

JUBILEE LINE NEW SIGNALLING

EQUIPMENT ROOM

STRATFORD MARKET DEPOT,

STRATFORD,

LONDON E15

LONDON BOROUGH OF NEWHAM

ARCHAEOLOGICAL WATCHING

BRIEF ON

GEOTECHNICAL TEST PITS

NOVEMBER 2004

JSM 04

An Archaeological Watching Brief On Geotechnical Test Pits At Jubilee Line New Signalling Equipment Room, Stratford Market Depot, Stratford, London E15, London Borough Of Newham.

Site Code: JSM 04

Central National Grid Reference: TQ 3902 8344

**Written and Researched by Denise Mulligan
Pre-Construct Archaeology Limited, November 2004**

Project Manager: Jon Butler

Commissioning Client: Tube Lines Ltd

**Contractor:
Pre-Construct Archaeology Limited
Unit 54
Brockley Cross Business Centre
96 Endwell Road
Brockley
London
SE4 2PD**

Tel: 020 7732 3925

Fax: 020 7732 7896

Email: jbutler@pre-construct.com

**© Pre-Construct Archaeology Limited
November 2004**

© The material contained herein is and remains the sole property of Pre-Construct Archaeology Limited and is not for publication to third parties without prior consent. Whilst every effort has been made to provide detailed and accurate information, Pre-Construct Archaeology Limited cannot be held responsible for errors or inaccuracies herein contained.

CONTENTS

1	Abstract	3
2	Introduction	4
3	Archaeological and Historical Background	7
4	Geology and Topography	9
5	Archaeological Methodology	10
6	Archaeological Sequence	11
7	Conclusions	18
8	Acknowledgements	19

Illustrations

Figure 1	Site location	5
Figure 2	Trench Locations	6
Figure 3	Sections	16
Figure 4	Ditch 32, Test Pit 111	17

Appendices

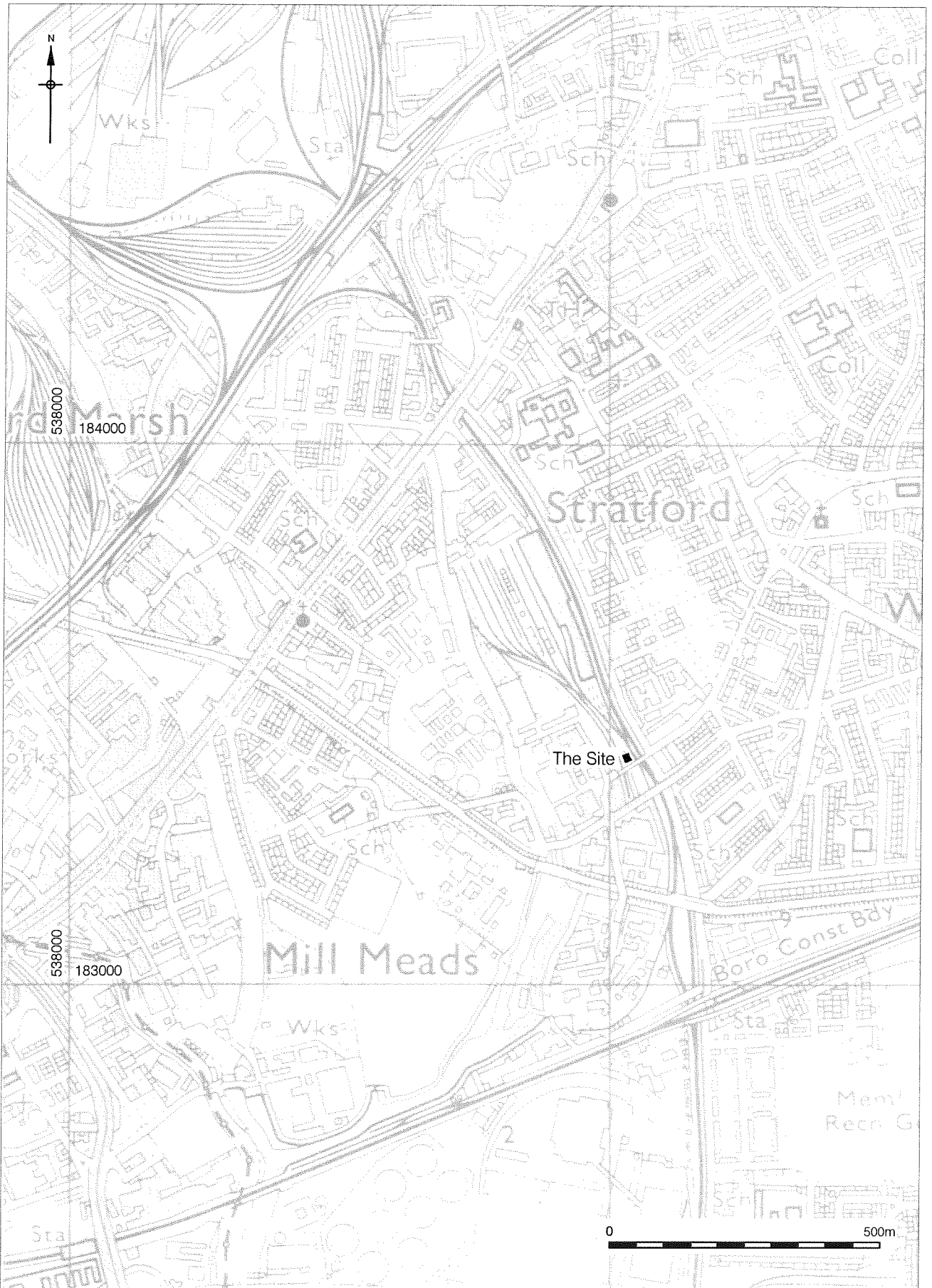
Appendix 1	Context Register	20
Appendix 2	Site Matrix	21
Appendix 3	Pottery Report	22
Appendix 4	Clay Tobacco Pipe Report	26
Appendix 5	Ceramic Building Material Report	29
Appendix 6	Animal Bone Report	32
Appendix 7	Lithic Report	33
Appendix 8	OASIS Form	34

1 ABSTRACT

- 1.1 This report details the results of an archaeological watching brief undertaken by Pre-Construct Archaeology Ltd on geotechnical fieldwork at Jubilee Line New Signalling Equipment Room, Stratford Market Depot, Stratford, London E15, London Borough of Newham. The watching brief was undertaken between the 1st November and the 5th November 2004. The work was commissioned by Tube Lines Ltd.
- 1.2 Four window-hole sample test pits (numbered 111, 112, 113, 114b) were excavated for geotechnical examination of deposits and three test pits located next to window samples (112, 113, 114b) were excavated for archaeological examination. The test pits measured 1.50m north/south by 1.50m east/west and were excavated to a depth of 1.20m below the present ground level.
- 1.3 Natural sandy gravel was revealed in all test pits with a mixed dirty probably natural deposit covering this to the south of the site.
- 1.4 To the north of the site was an alluvial deposit from which two struck flints were recovered, which may be the fill of a palaeochannel.
- 1.5 In the base of test pit [111] an undated ditch cut was observed truncating the alluvial deposit at a depth of 1.20m and was aligned east/west.
- 1.6 In test pit [113] a layer of mortar and chalk covered the base of the test pit and appeared to be a surface. In section red brick was laid on top of this layer and this was covered by a layer of tile suggesting this to be the remains of a structure of mid 18th century date. This possible floor was seen at a depth of 1.10m (103.52m OD) below ground level. A series of possible later gravel floors and occupation surfaces was revealed covering a demolition layer.
- 1.7 There was a large amount of post-medieval (largely late 17th to 18th century) deposits in all the test pits in the form of made ground.
- 1.8 All of the test pits revealed late 20th century raised concrete cable ducts truncating the higher post-medieval deposits.
- 1.9 No human remains associated with the cemetery of Stratford Langthorne Priory to the south were revealed. No structures associated with the priory were revealed although early post-medieval bricks which may have originally come from the complex were found to be reused in a later structure.

