



C261 ARCHAEOLOGY EARLY EAST

Fieldwork Report

Archaeological Watching Brief

at Vallance Road Gardens

Whitechapel (XSH10)

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Non technical summary

This report presents the results of a general watching brief carried out by Museum of London Archaeology (MOLA) in Vallance Road Gardens, Whitechapel, London E1, in the borough of Tower Hamlets, as part of works for the future Crossrail Whitechapel crossover.

The report was commissioned from MOLA by Crossrail Ltd and is being undertaken as part of a wider programme to mitigate the archaeological implications of railway development proposals along the Crossrail route.

This report covers the monitoring of: five boreholes, four starter pits for piezometers, a series of connecting shallow trenches, the foundations for a site hut and an Instrumentation and Monitoring (I&M) borehole, all within the confines of Vallance Road Gardens. The watching brief was carried out under Crossrail contract C261 Archaeology Early East.

Natural Taplow terrace gravels were recorded at each borehole location, varying between 3.25m and 4.90m below street level. In the extreme western edge of the gardens, peaty waterlain deposits were recorded overlying the natural strata, possibly from an undated ditch or stream.

Little indication of the 17th–19th-century Quaker burial ground was found, except for a single potentially in situ fragment of bone-from a deep borehole. Otherwise fragmented disarticulated human bone was documented in each intervention, predominantly from higher deposits, implying that remains had been well disturbed and subsequently redistributed across the site. This raises further questions (beyond the scope of this report) regarding the distribution and quantity of burials actually interred in the cemetery over the two hundred or so years of its use.

In the northern part of the gardens, substantial 18th-century brick foundations appeared to truncate to the natural strata. Two overlying phases of brick floor, possibly delineating yard surfaces and associated deposits were exposed in a starter pit. One particular sequence of deposits contained fine Chinese porcelain (for drinking tea), a wig curler and imported German stoneware, giving us a snapshot of local life during the late 18th to early 19th centuries.

Chalk and sandstone inclusions drilled from one borehole may have been in situ foundations from a structure of unknown date, but are just as likely residually deposited.

The majority of the deposits were dated by ceramics and tobacco pipes from the 18th to 19th centuries, and were recorded within substantial layers, probably dumped after the abandonment of the burial ground, and the formation of the gardens in the mid 19th-century. Small pockets of 20th-century rubble are evidence of general demolition and levelling following the Second World War.

The watching brief has demonstrated that there is extensive survival of low grade post-medieval deposits across the site; the majority appeared to have been formed once the burial ground had gone into disuse. 18th to 19th century domestic buildings and associated deposits survive at a shallow depth in the north area of the gardens, as predicted from contemporary mapping. There is limited evidence of Victorian and latter disturbance to the gardens, again supported by documentation that shows little change following the gardens establishment in the late 19th century.



Contents

1	Introduction	4
2	Planning background	6
3	Origin and scope of the report	6
4	Previous work relevant to archaeology of site	7
5	Geology and topography of site	8
5.1	Archaeological and Historical Background	8
6	Research objectives and aims	10
6.1	Objectives of the fieldwork	10
6.2	Research Aims	10
7	Methodology of site-based and off-site work	11
7.1	General watching brief Methodology	12
8	Results and observations including stratigraphic report and quantitative report	13
8.1	Borehole WH_58	13
8.2	Borehole WH_59	15
8.3	Borehole WH_60	17
8.4	Borehole WH_62	20
8.5	Borehole WH_63	22
8.6	Manhole XR_50901	24
8.7	Pipe trenches and pump base	26
8.8	Piezometer starter pits	28
9	Assessment of results against original research aims	28
9.1	Original research aims	28
10	Statement of potential archaeology	30
10.1	Importance of Resources	30
11	Conclusions	31
11.1	Geology	31
11.2	Roman and medieval remains	31
11.3	Post-medieval remains	31
12	Publication and dissemination proposals	32
13	Bibliography	33
14	Acknowledgements	34
15	NMR OASIS archaeological report form	35
16	Appendices:	37



16.1	Post-medieval pottery and tobacco pipes	37
16.2	Building Materials	38
16.3	Registered find	38

List of Figures

At end of document:

Figure 1 Site Location

Figure 2 Plan of boreholes and monitoring pits.

List of Photos

Photo 1 Whitechapel Society of Friends burial map (after 1853), north approximately to the right-hand side.	9
Photo 2 starter pit for borehole WH_58, looking east.	13
Photo 3, starter pit for borehole WH_59, looking north	15
Photo 4, starter pit for borehole WH_60, looking south	17
Photo 5, detail of starter pit for borehole WH_60 showing tiled floor remnant [124], looking south	19
Photo 6 starter pit for borehole WH_62, looking east	20
Photo 7 starter pit for borehole WH_63, looking east	22
Photo 8 starter pit for manhole XR_50901, looking north	24
Photo 9 shallow pipe trench exposing garden soil deposits, looking east	27
Photo 10 Reburial of human remains	29

List of Tables

Table 1 Site Details	5
Table 2 piezometer starter pit results	28
Table 3 Pottery and clay tobacco pipe from XSH10 by context, type, dating and statistical counts	37



1 Introduction

Crossrail is a new Cross-London Rail Link project which will provide transport routes across the south-east of England and London. The route will link Maidenhead and Heathrow in the west with Shenfield in the north-east and Abbey Wood in the south-east. In central London, from Royal Oak in the west to Pudding Mill Lane and Royal Victoria Dock in the east, Crossrail will consist of a tunnelled section with seven new stations linked to the existing transport network.

Whitechapel Station is located along the A11 road corridor with the East London Line (ELL) railway cutting running north/south at its centre and areas of above ground lines of the District and Hammersmith and City Underground Line to the east and west.

Vallance Road Gardens lies above the site of the future Crossrail Whitechapel Crossover, which will be tunnelled at depth.

The Crossrail mitigation response to archaeology is described in the Crossrail Generic WSI (Crossrail 2009a) and the detailed desk based assessment (DDBA; Crossrail 2008b), and can be summarised as follows:

- In the event that intact and important archaeological remains are identified at Crossrail worksites through this process, it may be preferable, where practicable, to preserve these where they are found (ie preservation *in situ*).
- However, because of the nature of major works projects such as Crossrail, experience of other similar projects suggests that preservation by record is usually the most appropriate method of dealing with archaeological finds.
- Following an extensive Environmental Impact Assessment (EIA) supporting the Crossrail Bill, and the production of site-specific DDBAs, appropriate mitigation measures were scoped and specified in detail in individual project designs (site-specific WSIs – Written Schemes of Investigation) which were prepared in accordance with the principles set out in the Generic WSI, and developed in consultation with the relevant statutory authorities.
- Archaeological information that is gained from fieldwork will be followed by analysis and publication of the results and will be transferred to an approved public receiving body.

This fieldwork report describes the results of an archaeological watching brief carried out in Vallance Road Gardens on five boreholes, 5 trial pits for piezometers, a series of connecting shallow trenches, the foundations for a site hut and an Instrumentation and Monitoring (I&M) borehole, located to the west of the future Crossrail Whitechapel station, bounded by Vallance Road to the west, Lomas Street the north, Castlemaine street to the east, and Wodeham Gardens to the south. All work was undertaken by Museum of London Archaeology (MOLA) under Crossrail contract C261. The Crossrail works fall within the London Borough of Tower Hamlets.

