

WESTFIELD LONDON – PHASE 2

Ariel Way London W1

London Borough of Hammersmith and Fulham

Report on an archaeological evaluation

October 2017

Document Number: W2-MOL-Z1-00-RP-R-00004

Revision: P01

Status Code: S2

Purpose of Issue: For Information



**Westfield London - Phase 2
Ariel Way
London
W12**

Site Code WSF14
NGR 523502 180462
OASIS reference molas1-272583

Planning reference 2013/05350/FUL
Condition Number 10

Document number: W2-MOL-Z1-00-RP-R-00004

Revision: P00

Status code: S2

Purpose of Issue: For information

Report on archaeological evaluation

Sign-off history:

Issue No.	Date:	Prepared by:	Checked/ Approved by:	Reason for Issue:
1	24.03.17	Tony Mackinder	Michael Smith	First issue
2	29.03.17	Michael Smith	Michael Smith	Document control comment
3	09.10.17	Tony Mackinder	Michael Smith	Updated with Trench 1

Graphics: Judit Peresztegi

© MOLA

Mortimer Wheeler House, 46 Eagle Wharf Road, London N1 7ED tel 0207 410 2200
email generalenquiries@mola.org.uk

MOLA is a company limited by guarantee registered in England and Wales
with company registration number 07751831 and charity registration number 1143574.
Registered office: Mortimer Wheeler House, 46 Eagle Wharf Road, London N1 7ED

Summary

This report presents the results of an archaeological evaluation carried out by MOLA at Westfield London – Phase 2, Ariel Way, W12. The report was commissioned from MOLA by the client Westfield Europe Ltd.

In accordance with the Written Scheme of Investigation (MOLA 2014a) five evaluation trenches (out of the eight proposed) were excavated on the site between October 2014 and September 2017. Much of the site was known to be disturbed by 19th century quarrying and 20th century railway tunnels.

Only post-medieval deposits were found and these are backfilling the 19th century quarry pits identified from cartographic sources.

The report concludes that only post-medieval archaeological remains of low significance may be impacted where new deep basements are proposed by the redevelopment.

Contents

Summary	1
Contents	2
1 Introduction	3
2 Topographical and historical background	4
3 Evaluation methodology	5
4 Results of the evaluation	6
5 Archaeological potential	12
6 Proposed development impact and conclusions	14
7 Acknowledgements	15
8 Bibliography	16
9 OASIS archaeological report form	19

List of Illustrations

Front cover: The site on the Ordnance Survey (2nd edition) map of 1893

<i>Fig 1 Site Location</i>	17
<i>Fig 2 Areas of evaluation</i>	18

Photographs

Photo 1 Trench 1 (looking south-west) showing deposits and the amount of truncation encountered.	6
Photo 2 Trench 2 (looking north-west) showing deposits sloping down to the north-east.	7
Photo 3 Southern end of trench 6 (looking south).	8
Photo 4 Section through deposits in the northern end of trench 6 (looking west).	9
Photo 5 Trench 7 (looking west) showing deposits above natural.	10
Photo 6 Trench 8 (looking east) showing deposits.	11

1 Introduction

1.1 Site background

- 1.1.1 An archaeological evaluation was carried out by MOLA at Westfield London – Phase 2, Ariel Way, London, W12 ('the site') between 14 October 2014 and 14 September 2017 (see *Fig 1*). This document is the Report on that work.
- 1.1.2 Originally 8 evaluation trenches (numbered 1 to 8) were proposed in the WSI (Section 3 MOLA 2014a), however, only trenches 1, 2, 6, 7 and 8 were investigated. Trenches 3, 4 and 5 were not dug as they were later found to be located over railway tunnels that would have removed any archaeological deposits. GLAAS agreed they did need not be excavated. The final trench was only investigated in September 2017 following the demolition of Network House.
- 1.1.3 A written HEA was previously prepared, which covered the whole area of the site (MOLA 2013, updated 2016). This document should be referred to for information on the natural geology, archaeological and historical background of the site, and the initial interpretation of its archaeological potential.
- 1.1.4 The trenches were excavated sequentially as they were made available, with interim reports prepared after each phase (MOLA 2014b, 2015 a and b and 2016). This report brings together all the interventions and supersedes the interim reports.

1.2 Planning background

- 1.2.1 The legislative and planning framework in which the evaluation took place was fully set out in the HEA which informed the project design for the evaluation (see Section 9, MOLA 2013, 2016). To summarise here:
- 1.2.2 The evaluation was carried out to fulfil a condition attached to the Planning Consent given by the local authority (reference 2013/05350/FUL and condition No 10 that dealt with the archaeology).

