Royal Victoria Dock, North
Archaeological Desktop study

by

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Introduction

The London Docklands Development Corporation commissioned the archaeological desktop study (LDDC Ref: AC0501.SH) forming the subject matter of the current document. The study was carried out by staff of the Archaeology and Local History Centre of Newham Museum Service. This document has been formulated taking account of the legal implications of Planning Policy Guidance note 16 (PPG16) produced by the Department of the Environment. It also follows the framework and standards detailed in 'Management of Archaeological Projects' (English Heritage 1991) produced by English Heritage. This report aims to produce an evaluation of the potential for surviving remains of archaeological significance in the area proposed for development. It is based on available historical and archaeological archival material, cartographic, borehole, testpit and land use information. It additionally sets out a series of recommendations to test the validity of the report and to enhance the preservation in situ of any surviving remains of archaeological importance. The report also considers the implications of the proposed development scheme with respect to any surviving buried remains.

The site is on the north and west sides of the Royal Victoria Dock, including part of the dock itself, as shown on Figure 1. It covers approximately 40 ha (Fig 1.). Outline planning permission was granted for mixed development on the site in 1988, renewed in 1994. A new outline planning application for an exhibition centre scheme with associated uses and infrastructure, etc. was made on the 21st July 1995. An application for the proposed eastern access to the site has also been made (August 1995). The site currently consists of a predominantly cleared area, large parts of which are under hard standing. A small number of buildings are present on the site consisting mainly of warehouses associated with the former dock facilities.

For the purposes of this study none of the features of the site which post date the construction of the dock itself (1850-1855) will be taken into account. Therefore the potential of the site with respect to aspects of industrial archaeology will not be considered, nor any archaeological or historical aspects of the listed buildings present on the site, all of which are later in date than the dock itself. It is understood that the LDDC has already received advice on these buildings, structures and artefacts.

This study will set out to describe the geological, archaeological and historical background to the site and it will assess changes in land use and earlier developments with respect to their potential impact on buried archaeology.

The area of the site lies within an archaeological priority zone set out in the Deposit version of the London Borough of Newham's Unitary Development Plan (UDP).

Archaeological and Historical Setting

The site lies within the Thames floodplain, between the Lea and Roding tributaries. The Thames has been within approximately the current drainage pattern since the end of the Anglian glaciation approximately 400000 years ago. The geological deposits with the potential of containing evidence of human activities in the British Isles cover the Pleistocene and Holocene periods. The relevant geological component at the Royal Victoria Dock site consists of river terrace gravels and all the more recent deposits. These consist of alluvial deposits and waterlogging events at the top of the gravel constituent, associated with rising sealevels. These events encouraged conditions favourable to peat growth. Further rises in sealevel and a generally wetter climate resulted in the formation of silty clays on top of the peat beds.

The area in which the Royal Victoria Dock is located forms part of the former Plaistow Levels. This was part of a much larger area of marshes stretching along both sides of the River Thames and its tributaries in the Greater London area. These wetlands started to form sometime after the last ice age, at times of rising sea levels. The north-east bank of the Thames and the floodplains of the tributaries which drain into it from this side have since the 19th century yielded large quantities of prehistoric and Roman artefacts and structures. Near Rainham ferry Roman pottery was found. The Dagenham idol, a wooden anthropomorphic figurine dated to the Neolithic period, came from the area of Dagenham (O'Leary 1964: Pl. 3). Bronze artefacts, mostly of Bronze Age date have been found in the lower reaches of the Roding the Royal Albert and Victoria Docks, the Plaistow marshes, Bow creek and further up the River Lea. A dugout canoe dating to the 3rd century AD and pottery of Roman date were found in excavations for the Royal Albert Dock (Whitaker 1889). Roman material was also found in the flood-plain of the River Lea. Crannocks or pile dwellings of uncertain date, but probably anywhere between the Bronze Age and Roman times were found in the excavations of the Maynard, Warwick and Banbury Reservoirs on the River Lea. A further wooden pile structure interpreted as being associated with fishing or a river crossing was found in the River Lea during the construction of the William Girling Reservoir. A log boat possibly dating to the Iron Age or Roman period came from the Lockwood reservoir. The remains of a clinker built boat of medieval or even Post medieval date was found in excavation for the Lockwood Reservoir. All these finds and others were made during the nineteenth and the first half of the twentieth centuries, and were found in the marshes on the northern bank of the Thames and its tributaries, the Lea and Roding in east London.

