DOCUMENT VERIFICATION

Stratford Market Depot, Stratford, London E15, London Borough of Newham

Watching Brief

Quality Control

Pre-Construct Archaeology Limited Project Code			K712
	Name & Title	Signature	Date
Text Prepared by:	Denise Mulligan		September 2004
Graphics Prepared by:	Hayley Baxter		September 2004
Graphics Checked by:	Josephine Brown		September 2004
Project Manager Sign-off:	Jon Butler		September 2004

Revision No.	Date	Checked	Approved

Pre-Construct Archaeology Ltd
Unit 54
Brockley Cross Business Centre
96 Endwell Road
London
SE4 2PD

AN ARCHAEOLOGICAL WATCHING BRIEF ON GEOTECHNICAL TEST PITS STRATFORD MARKET DEPOT, BURFORD ROAD STRATFORD, LONDON E15, LONDON BOUROUGH OF NEWHAM.

Site Code: SDD 04

Central National Grid Reference: TQ 3877 8372

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

Project Manager: Jon Butler

Commissioning Client: Ove Arup & Partners on behalf of Tube Lines

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
E-mail: jbutler@pre-construct.com

CONTENTS

1 ABSTRACT

1.1 This report details the results and working methods of an archaeological watching brief undertaken by Pre-Construct Archaeology Ltd on geotechnical fieldwork at Stratford Market Depot. The watching brief was undertaken between the 22nd June and 1st July 2004. The work was commissioned by Ove Arup & Partners on behalf of Tube Lines.

1.2 Four Test Pits (numbered 3, 4, 5 and 6) were excavated for geotechnical examination of deposits, and these were supplemented by 5 Window holes and 4 Boreholes.

1.3 There was a large amount of post-medieval evidence visible in all of the test pits in the form of made ground.

1.4 Some of the lower post-medieval deposits contained some late 19th early 20th century truncations including drains and a concrete slab, possibly a floor surface.

1.5 One archaeological feature, a possible water channel or drain, was observed in Test Pit 5. It was recorded cut into natural silty clay at a level of 2.75m OD.

2 INTRODUCTION

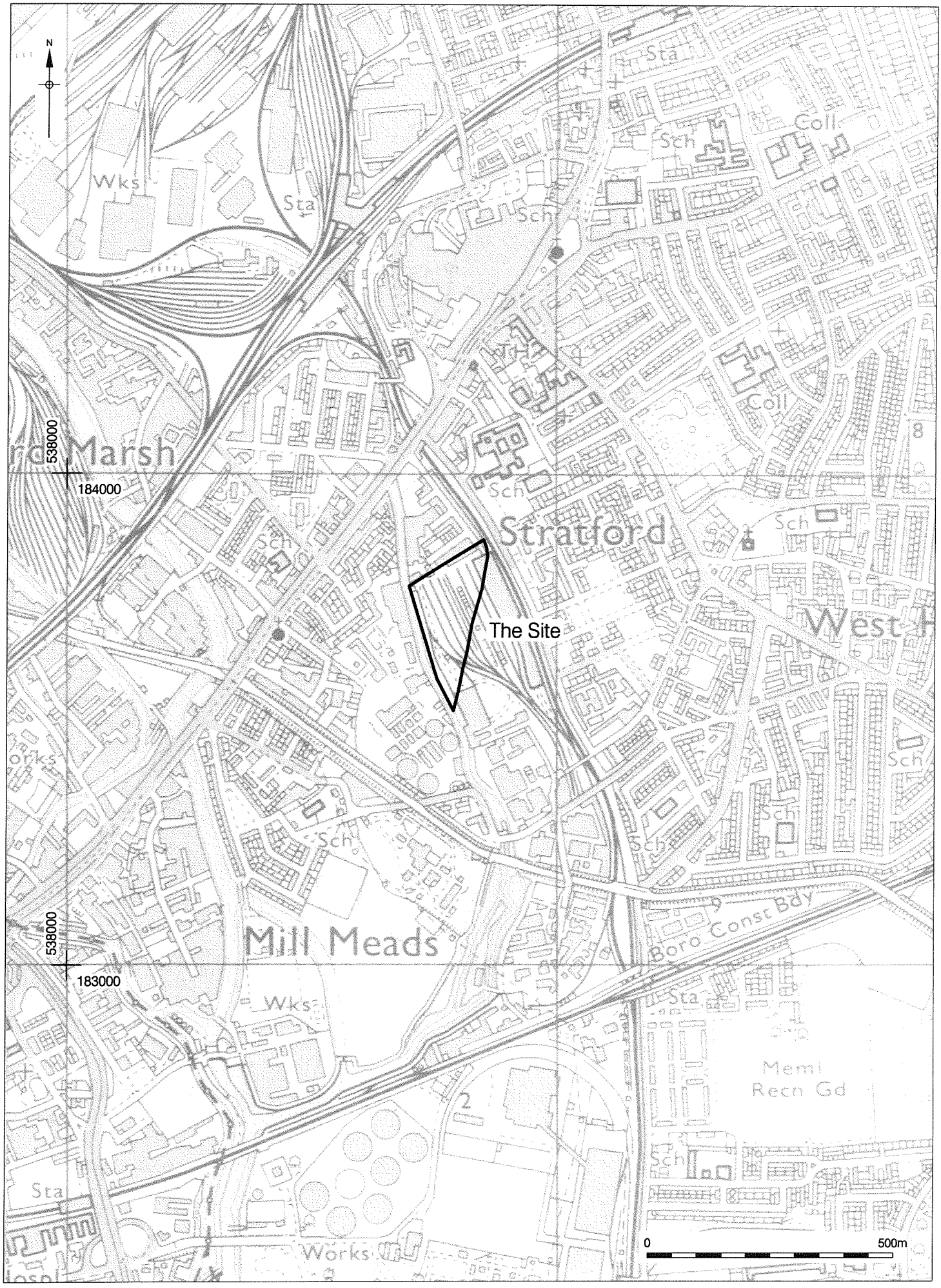
2.1 An archaeological watching brief was conducted by Pre-Construct Archaeology Ltd on geotechnical test pits, 'window' sampling holes and boreholes at Stratford Market Depot, Burford Road, Stratford, London E15, London Borough of Newham. The central National Grid Reference for the site is TQ 3877 8372. The watching brief was undertaken between the 22nd June and 1st July 2004. The work was commissioned by Ove Arup & Partners on behalf of Tube Lines.