1.3 Scope of the evaluation

- 1.3.1 Evaluation is defined by Historic England as intended to provide information about the archaeological resource in order to contribute to the:
- 1.3.2 - formulation of an appropriate response or mitigation strategy to planning applications or other proposals which may adversely affect such archaeological remains, or enhance them; and/or
- 1.3.3 - formulation of a proposal for further archaeological investigations within a programme of research
- 1.3.4 An archaeological evaluation is a limited fieldwork exercise designed to test the conclusions of preliminary desk based work. It is not the same as full excavation.
- 1.3.5 The evaluation was carried out within the terms of the relevant Standard for evaluation specified by the Chartered Institute for Archaeologists (CIFA, 2014).
- 1.3.6 All work has been undertaken within the research priorities established in the Museum of London's A research framework for London Archaeology, 2002.
- 1.3.7 All work was undertaken within research aims and objectives established in the Written Scheme of Investigation for the evaluation (see Section 2, MOLA 2014a)

2 Topographical and historical background

2.1 Topography and geology

- 2.1.1 The site itself is relatively flat and current ground level lies at 6.7–8.0m Ordnance Datum (OD). Ground level along the northern and eastern perimeter is 7.4–7.4m OD. At the junction of Wood Land and Ariel Way ground level is 6.7m OD, this rises toward the east with a ground level of 7.3m OD at the centre of the site. Ground level in the centre of the roundabout at the south of the site is slightly higher, at 7.9m OD, reflecting the beginning of a ramped approach road that runs eastwards to meet the elevated road, the West Cross Route (A3220), at 13m OD.
- 2.1.2 Prior to the current works, the site was occupied by a mixture of 20th century commercial and industrial units, an office building and the Westfield Shopping Centre. Disused tunnels of the London Underground crossed the western edge of the site.
- 2.1.3 British Geological Survey (BGS) sheet 256 shows that the site is located on brickearth (also known in London as the Langley Silt Complex) which is a fine-grained silt believed to have accumulated by a mixture of processes (e.g. wind, slope and freeze-thaw) mostly since the Last Glacial Maximum around 17,000BP. The brickearth overlays Kempton Park Gravel.

2.2 Archaeological background

- 2.2.1 A detailed description of the geology, archaeology and history of the site was provided in the earlier Historic Environment Assessment (MOLA 2013, 2016). A brief resume is provided here:
- 2.2.2 **Prehistoric, Roman and medieval periods** – remains dating to these periods are not expected as none have been found previously in the area of the site.
- 2.2.3 **Post-medieval period (1485 to present)** – the site remained rural into the 19th century the area only becoming developed with the expansion of the railways from the 1860s onwards. By the 20th century the site was the Kensington Borough Council Depot and a railway depot. There is the possibility of post-medieval farm buildings, as farm/residential buildings are known to have existed in the western part of the site in the area of Network House, from at least the mid-18th century and probably earlier. There could also be remains of late 19th century brickearth extraction and possibly brick manufacture/kilns as seen on the Ordnance Survey map of 1893 (see front cover) also early 20th century railways and associated infrastructure.

3 Evaluation methodology

3.1 Field methodology

- 3.1.1 Four evaluation trenches were investigated. There were intended to measure 20m x 1.8m. Trenches 1 and 2 were significantly reduced in size due to the site constraints with the consent of GLAAS.
- 3.1.2 The slab/ground was broken out and cleared by contractors under MOLA supervision. Trenches were excavated by machine by the contractors, and monitored by a MOLA supervisor.
- 3.1.3 Archaeological excavation was carried out in accordance with the Written Scheme of Investigation (MOLA 2014a)
- 3.1.4 Trench locations were either surveyed on site by MOLA surveyors or plotted by the on-site project surveyors who supplied MOLA with the trench co-ordinates.
- 3.1.5 Where referenced in this report (eg '3.45m OD'), levels relate to OS Ordnance Datum and were calculated by measurement from a nearby spot height on a plan provided (ref. provided) or taken from GPS survey points set out by the on-site surveyors.

3.2 Recording methodology

- 3.2.1 A written and drawn record of all archaeological deposits encountered was carried out in accordance with the Written Scheme of Investigation (MOLA 2014a).