In the present century further stray finds continued to be reported such as the discovery of a piece of worked wood at Barking in 1985 (Passmore Edwards Museum Archives).

The extent and nature of the peat beds found in this alluvium has been remarked upon at least as early as 1721 by John Perry in his account of the stopping of the Dagenham Breach. In this work he not only refers to the extensive presence of brush wood in the peats, he also mentions the widely found occurrence of Yew trees in these deposits and describes the basic sequence of clays overlying peats which in turn are on top of blue clays followed by gravels and sand.
It is since 1989 that a series of investigations, mostly by the former Passmore Edwards Museum (now Newham Museum Service), which have started to show again the richness of the archaeological resource found in these peats. Sites with significant archaeological remains have been found in Rainham (Beasley 1990; Meddens and Beasley 1990), Dagenham (Divers 1993), Barking (Chew 1994), and Newham (Beasley 1993; Divers 1994; Wessex 1994) (Fig.

2). These ranged in date from the Neolithic to the Roman period. Archaeological features have been found in the gravels and sands underlying the peat, in the peat itself and in the alluvial silty clays overlying it. Although it must be said that the great majority of the structural evidence is currently dated to the Middle Bronze age and comes from the peats itself.

In this respect it is important to note that the 2 to 3 m of alluvial silty clays overlying the peats effectively mask most geophysical prospecting techniques currently in use in archaeology. Nonetheless of the sites which have been taken to archaeological field assessments 56% (10 out of a total of 18 sites looked at since 1989) have produced archaeological remains. This suggests that there could be archaeological material present in such deposits on the site.

The Royal Victoria Dock site

The construction of the Dock itself dates to between 1850 and 1855, it was the first of the large docks to be constructed with a defined lifespan in mind and was the first dock to be directly linked to the railway network. In order to maximise its capacity four finger jetties were built, projecting from the northern quay, and a tidal basin was built at its western end (Fig. 3). The dock was considerably rebuilt and remodelled between 1935 and 1944 (Pudney 1975: 92-93)(Fig. 4). The location appears to have been chosen for a number of reasons, the land was cheap and at high tide much of it lay 8 to 10 feet below water (1975: 92). The natural drainage of the Plaistow levels tended to converge on the area in which the Royal Docks were eventually built. By the middle of the 19th century the ditches and fielddrains running towards the site were little more than open sewers with much of the effluent being deposited in the area where the docks where to be constructed. The construction of the Royal Docks destroyed the ancient outfalls and drainage structure (Powell 1986: 74).The sewage situation therefore continued to deteriorate after the Royal Victoria Dock had been built, until the final quarter of the century when the problem was solved.

Before the Dock was constructed the area was occupied by a series of fields, which appear to have been used for grazing (Fig. 5) as indicated by the large number of 'pounds' identified in this area in the survey by John James of 1742 (Appendix 2). The structure and pattern of the field system appear to be of considerable antiquity. References to fields belonging to the Manor of Westham (Appendix 2) indicate that these originally belonged to Stratford Langthorne abbey. This suggests a date for this landscape predating the dissolution of the monasteries (1540-1541). The field names present the possibility of even earlier origins. The field called Sudbury (no 52) is part of the demesne land of the manor of Sudbury mentioned in documentary sources dating to c. 1100. The plot identified as Leymouth (no 84) is a reference to the mouth of the River Lea. Some of the fieldnames refer to their usage, such as Wickleme, where wick is a reference to the landlords right to pasture his sheep on his tenants land at certain times of the year (Adams 1976: 45). The leme element of Wickleme may derive from an old British term for elm and is a word specifically associated with rivers, lakes, ponds and marshes (Copley 1968: 59). The term holm in Brightholm marsh means meadow in flat alluvial land (Copley 1968: 100). Wye as in Wyefield comes from an old British term 'wig' meaning idol or shrine (Copley 1968: 59).