2.2 The site lies in east London in the London Borough of Newham. The Southern part of the site was occupied by the former Stratford Wholesale Fruit and Vegetable Market and disused railway yard, and is now occupied by the new buildings of the Jubilee Depot. The Channelsea River (now culverted) borders the west of the site and runs north-south with rail-lines bordering the east of the site. The site is roughly triangular in shape and is at the moment covered with concrete. The area around the site is occupied by offices, railway tracks and associated buildings.

2.3 The fieldwork consisted of the excavation of five window sampling holes, four boreholes and four test pits, and was conducted by Weeks contractors on behalf of Ove Arup & Partners. The site work was overseen by Karen Fletcher of Ove Arup & Partners. The watching brief was project managed for Pre-Construct Archaeology by Jon Butler and supervised by the author.

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 code SDD 04.



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

Figure 1
Site Location
1:10,000

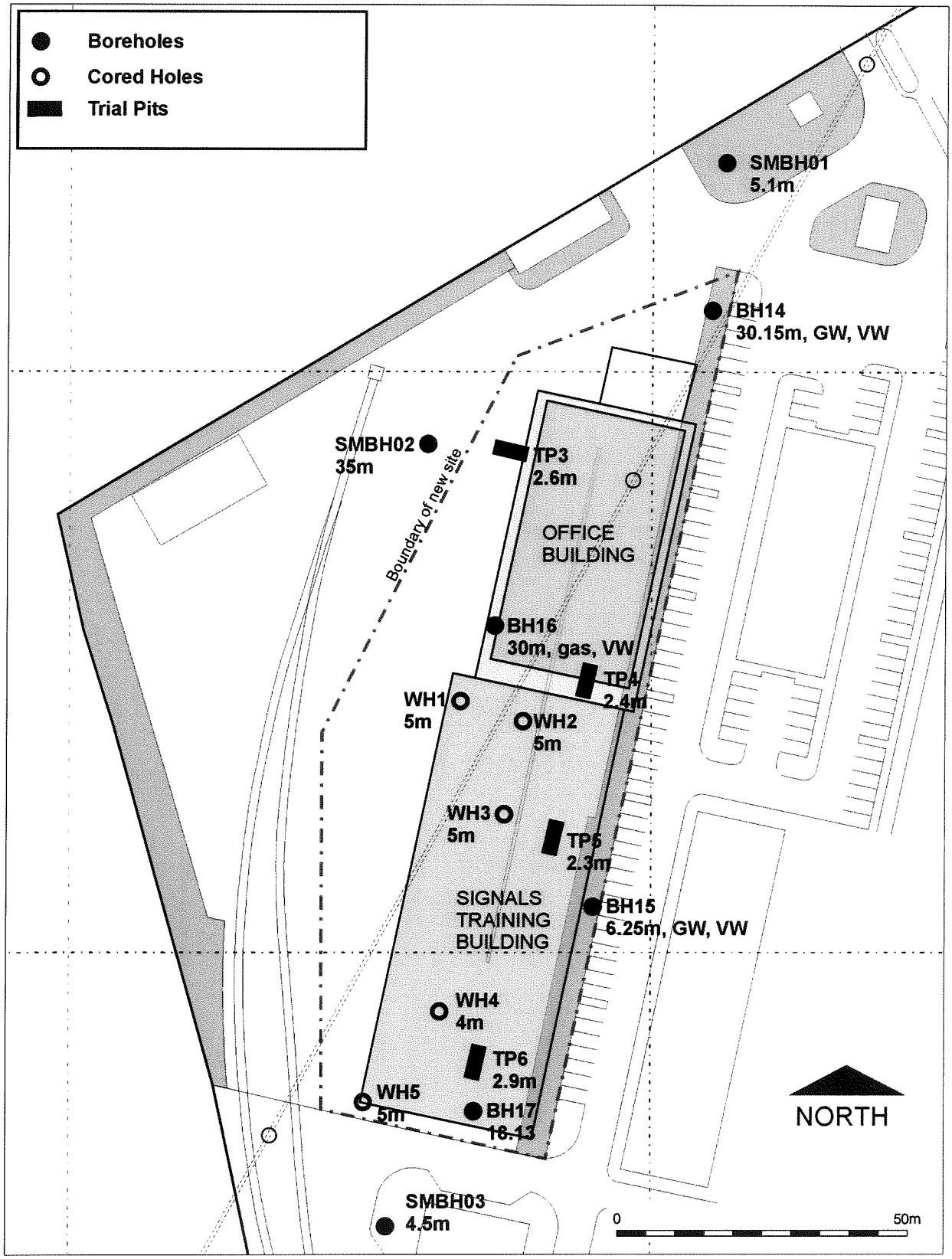


Figure 2
Borehole, Windowhole and Test Pit Locations
1:1000

3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The main archaeological and historical background to the site appears in the Archaeological Desk Study.[10] A summary of this is outlined below.

3.1 Prehistoric

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

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 a ritual/ religious element.

3.2 Roman

3.2.1 Excavations to the east of the Channelsea River revealed evidence of Roman settlement activity (SMR 061935). A considerable number of postholes dating to the 2nd century were exposed and seem 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 possible that they functioned as property boundaries. The archaeological evaluations carried out as part of the Jubilee Line extension by OAU in 1991/1992, and 1996 turned up a large number of Roman pits, postholes and ditches. There is the suggestion that there may be a large structure (building) to the south of the site. A full report will be published in September 2004.

3.3 Saxon

3.3.1 The evaluation by OAU at Stratford Market Depot also revealed two inhumations of Saxon / medieval date and sparse mid to late Saxon pottery.

3.4 Medieval

3.4.1 Little is known in detail of settlement before the 16th century. The Doomsday 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 River, where by the 12th century the parish church had already been built. Half a mile to the west lay Stratford, or Stratford Langthorne.

3.4.2 Stratford Langthorne Abbey is a Scheduled Ancient Monument and lies to the south of the development site. 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 may lie on part of Langhorne Abbey precincts. It was one of the largest Cistercian houses in England.

[10] Mulligan 2004

