & 9), these are the railway sidings for the East Sheds, first shown on the 1891 OS sheet (Adams 2005).

Railway signals: A single set survives against the eastern site boundary (Plate 10). The cast and wrought iron mechanism is supported upon a cylindrical cast iron post which also carries and access ladder in wrought iron. The signal board is missing.

#### 6. Conclusions

The test-pits have provided a valuable insight in to the archaeology of this area. Bedrock was only reached in four of the test pits, TP 3, 11, 12 and 13. The earliest deposits are the dark blue grey sandy clays and gravels, contexts 4 (TP 1), 11 (TP 5), 16 (TP 4), 17 (TP 6), 18 (TP 4) and 19 (TP 2), are estuarine deposits relating to the pre-1820 foreshore, and deposited before the dock was constructed. This clay deposit was not found in any of the test pits located close to the dock wall which appears to be constructed on bedrock. This may indicate that the foreshore rose gradually towards the city, though it is also likely that these silts were cleared from the western section of the site to allow construction of the dock wall. The deposit of dark clay was found in test pits 1 to 7 further to the East, except TP 3, as the bedrock was very shallow here, only 3.3 m and so any early deposits may have been removed from that area.

The piece of China recovered from Context 4, TP1, is significant as it was well stratified within the clay. Although it is a very small fragment of rim, it has been identified as 'Pearl ware', which developed after around 1840 (J. Speakman, pers. comm.). It is possible therefore that this deposit was disturbed during reconstruction of the dock wall in the 1860s.

Stratified above the clays and gravels in most of the test pits was a thick layer of sand and sandstone fragments which represents make-up for the construction of the dock and was therefore, deposited around 1820. The sands and gravels found elsewhere, notably in TP's 4, 5, 6 and 7 probably represent the same phase of construction. It is possible that the large yellow sandstone blocks found in some of the test pits and especially in TP 11, 12 and 13 came from demolished buildings in the vicinity of the site, though no worked masonry was found. It is known that there was a Naval Battery on this site prior to the construction of the dock, although it cannot be proven that these stones relate to the demolition of this building. The banded layers of red, black and yellow sand above this deposit probably relate to construction and demolition phases in the later 19<sup>th</sup> and early 20<sup>th</sup> centuries.

One of the most significant finds was the large deposit of fragments of sugar mould in TPs 6 and 7. These were used for making sugar loaves from raw molasses sugar (muscavado) imported in casks from the West Indies, where the initial refining of the cane was conducted. The muscavado was refined into 'loaves' of white sugar in one of the numerous sugar houses which operated in Liverpool from at least the mid-17<sup>th</sup> century. Sugar refining continued to be an important industry in Liverpool until the late 20<sup>th</sup> century, the last refinery closing in 1981.

The process involved mixing the muscavado with lime water and bullock's blood which was then heated in pans. The blood curdled in the heat, trapping any impurities which floated to the surface as a thick scum which was scraped off by hand. This process was repeated several times and the liquor then filtered through a wool lined basket prior to concentration by boiling. The mixture was then poured into a torpedo shaped mould fitted with a cloth bung in the lower opening which was then placed in an earthenware jar and the sugar allowed to drain for up to two days. The resultant loaf was then knocked out of the mould and dried in a kiln.

Fragments of sugar mould were also found in TP 4, 5, 8, 10 and 13 but the largest and most abundant fragments were from TP 6 and 7 suggesting that although deposits containing this material extend across most of the site, the two densest concentrations occur across the centre of the plot (Figure 2). Most of this material consists of fragments of body sherd, though sections of rim are also present. One of the fragments of rim from TP 7 features part of a stamp with three remaining letters visible from the end of a word, "OTT". This was compared with photographs of an example from Eccleston Hall, which had an identical stamp of the word "PRESCOTT" (J. Speakman, pers. comm.). The significance of this is unclear, there are no known late 18<sup>th</sup> century sugar factories of that name in Liverpool, the only known example being from mid-18<sup>th</sup> century London. One possible interpretation is that it indicates manufacture in Prescot for which there is excavated evidence for manufacture of this material (R. Philpott, pers. comm.). However, the spelling of the placename had settled to a single T by the late 18th century (c.f. Yates' 'Map of Lancashire' 1786) and it is more likely that it is a personal, rather than placename. Prescott may be the name of the manufacturer of the mould rather than the sugar refiner for whom it was made, though this too would appear unlikely, as does the possibility that it is a London mould reimported from the West Indies. Some of the fragments had very course fabric with a black glaze on the inside, possibly for the boiling of sugar. These sugar moulds were deposited in the construction make-up for the dock and so could not be any later in date than 1820. Further dating evidence is provided by the association with a tobacco pipe dated 1787-1805. This is very important evidence for the development of Liverpool as a port and of the significance of the trade in sugar and slaves from the West Indies.

All of the excavated deposits are consistent with the known history of the site, i.e. pre-dock estuarine deposits sealed by accumulations of make-up for construction of the dock in the early 19<sup>th</sup> century. The vast majority of this material contains little or no archaeological material and in its self is of little archaeological significance. However, within the make-up there are deposits of late 18<sup>th</sup> or early 19<sup>th</sup> century sugar mould which appear to be concentrated at the southern end of the site. Although this material must once have been common in central Liverpool, sugar refining being a significant industry in the area in the 18<sup>th</sup> and 19<sup>th</sup> centuries, very little has survived to the present making this collection an important survival from Liverpool's past. In addition small quantities of 17<sup>th</sup> century ceramics are also present, this type of material is relatively rare in central Liverpool.

The above ground features on the site represent a typical assemblage of the iron work found within the Central Docks area. By analogy with other areas the bollards and handrails are likely to be by designs by Jesse Hartley.

#### 7. Recommendations for Mitigation

Although none of the deposits recorded within the excavated test-pits are of archaeological significance in themselves, representing make-up for the construction

of Princes Dock between 1810 and 1820, the cultural material within them represents a significant assemblage of a type of material rarely collected on Merseyside.

The building is to be constructed over pilled foundations with checking for obstructions conducted using pilot holes (G. Currie, WSP pers. comm.). Consequently, subject to confirmation of the construction method, there will be little opportunity for archaeological monitoring of these areas.

However, excavation for basement pits across the centre of the plot to a depth of 2.5 m below present ground surface crosses areas which potentially contain significant quantities of sugar mould (Figure 10). Whilst these deposits do not merit detailed recording, this section of the excavation should be monitored as a Watching Brief to allow for the retrieval of a further sample of this material.

It is unlikely that pre-dock foreshore deposits will be disturbed, as data from the geotechnical test-pits suggest that these lie below the specified excavation depth. Consequently it is very unlikely that there will be any requirement for 'hand-digging' and no access to the excavation is likely to be required for archaeological personnel. However, provision should be made as a contingency for the provision of safe access. It is presently envisaged that the project will involve the collection of 'grab samples' from machine excavated deposits to a maximum of c. 1 in 5 bucket loads. This will require the presence of a maximum of two archaeological personnel during groundworks.

#### 8. Bibliography

Adams M. 2005 An Archaeological Desk-based Assessment of a Proposed Development of Land at Princes Dock, Liverpool. NGR SJ 336 909. Unpublished NMLFAU Report for EC Harris.

Brooks C.M. 1983 Aspects of the Sugar Refining Industry From the 16<sup>th</sup> to the 19<sup>th</sup> Century. *Post-Medieval Archaeology* **17**, 1-14.

NWSIAH 1981-2 Proposed *Maritime Museum. An Archaeological Survey.* North Western Society for Industrial Archaeology and History. Unpublished Report.

Oswald A. 1975 Clay Pipes for the Archaeologist. British Archaeological Reports.