2 INTRODUCTION

- 2.1 An archaeological watching brief was conducted by Pre-Construct Archaeology Ltd at Jubilee Line New Signalling Equipment Room, Stratford Market Depot, Stratford, London E15, London Borough of Newham between 1st and 5th November 2004. The work was commissioned by Tube Lines Ltd. The site was project managed for Pre-Construct Archaeology by Jon Butler and Tim Bradley and supervised by the author.
- 2.2 The site lies within an Archaeological Priority Area as defined by the London Borough of Newham's Unitary Development Plan (UDP). The Cistercian monastery of St. Mary Stratford Langthorne, nothing of which survives above ground, once occupied the area. The site is currently an open grassed area, which is bounded by the main Jubilee Line to the east and sidings to the west. An electricity sub station bounds the south/eastern area of the site.
- 2.3 The fieldwork consisted of the excavation of four window holes and three test pits and was conducted by Norwest Holst contractors on behalf of Ove Arup & Partners.
- 2.4 The completed archive comprising written, drawn and photographic records and artefacts will be stored by Pre-Construct Archaeology Ltd until their eventual deposition with LAARC.
- 2.5 The site was given the Museum of London code JSM 04.



Reproduced from Ordnance Survey 1:25,000. Crown Copyright 1987.

Figure 1
Site Location
1:10,000

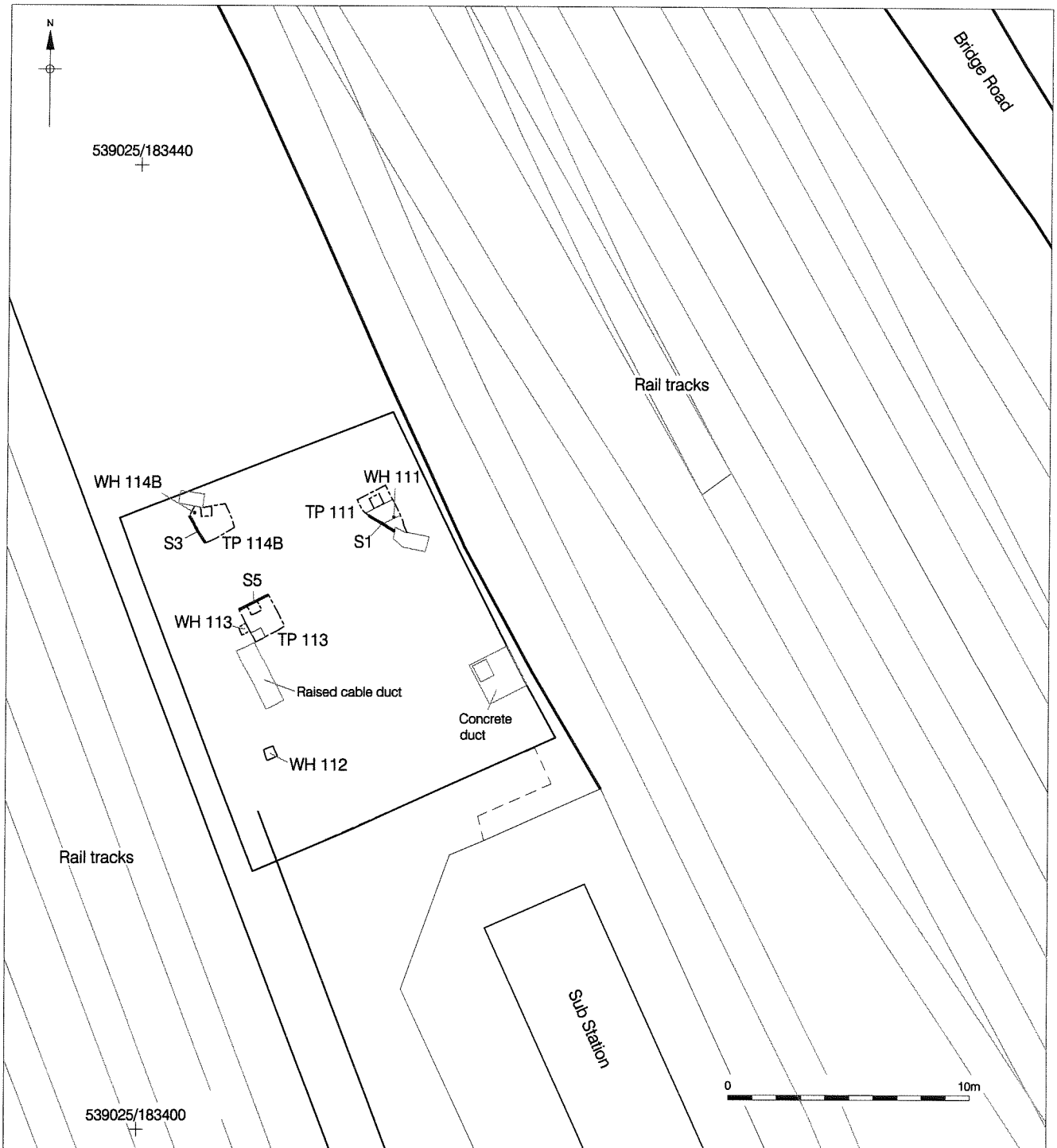


Figure 2
Location of trenches
1:250

3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 Prehistoric

3.1.1 Discoveries of flint tools, small flint blades and a flint boring tool of Mesolithic date were discovered during an evaluation by Oxford Archaeological Unit (OAU) at Stratford Market depot site code (HW OP 91), Bronze Age pottery and a Bronze Age flint assemblage of twenty five worked pieces were recovered residually from features of a later date to the west of the site.

3.1.2 Two horse burials and two crouched inhumations of Iron Age date were also discovered during the excavation by OAU. At least one ring ditch and several ring gullies, thought to be drip gullies from Iron Age houses were also discovered during the fieldwork. These discoveries have led to the suggestion that this was an Iron Age settlement with ritual /religious element These were located to the west of the site

3.2 Roman

3.2.1 Excavations to the east of the Channelsea River revealed evidence of Roman settlement activity (SMR061935). A considerable number of postholes dating to the 2nd century were exposed and seemed to represent a large structure, possibly a building. A number of ditches, apparently following some distinct alignments were identified – the latest of which date to the 3rd /4th century. It is possibly that they functioned as property boundaries The archaeological evaluations carried out as part of the Jubilee Line extension by Oxford Archaeological Unit in 1991/1992, and 1996 These revealed a very high incidence of Roman cuts, pits, postholes and ditches. There is the suggestion that there was a large structure (building) to the west of the site.

3.3 Saxon

3.3.1 An evaluation by OAU at Stratford Market Depot revealed two inhumations of Saxon /medieval date and occasional Middle to Late Saxon pottery.

3.4 Medieval

3.4.1 Little is known in detail of settlement before the 16th century. The Domesday manor of West Ham, like those in neighbouring parishes to the east lay on the gravel terraces above the marshes. West Ham village lay about half a mile east of the Channelsea, where by the 12th century the parish church had already been built. Half a mile west lay Stratford, or Stratford Langthorne

3.4.2 Stratford Langthorne Abbey is a Scheduled Ancient Monument. The Abbey precincts appear to have covered an area of about 20 acres, moated to the north, east and south. The main (eastern) entrance to the precincts was from Abbey Road through the

Great Gate, which stood in Bakers Row. The gatehouse survived until about 1825. The western entrance was from Abbey Lane through the Kiln house Gate. The area of the proposed development site lies within Langthorne Abbey precincts

- 3.4.3 Previous excavations in the area, undertaken between 1983 and 1994 by the Passmore Edwards Museum and Oxford Archaeological Unit have uncovered remains of the monastic church and associated buildings. The results of these investigations suggest that proposed development area may disturb remains associated with the monastery. To the south of the present site in the area occupied by the electricity substation elements of the monastic buildings were revealed together with an associated cemetery. A gravel road was discovered in the 1983 excavations which may mark the northern boundary of the cemetery. These excavations were on the southern perimeter of the site. If this is the case then the proposed development may lie outside the graveyard itself, although the remains of other monastic buildings may be encountered.