3.4.3 The Abbey Mills stood on an island in the Channelsea River, and comprised of a windmill as well as a water mill. The mills were mainly used for corn milling. In the early 16th century there was a tannery within the precincts of the abbey, but it apparently ceased shortly before 1534. The Abbey was affected by the dissolution. By 1539 the Abbey site and the property within the precincts were granted to Sir Peter Mewtas, later ambassador to France.

3.5 Post Medieval

3.5.1 The 1867 Ordnance Survey map shows the site predominantly as an apparent green field site comprising field plots as part of Abbey Marsh. There were a number of large drains controlled in part by sluices. The Channelsea River to the west is shown as having earth-banks.

3.5.2 The 1896 OS Map shows that the site had been developed as a Great Eastern Railway Goods and Coal Depot predominantly comprising of open sidings. In the south-western area of the site was part of a large building of Stratford Vegetable Market into which some railway tracks entered. The former ditches had either been backfilled or culverted. There were assorted small buildings in the north of the site adjacent to the northern site boundary.

3.5.3 South of the site the Abbey Print Works were replaced by buildings associated with Victoria Stone Works, chemical works, Abbey Candle Works, Varnish and Japan Works and Globe Mill. India rubber was replaced by brush works and hardware manufactory. The area east of Bridge Road had been developed for housing.

3.5.4 Between 1896 and 1916 the site remained unchanged. One structure (present in 1896) in the south of the site had been annotated as WM (weighing machine). The extreme south of the site was occupied by a building for the Victoria Stone Works.

3.5.5 The 1948 OS Map shows part of Stratford Market building as a ruin (possibly from bomb damage from the second world war).

4 GEOLOGY AND TOPOGRAPHY

4.1 Topography

4.1.1 The site lies on the higher terrace gravels of the Lee Valley. The site is a concrete area which slopes slightly towards the centre where a modern rainwater drain runs north-south. The north of the site lies at a level of approximately +4m OD sloping gently to the south where the level is recorded as +3.80m OD.

4.2 Geology

4.2.1 The 1:50,000 scale geological mapping for England and Wales (Sheet 270 Solid and Drift edition) 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 and referred to as a factual "Contaminated Land Baseline Project". This investigation of the site largely confirms this pattern, with made ground recorded to a depth of approximately 2.5m below ground level, which seals alluvium and Kempton Park Gravels towards the south of the site, with the alluvium absent further to the north. London Clay is recorded as being approximately 12.5m thick towards the south of the site, thinning to the north and is entirely absent in the northern-most portion of the site. Here, the gravels directly overlie Lambeth Clay.

4.2.3 The site investigation report uses the term Lambeth Group. This has now been classified according to the full BGS classification.

5 ARCHAEOLOGICAL METHODOLOGY

5.1 The watching brief was conducted in accordance with the archaeological method statement.[11]

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 the boreholes and window sampling holes were also recorded.