The Great Eastern Railway (now the North London railway line) along the northern boundary of the site, was completed between 1846 and 1847 (Powell 1986: 15) (Fig. 3).

A series of finds of Roman and prehistoric date have been recovered, apparently mostly found at the time of the original construction and then during remodelling of the Royal Victoria Dock. These discoveries include Palaeolithic hand axes, a Bronze Age spearhead, axe and sword, and medieval pottery. From slightly further east from excavations associated with the construction of the Royal Albert Dock, Roman pottery and a Roman dugout canoe dating to the 3rd century were recovered. These Roman finds came from layers associated with the interface of the top of the peats with the basal levels of overlying silty clays (See Appendix 1 and Fig. 6).

East Ham High Street and its southern extensions, East Ham Manor Way and Woolwich Manor Way have long been regarded as marking the line of a Roman Road, some 1.5 Km to the east of the site (Fig. 6). On the border of West and East Ham, Green Street runs exactly parallel with East Ham High Street. The straightness of this feature along with the fact that it runs exactly parallel with the High street, indicates that this too may be a Roman road. This road heads toward the former position of Ham Creek also known as the Blackwall Basin, approximately 1 km east of the Royal Victoria Dock site (Fig. 6), along Boundary Road, and then part of Stansfeld Road. Ham Creek was a natural harbour which silted up during the 19th century (Appendix 1). Parts of this creek appear to have been reclaimed during medieval times. The possibility of a Roman road, with a natural harbour and the finds of Roman pottery and a dugout canoe, during construction of the Royal Albert Dock (Appendix 1), may indicate the presence of a Roman harbour installation immediately to the east of the development site (Fig. 6).

The Bronze Age finds from the area of the Dock (Appendix 1) could indicate accidental losses. Combined with the recent evidence of extensive Bronze Age exploitation of the former marshes, including the find of a trackway and Bronze Age pottery at Fort Street (Fig. 6) in West Silvertown south of the site (Wessex 1994) these finds take on a new importance. Metal objects during the Bronze Age were a rarity. Their owners would have been individuals with considerable status. Objects of this type tend to be items associated with offerings or burials. The recent finds at Flag Fen, near Peterborough (Pryor 1992: 448), of extensive offering deposits consisting of large numbers of bronze artefacts (mainly weaponry) in direct association with large scale wooden structures in a former marsh is possibly an indication of the type of Bronze Age feature which may be or may have been located in close proximity to the area of the Royal Victoria Dock.

Two hand axes of Pleistocene date come from the Royal Victoria Dock site. These were in all likelihood discovered in the deep excavations carried out as part of the Dock construction and/or the later modifications made to it (Appendix 1) (Fig. 6). They probably represent re-deposited artefacts of Pleistocene date within the river gravel matrix underlying much of the site, and are unlikely to derive from an undisturbed Pleistocene site.

Borehole Survey

The borehole data for the site cover three separate surveys. They characterise the site typically from top to bottom as made up of a sequence of made ground, alluvial silty clays, peats, silty clays on top of gravel.

A review of the borehole data indicates that the gravel and sand component forms a natural ridge along the northern edge of the site and tends to dip down towards the existing dock edge

(Fig. 7), with particularly high rises on the north-eastern and north-western side. A small elevated gravel island appears to survive along the central section of the southern margin of the site. The peat deposits appear to be particularly deep along the central section of the northern side of the site, with good survival along the north eastern sector (Fig. 8). The north western side of the site appears to have only isolated pockets of peats, possibly as a result of an old river or stream bed forming part of the site along this margin (Fig. 8). The natural deposits along the southern side of the site appear to have been extensively truncated as a result of excavations associated with the construction of the Dock (Fig. 9). This has effectively removed most of the alluvial deposits and peats and indeed a large part of the gravel and sand component, with the possible exception of one small surviving island in the south central sector (Fig. 8). Effectively over 43% of the site extending over much of the southern half has been stripped of material pertaining to the Pleistocene and Holocene and the upper 6 to 10 meters consist of made ground post-dating the construction of the Dock (Fig. 10).