## 9. Figures

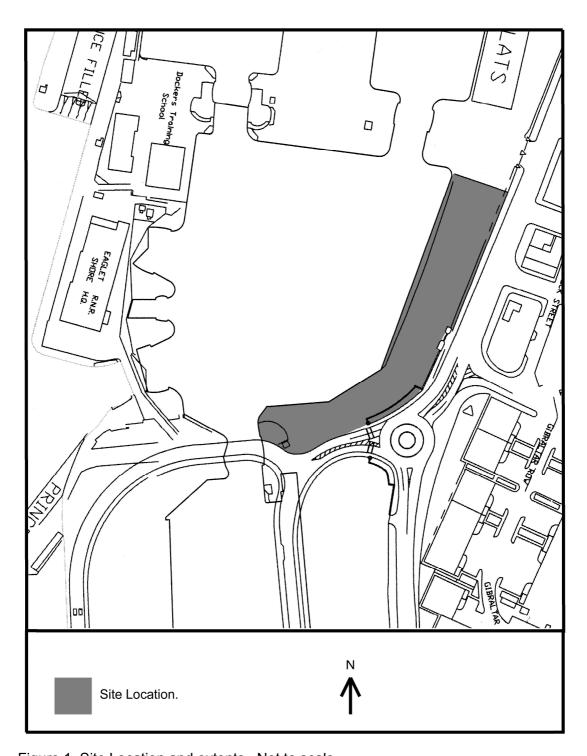


Figure 1. Site Location and extents. Not to scale.

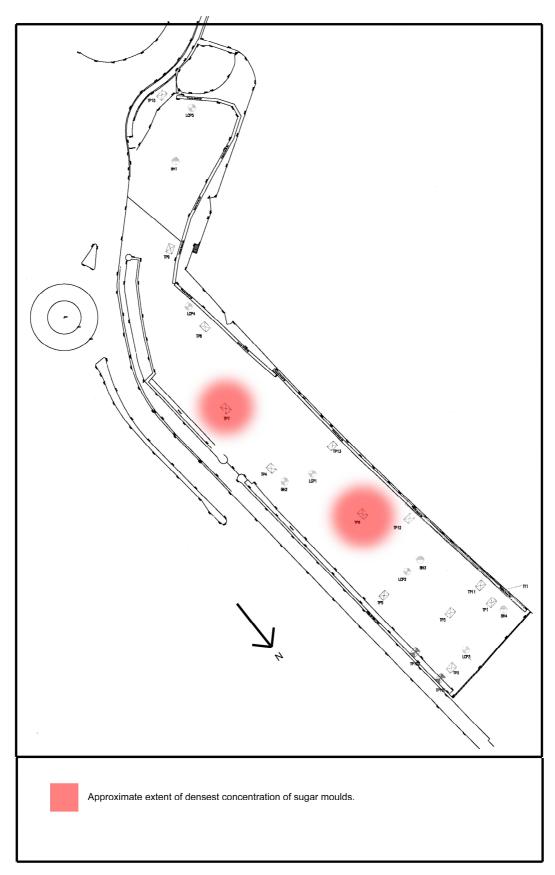


Figure 2. Test pit locations and projected extent of deposits containing sugar moulds. Not to scale.

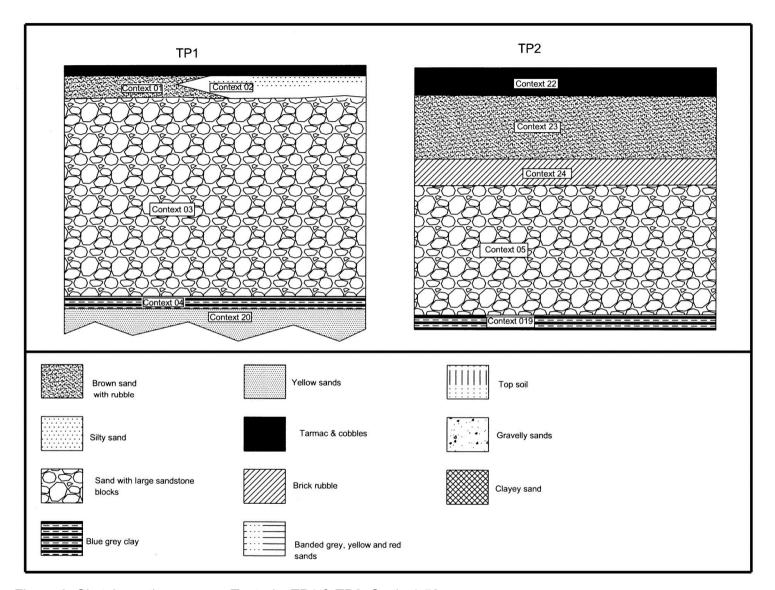


Figure 3. Sketch sections across Test-pits TP1 & TP2. Scale 1:50.

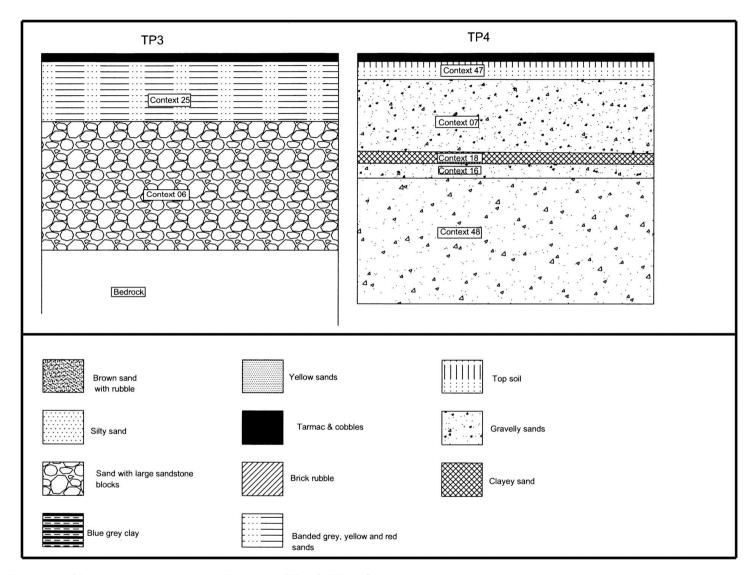


Figure 4. Sketch sections across Test-pits TP3 & TP4. Scale 1:50.

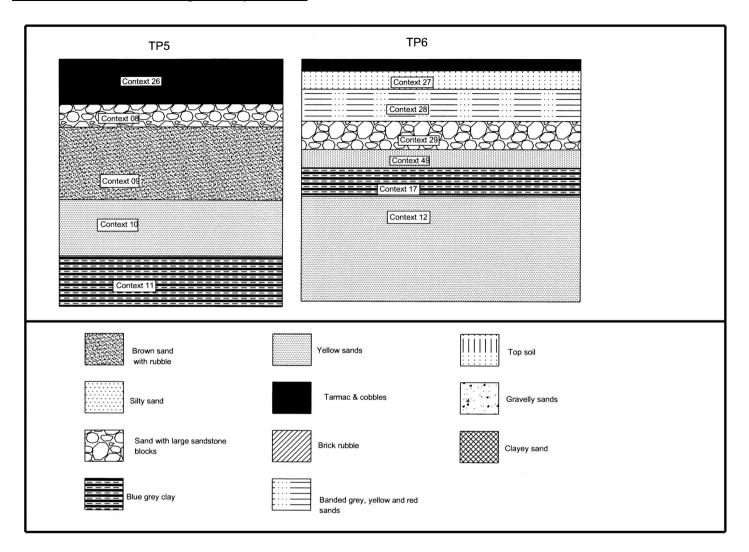


Figure 5. Sketch sections across Test-pits TP5 & TP6. Scale 1:50.

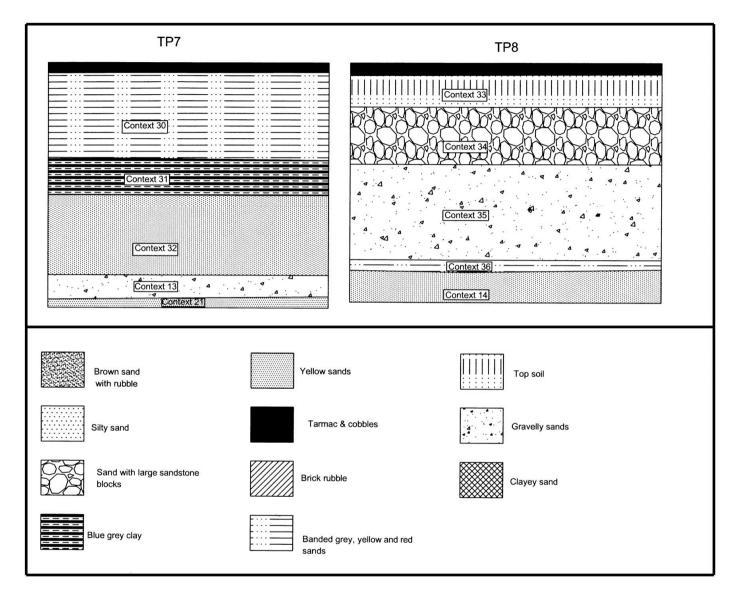


Figure 6. Sketch sections across Test-pits TP7 & TP8. Scale 1:50.