5.3 Test Pits numbered 3 to 6 were excavated to a depth of at least 2m or until the natural gravels was reached. They measured approximately 2.80m long x 1.40m wide.

5.4 All test pits were moved from their original positions because of services and access to the area. These and the borehole and window samples were located by the geotechnical contractors.

5.5 Sections were drawn at 1:20 and were assigned numbers corresponding with the Test Pits. Contexts were numbered sequentially, starting from 1.

5.6 The temporary benchmark used was at +4.00m OD, which was taken from engineers spot heights located on site.

[11] Butler, J, (2004) A Method Statement for an Archaeological Watching Brief at Harris City Academy, South Norwood Hill, London SE25, London Borough of Croydon.

6 ARCHAEOLOGICAL DISCUSSION

6.1 Test Pit 3 (Fig 5)

6.1.1 The earliest deposit encountered in Test Pit 3 consisted of a light brown natural clay [5], which was stiff and had orange /brown viening running through it. It was recorded at a depth of 0.98m below ground level at a height of approximately +3.22m OD.

6.1.2 This layer was cut by a backfilled modern drain [17]. The drain was orientated east-west with a shallow northern side and a flat base, and had a maximum depth of 0.60m. It was filled with a dark brown clayey silt [16] (primary) and brick coal and ash [15] (secondary).

6.1.3 The land drain was sealed by made ground [3] which was Type 2 grey gravel with a maximum thickness of 0.33m and a highest level of approximately+3.56m OD. The concrete cap was made up of 0.20m of concrete sealed by 0.24m of steel reinforced concrete giving a total thickness of 0.44m. The ground level in Test Pit 3 was recorded at +4m OD.

6.2 Test Pit 4 (Fig 5)

6.2.1 The earliest deposit encountered within Test Pit 4 was natural clay [5] recorded at a height of +2.90m OD.

6.2.2 This was sealed by a dark grey silty sand [4] with charcoal flecks and occasional organic material which had a maximum thickness of 0.13m and a highest level of +3.33m OD. Four medium size pieces of burnt flint were recovered from this layer - it may represented a horticultural horizon.

6.2.3 Layer [7] was cut by a shallow feature [7] which was recorded in section and measured approximately 0.45m E-W x 0.10m deep. It was filled with broken red brick [6], and may represent the remains of an internal wall foundation from a previous building. The shallow nature of the deposit suggests that this feature may have been horizontally truncated when the site was cleared and levelled.

6.2.4 The possible foundation was sealed by made ground [3] which was Type 2 grey gravel with a maximum thickness of 0.35m. The concrete cap was made up of 0.17m of concrete sealed by 0.24m of steel reinforced concrete giving a total thickness of 0.41m. The ground level in Test Pit 3 was recorded at +3.80m OD.

6.3 Test Pit 5 (Fig 5)

6.3.1 The earliest deposit encountered within Test Pit 5 consisted of natural clay [5] at a highest level of +2.75m OD.

6.3.2 Cut into this layer was a probable ditch or channel [10]. Only the southern side of the cut was visible and it appeared to be aligned north east – south west. The ditch was 0.60m in depth and was filled with a dark grey/green silt with black streaks recorded as [9]. No dating evidence was recovered from the ditch.

6.3.3 Sealing this probable ditch / channel was a layer of dark grey silt clay sand [8] with a maximum thickness of 0.26m and a highest level of approximately +3m OD. This

layer had frequent charcoal flecks and some fragments of coal and ash and is likely to be associated with the previous industrial activity situated in the area of the site.

6.3.4 This was sealed by a layer of Type 2 compacted gravel [3] with a maximum thickness of 0.30m, which was in turn sealed by a concrete cap of 0.35m thickness.

6.4 Test Pit 6 (Fig 5)

6.4.1 The earliest deposit encountered was a mid to light brown gravel [16] recorded at a highest level of +2.02m OD. This layer is likely to represent part of the Kempton Gravels.

6.4.2 This was overlain by a light brown alluvial clay [15] with a maximum thickness of 0.30m and a highest level of approximately +2.30m OD.

6.4.3 This probable alluvium was sealed by a dark brown sandy silt [14] which may represent an agriculturally derived soil. A further soil [13] of similar composition but with a slightly lighter hue was recorded above, and together these deposits had a maximum thickness of approximately 0.68m. An E-W orientated land drain was recorded cutting the upper level of [13] at a height of approximately +3.08m OD.

6.4.4 This was followed by a layer of black coal fragments and ash with a maximum thickness of 0.30m.

6.4.5 Sealing this sequence was a layer of dark grey silt clay sand [8] with a maximum thickness of 0.26m and a highest level of approximately +3m OD. This layer had frequent charcoal flecks and some fragments of coal and ash and is likely to be associated with the previous industrial activity situated in the area of the site.

6.4.6 This was followed by a layer grey compacted gravel of 0.30m thickness at a highest level of +3.70m OD. This was followed by layers of concrete and steel reinforced concrete to a highest level of +4m OD.