It should be noted that the sectors located between the grid references stated in appendix 3.1 have had that part of the stratigraphic sequence destroyed, which might have included evidence of mans activity on the site prior to 1850 (Fig. 10). Those sectors which may have archaeological remains surviving are listed in appendix 3.2 (Fig. 10) and those sectors which have a particularly high potential, because of the specifics of the subsurface topography are listed in appendix 3.3 (Fig. 10). The latter constitute rises in the subsurface gravel deposits which may have been islands in the marsh during the Bronze Age and earlier. These gravel outcrops are likely to have been favoured by early man in his exploitation of the marsh.

Archaeological Potential and Previous Developments

The site has been severely affected by earlier development, particularly the construction of the Royal Victoria Dock between 1850 and 1855 and later modifications made between 1935 and 1944. These works have removed large amounts of the subsurface geology dating to the periods between the first arrival of man in the British Isles and 1850.

The building of the railway along the northern margin of the site (Fig. 3), immediately before the Dock was completed, will also have had a negative impact on any archaeological remains surviving in the peats immediately below and adjacent to the line. This would have happened as a result of consolidation works required to form a stable base for the line, such as ramming in of hardcore and ballast. Excavation and embanking to remove or avoid soft spots would have been rare (pers. comm. T. Turbin). The compacting from above would have resulted in de-watering and compression of the peats. The later construction of the Docklands Light Railway would have had a similar effect, except where its elevated sections are concerned, where the construction of the foundations for these sections would have had a more damaging impact than where the railway was built at ground level.

The building of the trunk foul water sewer during the 1980's, also along the northern margin of the site, will have had a further negative impact on the waterlogged materials in the peats. The excavations associated with its construction went down to the underlying gravel deposits, destroying peats in the process and exposing further peat deposits to the effects of aeration and de-watering through the sides of the trench cut.

Before 1850 little or no construction activities took place which could have caused damage to the buried deposits. After 1850 a series of warehouses and offices were built between the northern edge of the site, defined by the railway line, and the northern margin of the dock (Fig. 3-4, 6). All of these buildings will have had limited piled foundations which will have had some effect on the buried peat deposits. Clearly the piles themselves will have destroyed any archaeological features in their path as they were driven in. As for much of the period of the construction of the warehouses and offices ground water levels were higher than they are currently, damage to the peat structure in the areas around the piles is likely to have been minimal. Additionally much of the most recent warehouse construction (Fig. 6) was positioned over parts of the site where the most extensive truncation of the subsurface peat deposits had already occured in the construction of the Dock itself (Fig. 9). An estimate of damage by piling associated with previous developments to the buried peats of between 1 and 2% of the overall area where they are known to have otherwise survived, is likely to be an accurate approximation of the situation.

Piling for the construction of the electricity pylons across the site, along the northern boundery, is likely to have caused damage to the peats, but this likely to have been limited to the area in the immediate vicinity of the pylon bases.

It is unlikely that construction of services and infrastructure associated with the earlier developments of the site, other than those which has been specifically mentioned above, will have had much impact on any buried remains due to the depth of the potential archaeological deposits.

Along the western side of the site the borehole information suggests the presence of a possible palaeochannel (Fig. 7). Smaller such palaeochannels appear to be located along the northern boundary of the site in the central sector.

It appears that the area where the Dock was built was a naturally low lying sector. Much of this land lay 8 to 10 feet below high water level (Pudney 1975:92). A significant part of it may have been part of the predecessor to Ham Creek (Fig. 6), before it silted up. The Dock was built in this precise location because the land was cheap as it was prone to flooding (Pudney 1975: 92).

The combination of relatively high ground with proximity to a natural harbour increases the potential for this sector to have been of importance in prehistory. Despite the extensive destruction of relevant deposits in historic times the potential for survival of significant remains appears high.

Human occupation seems likely to have been concentrated along the higher lying sections of the site, along the northern margin, at a level constituting a comparative dryland, wetland margin at the time the area was in use.