4 GEOLOGY AND TOPOGRAPHY

4.1 Topography

4.1.1 The site is a raised open flat top grass area with the sides sloping down to the east and south. The site is bounded by the main Jubilee Line track to the east and is bounded by a fence separating the site from railway sidings to the west. To the south of the site lies an electricity sub station. The area of open grass is triangular in shape

4.2 Geology

4.2.1 The geological map of the area indicates that drift deposits of Alluvium underlie the site. The underlying solid geology is shown to be London Clay and possibly Lambeth Clay (formerly known as Woolwich and Reading Beds) in the northern part of the site. The geological map shows the northern part of the site to be at or near a geological boundary, such that the thickness of the London Clay will reduce northwards and may be absent in parts of the site.

4.2.2 The main source of data is from previous investigations consisting of 13 boreholes carried out in May 2003 on the main Stratford Market Depot site at Burford Road and referred to as a factual Contaminated Land Baseline Project. The investigation of the site largely confirms this pattern, with made ground recorded to a depth of approximately 2.50m below ground level which seals alluvium and Kempton Park Gravels towards the south with alluvium absent further to the north. London Clay is recorded as being approximately 12.50m thick towards the south and thinning to the north and is entirely absent to the north of the site. Here the gravels directly overlie Lambeth Clay

5 ARCHAEOLOGICAL METHODOLOGY

- 5.1 The watching brief was conducted in accordance with the archaeological method statement.
- 5.2 Any concrete or asphalt surface was first broken and removed by contractors. The removal of the underlying material was monitored until archaeological deposits were encountered, or until the contractors reached the required depth. Any archaeological deposits were recorded and excavated by hand by an archaeologist. One Section was drawn for each of the Test Pits and window samples.
- 5.3 Test pits numbered 111,113 and 114b were excavated to a depth of at least 1.20m below ground level. They measured 1.50m north /south by 1.50m east/ west. All windows sample holes were hand excavated to a depth of 1.20m below ground level then the auger was used at the base of these trail pits to take a window sample of the lower deposits.
- 5.4 All Test Pits were moved from their original positions because of services raised concrete cable ducts. The geotechnical contractors located these and the window hole samples.
- 5.5 Sections were drawn at 1:10 and were assigned numbers corresponding with the window samples. Contexts were numbered sequentially, starting from 1.

6 ARCHAEOLOGICAL SEQUENCE

6.1 Window Hole [111] (Fig.3)

- 6.1.1. The earliest deposit encountered in test pit 111 consisted of a natural sandy gravel [30]. It was recorded at a depth of 1.90m below ground level (102.31m OD).
- 6.1.2 This was sealed by a possible alluvial deposit [38]. This consisted of an orange brown silt clay with occasional root disturbance which was recorded at a depth of 1.30m below ground level. Two struck flints were recovered from the top of this deposit suggesting prehistoric activity.
- 6.1.3 This was covered by a dark grey brown sand silt layer [7], a possible plough soil and was recorded at a depth of 0.94m below ground level.
- 6.1.4 A thin layer of chalk mortar with occasional red brick fragments [6] sealed this. This was recorded at a level of 0.80m below ground level.
- 6.1.5 The mortar was covered by a post medieval layer [5]. This consisted of a mid brown sand silt with frequent ceramic building material, pot, clay tobacco pipe, animal bone and metal fragments. This was recorded at a depth of 0.45m below ground level.
- 6.1.6 A layer of re-deposited sandy gravel [2] overlay this layer, which was recorded at a depth of 0.20m below ground level.
- 6.1.7 A 0.20m thick layer of dark brown topsoil [1] with a top height of 104.21m OD sealed this gravel.

6.2 Window Hole 112 (Fig.3)

- 6.2.1 The earliest deposit encountered in this sample was a natural sandy gravel [30]. This was recorded at a depth of 2.80m below ground level (101.82m OD).
- 6.2.2 This was sealed by a grey brown silty sand [36]. No inclusions were seen in this sample. It was recorded at a depth of 2.20m below ground level.
- 6.2.3 This was sealed by a dark brown sand silt [7]. This is a possible plough soil also seen in test pits 111 and 114b. It was recorded at a depth of 1.80m below ground level.
- 6.2.4 The above context was covered by a thin, chalk mortar layer [6] that contained occasional red brick fragments. This was recorded at a level of 1.60m below ground level.

6.2.5 This was sealed by a post-medieval layer [5] that consisted of a mid brown sand silt with frequent ceramic building material, pot, clay pipe, bone and metal fragments. This was recorded at a depth of 1.20m below ground level.

6.2.6 A layer of re-deposited sandy gravel [2] sealed this deposit. This was recorded at a level of 1.00m below ground level.

6.2.7 A layer of mid brown sand silt [37] with occasional small stones overlay this layer. This was recorded at a depth of 0.20m below ground level.

6.2.8 A 0.20m thick layer of dark brown topsoil [1] with a top height of 104.21m OD sealed the above deposit.

6.3 Window Hole 113 (Fig.3)

6.3.1 The earliest deposit encountered in this sample was a natural sandy gravel [30]. This was recorded at a depth of 2.70m below ground level (101.92m OD).

6.3.2 This was then sealed by a dark brown sandy silt [36]. This was recorded at a depth of 2.00m below ground level. This layer was also recorded in test pit 112.

6.3.3 This was then covered by a mid brown layer of clay silt recorded at a level of 1.60m below ground level.

6.3.4 This was sealed by a post medieval layer [5]. This consisted of frequent ceramic building material and mortar and was recorded at a depth of 1.20m below ground level.

6.3.5 A layer of re-deposited gravel overlay context [5]. This was recorded at a depth of 1.00m below ground level.

6.3.6 This was sealed by a mid brown layer [37] of sand silt with frequent small stones. This was recorded at a depth of 0.30m below ground level. This layer was also observed in window hole 112.

6.3.7 A 0.30m thick layer of topsoil [1] with a top height of 104.62m OD then capped the above layer.

6.4 Window Hole 114B (Fig.3)

- 6.4.1 The earliest deposit encountered in this sample was a natural sandy gravel [30]. This was recorded at a depth of 2.20m below ground level (102.40m OD).
- 6.4.2 This was sealed by a possible alluvial deposit [38]. This consisted of an orange brown silt clay with occasional root disturbance that was recorded a depth of 1.76m below ground level.
- 6.4.3 This was covered by a dark brown sand silt [7]. This is a possible plough soil also seen in window-holes 111 and 112. This was recorded at a depth of 1.30m below ground level.
- 6.4.4 This was sealed by a post medieval layer [5]. This consisted of frequent cbm and mortar and was recorded at a depth of 0.20m below ground level.
- 6.4.5 A layer of topsoil [1] 0.20m in thickness with a top height of 104.60m OD capped the above deposits.

6.5 Test Pit 111 (Figs.3 & 4)

- 6.5.1 The earliest deposit encountered in test pit 111 was a possible alluvial deposit [29]. This consisted of an orange brown silt clay with occasional root disturbance this was recorded at a depth of 1.25m below ground level (102.96m OD).
- 6.5.2 This layer was cut by a ditch [32] which was orientated east-west. The full depth of this feature is unknown. A small sondage was excavated through the fill [31] of the ditch to a depth of 0.50m. This exposed the southern edge of a sharp sloping cut but the base of the feature was not observed. The fill [31] was a dark grey brown very silty sand. No dating evidence was recovered from the fill of this ditch.
- 6.5.3 This was sealed by a dark brown sand silt [7]. This is a possible plough soil and was recorded at a level of 1.18m below ground level .An animal bone was recovered from the base of this plough soil.
- 6.5.4 This was covered by a thin chalk mortar layer [6] with occasional fragments of red brick which was recorded at a depth of 0.98m below ground level.
- 6.5.5 This was then sealed by a mid brown layer [5] of post-medieval date which consisted of frequent ceramic building material, coal fragments and small stones.