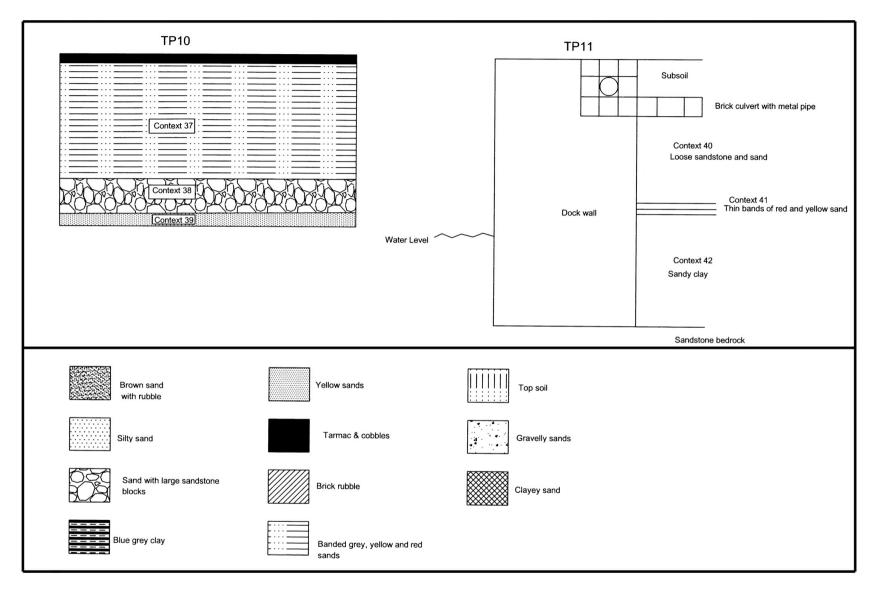


Figure 7. Sketch sections across Test-pits TP10 & TP11. Scale 1:50.

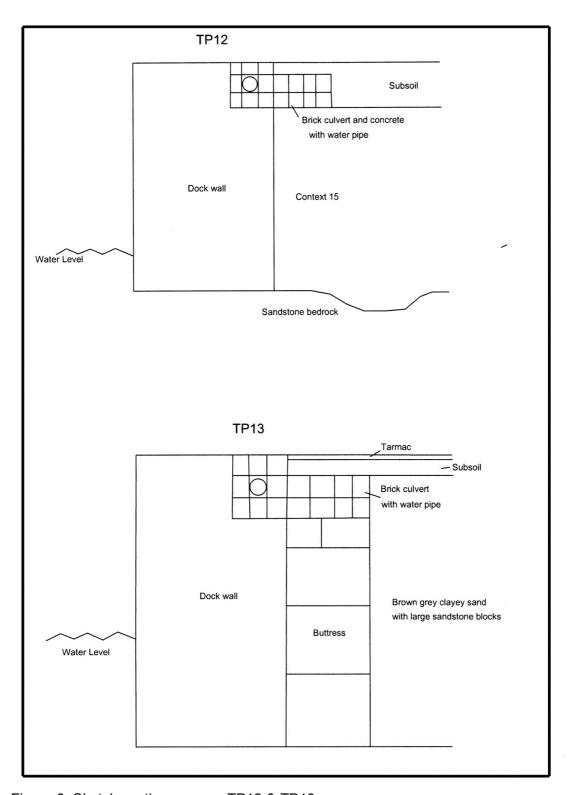


Figure 8. Sketch sections across TP12 & TP13.

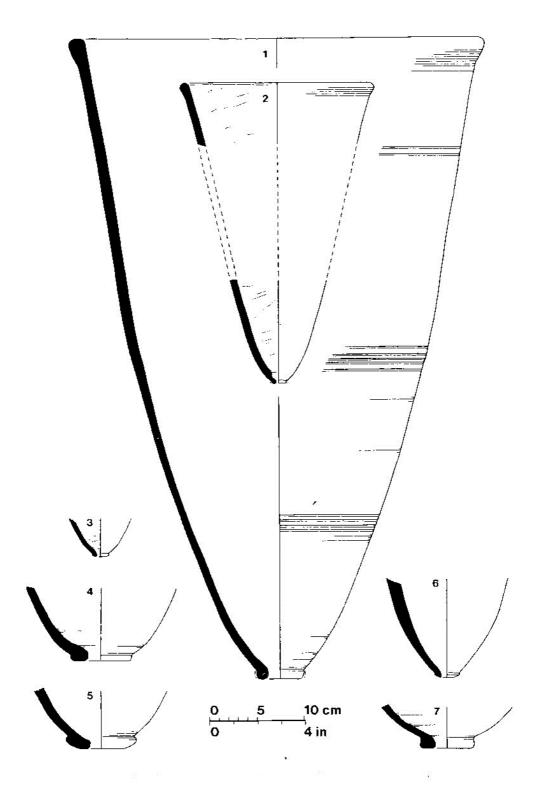


Figure 9. Examples of sugar mould from York and Bristol (From Brooks 1983)

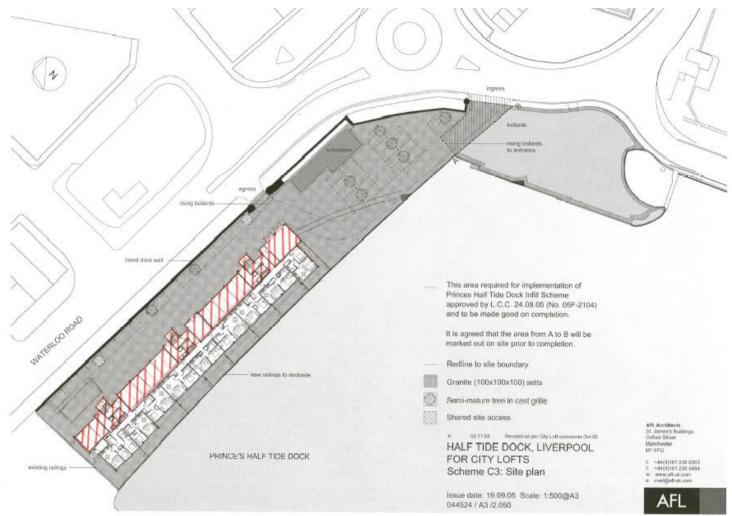


Figure 10. Location of excavation for basements. Figure from client.

Princes Half-Tide Basin. Watching Brief. Report Draft 3.

## 10. Plates

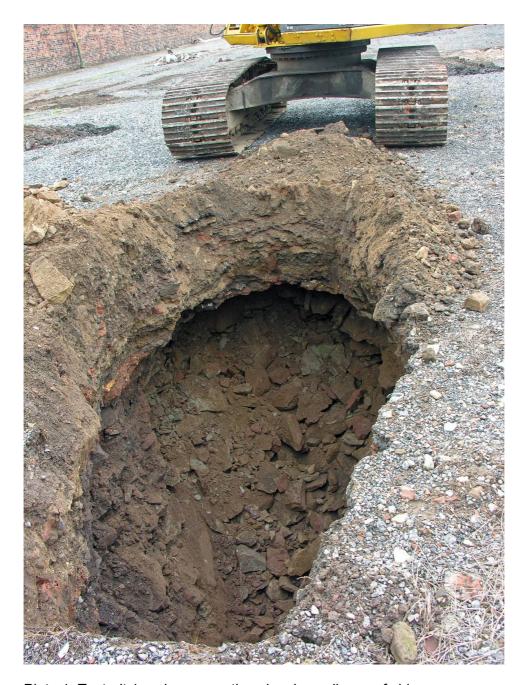


Plate 1. Test-pit 1 under excavation showing collapse of sides.