3.3 Site archive

Number of trench record sheets	5
Number of overall location plans	0
Number of Context (SU) sheets	16 (numbered 10-25)
Number of photographs	42
Number of Plan sheets	6
Number of Sections	3

4 Results of the evaluation

Of the 8 trenches originally proposed in the WSI (MOLA 2014a), only 5 were archaeologically investigated. For trench locations see Fig 2

4.1 Trench 1

Trench 1	
Location	Network House
Dimensions	5.0m (NW-SE) x 2.0m (SW-NE) x 1.40m deep
Modern ground level	c 7.23 – 7.27m OD
Base of modern ground level	c 6.57m to 6.27m OD
Depth of archaeological deposits seen	1.40m
Level of base of deposits observed	c .5.87m OD
Natural observed	c 6.07m OD

- 4.1.1 The trench size was restricted by a combination of disused London Underground tunnels and site constraints. There was up to 1.0m of modern crush associated with the demolition of Network House. These deposits were removed by machine.
- 4.1.2 The lowest deposit was discoloured orange clay natural at c 6.07m OD. This was overlain by a thin band of organic silt and then a 19th century dump of grey clay. Although the highest archaeological survival was at 6.57m OD in the available area for investigation, most of the trench was truncated by foundations associated with Network House.



Photo 1 Trench 1 (looking south-west) showing deposits and the amount of truncation encountered.

4.2 Trench 2

Trench 2	
Location	To east of Silver Road
Dimensions	3.40m (SW-NE) x 2.70m (SE-NW) x 2.0m deep
Modern ground level	c 7.15m OD (S) to 7.20m (N)
Base of modern ground level	c 6.65 to 6.70m OD
Depth of archaeological deposits seen	2.0m
Level of base of deposits observed	c.5.15 to 5.20m OD
Natural observed	N/A

- 4.2.1 The trench size was limited due to disused London Underground tunnels located on three sides and further limited from the size specified by a modern gully to the north east that had to be protected. The car park surface was 0.30m thick laid over a further 0.25m modern make-up deposit. Two modern ceramic pipes at c 0.90m below ground level ran across the trench from the west corner to the east corner. These were removed to allow further excavation by machine to continue.
- 4.2.2 Six deposits were recorded; the lowest a blue grey silt [25] was found at c 5.25m OD that was probably the top of weathered natural brickearth but this could not be confirmed due to the depth. The successive deposits above this, numbered [21] to [24], all dipped down to the north east and all appeared to be backfilling a large cut, possibly a quarry. Artefacts were limited to a few sherds of 19th century pottery (none retained). The highest deposit [20] may have been a modern levelling deposit due to the presence of some modern bricks.



Photo 2 Trench 2 (looking north-west) showing deposits sloping down to the north-east.

4.3 Trench 6

Trench 6	
Location	To east of Silver Road
Dimensions	20m x 2m x 4.5m deep
Modern ground level	c.8.00m OD
Base of modern ground level	c.6.00m OD
Depth of archaeological deposits seen	4.50m below ground level
Level of base of deposits observed	c.3.50m OD
Natural observed	c.3.5m-4.5m OD

- 4.3.1 Due to logistical problems, the trench was excavated in two halves, the southern half being backfilled before the northern half was excavated. The agreement of GLAAS was obtained for this approach.
- 4.3.2 The natural orange yellow brickearth and gravel layer was observed at c 4.5m OD in the north of the trench, dipping down to c 3.5m OD in the south of the trench. It is likely that this slope indicates the edge of the 19th century brickearth quarry that lies to the south. Overlying the natural brickearth was a layer [19] of medium red brown silty clay which is likely a dump or levelling deposit. Above this was a layer [18] of redeposited natural with ceramic building material (CBM) and isolated dumps of oyster shell. Sealing this was a dark brown clay [17] make-up deposit with frequent chalk, slate and CBM inclusions. Overlying there was approximately 2m of modern made ground and rubble from the demolition of previous buildings.



Photo 3 Southern end of trench 6 (looking south).



Photo 4 Section through deposits in the northern end of trench 6 (looking west).