The approximate centre of the site is at OS National Grid Reference 534494 181910.

All fieldwork was conducted between 31/7/12 and 28/03/13 and supervised by Sam Pfizenmaier, David Sankey and Robert Hartle (MOLA Supervisors).

All levels in this document are quoted in metres Above Tunnel Datum (m ATD). To convert Tunnel Datum to Ordnance Datum subtract 100m, ie 1m OD = 101m ATD.



Table 1 Site Details

Task	Principal Contractor	Dates of Fieldwork
<ul style="list-style-type: none">• General Watching Brief on boreholes WHI_58 to WHI_63 and an I&M borehole, within Vallance Road Gardens	C510 BBMV jv	31st July 2012 to 6th September 2012
<ul style="list-style-type: none">• General watching brief on piezometer trial pits, pipe trench and pump base, within Vallance Road Gardens	C510 BBMV jv	6th January 2013 to 28th March 2013

Borehole WHI_61 originally located within the playground on the northern edge of the gardens was relocated to Castlemaine Street to the east, thereby falling outside the eastern boundary of the burial ground, and therefore did not require monitoring.

The event code (sitecode) is XSH10.



2 Planning background

The legislative and planning framework in which all archaeological work took place was summarised in the Site Specific Written Scheme of Investigation – Doc. No. C140-HYD-T1-JLTI-DO61_00001 **Version 3**, 15.12.10 (Draft).

The overall framework within which archaeological work will be undertaken is set out in the Environmental Minimum Requirements (EMR) for Crossrail (Crossrail 2008a). The requirements being progressed follow the principles of Planning Policy Guidance Note 16 (PPG16)(DoE 1990), and its replacements Planning Policy Statement 5 (PPS5)(DCLG 2010) and the National Policy Planning Framework (NPPF)(DCLG 2012), on archaeology and planning. Accordingly the nominated undertaker or any contractors will be required to implement certain control measures in relation to archaeology before construction work begins.

Schedules 9, 10 and 15 of the Crossrail Act 2008 concern matters relating to archaeology and the built heritage, and allow the dis-application by Crossrail of various planning and legislative provisions including those related to listed building status, conservation areas and scheduled ancient monuments (Schedule 9). Schedule 10 allows certain rights of entry to English Heritage given that Schedule 9 effectively disapplied their existing rights to the Cross Rail project, and Schedule 15 allows Crossrail to bypass any ecclesiastical or other existing legislation relating to burial grounds.

Notwithstanding these disapplications, it is intended that agreements setting out the detail of the works and requiring relevant consultations and approvals of detail and of mitigation arrangements will be entered into by the nominated undertaker with the relevant local planning authorities and English Heritage in relation to listed buildings and with the Department of Culture, Media and Sport (DCMS) and English Heritage in relation to Scheduled Ancient Monuments (SAMs).

3 Origin and scope of the report

This report has been commissioned from Museum of London Archaeology (MOLA) by Crossrail Ltd. The report has been prepared within the terms of the relevant standard specified by the Institute for Archaeologists (IFA 2001). It considers the significance of the fieldwork results (in local, regional or national terms) and makes appropriate recommendations for any further action, commensurate with the results.

This report will be made available from The London Archaeological Archive and Research Centre (LAARC) in due course.



4 Previous work relevant to archaeology of site

The principal previous Crossrail studies are as follows:

- Crossrail, Environmental Statement, February 2005;
- Crossrail, Assessment of Archaeology Impacts, Technical Report. Part 4 of 6, South-East Route Section, 1E0318-E2E00-00001, February 2005 [Specialist Technical Report (STR)];
- Crossrail, Amendment of Provisions 1, January 2006;
- Crossrail, Amendment of Provisions 3, November 2006;
- Crossrail, Archaeology Programming Assessment, November 2006;
- Crossrail, Whitechapel Station Written Scheme of Investigation C140-HYD-T1-JLT-D061-00001 version 3.0
- Crossrail, Archaeology Assessment of Vallance Gardens 2011, C261-XRL-W-ASM-CRG03-50001

All fieldwork was carried out to a method statement prepared in line with the principal contractor's method statement. The above cited reports are all available from the London Archaeological Archive and research Centre (LAARC).

5 Geology and topography of site

Ground level slopes gently down from north to south, varying from 113.50m Above Tunnel Datum (ATD) to the north of the gardens to 112.80m ATD immediately to the south, reflecting the slight slope down to the Thames.

The site lies on an area of brickearth (Langley Silt complex), which caps the gravels of Third, or Taplow, Thames gravel terrace. The brickearth has been recorded at approximately 110.2 to 110.3m ATD (GI Package 1 boreholes WH7R & WH8CPT), some 3.0 to 3.5m below ground level (bGL).

5.1 Archaeological and Historical Background

The archaeological and historic background was covered in detail in the WSI (see section 4 above), and only the archaeological potential of the site is summarised below.

The main potential of this site is for the post-medial burial ground (see below), but it also has:

- A **low potential for Roman remains**, associated with the *Londinium* to Colchester road, c 100m to the south.
- A **high potential for the remains of post-medieval buildings and occupation** in parts only of the site.

These commence with buildings along the northern edge of the site shown by Gascoigne's map of 1703, slightly expanded by Rocque's in 1746, and spread down the western side of the site by Horwood in 1799 and 1819. The 1873 and 1913 Ordnance Survey maps show a building oriented south-west–north-east linking the two earlier rows of buildings. These buildings survived until destroyed by bombing during the Second World War.

There is also:

- A **high potential for 17th to 19th-century burials**.

The majority of the area for the modern Gardens is shown by Rocque as an open space, edged with rows of trees, bounded by what appears to be walls separating it from the grounds of the buildings to the north, and the future buildings to the west.

This open area is labelled on later maps as the Friends or Quakers burial ground (see below). It was acquired by the Quakers in 1687 (*Archaeology assessment Vallance gardens*), so possibly pre-dates the housing seen to the north on historic maps.

The area of the burial ground is marked as disused on the 1873 Ordnance Survey maps, and as a recreation ground on the 1913 survey.