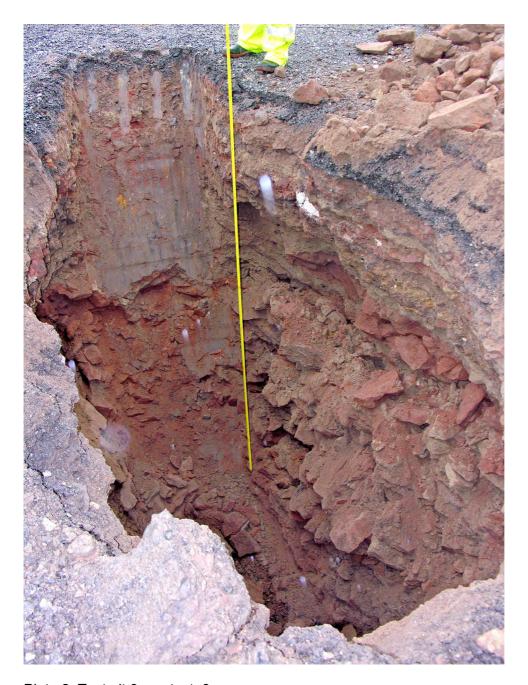


Plate 2. Test pit 3, context 6.



Plate 3. Idler Wheel: Cast iron on a cruciform cast iron base set into granite. NWSIAH (1981-2) Type T1



Plate 4. Handrail Stanchions, NWSIAH (1981-2) Type H.



Plate 5. Bollard, NWSIAH (1981-2) Type B1 in cast iron.

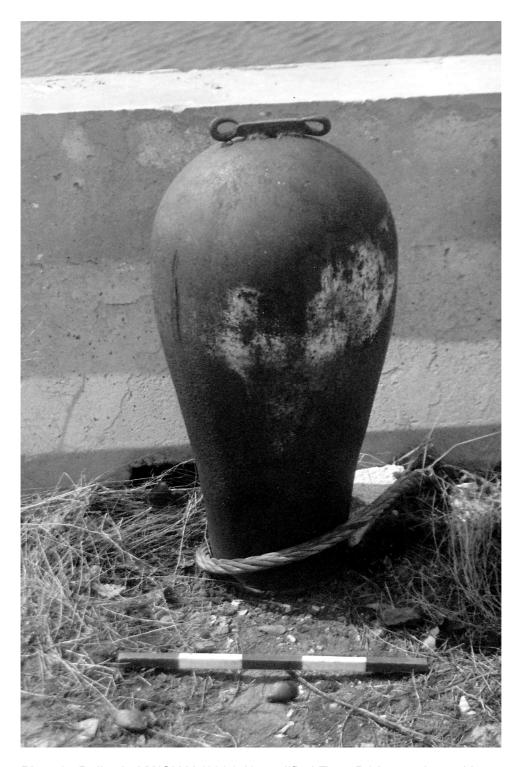


Plate 6. Bollard, NWSIAH (1981-2) modified Type B1 in cast iron with wrought iron bracket welded to the head.

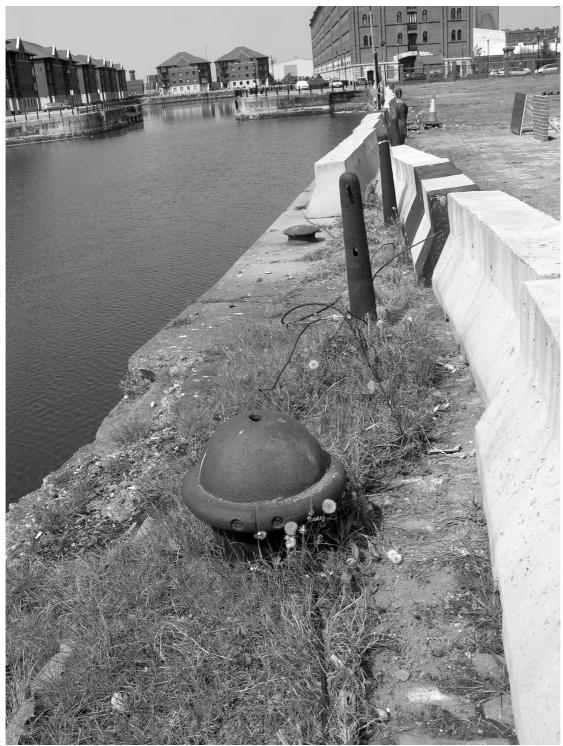


Plate 7. Bollard, NWSIAH (1981-2) modified Type B1 in cast iron with iron(?) 'collar fitted to the widest point.



Plate 8. Rail Tracks, view looking south.



Plate 9. Rail Tracks, view looking north.



Plate 10. Signalling equipment.

## 11. Catalogue of Finds

FindNoID	SITE NOTES	Material	Туре	Class	Area	Context	Lid	Rim	Base	Body	Handle	Total No Pieces	Weight	sv_sJ	Drawn
1	TP 6 light brown yellow sand	POT	UNG	SGM	TP6	12	0	1	0	0	0	1	49.90		Yes
2	TP 6 light brown yellow sand	POT	UNG	SGM	TP6	12	0	1	0	0	0	1	89.20		Yes
3	TP 6 light brown yellow sand	POT	UNG	SGM	TP6	12	0	1	0	0	0	1	72.40		Yes
4	TP 6 light brown yellow sand	POT	DKW	DCL	TP6	12	0	1	0	0	0	1	218.50		Yes
5	TP 6; syrup jar rim	POT	DKW	DCL	TP6		0	1	0	0	0	1	128.00		Yes
6	TP 6	POT	UNG	SGM	TP6		0	1	0	0	0	1	129.30		Yes
7	TP 6	POT	UNG	SGM	TP6		0	1	0	0	0	1	104.10		Yes
8	TP 6	POT	UNG	SGM	TP6		0	1	0	0	0	1	75.50		Yes
9	TP 6	POT	UNG	SGM	TP6		0	1	0	0	0	1	93.80		Yes
10	TP 6	POT	UNG	SGM	TP6		0	1	0	0	0	1	131.30		Yes
11	TP 6	POT	UNG	SGM	TP6		0	1	0	0	0	1	143.70		Yes
12	TP 6	POT	UNG	SGM	TP6		0	1	0	0	0	1	160.70		Yes
	TP 7; probable syrup jar rim; little or no internal glaze	POT	DKW	DCL	TP7		0	1	0	0	0	1	73.00		Yes
14	TP 6 light brown yellow sand	CER	PIP	STE	TP6	12	0	0	0	0	0	3	8.20		No
15	TP 6 light brown yellow sand	GLS	BTG		TP6	12	0	0	0	0	0	3	283.50		No
16	TP 6 light brown yellow sand	POT	STW		TP6	12	0	0	0	2	0	2	86.80		No
17	TP 6 light brown yellow sand	POT	MOT		TP6	12	0	0	1	0	0	1	101.40		No
18	TP 6 light brown yellow sand	CER	BRK		TP6	12	0	0	0	0	0	3	177.20		No
19	TP 6 light brown yellow sand	CER	DRP		TP6	12	0	0	0	0	0	2	80.50		No
	TP 6 light brown yellow sand; 1 x external sooting	POT	sco		TP6	12	0	0	0	2	0	2	72.60		No