- 6.5.6 This layer was truncated by the construction cut [4] for a raised concrete cable duct. The base of the cut was recorded at 1.10m below ground level. The cut was backfilled with mid brown silt and pebble deposit [3].
- 6.5.7 A re-deposited layer of gravel [2] sealed layer [5] and the modern cut.
- 6.5.8 A 0.13m thick layer of topsoil with a top height of 104.21m OD sealed the above deposits.

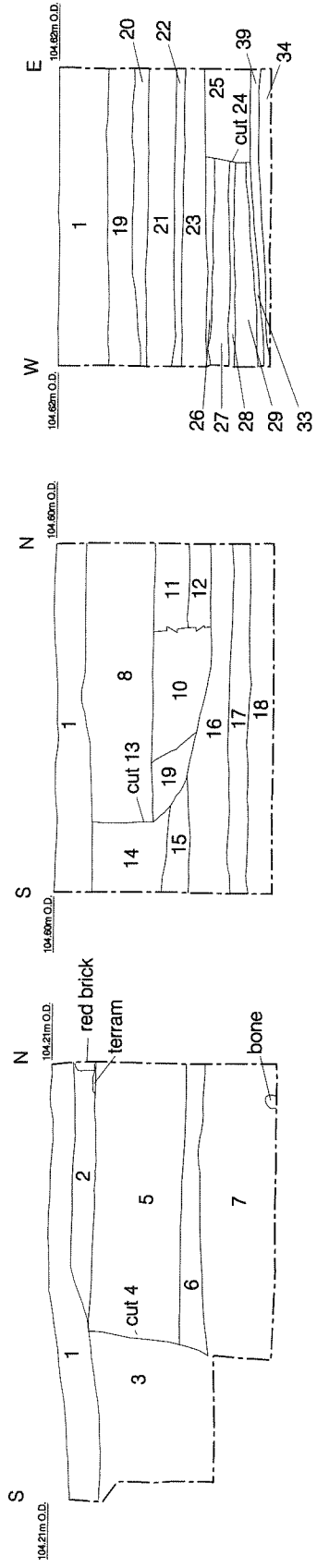
6.6 Test Pit 113 (Fig.3)

- 6.6.1 The earliest deposit encountered in test pit 113 was a dark brown sand silt [7]. This is a possible plough soil and was recorded at a level of 1.30m below ground level (103.32m OD).
- 6.6.2 On top of this deposit was laid red bricks on a bed of chalk mortar [34] which covered nearly all the base of the trench. It was recorded at a depth of 1.20m (103.42m OD) below ground level. Many of the bricks were broken and it appeared to represent the remains of floor surface. Analysis of the bricks suggested a late 17th to early 18th century date for the structure possibly reusing some earlier 15th to 16th century bricks.
- 6.6.3 The top of this apparent surface was covered by a demolition layer of broken tile [39] which was recorded at a depth of 1.05m below ground level. This consisted of roof and floor tile and dating suggests late 17th to early 18th century. This was covered by a thin burnt layer of charcoal and wood fragments [33].
- 6.6.4 Covering the possible demolition layer was a sequence of thin layers consisting of a dark brown sandy silt [29] up to 0.13m thick, a thin 0.03m thick deposit of black sandy silt [28], a 0.10m thick sandy gravel [27] and a thin deposit of black silt [26] up to 0.05m thick recorded at a depth of 0.82m below ground level (103.79m OD). This sequence may represent two floor layers [27] and [29] with thin occupation/trample surfaces [26] and [28]. Also covering the demolition deposits at the south of the test pit was a mid brown sandy silt with lenses of sand [35] which may represent the fill of another cut.
- 6.6.5 The sequence of possible floors and deposit [35] was truncated to the east by a vertically sided cut with a flat base [24] which continued beyond the eastern and northern limits of the test pit and was recorded at the same depth as the top of the possible floor surfaces (103/79m OD). It was filled with a mid brown very silty deposit [25], which contained occasional fragments of ceramic building material and frequent small stones.

- 6.6.6 The cut was sealed by a dark grey brown layer [23] that consisted of sandy silt with inclusions of occasional fragments of ceramic building material and chalk. This deposit was recorded at a depth of 0.70m below ground level and was in turn covered by a thin layer, 0.05m thick, of chalk and mortar [22], which was the same as layer [6] in window samples 111 and 112.
- 6.6.7 The above deposits were covered by layers of made ground with a top height of 0.27m below ground level (104.35m OD) consisting of a 0.15m thick layer of grey sandy gravel [21], a dark brown silt sand layer [20] and a mid brown stony layer [19] with frequent ceramic building material.
- 6.6.8 The made ground was capped by a 0.27m thick layer of topsoil which was recorded at level of 104.62m OD.

6.7 TEST PIT 114B (Fig.3)

- 6.7.1 The earliest deposit encountered in test pit 114b was a dark brown sand silt [7]. This layer which covered the base of the test pit is a possible plough soil and was recorded at 1.30m below ground level (103.30m OD).
- 6.7.2 This was sealed by a mid brown layer of sand and silt [18] which contained frequent fragments of pottery, animal bone and clay tobacco pipe confirming a post-medieval date for the deposit, which was recorded at a height of 1.09m below ground level.
- 6.7.3 This deposit was sealed by a series of make-up layers consisting of a layer of orange brown re-deposited gravel [17] recorded at 0.97m below ground level, a layer of mid brown sand silt [16] with frequent small stones, occasional ceramic building material and mortar flecks recorded at a depth of 0.75m below ground level, a layer of black coal and ash [15] recorded at a depth of 0.60m below ground level and a layer of mid to light brown sandy silt with frequent pebbles [14].
- 6.7.4 The made ground was truncated by a modern cut [13] containing a concrete cable duct [12] backfilled with [8], [9], [10] and [11] concrete cable duct. The depth of this cut was recorded at a maximum depth of 0.90m below ground level (103.70m OD).
- 6.7.5 This was then sealed by a 0.20m thick layer of top soil [1] recorded at height of 104.60m OD.