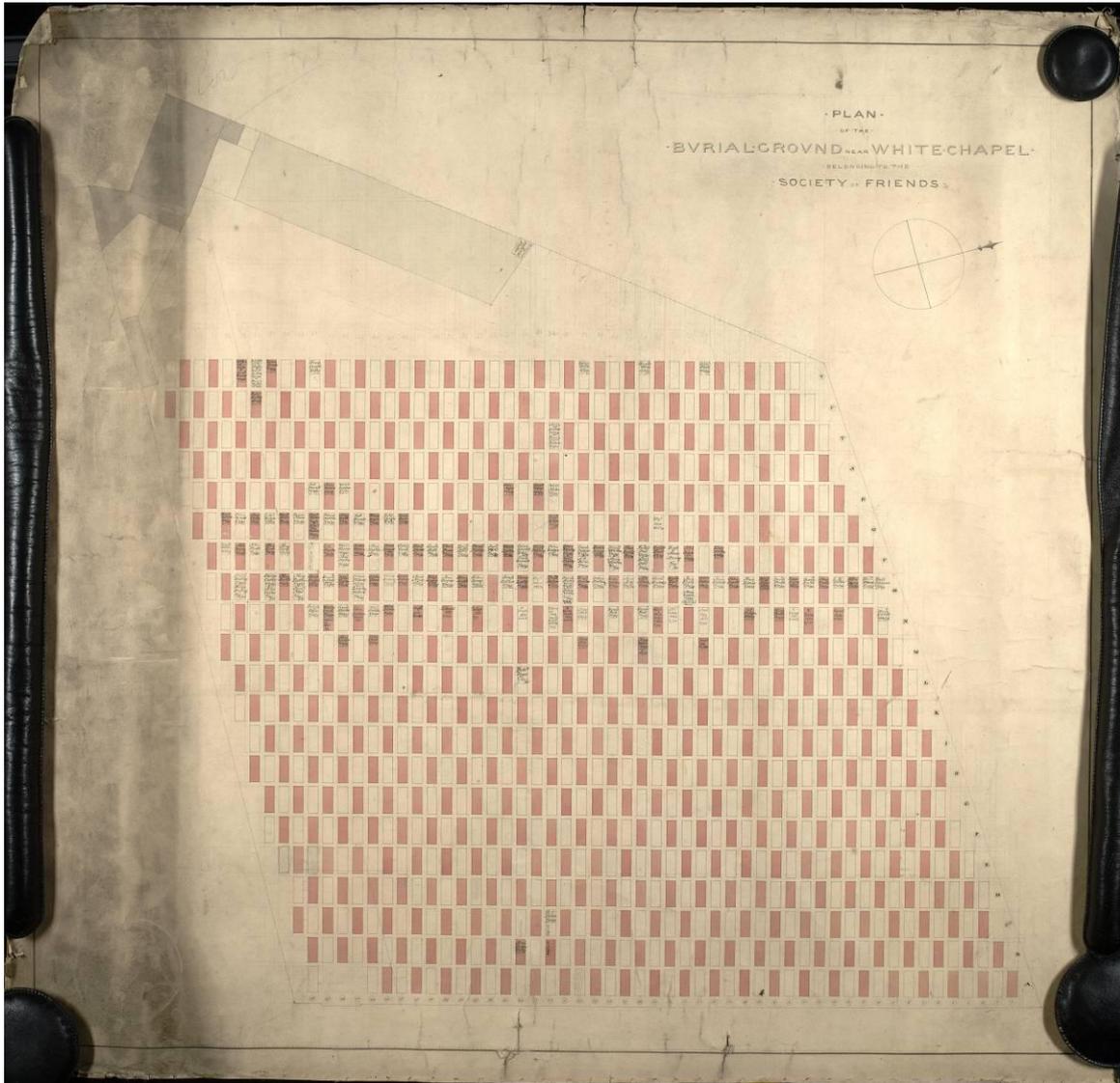


Photo 1 Whitechapel Society of Friends burial map (after 1853), north approximately to the right-hand side.



6 Research objectives and aims

6.1 Objectives of the fieldwork

The objectives of the archaeological investigations, as stated in the Addendum to the WSI (Crossrail 2011), are set out below.

- To recover any human remains encountered in the starter pits or brought up by the boreholes, either for reburial on site in the starter pits, or for later reburial by an exhumation contractor employed by the Principal Contractor or Crossrail (see 9.1).
- To ensure that any human remains are dealt with in accordance with the conditions of a burial licence obtained from the Ministry of Justice, and its extension letter (see Photo 10).
- To record any other archaeological remains or deposits that may be present above the natural geology (brickearth).

6.2 Research Aims

The original aims and objectives were listed in the WSI (Crossrail 2009), and stated that 'Archaeological investigation and mitigation within the Crossrail worksites for Whitechapel Station have the potential to contribute to the research themes set out below':

- This task is not expected to contribute to any project-wide research themes, given the likely fragmentation of any human remains recovered, and limited potential for meaningful data from other remains.



7 Methodology of site-based and off-site work

All archaeological excavation and recording during the watching brief was carried out in accordance with:

- Crossrail, 2009a *Archaeology Generic Written Scheme of Investigation*, Doc No. CR-PN-LWS-EN-SY-00009
- Museum of London *Archaeological Site Manual* (MoL 1994)
- English Heritage Greater London Archaeology Advisory Service, June 1998 *Archaeological Guidance Papers 1–5*
- English Heritage Greater London Archaeology Advisory Service, May 1999 *Archaeological Guidance Papers 6*
- English Heritage Greater London Archaeology Advisory Service, 2009 *Archaeological Guidance Papers 1–5 (consultation draft)* [1. Desk-Based Assessments, 2. Written Schemes of Investigation, 3. Fieldwork, 4. Reporting, dissemination and publication, 5. Popular dissemination and communication of archaeology]

The site finds and records can be found under the site code XSH10 in the MOLA archive. They will be stored there pending a future decision over the longer-term archive deposition and public access process for the wider Crossrail scheme.



7.1 General watching brief Methodology

The General Watching Briefs consisted of a basic monitoring presence to observe the works carried out by the Principal Contractor and any sub contractors without constraint on their working methods (Crossrail 2009c).

ESG soil mechanics were subcontracted by C510 BBMV jv to hand excavate: 7 starter pits to a depth of 1.2m beneath ground level for the 6 boreholes and I& M pit, 4 piezometer starter pits to between 1.1m below ground level (bGL) and shallow trenches for pipes and a pump base, that did not exceeding 0.6 in depth.

The trial pits varied in width between 500mm and 800mm. The reason for their excavation was twofold. Firstly, to ascertain the nature of any underground obstructions (e.g. services), and secondly, to allow for the easier insertion of monitoring equipment (a concrete collar) once boring was completed. It transpired that initially the started pits were too wide to allow safe access for the boring rig and crew. Consequently it was decided to extend the starter pits to the full width after boring was completed. Monitoring and recording during the general watching brief was made by observation from ground level. During boring MOLA staff noted changes in soil type and inclusions by close liaison with the drillers.

A written and drawn record was made in accordance with the principles set out in the Museum of London site recording manual (MoL 1994). The photos and figures included in this report have been specifically chosen so as to illustrate the archaeological/building features encountered. Trench location co-ordinates were supplied to MOLA by the Principal Contractor.

8 Results and observations including stratigraphic report and quantitative report

8.1 Borehole WH_58



Photo 2 starter pit for borehole WH_58, looking east.

Starter pit and borehole WH_58, (Figure 2, Photo 2)	
Location	North-west corner of gardens, border with Ward Broadway
Dimensions	0.68m (N-S) by 0.65m (E-W), starter pit hand excavated to 1.2m below ground level. Borehole monitored to 3.60m bGL.
OS National grid coordinates	53445 181920
LSG grid coordinates	84801 / 36569
Modern Ground Level/top of the slab	113.26m ATD
Modern subsurface deposits	n/a
Level of base of archaeological deposits observed	3.60m bGL
Natural observed	Terrace gravels at 109.66m ATD
Extent of modern truncation	n/a
Archaeological remains	Dating Evidence, Finds, and Samples