FindNoID	SITE NOTES	Material	Туре	Class	Area	Context	Lid	Rim	Base	Body	Handle	Total No Pieces	Weight	sv_sJ	Drawn
21	TP 6 light brown yellow sand	POT	POR		TP6	12	0	0	1	0	0	1	6.00		No
22	TP 6 light brown yellow sand	POT	CHN		TP6	12	0	2	1	7	1	11	91.90		No
23	TP 6 light brown yellow sand	POT	YLW		TP6	12	0	0	1	0	0	1	4.50		No
24	TP 6 light brown yellow sand; coral	CRL			TP6	12	0	0	0	0	0	1	8.90		No
25	TP 6 light brown yellow sand; paler fabric than usual	POT	UNG	SGM	TP6	12	0	0	0	6	0	6	208.50		No
26	TP 6 light brown yellow sand; thinner fabric than usual; sooted	POT	UNG	SGM	TP6	12	0	0	0	1	0	1	44.60		No
27	TP 6 light brown yellow sand; sooted fragments	POT	UNG	SGM	TP6	12	0	0	0	4	0	4	92.70		No
28	TP 6 light brown yellow sand; heavily burnt fabric	POT	UNG	SGM	TP6	12	0	0	0	1	0	1	69.70		No
29	TP 6 light brown yellow sand	POT	UNG	SGM	TP6	12	0	0	0	112	0	112	3925.60		No
30	TP 6 light brown yellow sand	POT	UNG	SGM	TP6	12	0	1	0	0	0	1	40.60		Yes
31	TP 6 light brown yellow sand	POT	DKW	DCL	TP6	12	0	1	0	0	0	1	49.50		Yes
	TP 6 light brown yellow sand; burnt fragments	POT	DKW	DCL	TP6	12	0	0	2	3	0	5	281.80		No
33	TP 6 light brown yellow sand; sooted fragments	POT	DKW	DCL	TP6	12	0	0	1	1	0	2	220.10		No
34	TP 6 light brown yellow sand; sooted fragments	POT	DKW	DCL	TP6	12	0	0	5	17	1	23	947.10	2SJ	No
35	TP 5 yellow sand	POT	CHN		TP5	10	0	2	3	3	0	8	28.10		No
36	TP 5 yellow sand	CER	PIP	STE	TP5	10	0	0	0	0	0	6	10.10		No
37	TP 5 yellow sand	GLS	BTG		TP5	10	0	0	0	0	0	2	26.50		No
38	TP 5 yellow sand	SLT			TP5	10	0	0	0	0	0	3	25.50		No
39	TP 5 brown grey sand	POT	DKW		TP5	9	0	0	0	0	1	1	122.20		No

FindNoID	SITE NOTES	Material	Туре	Class	Area	Context	Lid	Rim	Base	Body	Handle	Total No Pieces	Weight	sv_sJ	Drawn
40	TP 5 yellow sand	POT	DKW	DCL	TP5	10	0	0	0	12	0	12	96.70		No
41	TP 5 yellow sand	POT	SLP		TP5	10	0	0	0	2	0	2	37.40		No
42	TP 5 yellow sand	POT	UNG		TP5	10	0	0	0	1	0	1	18.90		No
43	TP 5 yellow sand	SHL			TP5	10	0	0	0	0	0	5	135.30		No
44	TP 5 yellow sand	POT	UNG	SGM	TP5	10	0	0	0	52	0	52	853.60		No
45	TP 5 yellow sand	POT	UNG	SGM	TP5	10	0	1	0	0	0	1	131.90		No
46	TP 5 yellow sand	POT	UNG	SGM	TP5	10	0	1	0	0	0	1	12.90		No
47	TP 8 light brown yellow sand	CER	PIP	STE	TP8	14	0	0	0	0	0	1	4.60		No
48	TP 8 light brown yellow sand	GLS	BTG		TP8	14	0	0	0	0	0	1	22.80		No
49	TP 8 light brown yellow sand	SHL			TP8	14	0	0	0	0	0	1	186.60		No
50	TP 8 light brown yellow sand	POT	DKW	DCL	TP8	14	0	0	1	0	7	8	458.30		No
51	TP 8 light brown yellow sand	POT	UNG	SGM	TP8	14	0	0	0	5	0	5	345.70		No
52	TP 8 light brown yellow sand	POT	sco		TP8	14	0	0	0	1	0	1	33.90		No
53	TP 8 light brown yellow sand; slipped exterior	POT	UNG	SGM	TP8	14	0	0	0	1	0	1	114.50		No
54	TP 8 light brown yellow sand	POT	CHN		TP8	14	0	1	1	1	0	3	89.10		No
55	TP 8 upper layers, light brown sand	POT	CHN		TP8	14	0	0	0	1	0	1	5.00		No
56	TP 7 light brown yellow sand; partial stamp visible 'O(?)TT'	POT	UNG	SGM	TP7	32	0	1	0	0	0	1	196.20		Yes
57	TP 7 light brown yellow sand	POT	UNG	SGM	TP7	32	0	0	1	0	0	1	92.10		Yes
	TP 7 light brown yellow sand	POT	UNG	SGM	TP7	32		2			0	2	657.70		Yes
59	,	POT	UNG	SGM	TP7	32		1	0	0	0	1	445.60		Yes
	TP 7 light brown yellow sand; rim sherd with smear marks	POT	UNG	SGM	TP7	32	0	1	0	0	0	1	370.90		Yes

FindNoID	SITE NOTES	Material	Туре	Class	Area	Context	Lid	Rim	Base	Body	Handle	Total No Pieces	Weight	sv_sJ	Drawn
61	TP 7 light brown yellow sand	POT	UNG	SGM	TP7	32	0	1	0	0	0	1	286.60		Yes
62	TP 7 light brown yellow sand	POT	UNG	SGM	TP7	32	0	1	0	0	0	1	140.70		Yes
63	TP 7 light brown yellow sand	POT	UNG	SGM	TP7	32	0	1	0	0	0	1	94.80		Yes
64	TP 7 light brown yellow sand	POT	UNG	SGM	TP7	32	0	1	0	0	0	1	140.80		Yes
65	TP 7 spoil from base of pit	POT	UNG	SGM	TP7	13	0	0	0	3	0	3	244.30	2SJ	No
66	TP 7 light brown yellow sand	POT	UNG	SGM	TP7	32	0	0	0	93	0	93	5473.60		No
67	TP 7 light brown yellow sand	CER	PIP	STE	TP7	32	0	0	0	0	0	1	1.90		No
	TP 7 light brown yellow sand; 1 x earthenware fabric	POT	STW		TP7	32	0	0	0	2	0	2	84.80		No
69	TP 7 light brown yellow sand	POT	CHN		TP7	32	0	0	1	0	0	1	9.90		No
70	TP 7 brown yellow sand	POT	DKW	DCL	TP7	32	0	0	1	3	0	4	276.60		No
71	TP 7 brown yellow sand	POT	DKW	DCL	TP7	32	0	0	1	0	0	1	72.40		No
72	TP 7 brown yellow sand	POT	UNG		TP7	32	0	0	0	1	0	1	12.70		No
73	TP 7 spoil from base of pit	POT	DKW	DCL	TP7	13	0	0	1	0	0	1	372.10		No
74	TP 7 light grey gritty sand	POT	DKW	DCL	TP7	13	0	0	4	2	0	6	1197.00		No
75	TP 7 light brown yellow sand	POT	DKW	DCL	TP7	32	0	0	9	18	0	27	2944.40		No
76	TP 4 gravelly context	GLS	BTG		TP4	16	0	0	0	0	0	1	251.10		No
77	TP 7 upper brown sandy layer	POT	CHN		TP7	32	0	1	0	0	0	1	14.00		No
78	TP 11 brown sandy clay next to dock wall	POT	CHN		TP11	42	0	0	0	1	0	1	16.30		No
79	TP 11 brown sandy clay next to dock wall	POT	DKW	DCL	TP11	42	0	0	0	1	0	1	21.80		No
80	TP 4 context above gravel	CER	PIP	STE	TP4	18	0	0	0	0	0	1	1.80		No
81	TP 4 context above gravel	POT	UNG	SGM	TP4	18	0	0	0	1	0	1	48.10		No
82	TP 4 context above gravel	POT	DKW	DCL	TP4	18	0	0	1	0	0	1	37.00		No