Stability and Conservation

Over much of the area currently covered in alluvial and peat deposits the water table tends to lie at the interface between the base of the peats and the top of the gravels and sands. The height of the watertable is usually considered a good measure of the condition of peats. With a lowered watertable peats dry out loose structure and deteriorate. The thick cap of silty clays overlying the peats appears, in the area of north-east London, to have effectively shielded the peats from drying out, and maintained high moisture levels and anaerobic conditions.

The data for the Royal Victoria Dock area, with regard to the water table indicates it is very variable. Borehole data with regard to watertable evidence is difficult to interpret. It only provides a very momentary glimpse at a water level which is influenced, in the case of the Royal Victoria Dock, not only by the season, and point specific ground conditions, but also by the tide. The borehole data for the Royal Victoria Dock shows a great deal of variation in all the three types of levels recorded, these being the level at which water was struck, the level to which it rose following a strike and the Ad hoc standing water level. Additionally, in a number of boreholes, two separate strike levels are indicated. Where this is the case the first tends to be at the bottom of made ground, the second in levels underlying the peat. The upper layer of water here is likely to reflect near-surface runoff, and the lower layer, groundwater. The general impression from the data from the Royal Victoria Dock site is that the watertable is near the interface of the peat with the underlying river gravels. This agrees with the water table evidence noticed at the other sites, looked at by Newham Museum Service, in the alluvium of north-east London.

The threat to the underlying peat structure where the peats are directly affected as a result of construction activities which result in removal or direct disturbance of the peat deposits is clear. Not only are the peat deposits which are immediately affected destroyed, the equilibrium of deposits over a considerable distance away from the damaged area is disturbed. Where the deposits are not directly disturbed damage is perceived to take place in part resulting from piling operations which effectively pierce the protecting silty clay cap, thus allowing moisture a way to escape and oxygenation of the deposits to take place. Secondly the exertion of greater pressures by the placing of structures on top is thought to result in compression of the peats effecting loss of moisture and structure.

The Implications of the Proposed Development

The proposed exhibition centre for the Royal Victoria Dock would impact the potentially surviving archaeological and palaeoenvironmental deposits in a variety of way. Some of the effects are impossible to quantify with current knowledge. A note will be made of the latter effects, and recommendations to evaluate them will be included.

The principal unknown factor is how the foundation design, piling configurations and drainage structures will affect the water table across the site. The water table will be affected by the proposed works, and this will have an effect on the buried peat deposits. Currently the foundation designs are not available, even when they are an assessment of their effect on the water table would be inexact science at best because of the number of variables involved. Even if a workable model of the water table changes could be generated the alterations in the condition of the peat deposits would be difficult to model. The chemical conditions and level of oxygenation of the peat deposits would influence any changes, these would be complicated to monitor and difficult to duplicate.

Considering that the Royal Victoria Dock North is not the only site to be affected by development in the LDDC area, however an argument can be made for establishing the ground parameters for such an assessment, as these would be of assistance not only for the Royal Victoria Dock but also for the other sites. It is understood the Corporation has recently discussed this issue with English Heritage.

The impact of a number of aspects of the proposed development can be defined at this stage without complications.

<u>The exhibition halls, phase 1, Royal Victoria Square and Eastern Access Road</u>

The southern threequarters of this structure is largely positioned over a part of the site where survival of archaeologically sensitive deposits is highly unlikely (Fig. 11). It is therefore thought that the potential negative impact on archaeological remains, of this part of the proposal will be negligible. The extension of lands into the dock would not affect any projected archaeological resource either, since the dock was constructed to a depth below which peat deposits have not survived (Fig. 8,11).