Section 5: South facing section of TP113

Section 3: East facing section of TP114B

Section 1: East facing section of TP111

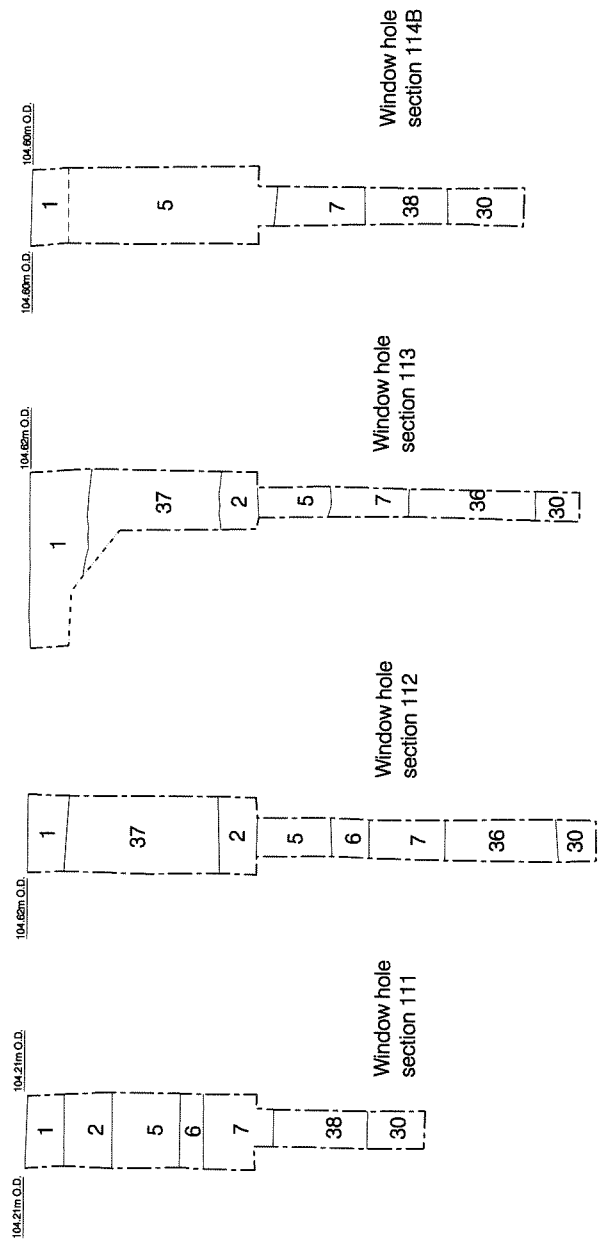


Figure 3
Sections 1, 3, 5 and window hole
sections 111, 112, 113 and 114B
1:40

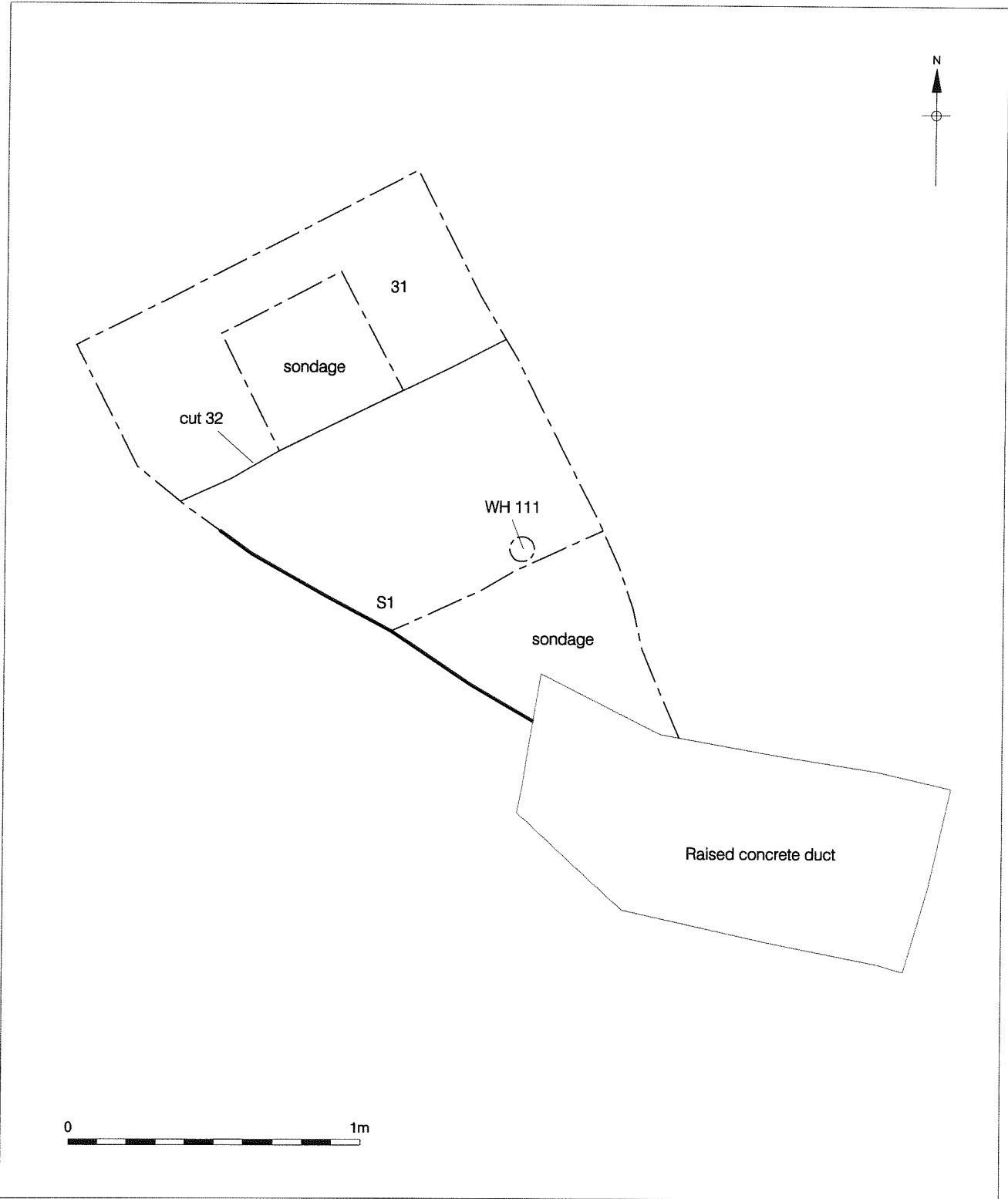


Figure 4
Ditch 32 in TP111
1:20

7 CONCLUSION

- 7.1 The archaeological watching brief revealed a sequence of natural clean sandy gravels [30] observed in all window samples. This varied in height between 102.40m OD in window sample 114b and 101.82m OD in window sample 112. In window samples 112 and 113 it was sealed by a dirty brown natural sand deposit [36] up to 0.66m thick revealed at a top height of sealed of 102.72m OD in window sample 113.
- 7.2 In window samples 111 and 114b a probable alluvium deposit was revealed. This may suggest a possible palaeochannel along the northern area of the site, possibly a small tributary of the Channelsea to the west. Two worked flints were recovered from the top of the alluvium in test pit 111 suggesting prehistoric activity on the site.
- 7.3 An east-west aligned ditch cutting through the alluvium to the north of the site contained no dateable artefacts but may medieval or earlier.
- 7.4 A probable plough soil [7] c.0.40m thick was present in all the window samples. No datable artefacts were recovered from this deposit.
- 7.5 In test pit 113 the remains of a structure recorded at a depth of 1.10m (103.42m OD) below the present ground surface which contained a brick of late 17th to early 18th century date. This structure also contained building material from the 16th century which may suggest a building of an earlier period was robbed out with the materials being incorporated into this later structure. A succession of further post-medieval surfaces seemed to seal the brick floor.
- 7.6 No human remains associated with the cemetery of Stratford Langthorne Priory to the south were revealed. No structures associated with the priory were revealed although early post-medieval bricks which may have originally come from the complex were found to be reused in a later structure (see para 7.5).
- 7.7 The remainder of the deposits revealed in the test pits consisted of made ground of largely late 17th and 18th century date.