[121] between 109.66 and 110.46m ATD. Firm grey-blue alluvial clay, Slightly organic with very occasional small angular flints. Overlaid by [120]	No Finds
[120] between 110.46 and 111.46m ATD. Soft greyish-black silty clay. Overlaid by [119].	No Finds
[119] between 111.46 and 112.01m ATD. Soft mid brown silty sand. Overlaid by [118].	No Finds
[118] between 112.01 and 112.06m ATD. Grey white sandy mortar dump. Overlaid by [117].	No Finds
[117] Surface to 112.06m ATD. Loose silty sand. Occasional butchered animal bone, glass mortar and oyster shell. Frequent inclusions of roof tile, brick and large slag lumps.	[117]: pot 1780–1820 [117]: tobacco pipe 1780–1820
Interpretation and summary	
<p>Boring exposed loose Taplow terrace gravels at 3.6m bGL (109.66m ATD). There was no evidence of <i>in situ</i> brickearth. A horizon approximately 0.8m thick [121] consisting of sterile alluvial clay overlay this between 109.66 and 110.46m ATD, which may indicate the presence of a ditch or stream, of an indeterminable date.</p> <p>Overlying these deposits were 2m+ of post-medieval (predominantly 18th–19th-century) made ground formed from general rubbish, as well as large fragments of slag waste. Context [117] is tightly dated to between 1780 and 1820, implying there has been little disturbance in this area of the gardens in the last 200 odd years.</p>	

8.2 Borehole WH_59



Photo 3, starter pit for borehole WH_59, looking north

Starter pit and borehole WH_596, (Figure 2, Photo 3)	
Location	North-west corner of gardens, border with Ward Broadway
Dimensions	0.66m (N-S) by 0.65m (E-W), starter pit hand excavated to 1.2m below ground level. Borehole monitored to 4.50m bGL.
OS National grid coordinates	5344463 181915
LSG grid coordinates	84820 / 36568
Modern Ground Level/top of the slab	113.66m ATD
Modern subsurface deposits	n/a
Level of base of archaeological deposits observed	4.50m bGL
Natural observed	Terrace gravels at 109.16m ATD
Extent of modern truncation	n/a
Archaeological remains	Dating Evidence, Finds, and Samples



<p>[112] Between 109.16 and 109.96m ATD. Firm grey-brown flinty sand alluvial clay, very occasional fragments of ceramic building material. Overlaid by [111].</p>	<p>No Finds</p>
<p>[111] Between 109.96m and 110.16m ATD. Very compact blue-grey clay. Moderate inclusions of chalk and sandstone. Overlaid by [110].</p>	<p>No Finds</p>
<p>[110] Between 110.16m and 111.46m ATD. Loose brown silty clay. Occasional highly fragmented human and animal bone, mortar, chalk, pot, and oyster shell. Overlaid by [109].</p>	<p>[110]: pot 1690–1700</p>
<p>[109] Between 111.46m and 112.39m ATD. Loose silty grey-brown clays and sand. Occasional butchered animal bone, glass, mortar and oyster shell. Occasional inclusions of roof tile, brick, oyster shell and slag lumps. Overlaid by [108].</p>	<p>No Finds</p>
<p>[108] 112.39m ATD–Surface. Occasional small CMB fragments, burnt flint and fragment of human bone (probably femur)</p>	<p>Not retained</p>
<p>Interpretation and summary</p>	
<p>Overlying Taplow terrace gravels at approximately 4.50m bGL (109.16m ATD) was a thick horizon of redeposited natural strata [112], possibly a levelling deposit. The thin layer of clay [111] overlying this with chalk and sandstone inclusions, may be the <i>in situ</i> remains of a buildings foundations, truncated by later activity, or possibly redeposited (impossible to tell from a borehole), but all probably post medieval or earlier.</p> <p>Overlying these was a series of similar soil horizons, all post medieval in date. The small amount of human remains recovered is most likely residue from the nearby post medieval Quaker cemetery.</p>	

8.3 Borehole WH_60



Photo 4, starter pit for borehole WH_60, looking south

Starter pit and borehole WH_60 (Figure 2, Photo 4, Photo 5)	
Location	North-west corner of Gardens
Dimensions	0.60m (N-S) by 0.65m (E-W), starter pit hand excavated to 1.2m below ground level. Borehole monitored to 3.50m bGL.
OS National grid coordinates	534463 181937
LSG grid coordinates	84820 / 36568
Modern Ground Level/top of the slab	113.62m ATD
Modern subsurface deposits	n/a
Level of base of archaeological deposits observed	3.50m bGL
Natural observed	Sandy Terrace gravels at 110.12m ATD
Extent of modern truncation	n/a



Archaeological remains	Dating Evidence, Finds, and Samples
[126] Between 2.3 and 3.5m bGL, Brick fragments (probably 18th-century some reused, evidently <i>in situ</i> wall/footing.	No Finds
[125] Between 2.3 and 3.5m bGL. Mixed layers of loose sandy silt, becoming darker and more clayey with depth. Occasional pot, glass, butchered animal bone, coal ash and charcoal.	[125]: pot 1720–1800
[124] (Photo 5) Between 0.78 and 0.92m bGL Tiled brick and mortar floor extending across pit	No Finds (bricks not retained)
[123] between 0.24 and 0.78m bGL. Layered mid brownish grey silty sand Occasional animal bone, glass, mortar, oyster shell, roof tile, brick and pot.	[123]: pot 1590–1850 [123]: tobacco pipe 1780–1820 [123]: ceramic wig curler, 18th-century. (see 16.3)
[122] Surface to 0.24m bGL. Loose grey silt, frequent 19th–20th-century bricks and mortar.	No finds
Interpretation and summary	
<p>Taplow terrace gravels at approximately 3.50m bGL appeared to have been truncated by a significant 1m+ thick masonry wall/footing [126], probably dating to the 18th century. The 1.2m thick deposit overlying this probably built up during the 18th century, after the demolition of the building associated with [126], and consisted of waste apparently from a kitchen environment. Sealing this was a fairly rudimentary tiled brick floor [124] (Photo 5), possibly denoting a yard surface. More household rubbish [123] (dated 1780–1850) overlay this, which in turn was sealed by demolition debris [122], possibly formed during or after WWII.</p>	



Photo 5, detail of starter pit for borehole WH_60 showing tiled floor remnant [124], looking south

8.4 Borehole WH_62



Photo 6 starter pit for borehole WH_62, looking east

Starter pit and borehole WH_62 (Figure 2, Photo 6)	
Location	North-west corner of Gardens
Dimensions	0.70m (N-S) by 0.65m (E-W), starter pit hand excavated to 1.2m below ground level. Borehole monitored to 4.82m bGL.
OS National grid coordinates	534506 181925
LSG grid coordinates	84820 / 36568
Modern Ground Level/top of the slab	113.67m ATD
Modern subsurface deposits	n/a
Level of base of archaeological deposits observed	4.82m bGL
Natural observed	Coarse sandy terrace gravels at 108.87m ATD
Extent of modern truncation	n/a
Archaeological remains	Dating Evidence, Finds, and Samples



[107] Between 108.87 and 110.11m ATD. Highly mixed deposit consisting of comparatively thin bands compressed and mixed by boring process. Bands of silty sand, redeposited brickearth clay and sandy gravel. Occasional charcoal, brick, oyster shell and pottery. Overlaid by [106].	[107]: pot 1580–1700 Context [107]: (including utilitarian wares sourced from pothouses located around Harlow, Essex and on those on the Surrey-Hampshire borders see 16.1)
[106] Between 110.11m and 110.57m ATD. Loose grey silty sand. Occasional tobacco pipe stem, chalk, animal bone, charcoal and slate. Overlain by [105].	[106]: delft wall tile probably 18th century (see 16.2)
[105] Between 110.57 and 111.32m ATD. Coarse brown sandy silt. Occasional oyster shell, charcoal, sandstone, marble, chalk and coal. Overlain by [104].	[105]: delft wall tile probably 18th century (see 16.1)
[104] Between 111.32m and 113.38m ATD. Loose dark brown sandy silt. silty sand. Occasional CBM fragments, glass, mortar, animal bone and bricks.	[104]: pot 1812–1830
Interpretation and summary	
Coarse Taplow terrace gravels were recorded at approximately 4.82m bGL (108.87m ATD). The sequence consisted of deposits formed from a variety of colours and compositions, which were difficult to decipher, having been mixed during boring. No finds dated to after 1830, suggesting that little disturbance had taken place in the gardens during the latter 19th century. Topsoil and 20th-century rubble accounted for the top 0.29m.	

