

ARCHAEOLOGICAL WATCHING BRIEF  
ABBEY MILLS SEWAGE PUMPING STATION, WEST HAM,  
LONDON BOROUGH OF NEWHAM

HW - AM 95

LDPEM / ACHW / 336

NATIONAL GRID REFERENCE TQ 386 831

LEVEL III REPORT

W. S. TAMBLYN

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## **Abstract**

The excavation of the site of the proposed sewage pumping station revealed two sewage/drainage pipes, one definitely associated with the original Abbey Mills pumping station (1865 -1868); both overlain by late 19th century and 20th century dump layers. Residual 17th and 18th century pottery had been imported on to the site and deposited within the late 19th century material. Owing to the nature of the deposits encountered it can be stated that remains of archaeological significance were not found on the site.

## **Report Introduction**

This report details the results of a watching brief conducted by the Archaeology Section of the Newham Museum Service at Abbey Mills, West Ham, in the London Borough of Newham (see **figure 1**). The results of the work are set out here in order to facilitate checking of the information and the use of the site archive.

The report is divided into the following sections:

Site Introduction and Method  
Phase Summary  
Conclusion and Summary  
Acknowledgements  
Illustrations  
Appendices: I - VI

The purpose of the work, the methodology of the work, the contract and project management details, and dates are contained in the “Site Introduction and Method”.

In the “Phase Summary” the archaeological deposits are considered together, and an overall temporal sequence of activity on the site is suggested. A phase contains one or more groups (see below), and represents one or a number of not necessarily related events that can be assigned to the same temporal unit.

In the “Conclusion and Summary” the archaeological deposits are considered in the light of documentary evidence to interpret the recorded activities, and to suggest any resulting recommendations.

The “Acknowledgements” thank all the individuals and organisations involved in the archaeological fieldwork and the production of this report.

The “Illustrations” include figures showing the location of the site, the location of the works within the site and plans and sections of the edges of the excavated area.

In the “Appendix I: Group Summary” the contexts recorded on site are discussed in discrete groups. A context is any event in time resulting in the creation of surviving material remains, e.g. a layer of soil, a pit, the material filling a pit or a wall. Discrete and related series of contexts are discussed together (e.g. a wall, its foundation trench and backfilling, a group of postholes or a ditch and the layers of material filling it), in order to see fully their archaeological implications.

Firstly the stratigraphic relationships between the contexts in each group are set out in the form of a matrix:

32  
|  
33  
|  
34

The above is an example of a simple stratigraphic matrix. Context (32) post-dates both contexts (33) and (34), while context (34) pre-dates both contexts (32) and (33). Context (33) thus occurs before context (32) and after context (34).

“Appendix II: Site Matrix” is included to allow the checking of the exact relationships between the contexts.

“Appendix III: The Level III Index” summarises each context in tabular form, showing its type, the area in which it occurs, the group to which it belongs and any section drawings or plans on which it is shown.

“Appendix IV: Finds” contains a description of the material recovered on site, treated context by context.

“Appendix V: Greater London SMR form” consists of a copy of the Greater London Sites and Monuments form submitted for the site.

“Appendix VI: Environmental Report” contains copies of the report on the geoarchaeological investigation undertaken prior to the commencement of excavation by Geoarchaeological Service Facility, and the report on the environmental sampling conducted by the Museum of London Archaeology Service.

## **Site Introduction and Method**

The watching brief took place between 22nd May 1995 and 28th June 1995, at the site of the new sewage pumping station at Abbey Mills, West Ham (Abbey Mills Pumping Renewal), Thames Water Contract number 1763/A1. An archaeologist from Newham Museum Service was present on site throughout the excavation of the footprint of the proposed pumping station building and attendant works for inlet and outlet pipes, down to a depth of 5 metres below the existing ground level. The work was carried out by agreement between Thames Water Plc and the archaeological planning officer for north east London, Lawrence Pontin.

The site of the proposed development (NGR TQ 386 831) is located directly to the south west of the existing Abbey Mills Pumping Station, at a height of between approximately 4 metres and 6.7 metres above Ordnance Datum. It is bounded to the north west by Gay Road and Riverside Road, to the south west by the Prescott Channel and to the east by the Abbey Creek/Channelsea River (see **figures 1 and 2**).

The underlying geology of the site is London Clay covered with superficial deposits of alluvium and sands and gravels of the River Terrace Gravel sequence (W. G. Greenwood 1993: 2).