8 ACKNOWLEDGEMENTS

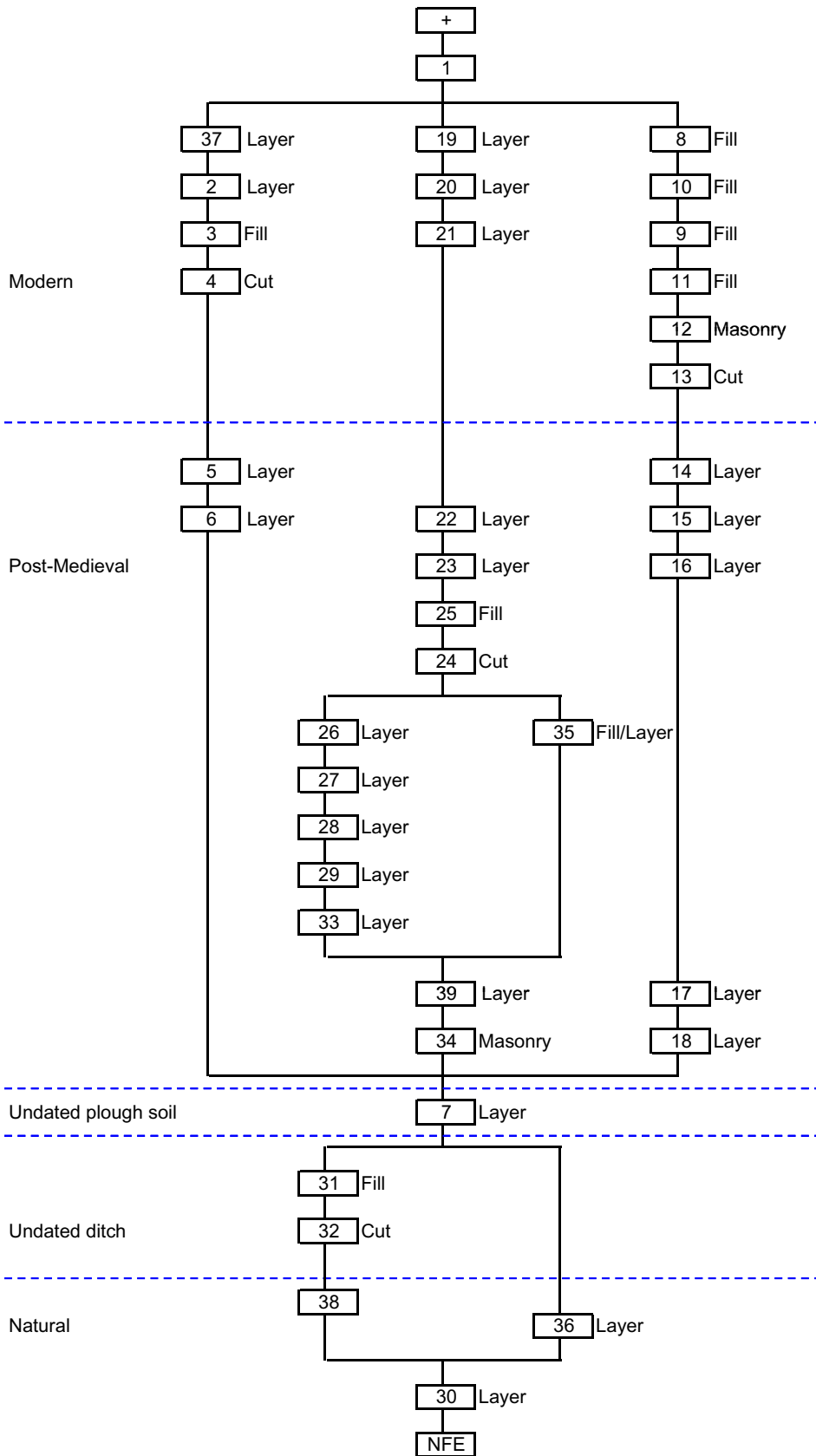
- 8.1 Pre-Construct Archaeology would like to thank Tube Lines for commissioning and funding the archaeological investigation. In particular the help of Stephen Bell and Peter Jones is gratefully appreciated.

- 8.2 The author would like to thank Jon Butler for project managing the site and editing the present report, Adrian Nash for the illustrations, Chris Jarrett for the pottery and clay tobacco pipe reports, John Brown for the ceramic building material report, Lisa Yeomans for the animal bone report and Jim Leary for the lithic report.

APPENDIX 1

CONTEXT REGISTER

Context Number	Window Sample	Test Pit	Section Number	Type	Description	Highest Below ground level	Lowest Below ground level
1	All	All	1, 3,6	Layer	Topsoil	0m	0.20m
2	WS111, 112, 113	TP111	1	Layer	Gravel	0m	0.20m
3	-	TP111	1	Fill	Stoney fill of cut 4	0.18m	0.60m
4	-	TP111	1	Cut	Cut filled with 3	0.18m	0.60m
5	All	TP111	1	Layer	Sand silt	0.45m	0.60m
6	WS111, 112	TP111	1	Layer	Chalk mortar	0.84m	0.88m
7	All	TP111	1	Layer	Plough soil	0.88m	0.30m
8	-	TP114B	3	Fill	Mid brown	0.20m	0.60m
9	-	TP114B	3	Fill	Silty sand	0.60m	0.75m
10	-	TP114B	3	Fill	Brick rubble	0.60m	0.90m
11	-	TP114B	3	Fill	Loose stone	0.60m	0.80m
12	-	TP114B	3	Masonry	Concrete foundation	0.80m	0.90m
13	-	TP114B	3	Cut	Cut filled with 8, 9, 10, 11, 12	0.25m	0.90m
14	-	TP114B	3	Layer	Light brown frequent stone	0.25m	0.62m
15	-	TP114B	3	Layer	Black coal ash	0.65m	0.80m
16	-	TP114B	3	Layer	Mid brown sandy silt	0.80m	1.05m
17	-	TP114B	3	Layer	Orange brown gravel	1.05m	1.15m
18	-	TP114B	3	Layer	Mid brown sandy silt	1.05m	1.28m
19	-	TP113	5 & 6	Layer	Mid brown sandy silt	0.32m	0.42m
20	-	TP113	5 & 6	Layer	Dark brown silt	0.42m	0.50m
21	-	TP113	5 & 6	Layer	Light grey sand gravel	0.50m	0.65m
22	-	TP113	5 & 6	Layer	Mortar chalk	0.65m	0.70m
23	-	TP113	5 & 6	Layer	Dark grey brown sandsilt	0.70m	0.82m
24	-	TP113	5 & 6	Cut	Cut filled with 25	0.82m	1.20m
25	-	TP113	6	Fill	Mid brown very silty	0.82m	1.05m
26	-	TP113	6	Layer	Black silt	0.83m	0.88m
27	-	TP113	5	Layer	Lens black coal	0.95m	1.00m
28	-	TP113	5	Layer	Dark brown sandy silt	1.00m	1.10m
29	-	TP113	5	Layer	Orange brown alluvium	1.00m	1.15m
30	All	112	5	Layer	Natural gravel	1.35m	2.60m
31	-	111	-	Fill	Fill of cut 32	1.27m	1.67m
32	-	111	-	Cut	Ditch filled with 31	1.27m	1.67m
33	-	TP113	5	Layer	Charcoal & wood fragments	1.06m	1.13m
34	-	TP113	5 & 6	Masonry	Brick & tile floor	1.08m	1.20m
35	-	TP113	6	Layer	Mid brown sandy silt	0.80m	1.18m
36	WS112, 113	-	-	Layer	Dark grey brown silty sand	1.08m	1.38m
37	WS112, 113	-	-	Layer	Mid brown sandy silt	0.10m	0.50m
38	WS111, 114B	-	-	Layer	Orange brown silty clay	1.30m	2.16m
39	-	TP113	5	Layer	Broken floor/roof tile	1.05m	1.10m



APPENDIX 3 POTTERY REPORT

By Chris Jarrett

Introduction

A small sized assemblage of pottery was recovered from the site (1box). Most sherds are in a good condition, but small in size, indicating that they had not been subject to much redeposition and discarded soon after breakage. There are relatively very few vessels with complete profiles. All the pottery is unstratified and recovered from spoil generated by engineering test pits.

All the pottery (38 sherds) was examined macroscopically and microscopically using a binocular microscope (x20), and recorded in an ACCESS 2000 database, by fabric, form, decoration, sherd count and estimated number of vessels, using standard Museum of London Specialist Services codes for fabric, form and decoration. Its types and distribution discuss the pottery.

Pottery types

All the pottery is of a post-medieval date, ranging between the 16th and 19th-centuries.

Local Coarse earthenwares

There are fourteen sherds of local coarse Post-medieval redware, firstly as three sherds of Early Post-medieval redware (PMRE), dated 1480-1600 in the form of a cauldron. However the fabric is well fired and may date to the end of the 16th-century, perhaps early 17th-century. Eleven sherds are in Post-medieval redware (PMR), dated 1580-1900 and the forms identified are a bowl or dish and jars, including the rim of a small rounded example.

Essex Fine earthenware

A single chamber pot may represent the eight sherds of Post-medieval black-glazed ware (PMBL), dated 1680-1700 and could have been made at Harlow, Loughton or possibly Stock in Essex.

Delftware

The tin-glazed earthenware or delftware (TGW) accounts for seven sherds and includes two plates, one with its glaze missing the other with a blue and white band and floral pattern probably dating to the late 17th and early 18th-century. Plain white delftware (TGW C) is dated 1630-1800 and is present as two sherds from a squat straight-sided jar. All other sherds are in style H (TGW H) with darker blue designs on a lighter blue background, dated 1690-1800 and the forms include a charger dating to the start of the 18th-century and two sherds from simple shape plates.