6.5 Boreholes and Window Sampling Holes (Figs 3 & 4)

6.5.1 During the monitoring of the boreholes and window holes, London Clay was recorded at a depth of approximately 4m below ground level. This was sealed by Kempton Park Gravels which varied in height between 1.50m below ground level in Borehole 17, located in extreme south of the site, and 3.40m below ground level in Borehole 16, towards the centre. Pockets of alluvium was recorded sealing the gravel in window sampling holes 3 and 5 and Borehole 14. Between 1 and 2m of made ground completed the sequence.

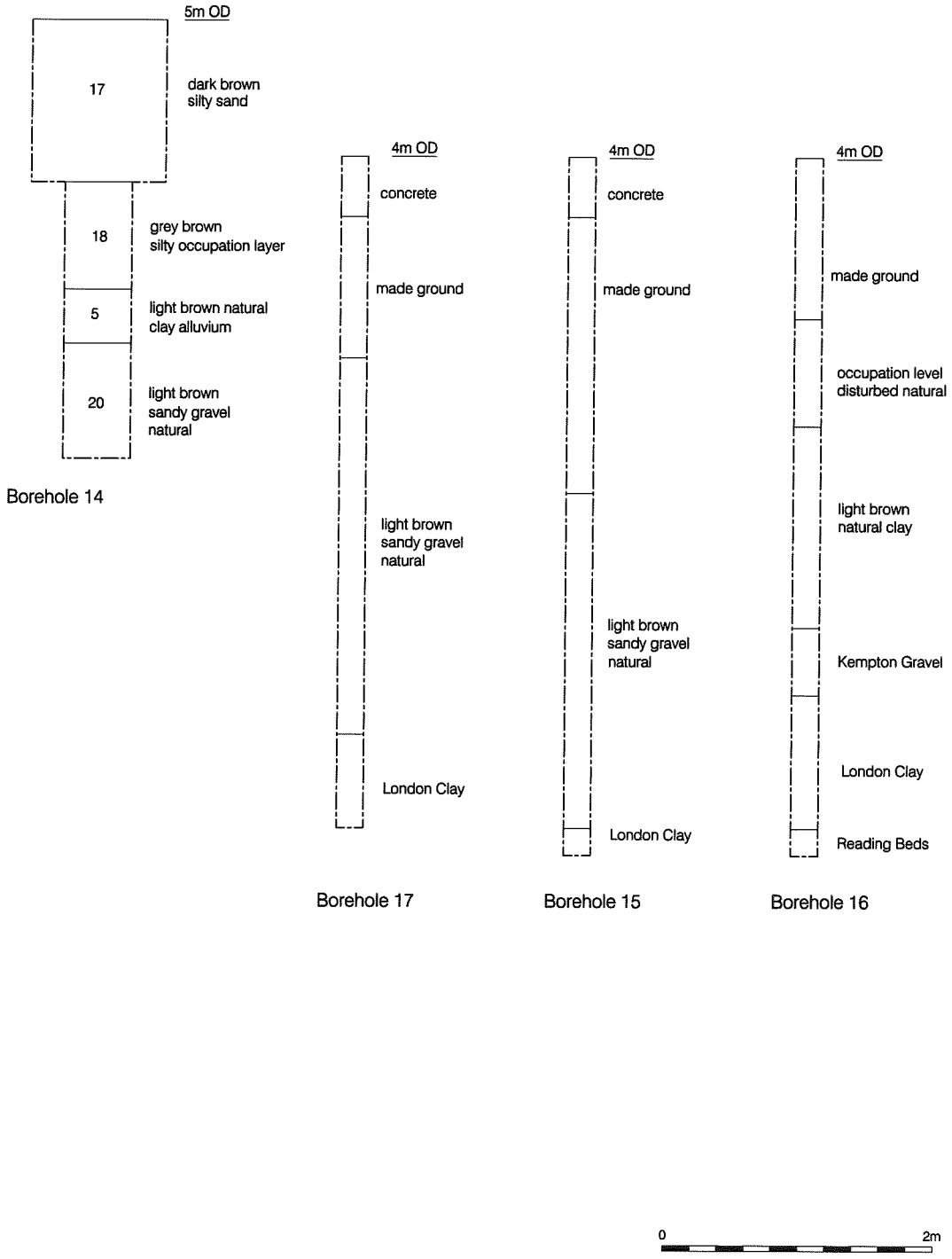


Figure 3
Boreholes
1:50

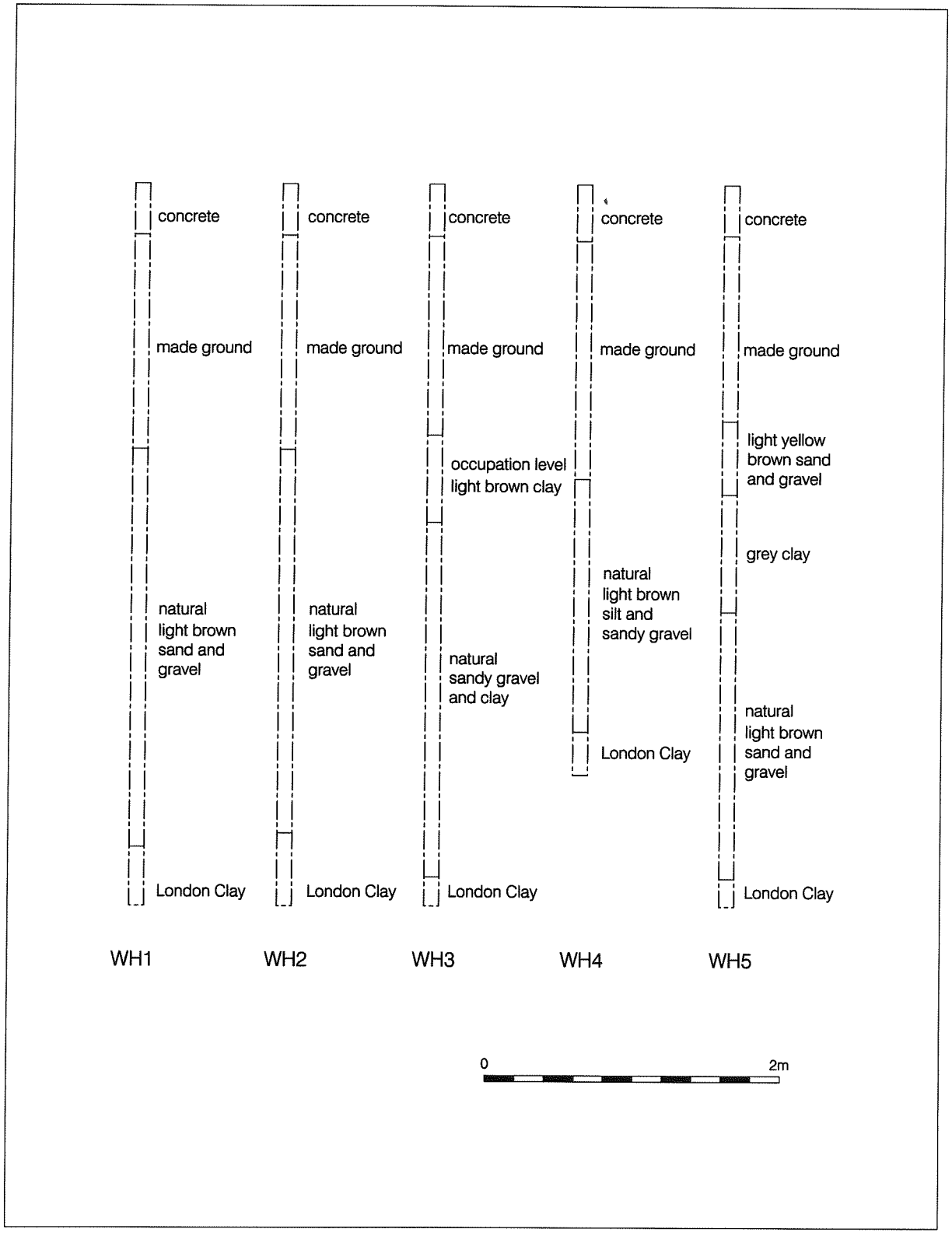
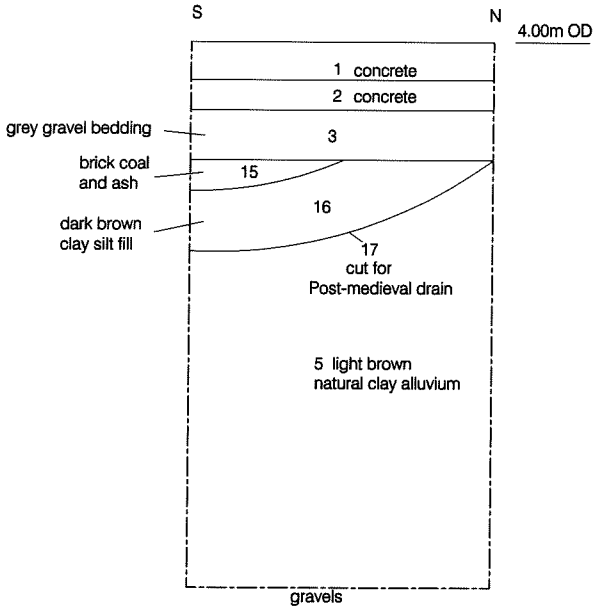
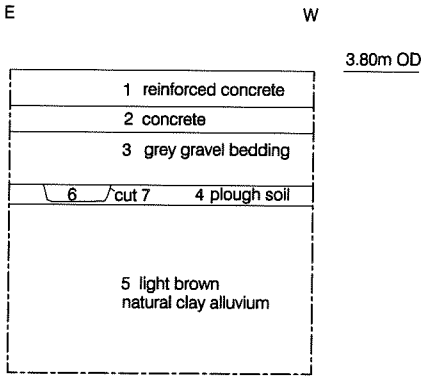