The northern quarter of the buildings is positioned on top of deposits where archaeological potential exists. The piling associated with this part of the exhibition halls would clearly have a negative impact on the underlying peat deposits. The proposed undercrofting of this part of the development would probably not damage the peat layers. The top of the peat is at a mean level of -1.29 OD (minimum top level -3.61 OD, maximum 0.39 OD). The level of the undercroft floor in the first phase of development would be at 4.75 OD. The highest levels at which significant archaeological structures have been found in the peat deposits of north-east London are at a minimum level of -1.96 OD and a maximum level of 0.46 OD with a mean of -0.95 OD. At the nearby Fort Street site a major trackway was found at a level of -1.00 OD. Based on the evidence from other sites it is unlikely therefore that the base level of the development will cut peat levels. It should be noted though that cutting into the peat deposits at all would not just destroy that part of the deposits which would be physically removed, it would also damage the structure of any lower peat segment remaining in situ. This damage would be caused by the changes brought about in the micro-environment

containing the peats by removal of the clay seal. The result would be increased moisture loss, exposure to oxygenation processes and the potential for introducing chemical changes into the peat deposits by exposure to chemicals contained within the made-ground overburden.

The proposed Royal Victoria Square does not appear to contain any elements which would impact buried archaeological remains.

Whether the provision of service access, marshalling yards and car-parking facilities, proposed for the rest of the site, are likely to impact archaeological deposits depends on the type of support structures required. On the currently available information it would seem unlikely that the construction of these facilities would result in any significant damage to the relevant subsurface component. More information would be required however about design and drainage to ensure minimum impact.

Any construction method involving minimum disturbance to the underlying subsoils and peat deposits is likely to result in limited impact on these deposits. One example of such a method is ground consolidation by rammed ballast. This method could potentially result in some loss of moisture and distortion of the sensitive deposits, but effectively much less so than the use some of the alternatives such as a raft or piling.

The exhibition halls, later phases

The extension of the exhibition halls to the east will as far as the southern threequarters of the structures is concerned again have minimum or no impact on archaeological remains. The northern quarter of these exhibition halls will potentially be damaging. For a detailed discussion note details provided on the northern quarter of the exhibition halls in phase 1.

The lower height southern range exhibition hall, the 500 room hotel, trade centre and transport link construction all could damage deposits of potential archaeological interest. The degree of damage would depend on foundation design, basement levels etc.

The eastern zone, western zone and other phase 3 developments

Proposals for the remainder of the scheme are only illustrative at this stage and and the final development could be somewhat different to that currently shown.

The multi-story car-park facility proposed to the North of the main exhibition halls, would be on top of a gravel outcrop with high potential for archaeological remains. Its piling configuration and proposed lower levels could damage relevant deposits.

The northern wings of the 500 room hotel in the western sector could damage sensitive deposits. The extent of the potential damage would depend on the type of foundation design.

Damage could be minimised by ensuring that the foundation and lower construction levels do not penetrate the layers of clay, employing rafted foundations or by using piling structures which are designed to minimise upward migration of liquids.

Where possible impact on archaeological remains should be considered in determining the siting of buildings and other structures which could damage any surviving remains.

Foundation construction methods

Raft construction is likely to result in more limited damage to the underlying deposits than a piled foundation structure. The weight of the raft would still have a negative impact on the alluvial and peat deposits, their compression resulting in loss of moisture and changes in structure. Although this type of foundation may be inappropriate because of the local ground conditions. Pile-caps and foundation beams which do not penetrate down into the peat deposits would be less damaging than ones which do. Piles which are augered and which are designed to counteract liquids from migrating upwards would have less of an impact than rammed concrete piles. It may be possible to quantify the effects of using various specific foundation designs with information of the load-bearing characteristics required. The variety of foundation designs available and currently the lack of detail on foundation specifications for the development make it difficult to be more precise in the advice at this stage.

Conclusions and Recommendations for Action

The results of the current desktop study have identified a number of areas within the Royal Victoria Dock (North) site where deposits which could contain archaeological remains survive. The fact that recent archaeological field evaluations in the alluvium of north-east London have had a high success rate in locating archaeologically significant remains should be considered (at 56% double the rate for the rest of the Greater London Area). The fact that Bronze Age metal tools where found when the Dock itself was constructed, and the potential existence of a Roman site, possibly a harbour installation immediately to the east (Fig. 6) should be noted. The Bronze Age site at Fort Street immediately to the south of the Dock is of relevance. All these factors would argue in favour of there being a relatively high probability of surviving archaeological remains on the site.