No records exist of archaeological remains on the proposed development site. However, it lies within an area where extensive traces of activity from different periods have been located. Among these are a number of isolated finds of prehistoric stone tools, an Iron Age occupation site at Black Lane 500 metres to the north east and evidence of Roman activity at Stratford Market Depot 500 metres to the north. The Roman Road from London to Colchester ran to the north of the site, crossing the River Lea approximately 700 metres to the north west. Furthermore, 500 metres to the north north east is the site of the medieval abbey of Stratford Langthorne (St. Mary's), the holdings of which may have included the site.

The Abbey Mills stood on the island between the two branches of the Channelsea River, to the north of Abbey Lane approximately 200 metres north east of the site. It was rebuilt in 1698 and in 1863 -1864, damaged by fire during the Second World War and finally demolished in 1967 (R. B. Pugh 1973: 90).

The specific aims of the archaeological fieldwork were firstly to assess whether remains associated with Stratford Langthorne Abbey existed on the site, such as water management or waterfront structures, and to assess the nature of the prehistoric landscape and the possible landuse of the site area.

At a general level, the aim of the fieldwork was to determine the nature, extent, date, significance, and degree of preservation of any archaeological remains existing on the site. The fieldwork was further intended to monitor, and help to design a strategy to mitigate, the impact of the development on any archaeological remains encountered.

The archaeological fieldwork was preceded by the taking of a single borehole, on 17th May 1995, to provide a reference sequence for the site as a whole and for palaeoenvironmental assessment. The location of this borehole is indicated on the site plan (see **figure 2**).

Deposits observed on site during the excavations were recorded using pro forma context recording sheets. As it became exposed during the course of excavation, the interface between the alluvial deposits and the River Terrace Gravels was investigated manually for traces of prehistoric activity.

A photographic record of the deposits and the progress of the works was compiled, and sections were drawn where deemed necessary. The entire west facing section of the excavated area (before this material was removed by further excavation), and 50 metres of the north facing section, running from its eastern end, were drawn at a scale of 1:50.

Environmental sampling was undertaken by a staff member from the Museum of London Archaeology Service, on 14th June 1995. The location of the sampling, in the north facing section of the excavated area, is indicated on the site plan (see **figure 2**). A column sample was taken through the sequence of alluvial deposits (contexts 8, 9 and 10), to the upper level of the gravel (context 4), to provide a basis for the reconstruction of the palaeoenvironmental history of the site. Four bulk samples of organic material were recovered from contexts 8, 9 and 10 (two samples from context 9), for absolute dating by the use of the Radiocarbon method.

The complete site archive, consisting of the finds recovered from the site and the written and photographic records of the fieldwork, is held by the Newham Museum Service Archaeology Unit, at 31 Stock Street, Plaistow, London, E13 OBX.

## Phase Summary

### Phase I

Phase I consists of groups 1:10 and 1:11, and it was exposed over the entire site area. It is composed of light brownish yellow sandy gravel, with patches of light blue grey sand and light blue grey sandy gravel. The upper level of Phase I was encountered at -0.50 metres A.O.D at the east end of the site area and 0.60 metres A.O.D at the west end of the site area. Phase I consists of deposits of the River Terrace Gravel series of late Pleistocene date, and was formed by fluvial processes.

### Phase II

Phase II consists of groups 1:07, 1:08 and 1:09, and was found over the entire excavated area. It is composed of mid blue grey to dark blue grey silty and sandy clays (groups 1:07 and 1:09), and dark brownish grey peaty silty clay (group 1:08). Phase II represents the deposition of alluvial deposits over time in a body of water by fluvial action. Phase II was encountered at a level of between 1.60 metres A.O.D and -0.35 metres A.O.D. Phase II may have been formed between the final stages of the Pleistocene and the earlier Holocene (late Palaeolithic to Mesolithic).

### Phase III

Phase III is made up of groups 1:05 and 1:06 and was found covering the whole excavated area of the site on the north-south axis extending for 17 metres to the west of the eastern limit of excavation. It consists of dark brownish grey organic clayey silt (group 1:05) and light grey to light yellow brown silty clays (group 1:06). Phase III was encountered between 1.60 metres A.O.D and 0.80 metres A.O.D, and represents alluvium deposited by fluvial action, disturbed and truncated by recent deposits (Group 1:01), (see **Section 1: figure 3** and **Section 2: figure 4**). It is of Holocene date, and may tentatively be ascribed to the Neolithic.