Stoneware

There is a single sherd of London stoneware dated 1670-1900, but probably of an 18th century date. White dipped stoneware (SWSL) is dated 1710-60 and occurs as a single rim sherd from a tankard. English stoneware (ENGS) is present as the base of a 19th-century bottle, probably made by Bourne of Derbyshire.

Non-Local pottery

Two sherds of Staffordshire-type slipware (SWSL) is recorded as part of a rounded cup and the base of a tankard. The latter has an external red slip, but the underside is sooted indicating that it may have been used to heat beverages. Both sherds are probably 18th-century in date.

Industrial finewares

A small sherd of Transfer-printed ware (TPW) of a mid 19th century date is present, while an uncoded yellow fabric with a brown glaze is present as the handle of a possible pipkin and is probably late 19th-century in date.

Surrey-Hampshire Border ware.

A single handle and body sherd is present in Red Border ware (RBOR), dated 1580-1800.

Imported pottery

The base of A German Frechen stoneware (FREC) jug is present and dated 1550-1700.

Distribution

Test Pit 111

Twelve sherds of unstratified pottery are recorded for this test pit and six sherds are as Post-medieval redware (PMR) and include a bowl or dish and a jar rim as the only identified forms. A base sherd of an 18th century delftware (TGW H) plate occurs as does a sherd of London stoneware (LONS) and the Frechen stoneware jug base. The latest pottery types are a sherd of mid 19th-century Transfer-printed ware (TPW) and the late 19th-century brown-glazed yellow fabric possible pipkin handle.

Test Pit 113

The six sherds of pottery from this test pit consist of three sherds from the Early Post-medieval redware (PMRE) cauldron, a sherd of a blue on white delftware plate, the Red Border ware handle (RBOR) and the 19th-century English stoneware bottle.

Test Pit 114B

Pottery recovered from this test pit is more consistent with a late 17th and 18th-century date. There are twenty sherds of pottery associated with the test pit and seven sherds are from a Post-medieval black-glazed ware chamber pot (a possible family sherd being present in test pit 111), while five sherds of Post-medieval redware (PMR) includes one with a piercing and the rim of a jar. Tin-glazed wares include three different plates, two sherds in style H and one with its glaze missing, besides the plain white (TGW C) squat straight-sided jar. The Staffordshire slipware cup and tankard are represented by one sherd each and a rim sherd of the white dipped stoneware (SWSL) tankard is also present.

Significance of the collection

As the pottery is unstratified its only significance is the indication of post-medieval activity on the site.

Potential

The pottery has little potential but is consistent with the assemblages excavated on the adjacent Stratford Langthorne Abbey site (HW-RL 94).

Research Aims

No research questions are postulated for the pottery.

Recommendations for further work

No further work is recommended on the pottery.

APPENDIX 4 CLAY TOBACCO PIPE REPORT

By Chris Jarrett

Introduction

A small sized assemblage of clay tobacco pipes was recovered from the site (1 box). Most fragments are in a fairly good condition, indicating that they had not been subject to much redeposition or were deposited soon after breakage. All the clay tobacco pipes are unstratified, but were recovered from specific test pits.

All the clay tobacco pipes (53 fragments, and all are unstratified) were recorded in an ACCESS 2000 database and classified by Atkinson and Oswald's (1969) typology (AO) and 18th-century examples by Oswald's (1975) typology (OS). The pipes are further coded by decoration and quantified by fragment count. The tobacco pipes are discussed by their types and distribution.

THE CLAY TOBACCO PIPE TYPES

The clay tobacco pipe assemblage from the site consists of seven bowls, and 46 stems. The clay tobacco pipe bowls range in date between 1700-1780. All the stems recovered are thick and appear to be of an 18th-century date.

1700-1770

There are five fragments of AO25 bowls recognisable only as a heel and bowl fragments and these could not be divided into Oswald's 18th-century type series. The one heel is initialled I ?A, the family name not being clear, but makers with these initials are known in London during the 18th century, such as James Allen, 1716, Jonathan Adams, 1725 and John Adds, 1761, The Strand, but none are known to be local to Stratford, which probably had its own industry at this time.

1730-1780

There are two heeled OS12 bowls identified and both have the family name W, but the forename is illegible. This pipe maker either represents a local manufacturer or someone supplying pipes to the area.

DISTRIBUTION

Test Pit 113

A single tobacco pipe stem was recovered from this test pit and is almost certainly of an 18th-century date.

Test Pit 114B

All the bowls from the site were recovered from this test pit (see above) and are 18th century in date. The additional 45 stems recorded from the test pit appear to be contemporary with the bowls.

Significance of the collection

The pipes are probably significant on a local level and gives some indication of the local tobacco pipe industry.

Potential

As the pipes are unstratified, but all of the same date, its only potential is to indicate 18th-century activity on the site.

Research aims

No research aims can be proposed concerning these pipes, but in the event of future work on the site then the pipes recovered from such work could be compared to the assemblages recovered from excavations on the adjacent site of Stratford Langthorne Abbey (site codes HW-SL 94 and HW-RW 94).

Recommendations for further work

No further work on the tobacco pipes is recommended.

Bibliography

Atkinson, D. and Oswald, A. (1969), London clay tobacco pipes. *Journal of British Archaeology Association*, 3rd series, Vol. 32, 171-227.

Oswald, A. (1975). Clay pipes for the Archaeologist, *British Archaeological Reports*, British series, No.14.

APPENDIX 5 CERAMIC BUILDING MATERIAL REPORT

By John Brown

METHODOLOGY

The building materials were examined using the London system of classification. A fabric number is allocated to each object, specifying its composition, form, method of manufacture and approximate date range. The material was examined under magnification (x20), quantified and weighed. A description of the fabrics appears at the end. Examples of the fabrics can be found in the archives of PCA and/or the Museum of London.

Quantification of items was undertaken and the data recorded onto pro-forma record sheets, and/or entered onto a computer database (Microsoft Access 2000). After analysis the common fabric types were discarded, with a type sample kept for archive. Unusual pieces or uncommon fabrics were also kept for archive.

QUANTITY AND CONDITION

Total No. CBM boxes: 1

Total no contexts producing Building material: 3

Total Count: 21

Total Weight kg: 5.384

The majority of the material was fragmentary, although several pieces showed at least two quantifiable dimensions. Brick samples were recovered from one masonry context.

DATE RANGES

The **Date range** gives the earliest date for the earliest CBM fabric type and the latest date for the latest fabric type. The **Latest Date** refers to the latest dated CBM type and the **Best-fit date** compares the latest date for the earliest material and the earliest date for the latest material. The **Deposition Date** is the suggested date of deposition. Also noted are the number of sherds present in each context (**Size**) and the **Weight**. Groups are determined as small (1-30 sherds), medium (31-100 sherds) or large (over 100 sherds).

CBM by context with size/weight and date ranges

Context	Size	Weight (g)	Date range	Latest Date	Best-fit date	Deposition Date
TP113	8	252	1480 1950	1780 1950	1780 1800	1780 to 1900
TP113 [33]	4	190	1666 1900	1666 1900	1666 1900	1666 to 1900

Context	Size	Weight (g)	Date range	Latest Date	Best-fit date	Deposition Date
TP113 [34]	9	4932	1180 1900	1666 1900	1666 1700	1666 to 1700

Contexts in italic are samples from masonry contexts.

[!] Possibly inclusive material

[r] Residual material

DISCUSSION

All of the material assessed consisted of post-medieval ceramic building materials. Materials of different periods and forms are discussed below. Fabrics that appear both in Medieval and Post Medieval forms are described in the first instance and noted in the second. All of the material assessed came from Test pit 111.