FindNoID	SITE NOTES	Material	Туре	Class	Area	Context	Lid	Rim	Base	Body	Handle	Total No Pieces	Weight	sv_sJ	Drawn
83	TP 3	SHL			TP3		0	0	0	0	0	1	36.60		No
84	TP 3	POT	CHN		TP3		0	3	1	4	0	8	15.90		No
85	TP 3	POT	UNG	SGM	TP3		0	0	0	2	0	2	13.90		No
86	TP 1 blue grey clay	POT	CHN		TP1		0	1	0	0	0	1	0.60		No
87	TP 1	POT	CHN		TP1		0	1	0	0	0	1	0.50		No
88	TP 1	POT	DKW	DCL	TP1		0	0	0	1	0	1	29.30		No
	TP 1; internal matt black glaze, unusually thick body sherd from possible base or neck of a globular vessel ?jug	POT	DKW	DCL	TP1		0	0	0	1	0	1	159.60		No
90	TP 10	POT	UNG	SGM	TP10		0	1	0	0	0	1	63.40		Yes
91	TP 10	POT	CHN		TP10		0	0	0	2	0	2	3.30		No
	TP 12 brown sand and sandstone fill next to dock wall	POT	CHN		TP12		0	1	0	1	0	2	3.60		No
	TP 12 brown sand and sandstone fill next to dock wall	CER	DRP	GED	TP12		0	0	0	1	0	1	17.90		No
	TP 12 brown sand and sandstone fill next to dock wall	GLS	BTG		TP12		0	0	0	0	0	1	6.00		No
95	TP 5 upper layers	POT	CHN		TP5		0	0	0	1	0	1	3.40		No
96	TP 5 black clay	CER	BRK		TP5		0	0	0	0	0	2	70.30		No
97	TP 5 black clay	POT	UNG	SGM	TP5		0	0	0	5	0	5	69.10		No
98	TP 5 black clay	CER	PIP	STE	TP5		0	0	0	0	0	1	1.00		No
99	TP 5 brown/grey sand and rubble	POT	UNG	SGM	TP5		0	0	0	5	0	5	131.40		No
	TP 5 brown/grey sand and rubble; 1 x glazed	CER	PIP	STE	TP5		0	0	0	0	0	2	5.20		No
101	TP 5 brown/grey sand and rubble	POT	CHN		TP5		0	0	0	1	0	1	2.60		No

FindNoID	SITE NOTES	Material	Туре	Class	Area	Context	Lid	Rim	Base	Body	Handle	Total No Pieces	Weight	sv_sJ	Drawn
102	TP 5 brown/grey sand and rubble	POT	STW		TP5		0	0	0	1	0	1	10.20		No
103	TP 5 brown/grey sand and rubble	POT	DKW		TP5		0	0	0	1	0	1	15.80		No
104	TP 4 gravelly context	BON	ANB		TP4		0	0	0	0	0	1	11.50		No
105	TP 4 gravelly context	CER	PIP	STE	TP4		0	0	0	0	0	1	0.70		No
106	TP 4 gravelly context	POT	CHN		TP4		0	3	0	2	0	5	13.50		No
	TP 4 gravelly context; exterior copper green glaze, interior patchy splash glaze	POT	IMP?		TP4		0	0	0	1	0	1	2.00		No
108	TP 4 gravelly context	POT	UNG	SGM	TP4		0	0	0	2	0	2	47.00		No
109	TP 4 gravelly context	POT	UNG	SGM	TP4		0	1	0	0	0	1	36.30		Yes
110	TP 4 gravelly context	POT	UNG	SGM	TP4		0	0	1	0	0	1	24.90		Yes
	TP 4 gravelly context; white pipe clay fabric, possible porcelain biscuit ware	POT	UNG	SGM?	TP4		0	1	0	0	0	1	33.10		Yes
112	TP 4 gravelly context; white pipe clay fabric	POT	UNG	SGM?	TP4		0	0	0	1	0	1	5.80		No
113	TP 4 gravelly context; leather shoe fragment	LEA	SHO		TP4		0	0	0	0	0	0	16.10		No
114	TP 4 gravelly context; leather shoe fragment	LEA	SHO		TP4		0	0	0	0	0	0	4.90		No
115	TP 13 unstratified	GLS	BTG		TP13		0	0	0	0	0	1	10.90		No
116	TP 13 unstratified	GLS	WIN		TP13		0	0	0	0	0	1	21.10		No
117	TP 13 unstratified	POT	UNG	SGM	TP13		0	0	0	4	0	4	117.60		No
118	TP 13 unstratified	POT	DKW	DCL	TP13		0	0	0	4	0	4	226.70		No
	TP 13 unstratified; white pipe clay fabric, possible porcelain biscuit ware	POT	BSC?		TP13		0	0	0	1	0	1	17.90		No
120	TP 13 unstratified	POT	CHN		TP13		0	0	0	1	0	1	7.60		No
121	TP 13 unstratified	CER	TIL		TP13		0	0	0	0	0	1	34.90		No
122	TP 13 unstratified	POT	MED		TP13		0	1	0	0	0	1	114.10		Yes

FindNoID	SITE NOTES	Material	Туре	Class	Area	Context	Lid	Rim	Base	Body	Handle	Total No Pieces	Weight	SV_SJ	Drawn
123	Bore Hole 1; 4 - 4.5 metres depth	POT	DKW	DCE			0	0	1	0	0	1	54.10		No
	Hand dug pit 1; brown sandy deposit, 1.2 metre depth	POT	STW				0	0	0	0	0	1	161.20		No
	Hand dug pit 1; brown sandy deposit, 1.2 metre depth	POT	CHN				1	0	0	0	0	1	9.70		No
126	Hand dug pit 2	GLS	BTG				0	0	0	0	0	2	104.10		No
127	Hand dug pit 2	POT	DKW				0	0	0	1	0	1	8.90		No
128	Hand dug pit 2	IRN					0	0	0	0	0	1	169.20		No
129	Hand dug pit 2	POT	STW				0	1	0	0	0	1	60.30		No
130	TP 4 gravelly context	BON			TP4		0	0	0	0	0	1	0.50		No
	TP 7 light brown yellow sand; body sherd with external smear marks	POT	UNG	SGM	TP7		0	0	0	1	0	1	633.90		No
	TP 5 brown/grey sand and rubble; stamped stem 'T.UNWIN.LIVERPOOL'	CER	PIP	STE	TP5		0	0	0	0	0	1	4.70		No
133	TP 5 yellow sand	CER	PIP	BOW	TP5		0	0	0	0	0	1	0.70		No

## 12. Photographic Register.

CAT	FILM	СТХТ	DESCRIPTION	DIR	DATE
1	DIG		View of site and dock wall, showing Dock Road wall	SW	08/05/2006
2	DIG		Location shot of half-tide dock	S	08/05/2006
3	DIG		Location shot of half-tide dock showing dock gates	E	08/05/2006
4	DIG		Location shot of half-tide dock showing dock gates	E	08/05/2006
5	DIG		Location shot of half-tide dock	E	08/05/2006
6	DIG		Dock gates of halftide dock	E	08/05/2006
7	DIG		Location shot	E	08/05/2006
8	DIG		Location shot of test pits	N	08/05/2006
9	DIG		Location shot showing filling in of the halftide dock	E	08/05/2006
10	DIG		TP1 working shot	NW	08/05/2006
11	DIG		TP1 working shot	W	08/05/2006
12	DIG		TP1 working shot	N	08/05/2006
13	DIG		TP1 working shot	N	08/05/2006
14	DIG		TP1 working shot	N	08/05/2006
15	DIG		TP1 working shot	N	08/05/2006
16	DIG	4	TP1 working shot, revealing context 4 dark clay near base of trench	N	08/05/2006
17	DIG	20	TP1 working shot, revealing context 16, yellow sand	N	08/05/2006
		4	N facing section of TP1 showing layer of dark grey clay, context 4	N	08/05/2006
19	DIG		S facing section of TP1	SW	08/05/2006
	DIG	3	TP1 showing collapsed sides and banded layers above context 3	N	08/05/2006
	DIG		TP1 working shot showing water at bottom of trench	N	08/05/2006
22	DIG		TP2 location shot	NE	08/05/2006
23	DIG		TP2 working shot	NE	08/05/2006
24	DIG		TP2 working shot showing pipe in side of section	NE	08/05/2006
	DIG	5,19	TP2 showing context 5 with water and 19 showing at base of trench	NE	08/05/2006
	DIG	5,19	TP2 showing context 5 with water and 19 showing at base of trench	NE	08/05/2006
	DIG	5,19	TP2 showing context 5 with water and 19 showing at base of trench	NE	08/05/2006
	DIG		TP2 showing banded red and yellow layers below tarmac		08/05/2006
	DIG	5	TP2 context 5		08/05/2006
	DIG	5	TP2 Leasting section with pipe showing	E	08/05/2006
	DIG	<u> </u>	TP3 location shot	S	08/05/2006
	DIG	<u> </u>	TP3 working shot	S	08/05/2006
	DIG		TP3 working shot	S	08/05/2006
	DIG		TP3 showing banded layers below tarmac		08/05/2006
35	DIG	6	TP3 showing banded layers below tarmac and context	W	08/05/2006