8.5 Borehole WH_63



Photo 7 starter pit for borehole WH_63.looking east

Starter pit and borehole WH_63 (Figure 2, Photo 7)	
Location	North-west corner of Gardens
Dimensions	0.48m (N-S) by 0.65m (E-W), starter pit hand excavated to 1.2m below ground level. Borehole monitored to 3.97m bGL.
OS National grid coordinates	534514 181908
LSG grid coordinates	84820 / 36568
Modern Ground Level/top of the slab	113.40m ATD
Modern subsurface deposits	n/a
Level of base of archaeological deposits observed	3.97m bGL
Natural observed	Sandy Terrace gravels at 109.43m ATD. Also includes [103] compacted sterile brickearth between 109.44 and 109.60m ATD.
Extent of modern truncation	n/a
Archaeological remains	Dating Evidence, Finds, and Samples



[103] Between 109.44 and 109.60m ATD. Compact laminated sterile brickearth. Overlaid by [102].	No Finds
[102] Between 109.60 and 110.20m ATD. Compact grey brown clay silt. Occasional angular flints, charcoal, pottery and Human tibia fragment (fresh break). Overlaid by [101].	[102]: pot 1670–1900 (see 16.1)
[101] Between 110.20 and 112.40m ATD. Mixed deposits, predominantly clay silt, band of sandy gravel at 1.3m bGL. Occasional oyster shell, charcoal, mortar, animal bone. Overlaid by [100].	No Finds
[100] Between 112.40 and 113.32m ATD. Loose brown sandy silt. Human phalange found at 0.15m bGL.	(19th/20th-century tobacco pipe and bricks- not retained)
Interpretation and summary	
<p>Loose Taplow terrace gravels were recorded at approximately 3.97m bGL, overlaid by a thin band of sterile laminated brickearth [103]. Within the overlying approximately 600mm thick deposit [102] a large fragment of human tibia was recovered evidently damaged by the boring process. Potentially this may have come from an <i>in situ</i> burial, or one disturbed by later post-medieval activity. The overlying deposits appeared to have been gradually built up over the subsequent years, possibly after the cemetery was abandoned during the early 19th century. This hypothesis is supported by the wide pottery dates recorded from the context of 1670–1900. Within context [100] at a depth of only 150mm a single well-preserved human phalange was recovered. This may suggest that shallower burials survive in this area of the gardens.</p>	

8.6 Manhole XR_50901



Photo 8 starter pit for manhole XR_50901, looking north

Starter pit for manhole XR_50901 (Figure 2, Photo 8)	
Location	North-west corner of Gardens
Dimensions	0.66m (N-S) by 0.65m (E-W), starter pit hand excavated to 1.2m below ground level. Borehole monitored to 3.30m bGL.
OS National grid coordinates	534462 181929
LSG grid coordinates	84820 / 36568
Modern Ground Level/top of the slab	113.66m ATD
Modern subsurface deposits	n/a
Level of base of archaeological deposits observed	110.41m ATD
Natural observed	Sandy Terrace gravels at 109.16m ATD (deepest point). [116] Between 110.41 and 110.66m ATD. Sterile reddish grey brickearth.
Extent of modern truncation	n/a
Archaeological remains	Dating Evidence, Finds, and Samples



[115] Between 110.66m ATD and 110.76m ATD. Thin blueish-grey clay, slightly organic with inclusions of CBM fragments (post-medieval), weathered chalk lumps and heavily decayed leather (not retained). Overlain by [115].	No Finds
[114] Between 110.76 and 111.66m ATD. Firm brownish black silty clay. Occasional Iron, animal bone and tobacco pipe stem (all possibly intrusive). Overlain by [113].	No Finds
[113] Between 111.66 and 113.34m ATD. Soft brown silty sand. Quite sterile. 19th-century east-west aligned ceramic drain recorded at 0.3m bGL (113.23m ATD).	[113]: pot 1590–1800 (see 16.1)
Interpretation and summary	
Taplow terrace gravels were recorded at 3.30m bGL, overlaid by a 0.25m thick band of brickearth [116]. The thin overlying horizon of clay [115], with limited organic survival may be the remnant of a waterlain deposit, although there is the suspicion that this redeposited within a later deposit. Inclusions of ceramic building material suggest this feature is post-medieval or later. The remainder of the deposits recorded appeared to be post-medieval soil horizons, most likely deposited over a number of years, probably after the burial ground had fallen into disuse sometime prior to 1850. This suggests that this borehole probably fell outside the burial locations. The 19th-century ceramic drain recorded near the surface implies that there has been little disturbance in the area in recent times.	

8.7 Pipe trenches and pump base

Pipe trench and pump base (Photo 9)	
Location	Pipe trench ran from the north-western corner of the gardens south through pump area, running S–E to P1, then east splitting into two at P5
Dimensions	Pipe trench 0.4m wide by 0.6m deep/ extended to 1.2m by 1.2 at well junction. Pump base 4m E–W by 5.5m N–S and 0.4m deep
OS National grid coordinates	various
LSG grid coordinates	various
Modern Ground Level/top of the slab	113.26–113.72m ATD
Modern subsurface deposits	n/a
Level of base of deposits observed	112.66m ATD
Natural observed	Not observed
Extent of modern truncation	Occasional shallow 20th-century disturbance
Archaeological remains	Dating Evidence, Finds, and Samples
n/a	No Finds
Interpretation and summary	
The deposits observed were formed entirely from garden soils dating from the 20th-century. Occasionally very modern truncations were encountered, in the form of sandy lenses and small fragments of concrete and brick, all probably associated with general maintenance of the gardens	



Photo 9 shallow pipe trench exposing garden soil deposits, looking east

8.8 Piezometer starter pits

All heights in ATD	PW1	PW46	PW5	PW6	PW7
Location (area of gardens)	north-west	north-west	central	central-east	central-east
Dimensions	Starter pit: 800mm by 600mm	Starter pit: 800mm by 600mm	Starter pit: 800mm by 600mm	800m by 600m, 0.7m deep	Starter pit: 800mm by 600mm
OS/LSG coordinates	534447 181938 84804 36587	534459 181915 84816 36564	534488 181914 84844 36562	534522 181906 84873 36553	534510 181925 84867 36572
Ground level	113.40	113.61	113.79	113.79	113.65
Modern subsurface deposits (bGL)	Turf/soil 0–0.1m 0.1–0.2m sand 0.2–4m coal ash	Turf/soil 0–0.1m. 0.1–0.8m coal ash+brick 0.8–3m coal ash	Turf/soil 0–0.1m. 0.1–0.8m coal ash+brick 0.8–3m coal ash	Turf/soil 0–0.3m. 0.3–3.99m silty sand, occ brick/concrete	Turf/soil 0.– 0.4m. 0.4–2m coal- ashy sandy silty
Base of archaeological deposits observed	109.40m	110.61m	110.79m	109.80m	111.65m
Natural observed	Terrace gravels at approx. 109.40m	Terrace gravels at approx. 110.61m	Terrace gravel at approx. 110.7m9	Sandy Terrace gravels at approx. 109.80m	Terrace gravels at approx. 111.65m London clay at 103.65m

Table 2 piezometer starter pit results

9 Assessment of results against original research aims

The draft revised GLAAS guidelines (English Heritage 2009) require an Assessment of results against original expectations (these no longer mention the criteria for assessing national importance).