Post-medieval roof tile fabrics: 2276, 2586

Two fabric types were noted, both of locally retrieved orange-firing clay, with varying amounts of quartz. The fabric 2586 was used throughout the medieval and post-medieval period, and tiles of this fabric were less well manufactured than those of the later fabric 2276. All the tiles seemed to be of peg tile type, a roofing system used in London from at least the late 12th century until the 19th century, when the influx of cheap slate from Wales gradually superseded clay tiling.

Medieval/Post-medieval floor tile fabrics: (Penn), (Westminster), (Flemish)

Two brick samples from a ?collapsed structure or wall [34] represented bricks made from local brickearth. An orange, soft and fairly dense brick, unfrogged and with sunken margins, was possibly a transitional example of fabric 3033, as it had moderate small voids indicating the use of combustible organics in the brick. The other example, fabric 3032, represents a typical post-fire (1666) hand-moulded 'stock' brick, and the use of both fabrics together suggests either the reuse of earlier material or that construction took place during the late 17th or early 18th century, when the use of both fabrics overlapped. Tile fragments of type 2276 were also recovered from this context, possibly used as levelling material.

CONCLUSIONS

The assemblage is unremarkable for the post-medieval period in Greater London, and the tile was discarded after quantification. The brick samples were kept.

The masonry [34] probably represents construction during the late 17th or early 18th century, but the appearance of brick fabric 3033 suggests that early structures of 15th to 17th century date may be present somewhere on the site.

RECOMMENDATIONS

No further work is recommended on this material.

FABRICS

Brick:

3032	Usually hard fabric with a surface very resistant to damage by abrasion. Less well fired examples can be brittle. Yellow and white calcium carbonate specks and iron oxide show throughout the fabric. Both stock moulded and machine examples occur. Some machine-pressed bricks have shallow frogs, stock moulded are usually unfrogged.
3033	Some bricks have moderate coarse quartz <0.8mm, otherwise moderate quartz <0.5mm. Occasional black iron oxide <0.8mm, yellowish white silty inclusions <4mm, occasional fine stones & pebbles. Individual bricks have a high degree of uniformity of texture & colour. Soft texture crumbles easily if scratched. Stock moulded bricks, often frogged, often indented borders.

Tile:

2276	Hard, well fired fine texture with few visible inclusions - occasional quartz <0.6mm, occasional calcium carbonate and red iron oxide <0.5mm, muscovite mica <0.05mm. Same as [2271] except with fine moulding sand.
2586	Fine clay matrix with moderate quartz inclusions <0.5mm, occasional red & black iron oxide <1mm; amount of quartz can vary, sandy version of fabric 2271

APPENDIX 6 ANIMAL BONE REPORT

By Lisa Yeomans

A small quantity of animal bone was recovered from the topsoil in the test pits. The Distribution of the 57 fragments is given in table 1 with the bulk of the material recovered from test pit 114B; this is typical of domestic waste dated to post-medieval period on the basis of the pottery. No further work is recommended for the assemblage because of its small size and recovery from unstratified deposits.

	TP111	TP111 (7)	TP113	TP114 B
Cattle (<i>Bos taurus</i>)	2		1	6
Sheep/goat (<i>Ovis aries/Capra hircus</i>)	3		1	8
Indeterminate	5	2	2	27
Total	10	2	4	41

Table 1: Species identified in test pits.

APPENDIX 7 LITHIC REPORT

The site produced a total of 2 pieces of struck flint, as well as 106g of unmodified burnt flint. The struck flint was recovered from the top of the alluvial deposit [38] in TP 111, whilst the burnt flint was recovered from TP 114B.

The raw material utilised for the struck flint consisted of dark, reddish brown flint with a dark, abraded cortex. The condition of the struck flint is reasonably good, although post-depositional damage is noted.

The struck flint comprised one broad, thin flake measuring 45mm x 40mm x 5mm with unidirectional dorsal scars and a small amount of dorsal cortex. Both a bulb of percussion and a striking platform were present, as were a number of platform edge miss-hits. Retouch was present along one side. The other flake was smaller measuring 30mm x 35mm x 5mm, and also had a bulb of percussion and a striking platform. There were no other diagnostic features on this piece and it is possible that it resulted from being struck by a machine.

The struck flint has no truly diagnostic qualities, however, it does demonstrate a degree of activity at the site at some point between the Mesolithic and the Bronze Age. The burnt flint was typical of that deriving from a domestic context and may be indicative of prehistoric occupation in the vicinity.

APPENDIX 8 OASIS FORM

OASIS ID: preconst1-5013

Project details

Project name	Jubilee Line New Signalling Equipment Room, Stratford Market Depot
Short description of the project	<p>Four window-hole sample test pits (numbered 111,112, 113, 114b) were excavated for geotechnical examination of deposits and three test pits located next to window samples (112, 113, 114b) were excavated for archaeological examination. The test pits measured 1.50m north/south by 1.50m east/west and were excavated to a depth of 1.20m below the present ground level. Previously remains of Stratford Langthorne Priory and associated cemetery had been found to the south. Natural sandy gravel was revealed in all test pits with a mixed dirty probably natural deposit covering this to the south of the site. To the north of the site was an alluvial deposit from which two struck flints were recovered, which may be the fill of a palaeochannel. In the base of test pit [111] an undated ditch cut was observed truncating the alluvial deposit at a depth of 1.20m and was aligned east/west. In test pit 113 a layer of mortar and chalk covered the base of the test pit and appeared to be a surface. In section red brick was laid on top of this layer and this was covered by a layer of tile suggesting this to be the remains of a structure of mid 18th century date. This possible floor was seen at a depth of 1.10m (103.52m OD) below ground level. A series of possible later gravel floors and occupation surfaces was revealed covering a demolition layer. There was a large amount of post-medieval (largely late 17th to 18th century) deposits in all the test pits in the form of made ground. All of the test pits revealed late 20th century raised concrete cable ducts truncating the higher post-medieval deposits. No human remains associated with the cemetery of Stratford Langthorne Priory to the west were revealed. No structures associated with the priory were revealed although early post-medieval bricks which may have originally come from the complex were found to be reused in a later structure.</p>
Project dates	Start: 01-11-2004 End: 05-11-2004
Previous/future work	No / Yes
Any associated project reference codes	JSM 04 - Sitecode
Type of project	Recording project
Site status	Area of Archaeological Importance (AAI)
Current Land use	Transport and Utilities 2 - Other transport infrastructure
Monument type	PALAEOCHANNEL Late Prehistoric

Monument type	DITCH Uncertain
Monument type	PLOUGHSOIL Uncertain
Monument type	STRUCTURE Post Medieval
Monument type	FLOORS SURFACES Post Medieval
Monument type	DUMPING Post Medieval
Significant Finds	STRUCK AND BURNT FLINT Late Prehistoric
Significant Finds	POTTERY Post Medieval
Significant Finds	CLAY TOBACCO PIPE Post Medieval
Significant Finds	CBM Post Medieval
Significant Finds	ANIMAL BONE Post Medieval
Investigation type	'Watching Brief'
Prompt	Direction from Local Planning Authority - PPG16

Project location

Country	England
Site location	GREATER LONDON NEWHAM STRATFORD Jubilee Line New Signalling Equipment Room, Stratford Market Depot, Stratford
Study area	195 Square metres
National grid reference	TQ 3902 8344 Point
Height OD	Min: 101.82m Max: 102.4m

Project creators

Name of Organisation	Pre-Construct Archaeology Ltd
Project brief originator	Greater London Archaeological Advisory Service
Project design originator	Pre-Construct Archaeology Ltd
Project	Jon Butler

director/manager

Project supervisor Denise Mulligan

Sponsor or funding body Tube Lines Ltd

Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)

Title An Archaeological Watching Brief on Geotechnical Test Pits at Jubilee Line New Signalling Equipment Room, Stratford Market Depot, Stratford

Author(s)/Editor(s) Mulligan, D.

Date 2004

Issuer or publisher Pre-Construct Archaeology

Place of issue or publication London

Description A4 Bound

Entered by jon butler (jbutler@pre-construct.com)

Entered on 22 November 2004