CAT	FILM	CTXT	DESCRIPTION	DIR	DATE
			6		
36	DIG	6	TP3 showing banded layers below tarmac and context 6	SW	08/05/2006
37	DIG	6	TP3 showing banded layers below tarmac and context 6	S	08/05/2006
38	DIG	6	TP3 showing banded layers below tarmac and context 6	W	08/05/2006
39	DIG		TP4 location shot	SE	08/05/2006
40	DIG	7, 18	TP4 showing yellow gravelly sand [7] and dark grey clayey sand [18]	S	08/05/2006
41	DIG	7, 18, 16	TP4 W facing section showing light gravelly sand [16] below [18]	W	08/05/2006
42	DIG	7, 18, 16	TP4 W facing section showing light gravelly sand [16] below [18]	W	08/05/2006
43	DIG	18	TP4 N facing section showing dark grey clayey sand [18]	N	08/05/2006
44	DIG	18	TP4 N facing section showing dark grey clayey sand [18]	N	08/05/2006
45	DIG		TP4 location shot	N	08/05/2006
46	DIG		TP5 location shot	N	09/05/2006
47	DIG		TP5 working shot	N	09/05/2006
48	DIG	8, 9	TP5 W facing section showing red sand [8] and brown/grey sand [9]	W	09/05/2006
49	DIG		TP5 working shot	N	09/05/2006
50	DIG	9, 10	TP5 working shot revealing yellow sand [10]	NW	09/05/2006
51	DIG	8, 9, 10	TP5 working shot revealing yellow sand [10]	NW	09/05/2006
52	DIG	8, 9, 10, 11	TP5 showing coal rich clay [11]	S	09/05/2006
53	DIG	8, 9, 10, 11	TP5 showing coal rich clay [11]	S	09/05/2006
54	DIG	8, 9, 10, 11	TP5 showing coal rich clay [11] with red and yellow sands below	S	09/05/2006
55	DIG	8, 9, 10, 11	TP5 showing coal rich clay [11] with red and yellow sands below	S	09/05/2006
56	DIG	8, 9, 10, 11	TP5 showing coal rich clay [11] with red and yellow sands below	S	09/05/2006
57	DIG	8, 9	TP5 W facing section showing red sand [8] and brown/grey sand [9]	W	09/05/2006
	DIG	9, 10	TP5 N facing section showing yellow sand [10]	N	09/05/2006
59	DIG		TP6 location shot	SE	09/05/2006
60	DIG		TP6 location shot	NW	09/05/2006
61	DIG		TP6 showing banded layers above red sand	W	09/05/2006
62	DIG		TP6 showing banded layers above red sand	W	09/05/2006
63	DIG		TP6 working shot	SW	09/05/2006
64	DIG		TP6 working shot showing ?bedrock at base of trench	SW	09/05/2006
65	DIG		TP6 working shot showing ?bedrock at base of trench	S	09/05/2006
66	DIG	17, 12	TP6 showing banded layers and contexts [17] and [12]	W	09/05/2006
67	DIG	17, 12	TP6 showing banded layers and contexts [17] and [12]	W	09/05/2006

CAT	FILM	СТХТ	DESCRIPTION	DIR	DATE
68	DIG	17, 12	TP6 showing banded layers and contexts [17] and [12]	W	09/05/2006
69	DIG	17, 12	TP6 showing banded layers and contexts [17] and [12]	W	09/05/2006
70	DIG	17	TP6 detail of dark grey clay [17]	W	09/05/2006
71	DIG	17	TP6 detail of dark grey clay [17]	W	09/05/2006
72	DIG		TP7 location shot	SW	09/05/2006
73	DIG	21	TP7 working shot showing thick band of dark grey sandy clay [21]	N	09/05/2006
74	DIG	13, 21	TP7 N facing section showing dark clay [21] and context [13]	N	09/05/2006
75	DIG	13, 21	TP7 N facing section showing dark clay [21] and context [13]	N	09/05/2006
76	DIG	13, 21	TP7 E facing section showing dark clay [21] and context [13]	E	09/05/2006
77	DIG	13, 21	TP7 W facing section showing dark clay [21] and context [13]	W	09/05/2006
78	DIG		TP7 yellow sand at the base of the pit	W	09/05/2006
79	DIG		TP8 location shot	S	09/05/2006
80	DIG		TP8 location shot	S	09/05/2006
81	DIG		TP8 location shot	S	09/05/2006
82	DIG	14	TP8 red sand and sandstone, context [14]	S	09/05/2006
83	DIG	14	TP8 detail of S facing section showing red sand and [14]	S	09/05/2006
84	DIG	14	TP8 detail of W facing section showing red sand and [14]	W	09/05/2006
85	DIG		TP10 location shot	W	09/05/2006
86	DIG		TP10 location working shot	S	09/05/2006
87	DIG		TP10 showing layers of red and yellow sands	W	09/05/2006
88	DIG		TP10 detail of yellow band of clayey sand	W	09/05/2006
89	DIG		TP10 detail of yellow sand in N facing section	N	09/05/2006
90	DIG		TP10 detail of yellow sand in N facing section	N	09/05/2006
91	DIG		TP11 location working shot	S	10/05/2006
92	DIG		TP11 location working shot	S	10/05/2006
93	DIG		TP11 brick culvert of water pipe lying on top of dock wall step	W	10/05/2006
94	DIG		TP11 location working shot	S	10/05/2006
95	DIG		TP11 working shot showing sandstone blocks and exposed dock wall	SE	10/05/2006
96	DIG		TP11 exposed back of dock wall	E	10/05/2006
	DIG		TP11 exposed back of dock wall	E	10/05/2006
	DIG		TP11 exposed back of dock wall, detail	E	10/05/2006
	DIG		TP11 exposed back of dock wall, detail	E	10/05/2006
	DIG		TP11 exposed back of dock wall, detail showing brick culvert	E	10/05/2006
101	DIG		TP11 showing yellow brown sand and sandstone deposit	SE	10/05/2006
102	DIG		TP11 showing detail of red and yellow banded layers	S	10/05/2006

CAT	FILM	CTXT	DESCRIPTION	DIR	DATE
103	DIG		TP11 showing yellow brown sand and sandstone deposit	S	10/05/2006
104	DIG		TP11 showing yellow brown sand and sandstone deposit	S	10/05/2006
105	DIG		TP12 location shot	S	10/05/2006
106	DIG		TP12 location shot	S	10/05/2006
107	DIG		TP12 location shot	S	10/05/2006
108	DIG		TP12 location shot	S	10/05/2006
109	DIG		TP12 location shot showing spoilheap and large sandstone blocks	S	10/05/2006
		15	TP12 showing loose deposit [15] and concrete	SE	10/05/2006
111	DIG		TP12 showing banded layers below concrete	S	10/05/2006
112	DIG		TP12 detail of exposed back of dock wall	SE	10/05/2006
113	DIG		TP12 detail of exposed back of dock wall	SE	10/05/2006
114	DIG		TP12 detail of exposed back of dock wall	SE	10/05/2006
115	DIG		TP12 detail of exposed back of dock wall	SE	10/05/2006
116	DIG		TP12 detail of exposed back of dock wall	SE	10/05/2006
117	DIG		TP12 detail of grey brown and red banded layers below concrete	S	10/05/2006
118	DIG		TP12 detail of exposed back of dock wall	SE	10/05/2006
119	DIG		TP12 detail of exposed back of dock wall	SE	10/05/2006
120	DIG		TP12 detail of exposed back of dock wall	SE	10/05/2006
121	DIG		TP12 location shot of exposed dock wall	SE	10/05/2006
122	DIG		TP12 location shot of exposed dock wall	SE	10/05/2006
123	DIG		TP13 location shot	S	11/05/2006
124	DIG		TP13 location shot	S	11/05/2006
125	DIG		TP13 location shot	S	11/05/2006
126	DIG		TP13 location shot	S	11/05/2006
127	DIG		TP13 location shot	S	11/05/2006
128	DIG		TP13 banded layers below concrete	S	11/05/2006
129	DIG		TP13 exposed back of dock wall	SE	11/05/2006
130	DIG		TP13 exposed back of dock wall	SE	11/05/2006
131	DIG		TP13 exposed back of dock wall	SE	11/05/2006
132	DIG		TP13 exposed back of dock wall showing corner appearing	SE	11/05/2006
133	DIG		TP13 exposed back of dock wall working shot	SE	11/05/2006
134	DIG		TP13 exposed back of dock wall working shot	SE	11/05/2006
135	DIG		TP13 exposed back of dock wall detail	SE	11/05/2006
136	DIG		TP13 exposed top of dock wall with brick culvert structure on top	S	11/05/2006
137	DIG		TP13 exposed top of dock wall with brick culvert structure on top	S	11/05/2006
138	DIG		TP13 exposed top of dock wall with brick culvert structure on top	S	11/05/2006