9.1 Original research aims

The original research objectives were met as follows:

- To recover any human remains encountered in the starter pits or brought up by the boreholes, either for reburial on site in the starter pits, or for later reburial by an exhumation contractor employed by the Principal Contractor or Crossrail.

A small quantity of human remains were recovered, these were labelled, bagged and reburied (see below) in the north-west area of the gardens, near to WH_58 (see Figure 2).



Photo 10 Reburial of human remains

- To ensure that any human remains are dealt with in accordance with the conditions of a burial licence obtained from the Ministry of Justice, and its extension letter.

MOLA were fully compliant with the conditions stipulated in burial licence (No **12 0700** issued on 23 May 2012, extended to 31st December 2012 as well as (when in attendance) ensuring the Principal Contractor respected the terms of the license.

- To record any other archaeological remains or deposits that may be present above the natural geology (brickearth).

Human remains were recorded (although potentially residual), along with overlying remains of 18th to 19th-century occupation (brick floors and a wall). Extensive dumping from the 18th-century and later was frequently observed, particularly within the trial pits in the western area of the gardens, and almost entirely within the shallow pipe trenching, giving the impression that there had been little disturbance over the past 200 odd years.

10 Statement of potential archaeology

The watching brief has **demonstrated the potential survival** of a ditch or paleochannel at a depth of 3.50m bGL in the western area of the site, next to Ward Broadway, although given that this was recorded within a deep borehole(s) (that can give conflicting results) the findings may be potentially misleading. Post-medieval deposits, including brick footings/floors as well as dump/levelling layers survive extensively across the site, with little later disturbance. Very tentative evidence for *in situ* burials was recorded, and the quantity of redeposited remains recovered point towards there being a high likelihood that many burials are truncated/disturbed (at least in the central and northern parts covered by the interventions), or that the majority of the burial ground is located in the central and southern part of the gardens.

10.1 Importance of Resources

The importance of the excavated remains has been assessed using professional judgement (including consulting MOLA's buildings specialists), informed, where applicable, by the criteria for assessing the national importance of monuments (DCMS 2010, Annex 1)

The archaeological remains identified in the fieldwork are provisionally assessed as being of low importance, as it is impossible to verify whether the waterlain deposits are indeed *in situ*. The human remains consisted of two fragments, both probably disarticulated and whilst of some rarity value coupled with their intrinsic importance they have not added significantly to the information regarding the Quaker burial.

The remaining post-medieval features identified are of common everyday use and of widespread construction methods and materials. They are therefore assessed as being of **low importance**.

11 Conclusions

11.1 Geology

Natural geology in the form of Taplow terrace gravels was recorded across the site at each intervention. Gravels were recorded between 108.87 m ATD in borehole WH_63 and 110.12m ATD in Borehole WH_60. Generally depths of natural geology were consistent across the site, and are not sufficiently variable to imply truncation. Two thin bands of apparently naturally formed brickearth were recorded at two locations (WH_63 and XR50901); these were approximately 0.5m deeper than those recorded in GI Package 1 boreholes WH7R & WH8CPT, but still roughly comparable.

11.2 Roman and medieval remains

No remains from these periods were conclusively identified. The possible undated paleochannel could conceivably be medieval or earlier.

11.3 Post-medieval remains

All of the dated archaeological remains encountered date to this period (see 5). The earliest deposit (recorded within a borehole) is context [102] between 109.60 and 110.20m ATD in borehole WH_63. This context may indicate the survival of *in situ* burials (a single fragmented of human tibia was recovered; see 8.5) associated with the Quaker burial ground in use between the 17th–19th centuries, tentatively supported by the single sherd of pottery recovered from the borehole dated 1670–1900. Given the limited size of the trial holes, a relatively high quantity of fragmented disarticulated human bone was recovered, predominantly from higher deposits, implying that remains had been extensively disturbed by later activity and subsequently redistributed across the site. Little definitive information regarding the burial ground was recovered. This may be explained by; the boreholes missing the burials, the grave yard having not been fully utilised, and/or the majority of burials' being located in the south of the gardens. A plan of the Whitechapel (Society of Friends see Photo 1) burial ground (after 1853 the latest burial) shows that less than ¼ of approximately 900 plots had been allocated by the mid-19th century. The earliest burials are from the beginning of the 19th century; significantly, earlier burials potentially dating back to the end of the 17th century may have been omitted.

In the north-west part of the gardens, 18th-century building foundations (see 17) and multiple phases of brick and tiled floor survived at a shallow depth (1m beneath ground level). These are likely tenements indicated on 18th-century maps (see 8), that lined the northern and western sides of the gardens, that were subsequently levelled following bombing during the Second World War. Stratigraphically associated finds from this location all date to the 18th and 19th centuries, including imported decorated Chinese porcelain, a Westerwald chamber pot, delftware tiles, and a wig curler.

The remaining deposits appear to consist of levelling and make up dumps dating to no later than the latter half of the 19th century, apart from very occasional shallow 20th century intrusions, probably dating to during or after WWII.



12 Publication and dissemination proposals

The Watching Brief results will initially be disseminated via this report and the supporting site archive of finds and records (including digital data).

A summary report will be published in the London Archaeologist excavation round up and also deposited with the LAARC.

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The watching brief was supervised by the author Sam Pfizenmaier (Senior Archaeologist) and David Sankey (Senior Archaeologist), with specialist input from Ian Betts (building materials), Nigel Jefferies (pottery and tobacco pipes) and Angela Wardle (registered finds). The fieldwork was managed by MOLA Assistant Contracts Manager Nicholas Elsdon and Contracts Manager Elaine Eastbury.