### Phase IV

Phase IV consists of groups 1:02, 1:03, and 1:04. Group 1:02 consists of mixed layers of redeposited clay, silty clay and ash with a high proportion of material in inclusion, for instance bottle glass, ceramic building material, roofing slate and ceramics. This material was predominantly of later 19th century date, however a small number of residual ceramic objects of 17th/18th century date were found, including a lid of Speckled Ware (c.1680 -1740) and a Bow porcelain knife/fork (see **figures 5.1** and **5.2**). Group 1:03 consists of a sewage pipe and attendant cut extending for 15 metres into the site area northwards from the southern edge of the excavation (for location see **Section 2: figure 4**). Group 1:04 consists of a linear feature 6.5 metres in width found at west end of the site running WSW to ENE across the excavated area for a



distance of 45 metres. Group 1:04 corresponds to a known sewer linked to the Abbey Mills complex. Phase IV represents later 19th and earlier 20th century activity on the site, and is found at between 4.65 metres A.O.D and 0.15 metres A.O.D. The upper level of group 1:04 was encountered at 1.60 metres A.O.D and it extended below the base of the excavation.

#### Phase V

Phase V consists of group 1:01 and is found over the whole site area. It is composed of very many differing dump layers of clay, silty clay, ash, organic material, household refuse and building rubble (context 2), overlain by a deposit of rubbly silty clay and clayey silt (context 1). The material incorporated in group 1:01 is all of recent date, probably post dating 1945. Context 1 may result from groundworks associated with the last extension of the Abbey Mills site in 1993 (station E). Phase V is found at a height of between 6.70 metres A.O.D and 0.90 metres A.O.D.

## **Summary and Discussion**

Assuming that the sands and gravels (Phase I), are of late Pleistocene date, and that thereafter there was a constant rate of deposition with no hiatus's, the overlying Alluvial deposits (Phases II and III), can be ascribed the approximate dates given to them in the above "Phase Discussion".

The lowest deposits of Phase II (Group 1:09), may be periglacial outwash, resulting from the massive flow of glacial meltwater draining into the Thames basin at the end of the Pleistocene/beginning of the Holocene. The higher organic content of group 1:08 suggests that it was formed in Fen/Carr conditions; marginal wetland subject to seasonal inundations. Group 1:07, consisting of less organic clay, may have been formed in more mobile aquatic conditions with a greater flow of water and deposition of alluvium, transported from outside the site area by the Thames and its tributaries.

Phase III is composed of alluvial deposits formed by similar processes to Phase II. Group 1:06 has a high organic content analogous to group 1:08, it was therefore probably also formed in a Fen/Carr environment. Group 1:05 corresponds to groups 1:09 and 1:07 in its composition, and was thus probably deposited in a similar aquatic environment. Phase III as a whole has been greatly disturbed by later refuse disposal on the site (Phase I), and as a result much later material has become incorporated within it (see **Appendix VI: Reference Borehole Log** and **Appendix VII: Environmental Assessment**).

Phase IV post dates the construction of the original Abbey Mills complex designed by Bazalgette and Cooper (with the exception of group 1:04, which may be contemporary with it), and built in 1865 -68 (B. Weinreb & C. Hibbert: 1983). The Ordnance Survey 1:2500 scale map of the area (dated 1894 -96), shows the land to the south of Pumping Station at a level of approximately 3.00 metres A.O.D, crossed by a number of drainage channels. A later Ordnance Survey map (1916), at the same scale, shows continuation of this pattern of drainage channels, with the area marked as Allotment gardens. Group 1:02 therefore represents a late 19th and early 20th century refuse deposit between this area (later the Allotments) and the Pumping Station. The raising of the site as a whole to its present level is the result of refuse disposal after the Second World War (including group 1:01); on the 1955 1:10,560 scale Ordnance Survey map the drainage channels are no longer present and the ground level is indicated as higher. As a result the ground rises to the south from approximately 2.00 metres A.O.D (the level of the Pumping Station) to 5.00 - 6.70 metres A.O.D (the ground level of the excavated area). Group 1:03 (Phase IV) corresponds to an overflow pipe linking Stratford and the Channelsea River, marked on plans dated 1898 in the possession of Thames Water, and maybe a later 19th century continuation of an open sewer known as the Mill Meads Common Sewer. Group 1:04 (Phase IV), is one of the sewers serving the original Pumping Station (Station 'A'), known as Low Level No.2.

It can be stated that no remains of archaeological significance were found during the watching brief at Abbey Mills, West Ham; with the exception of the small quantity of residual 17th and 18th century pottery recovered from the late 19th century dump layer (see **Appendix IV: Finds**). With regards to the present development of the site by Thames Water Plc the necessity for further archaeological investigation does not arise.

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