CAT	FILM	CTXT	DESCRIPTION	DIR	DATE
139	DIG		TP13 working shot scraping bedrock	SW	11/05/2006
140	DIG		TP13 working shot scraping bedrock	SW	11/05/2006
141	DIG		TP13 detail of dock wall	SE	11/05/2006
142	DIG		TP13 detail of dock wall	SE	11/05/2006
143	DIG		TP13 detail of dock wall showing location in surrounding area	SE	11/05/2006
144	DIG		TP13 working shot	SE	11/05/2006
145	DIG		TP13 working shot showing base of trench	SE	11/05/2006
146	DIG		TP13 detail of dock wall	SE	11/05/2006
147	DIG		TP13 detail of dock wall showing location in surrounding area	SE	11/05/2006
148	DIG		TP13 detail of yellow sandstone blocks from spoil heap		11/05/2006
149	DIG		TP13 detail of yellow sandstone blocks from spoil heap		11/05/2006
150	DIG		TP13 exposed buttress	SE	11/05/2006
151	DIG		TP13 exposed buttress	SE	11/05/2006
152	DIG		TP13 exposed buttress	E	11/05/2006
153	DIG		TP13 exposed buttress	E	11/05/2006
154	DIG		TP13 exposed buttress	E	11/05/2006
155	DIG		TP13 exposed buttress	E	11/05/2006
156	DIG		TP13 exposed buttress	NE	11/05/2006
157	DIG		TP13 exposed buttress	NE	11/05/2006
158	DIG		TP13 detail of South side of buttress	S	11/05/2006
159	DIG		TP13 general shot showing spoil heap	S	11/05/2006
160	DIG		TP13 detail of banded layers below concrete	S	11/05/2006
161	DIG		Location shot for hand dug trenches 1 and 2	S	11/05/2006
162	DIG		Location shot for hand dug trenches 1 and 2	S	11/05/2006
163	DIG		Hand dug pit 1 showing plinth and cables at base	W	11/05/2006
164	DIG		Hand dug pit 1 showing plinth and cables at base	S	11/05/2006
165	DIG		Hand dug pit 2 showing plinth for Dock Road wall	W	11/05/2006
166	DIG		Hand dug pit 2 showing plinth for Dock Road wall	W	11/05/2006
167	DIG		Location shot of half tide dock site	SW	11/05/2006
168	DIG		Location shot of half tide dock site	SW	11/05/2006
169	DIG		Location shot of half tide dock site showing metal bollards	S	11/05/2006
170	DIG		Location shot of half tide dock site showing metal bollards	S	11/05/2006
171	DIG		Northern extent of exposed dock wall showing arched brick culvert	SE	17/05/2006
172	DIG		Northern extent of exposed dock wall showing arched brick culvert	SE	17/05/2006
173	DIG		Shot along length of exposed dock wall	NE	17/05/2006
174	DIG		Detail of top of wall and metal bollard	E	17/05/2006
175	DIG		Shot along length of exposed dock wall	N	17/05/2006

CAT	FILM	СТХТ	DESCRIPTION	DIR	DATE
176	DIG		Detail of brick culvert lying on top of dock wall	E	17/05/2006
177	DIG		Shot along length of exposed dock wall	NE	17/05/2006
178	DIG		Detail shot of wall construction	NE	17/05/2006
179	DIG		Detail of wall showing buttress	E	17/05/2006
180	DIG		Detail of wall showing buttress	E	17/05/2006
181	DIG		Detail of wall showing buttress	E	17/05/2006
182	DIG		Shot along length of exposed dock wall	SE	17/05/2006
183	DIG		Shot along length of exposed dock wall	SE	17/05/2006
184	DIG		Shot along length of exposed dock wall	NE	17/05/2006
185	DIG		Detail of exposed wall	E	17/05/2006
186	DIG		Detail of section of wall showing small buttress	E	17/05/2006
187	DIG		Shot along length of exposed dock wall	S	17/05/2006
188	DIG		Detail shot of buttress	E	17/05/2006
189	B/W		Disused railway lines at North end of halftide dock	E	11/05/2006
190	B/W		Disused railway lines at North end of halftide dock	W	11/05/2006
191	B/W		Disused railway lines at North end of halftide dock	W	11/05/2006
192	B/W		Disused railway lines at North end of halftide dock facing road entrance	SW	11/05/2006
193	B/W		Disused railway lines on East side of dock showing railway signal	SW	11/05/2006
194	B/W		Disused railway lines on East side of dock	SW	11/05/2006
195	B/W		Disused railway lines on East side of dock	NE	11/05/2006
196	B/W		Disused railway lines on East side of dock	NE	11/05/2006
197	B/W		Disused railway lines on East side of dock	NE	11/05/2006
198	B/W		Disused railway lines on East side of dock, detail showing lines in cobbles	SW	11/05/2006
199	B/W		Disused railway lines on East side of dock, detail showing lines in cobbles	SW	11/05/2006
200	B/W		Disused railway lines on East side of dock, showing railway signal in background	SW	11/05/2006
201	B/W		Disused railway lines on East side of dock, showing railway signal in background	SW	11/05/2006
202	B/W		Disused railway signal adjacent to Dock Road wall	S	11/05/2006
203	B/W		Disused railway signal adjacent to Dock Road wall	S	11/05/2006
204	B/W		Disused railway signal adjacent to Dock Road wall, detail of top	SW	11/05/2006
205	B/W		Disused railway signal adjacent to Dock Road wall	W	11/05/2006
206	B/W		Disused railway signal adjacent to Dock Road wall	W	11/05/2006
207	B/W		Disused railway signal adjacent to Dock Road wall, detail of top	W	11/05/2006
208	B/W		Disused railway signal adjacent to Dock Road wall	W	11/05/2006
209	B/W		Disused railway signal adjacent to Dock Road wall, detail of top	SW	11/05/2006
210	B/W		View along Dock Raod wall showing railway signal	N	11/05/2006

CAT	FILM	CTXT	DESCRIPTION	DIR	DATE
211	B/W		Disused electric fuse box? On Dock Road wall	SW	11/05/2006
212	B/W		Metal bollard on dock wall, E side of dock	SE	11/05/2006
213	B/W		Metal bollard on dock wall, E side of dock	SE	11/05/2006
214	B/W		Metal bollard on dock wall, E side of dock	SE	11/05/2006
215	B/W		Metal bollard on dock wall, E side of dock	SE	11/05/2006
216	B/W		View along dock wall showing position of bollards	S	11/05/2006
217	B/W		View along dock wall showing position of bollards	S	11/05/2006
218	B/W		Metal bollard on dock wall, E side of dock, detail showing hooks on top	E	11/05/2006
219	B/W		Metal bollard on dock wall, E side of dock, detail showing hooks on top	E	11/05/2006
220	B/W		Metal bollard on dock wall, detail showing hooks and numbers impressed on top	W	11/05/2006
221	B/W		Metal bollard on dock wall, detail showing hooks and numbers impressed on top	W	11/05/2006
222	B/W		Metal bollard with hooks,on dock wall, E side of dock	E	11/05/2006
223	B/W		Detail of tall thin metal bollard	E	11/05/2006
224	B/W		View along dock wall showing location of bollards	N	11/05/2006
225	B/W		Small disc shaped metal bollard on dock wall	S	11/05/2006