15 NMR OASIS archaeological report form

OASIS ID: molas1-136421

Project name	Crossrail Vallance Gardens GWB
Short description of the project	Natural Taplow terrace gravels were recorded at each borehole location between 3.25 and 4.90m below street level. In the extreme eastern edge of the gardens, waterlain deposits were recorded possibly from an undated ditch or palaeochannel. Immediately to the north two phases of brick floor, possibly delineating yard surfaces and associated deposits were exposed in a starter pit. One particular context containing fine Chinese porcelain, a wig curler and imported German stoneware gives us a snapshot of daily life at the time. A subsequent borehole suggested that substantial brick foundations survived to a considerable depth in this area, most likely associated with 18th-19th century terraced buildings that had been levelled following World War II. Little in situ remains survived from the period when the gardens were in use as a (Quaker) burial ground, from the late 17th to 19th centuries. Only tentative evidence was recorded of in situ remains. Disarticulated human bone was documented in each intervention, generally in the higher deposits, implying that the remains had been well disturbed and subsequently redistributed across the site. Chalk and sandstone inclusions drilled from one borehole may have been from an in situ structure of unknown date, but are just as likely arbitrary inclusions. The majority of the deposits were dated by inclusions (ceramics and tobacco pipes) from the 18th-19th centuries, and were recorded within substantial levelling/ make up dumps. The watching brief demonstrated that there is extensive survival of low grade post medieval deposits across the site, the majority formed once the burial ground had gone into disuse. 18th-19th century domestic buildings survive at a shallow depth in the north of the gardens, as predicted through contemporary mapping. There is limited evidence of Victorian and latter disturbance, again supported by documentation that shows little change following the gardens establishment in the 19th century.
Project dates	Start: 31-07-2012 End: 06-09-2012
Previous/future work	No / Not known
Type of project	Recording project
Site status	None
Current Land use	Other 5 - Garden
Monument type	FLOOR Post Medieval
Monument type	WALL Post Medieval
Significant Finds	POT Modern
Significant Finds	WIG CURLER Post Medieval
Investigation type	"Watching Brief"
Prompt	Planning condition
Site location	GREATER LONDON TOWER HAMLETS TOWER HAMLETS Vallance Road Gardens
Postcode	EC1



Study area	6.00 Square metres
Site coordinates	LL - 34494 81910 (decimal) LL - 34494 00 00 N 81910 00 00 E (degrees) Point
Lat/Long Datum (other)	51.520036
Height OD / Depth	Min: 8.87m Max: 10.12m
Name of Organisation	MOLA
Project brief originator	Crossrail
Project design originator	Crossrail
Project director/manager	Elaine Eastbury
Project supervisor	Sam Pfizenmaier
Type of sponsor/funding body	Crossrail Ltd
Name of sponsor/funding body	Crossrail
Physical Archive recipient	LAARC
Physical Contents	"Ceramics","other"
Digital Archive recipient	LAARC
Digital Contents	"Ceramics","Human Bones"
Paper Archive recipient	LAARC
Paper Contents	"Ceramics","Human Bones","Metal"
Paper Media available	"Matrices","Notebook - Excavation',' Research',' General Notes"
Title	Crossrail Vallance Road Gardens GWB Fieldwork report
Author(s)/Editor(s)	Mr S Pfizenmaier
Date	2012
Issuer or publisher	MOLA
Place of issue or publication	London
Description	A4 ringbound

16 Appendices:

16.1 Post-medieval pottery and tobacco pipes

Nigel Jefferies

This text considers the 17th–19th-century dated pottery and clay tobacco pipes retrieved in eight contexts from this site.

The 28 pottery vessels (reconstructing from 41 sherds; weight 467g) included a range of London made types, notably delftware and redwares, supplemented by Rhenish sourced stoneware and Chinese made porcelain. Overall this assemblage is broadly dated 1580–1850 and not particularly well preserved; with the exception of the pottery in [125], few joining sherds were retrieved.

Comprising five bowls, clay tobacco pipe was retrieved in contexts [117] and [123], with three bearing relief moulded maker's marks initials on either heel side (<1>–<3>). The AO27 bowl, dated 1780–1820 is most common type (3) and includes two examples <2> <3> marked with the initials EM (maker unknown) and another <1> displaying the initials IB, most likely James Bourne of Bethnal Green whom made pipes between 1799–1832.

The small quantities of pottery and pipes found present well dated evidence of mostly 18th to early 19th-century landuse in this part of Whitechapel, with an emphasis on Chinese porcelain for taking hot drinks, clay tobacco pipes used in enjoying tobacco, and supplemented by London made utilitarian redwares.

Table 3 Pottery and clay tobacco pipe from XSH10 by context, type, dating and statistical counts

Context	Type	TPQ	TAQ	Sherd count	Vessel count	Weight (grammes)
102	PMPOT	1670	1900	1	1	5
104	PMPOT	1812	1830	5	4	15
107	PMPOT	1580	1700	3	3	9
110	PMPOT	1690	1700	7	6	82
113	PMPOT	1590	1800	5	3	57
117	PMPOT	1780	1820	4	2	19
117	PIPE	1780	1820	2	2	-
123	PMPOT	1590	1850	3	2	162
123	PIPE	1780	1820	3	3	-
125	PMPOT	1720	1800	13	7	118
			Total	43	30	467



Summary of key contexts:

Context [104]: The latest landuse dated by pottery was recovered in [104] and comprised fragmented blue printed transfer-printed pearlwares in prints common to the first quarter of the 19th century.

Context [107]: Dated by pottery to 1580–1700, this deposit contained fragmented utilitarian wares sourced from pothouses located around Harlow, Essex and on those on the Surrey-Hampshire borders.

Context [125]: This deposit contained the most pottery recovered from one feature on this site (13 sherds from 7 vessels), including decorated Chinese porcelain (3 vessels), a Westerwald stoneware chamber pot and a London made delftware plate decorated with Chinese figures in a garden landscape. The three clay tobacco pipes also found include two AO27 examples marked with the initials EM.

16.2 Building Materials

Ian Betts

Two small fragments of tin-glazed 'delft' wall tile were recovered from the site. One (context [105] <4>) is painted in blue and white and shows part of a landscape scene with a church spire. The small area of surviving pattern makes it difficult to date, but it is probably 18th-century. The back shows the tile has been cut and broken to fit into a particular area of the wall. Most delft wall tiles used in London were set around fireplace surrounds, which is the likely origin of this example.

The other delft tile (context [106] <5>) has a distorted upper surface. There is no indication where the tile was originally plain or decorated. There is mortar covering part of the upper surface suggesting the tile was of too poor quality to be used as walling. This tile is also probably also 18th-century.

16.3 Registered find

Angela Wardle

Ceramic wig curler

<6>, [123]

Complete; L 69.4mm; Diam (max) 14.2mm, Diam (at centre) 9.8mm. The pipeclay wig curler is of classic cylindrical form with a narrow 'waist' and bulbous terminals. The flat ends are unstamped. The form is typical of those in use in the 18th century, at a time when a wig (peruke or periwig) was an essential item of male attire. It is likely to be a little earlier than the date of the context, ascribed by a clay tobacco pipe to the late 18th/early 19th-century.



Wigs were universally fashionable for men during the 18th century, until about 1790, with a great variety of available styles. Wig curlers were used to set the damp hair which was rolled with paper around the purpose-made cylinder and heated until the curls were set. They are found in a wide range of sizes, reflecting the required size of the curl and are sometimes found with maker's marks (Crummy 1987, 24–5). London has produced numerous wig curlers from excavations, with over 130 in the database of current sites.

Crummy, N, 1987 The post-Roman small finds from excavations in Colchester 1971–85, Colchester Archaeological Rep 5, Colchester.