The proposed development plan for the site as it currently is taking form would result in some 70 to 75% of the new building footprints avoiding locations where remains of significance could survive. Because of the size of the development under discussion the remainder of the proposed construction could still pose considerable problems with respect to either preservation in situ or indeed rescue excavation of remains if and when these are identified.

The depth, extent and nature of the overburden overlying the peats on the site would argue against the use of most non-invasive geophysical testing methods to target any archaeological resource.

It would therefore seem prudent to carry out some limited evaluation excavations in sectors of the site which would appear to have a high potential of surviving archaeological remains. Considering the nature of the deposits on site a series of stepped down open trench excavations should be possible. These pits should be excavated down to the level of the underlying river gravels. This could possibly be combined with the taking of a limited number of boreholes for archaeological purposes in order to improve the resolution of the subsurface stratigraphy and depositional sequence. The latter would be particularly useful when archaeological remains have been identified already. Borehole techniques could be effectively used to define boundaries of archaeologically sensitive areas and to chase known archaeological features.

The nature and extent of this kind of evaluation exercise would need to be discussed with the English Heritage archaeology adviser for north-east London, in order for it to be part of a valid and accepted mitigation exercise.

Appendix 1 (For locations see Fig. 6)

Sites and Monuments Record data

SMR number	TQ reference	Description	Location
061758	TQ 4113* 8034*	Palaeolithic handaxe (found c 1858)	Royal Victoria Dock
108000	TQ 4406* 795**	Medieval bowl	Silvertown
060582	TQ 4105* 8059*	Palaeolithic handaxe (found before 1855)	Royal Victoria Dock
061744	TQ 404** 814**	Bronze Age spearhead (found 1865)	Plaistow Marshes
061753	TQ 403** 796**	Prehistoric decorated pottery (found before 1912)	Silvertown
061759	TQ 4105* 8059*	Bronze Age bronze axe (found before 1932)	Royal Victoria Dock
061790	TQ 4145* 8085*	Medieval manor house, known as Sudbury manor or Abbey place (earliest documentary reference c 1100), location in the marsh as suggested in the SMR, based on field name probably is a misinterpretation of documentary sources	Royal Victoria Dock
061751	TQ 404** 814**	Bronze Age bronze sword	Plaistow Marshes
061823	TQ 4240* 8065*	Ham Creek, substantial natural harbour, used during the 17th century as naval dockyard and it was probably used as a harbour at least as early as Roman times	Royal Albert Dock
060208	TQ 4270* 8063*	Dug out canoe, Roman 3rd century AD, (found c 1878)	Royal Albert Dock
060209	TQ 4270* 8063*	Roman pottery (found c 1878)	Royal Albert Dock

Appendix 2 (For locations see Fig. 5)

Property plots Plaistow ward, J. James 1742

Showing only the fields in the area of the Royal Victoria Dock (North)

ID	Field name	Pound	Marsh name	Manor
41	Wickleme		New Marsh	Manor of Bretts
42			New Marsh	Manor of Westham
43			New Marsh	Manor of Westham
44		Capon Elms Pound	New Marsh	Manor of Westham
49			New Marsh	Manor of Westham
50			New Marsh	Manor of Bretts
52	Sudburyfield		New Marsh	Manor of Westham
52				
54			New Marsh & Trinity Marsh	
55			Trinity Marsh	Manor of Westham
56		Logger-Head Pound	Trinity Marsh	Manor of Westham
57			Trinity Marsh	
59			Trinity Marsh	
60			Trinity Marsh	
61			Great Lords Marsh	
65			New Marsh	Manor of Westham
66	Swansnest		New Marsh	Manor of Bretts
67	Swansnest		New Marsh	Manor of Westham
68	Managates		New Marsh	Manor of Bretts
69			New Marsh	Manor of Bretts
71			New Marsh	Manor of Westham
72			New Marsh	Manor of Westham
73			New Marsh	
74			New Marsh	Manor of Westham
75			New Marsh	Manor of Westham
76			New Marsh Burnells	Manor of Westham
77			New Marsh Burnells	Manor of Westham
78			New Marsh	Crown land
79			New Marsh Burnells	Manor of Westham
80	Shoulder of mutton piece		New Marsh	Manor of Westham
81			New Marsh	Manor of Bretts
82			Middle Marsh	Manor of Bretts
83			Middle Marsh	
84	Leymouth		Middle Marsh	Manor of Westham
85	Leymouth		Middle Marsh	
91	Crookbacon		Middle Marsh	Manor of Westham