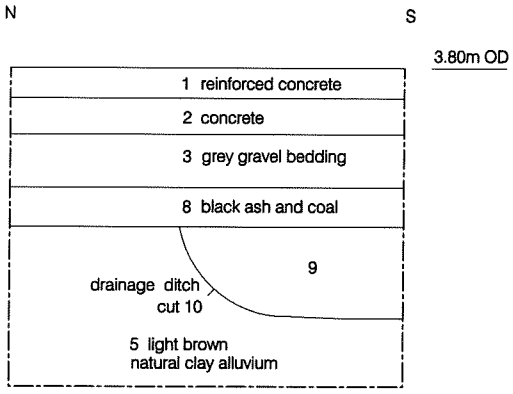
Figure 4
Window hole logs
1:40



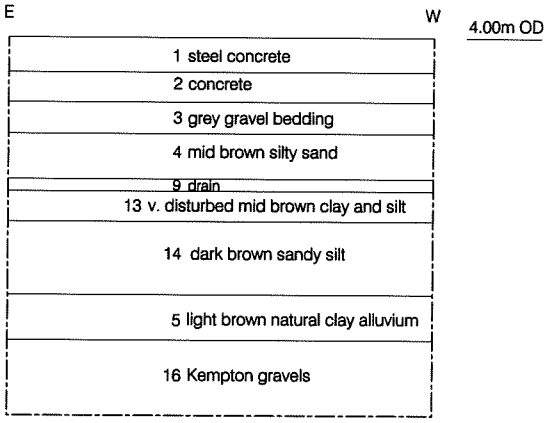
TP3
West facing



TP4
North facing



TP5
West facing



TP6
North facing

Figure 5
Test Pit Sections
1:50

7 CONCLUSIONS

7.1 The archaeological watching brief revealed a natural sequence of London Clay sealed by Kempton Gravels across the area of the site. In the areas of the geotechnical test pits this was sealed by alluvium.

7.2 Sealing the alluvium in Test Pits 4 and 6 was a dark grey silty sand deposit recorded at a height of approximately +3.30m OD. This contained charcoal flecks and yielded several fragments of burnt flint, and may represent an occupation or agricultural horizon.

7.3 Cut into this layer in Test Pit 6 was a shallow feature filled with broken brick which may represent the remains of a foundation for a previous building. The shallow (0.10m) depth of the possible foundation suggests that the area was comprehensively levelled during demolition, and this action may have impacted on any shallow archaeological horizons.

7.4 A probable channel/ditch was recorded in Test Pit 5 in the centre of the site. Whilst no dating evidence was recovered from the ditch, it may represent part of the land management activity that was undertaken in the post-medieval period when land was drained and controlled by channels and sluices. The channel /ditch was aligned north-east south-west.

7.5 Between 1 and 2m of made ground and concrete hard standing was recorded overlying the natural and archaeological horizons across the area of the site.

8 BIBLIOGRAPHY

Butler, J., "A Method Statement for an Archaeological Watching Brief on Geotechnical Test Pits at Stratford Market Depot, Burford Road, London E15, London Borough of Newham", Pre-Construct Archaeology Ltd, unpublished report, July 2004.

Mulligan, D., "Stratford Market Depot Burford Road Stratford London E15 London Borough of Newham Desk Study", Ove Arup and Partners Ltd, unpublished report July 2004.

9 ACKNOWLEDGEMENTS

9.1 Pre-Construct Archaeology Limited would like to thank Richard Hughes of Ove Arup and Partners who commissioned the work on behalf of Tube Lines, and Nick Truckle of English Heritage for monitoring the work.

9.2 The author would like to thank Jon Butler for project management, Chris Jarret for pot analysis and dating, Hayley Baxter for the illustrations and Nick Hobbs from Weeks for the borehole and site geology. Thanks also to Karen Fletcher of Ove Arup and Partners.