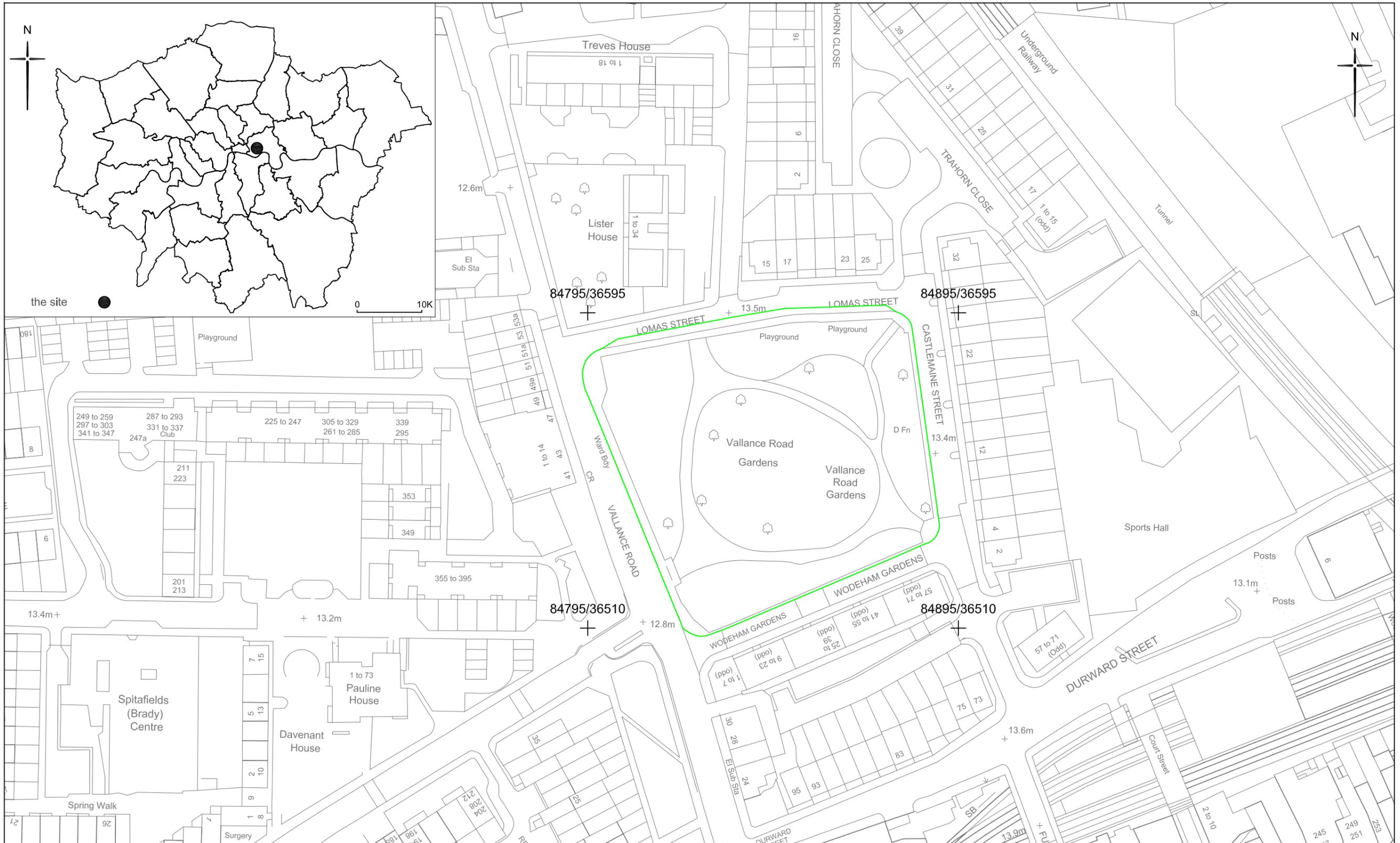


Fig 1 Location of Vallance Road Gardens interventions

Site outline

1:1000 @ A3
 0 50m

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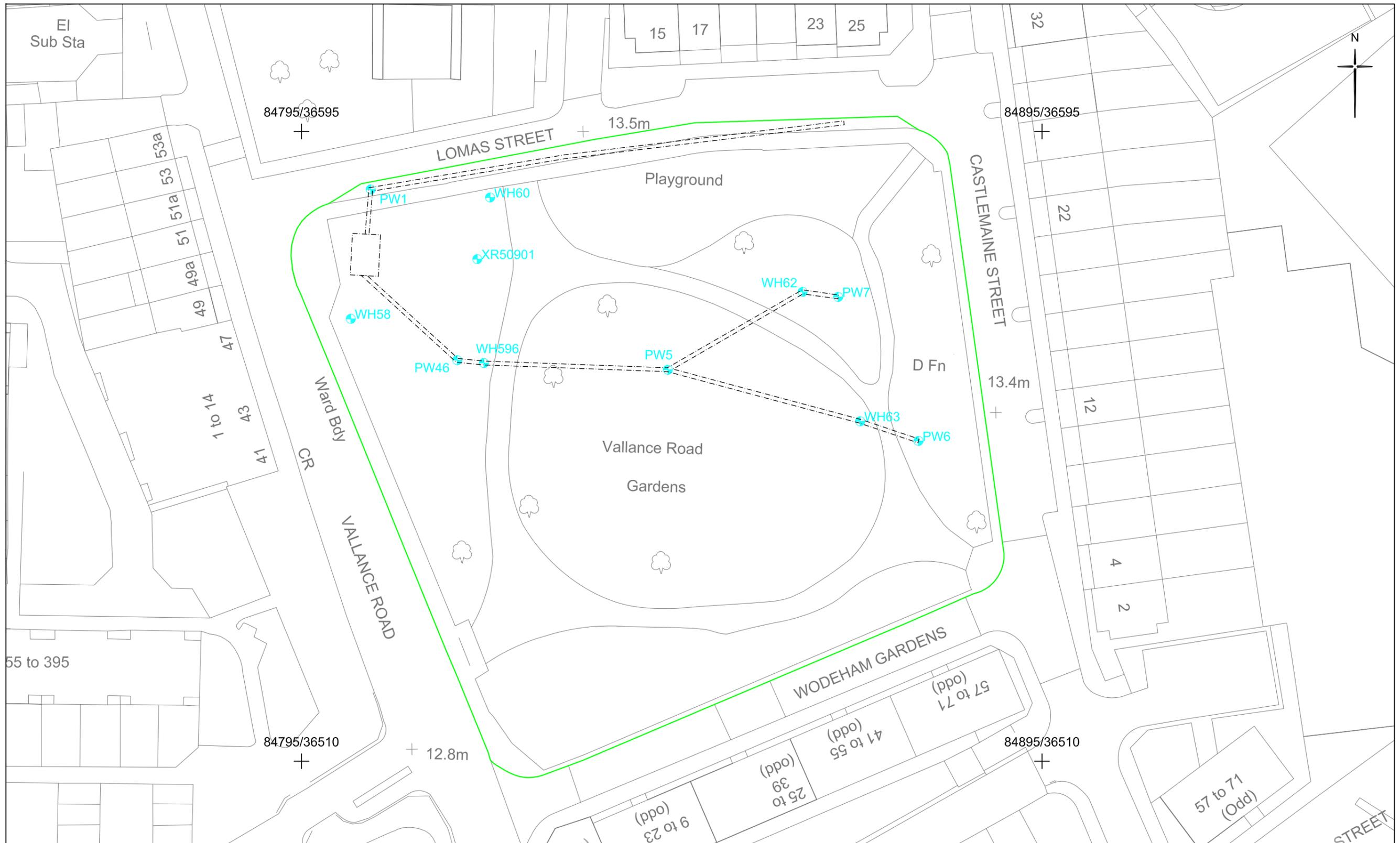


Fig 2 Monitored works in Vallance Road Gardens (XSH10)

- Site outline
- Pipe trenches and pump base
- Borehole, manhole and piezometer starter pits

1:500 @ A3
 0 25m

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