Appendix 3.1 (For locations see Fig. 10)

Sectors of the site without archaeologically sensitive deposits (NP)

The co-ordinates provided constitute points on the boundaries of the relevant sectors. *As the data on which the interpretations were based was extracted from data held on the LDDC database the disclaimer attached by the LDDC also covers this report*[1]

1. 541302-180783, 541307-180708, 541265-180615, 540737-180683, 540737-180760.
2. 540576-180757, 540591-180722, 540554-180631, 540354-180628, 540402-180788

Appendix 3.2

Sectors of the site with potential survival of archaeological deposits (P)

1. 540049-180612, 540012-180658, 540024-180799, 540046-180785, 540096-180755 (possible palaeochannel)
2. 540200-180766, 540346-180894, 540096-180845, 540696-180918, 540996-180931, 541145-180922, 541345-180905, 541584-180732, 541357-180698, 541345-180904, 540246-180771
3. 540695-180785, 540695-180707

Appendix 3.3

Sectors of the site with high archaeological potential (HP)

1. 541048-180922, 541145-180922, 541348-180875, 541248-180864, 541048-180878
2. 540096-180845, 540196-180867, 540296-180881, 540296-180833, 540196-180820, 540096-180805

[1] 'Under no circumstances can responsibility be accepted by the Corporation for the accuracy of the factual data where the work was commissioned by others. Where factual data is contained within reports commissioned directly by the Corporation, the recipient thereof shall be aware that the accuracy of such data is limited by the constraints of accepted site investigation practices in use at the time of the investigation. The Corporation gives no warranty as to the accuracy of any site investigation data, whether such data was commissioned directly by the Corporation or otherwise. Further, but without limitation, no assurance of continuity of ground conditions between boreholes or trial pits can be given.
Any interpretative information, whether such information was commissioned directly by the Corporation or otherwise, should not be taken to express the view of the Corporation. In providing that information the Corporation accepts no liability for and makes no assurance of the interpretations contained therein.'

Figures

1. Royal Victoria Dock (North) site outline based LDDC Exhibition Centre plan and 1995 OS map.
2. Archaeological sites excavated since 1989 in the alluvium of Northeast London, with the Royal Victoria Dock (North) site outline superimposed.
3. The 1870-1882 OS map with Royal Victoria Dock (North) site outline superimposed.
4. The 1950 OS map showing the 1935-1944 remodelling of the Dock with Royal Victoria Dock (North) site outline superimposed.
5. Map of Plaistow Ward, based on James 1742, with Royal Victoria Dock (North) site outline superimposed.
6. The 1977 OS map with the line of the possible Roman roads marked, location of SMR numbers, and the outline of what remained of Ham Creek during the 19th century.
7. Top shows locations of boreholes on which the plot is based, centre shows contour map of the top of the gravel with Royal Victoria Dock (North) site outline superimposed, bottom a 3D surface model of the top of the gravel.
8. Top shows locations of boreholes on which the plot is based, centre shows contour map of the top of the peat deposits, with the Royal Victoria Dock (North) site outline superimposed, bottom a 3D surface model of the top of the peat deposits.
9. Top shows locations of boreholes on which the plot is based, centre shows contour map of the top of the level of truncation, with the Royal Victoria Dock (North) site outline superimposed, bottom a 3D surface model of the top of the truncation interface.
10. Site with the areas of high probability of archaeological remains (HP) probability of archaeological remains (P) and no archaeological remains (NP) marked.
11. Contour map of subsurface peat deposits with the site outline, and the locations of the Exhibition Centre and buildings which are to be retained marked.

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