APPENDIX 1

Context Descriptions

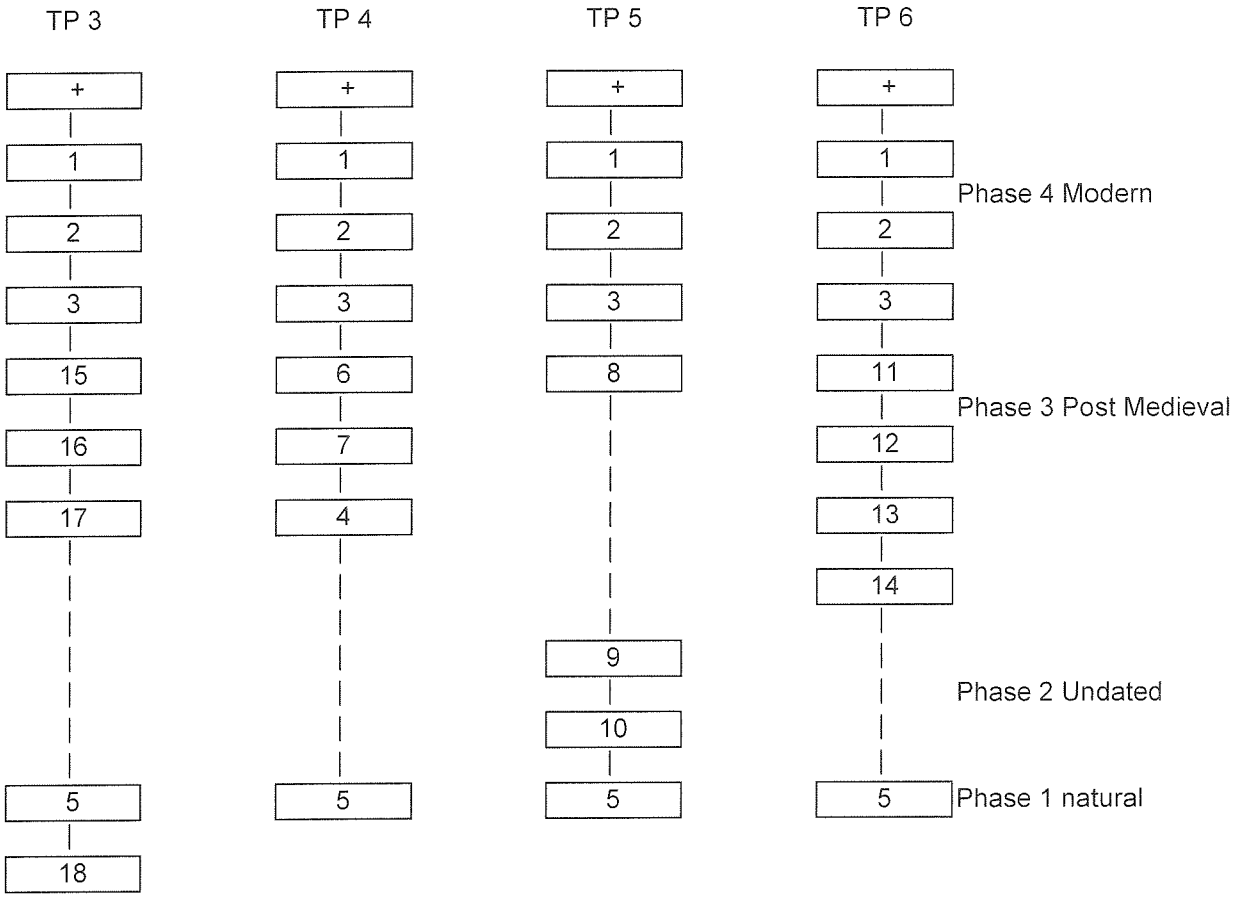
APPENDIX 1

Context Descriptions

Site	Context	Type	Description
SDD 04	1	Layer	Steel reinforced concrete
SDD 04	2	Layer	Concrete
SDD 04	3	Layer	Type 2 compacted gravel
SDD 04	4	Layer	Dark gray, possible plough soil
SDD 04	5	Layer	Natural light brown clay alluvium
SDD 04	6	Fill	Broken red brick fill of cut 7
SDD 04	7	Cut	Cut of wall
SDD 04	8	Layer	Dark gray black, coal ash
SDD 04	9	Fill	Grey green fill of ditch
SDD 04	10	Cut	Cut of ditch /channel
SDD 04	11	Layer	Dark gray/black coal ash
SDD 04	12	Fill	Post med drain
SDD 04	13	Layer	Light brown silt clay sand
SDD 04	14	Layer	Dark brown silt clay
SDD 04	15	Fill	Fill of cut 17 red brick
SDD 04	16	Fill	Fill of cut 17 dark brown silt clay
SDD 04	17	Cut	Cut from post med drain
SDD 04	18	Layer	Natural light brown clay gravels

Appendix 2

Site Matrix



APPENDIX 3

OASIS FORM

Project details

Project name	Stratford Market Depot
Short description of the project	The archaeological watching brief on geotechnical test pits revealed gravels sealed by alluvium. A probable post-medieval drainage ditch was recorded in TP5. Made ground of between 1 and 2m thickness was recorded sealing the alluvium. The site was capped with concrete hardstanding
Project dates	Start: 22-06-2004 End: 01-07-2004
Previous/future work	Yes / Yes
Type of project	Recording project
Site status	Local Authority Designated Archaeological Area
Current Land use	Industry and Commerce 1 - Industrial
Monument type	DITCH Post Medieval
Investigation type	'Watching Brief'

Project location

Country	England
Site location	GREATER LONDON NEWHAM STRATFORD Stratford Market Depot
Postcode	E15
Study area	5890 Square metres
National grid reference	TQ 3877 8372 Point
Height OD	Min: 2.02m Max: 3.22m

Project creators

Project design originator	Richard Hughes
Project director/manager	Jon Butler
Project supervisor	Denise Mulligan
Sponsor or funding body	Tube Lines

Project archives

Physical Archive recipient	LAARC
Physical Archive Exists?	Yes
Digital Archive recipient	LAARC
Digital Archive Exists?	Yes
Paper Archive recipient	LAARC
Paper Media available	'Context sheet','Correspondence','Drawing','Matrices','Photograph','Plan','Section'
Paper Archive Exists?	Yes

Project bibliography 1

Publication type	An unpublished document/manuscript
Title	An Archaeological Watching Brief on Geotechnical Test Pits at Stratford Market Depot, Burford Road, Stratford, London E15, London Borough of Newham
Author(s)/Editor(s)	Mulligan, D
Date	2004

Issuer or publisher	Pre-Construct Archaeology Ltd
Place of issue or publication	Unpublished document
Description	Watching Brief Report
Entered by	Paul Steel (psteele@pre-construct.com)
Entered on	19 August 2004