4.4 Trench 7

Trench 7	
Location	At the far north of the site
Dimensions	20m x c 3.50m x 3m deep
Modern ground level	7.13–7.15m OD
Base of modern ground level	6.75m OD
Depth of archaeological deposits seen	2.16m
Level of base of deposits observed	4.23m OD
Natural observed	4.23–4.07m OD

- 4.4.1 Overlying the clean, natural brickearth at 4.43–4.23m OD was a layer of stained black brickearth [15] which was sterile, indicating that it had not been worked. This staining could have been due to contamination from the piles for the modern warehouses, leaching of substances when the warehouses were in use or from the several train lines running next to the site.
- 4.4.2 Layer [14] above this, from 5.63m OD, was a mixed backfill or dump deposit with frequent charcoal and CBM fragments. This was probably used to infill the late 19th century quarry on the site. A number of ceramic bottles were recovered from this layer dated to c 1810–1910. One was inscribed with 'Ray & Son' Westminster, 1816 and probably contained ginger beer, these finds were not retained.
- 4.4.3 Overlying this layer at 6.39m OD was a redeposited brickearth deposit [13] containing occasional CBM and mortar fragments. This may also relate to the backfilling of the quarry.
- 4.4.4 Above layer [13] at 6.75m OD was the make-up layer [12] for the road that has since been removed. This deposit was sealed by the remains of the road and modern demolition material to 7.15m OD.



Photo 5 Trench 7 (looking west) showing deposits above natural.

4.5 Trench 8

Trench 8	
Location	To east of Silver street warehouses
Dimensions	20m x 2m x 1.20m deep (sondage to max. 2.80m)
Modern ground level	8.28–8.30m OD
Base of modern ground level	7.52m OD
Depth of archaeological deposits seen	2.09m
Level of base of deposits observed	5.48m OD
Natural observed	6.0–5.48m OD

- 4.5.1 Overlying the natural brickearth was a layer [11] of dark grey sticky silty-brickearth dated by ceramics to 1666–1900. The function of this was unclear but it may be waste material related to the nearby quarrying of brickearth or part of the demolition of previous buildings on the site.
- 4.5.2 Layer [10] above was a very mixed deposit of silty-brickearth with moderate CBM fragments and charcoal, dated to 1666–1900. Due to the quantity of brick remains these could be related to the demolition of the buildings in the area to build the modern warehouses and road, or waste material or backfill from the quarrying of brickearth. This deposit was sealed by 0.76m of made ground and tarmac.



Photo 6 Trench 8 (looking east) showing deposits.

4.6 The finds

4.6.1 No finds were retained.

4.7 The site as a whole

4.7.1 Assessing the results from all the trenches, and dating evidence where it exists, it appears that archaeology is limited to the post-medieval period and relates mainly to the backfilling of 19th century quarrying pits. Cartographic evidence suggests that the majority of the site had been quarried by the later 19th century, and other parts of the site had been truncated by London Underground railway tunnels.

5 Archaeological potential

5.1 Answering original research aims

The following research aims from the WSI (section 2.2, MOLA 2014) can be answered;

- *What is the nature and level of natural topography?*

In the NE corner of the site natural brickearth was found that dipped down from 6.0m OD in the east to 3.5m OD in the west. Elsewhere on site, a weathered natural was seen at c 5.25m OD in Trench 2.

- *What are the earliest deposits identified?*

The earliest deposits appear to be 19th century demolition deposits in Trench 7 though there may be some earlier material mixed in.

- *What are the latest deposits identified?*

The latest deposits are 19th century back fill to the brickearth quarries that are known to exist in the central part of the site.

- *What is the extent of modern disturbance?*

Only a small amount of modern disturbance was noted.

- *Are there any remains associated with the post-medieval farm known as 'Turverns House' that was thought to occupy part of the western area of the development site?*

There were no remains that relate to the post-medieval farmhouse to the west.

- *Are there any remains associated with the medieval settlements, such as Wormholt Wood Farm, that are known to have existed close to the development site?*

There were no remains that relate to the nearby medieval settlements.

5.2 General discussion of potential

5.2.1 The evaluation has shown that the potential for survival of ancient ground surfaces (horizontal archaeological stratification above natural ground) on the site is zero.

5.2.2 However, there is potential for survival of cut features such as the 19th century quarry cut(s).

5.2.3 However survival is likely to be extremely limited because of the 19th century quarry cut(s) in the centre of the site.

5.2.4 The average depth of archaeological deposits where they do survive is likely to be c 1.0m in the quarry areas based on the results from trenches 2, 7 and 8.

5.3 Significance

5.3.1 Whilst the archaeological remains are of local significance there is nothing to suggest that they are of regional or national importance.

5.4 Assessment of the evaluation

- 5.4.1 In the case of this site, where there were limited areas to locate evaluation trenches, the results of this evaluation showed archaeology is limited to the post-medieval period and relates to the 19th century quarrying known to have taken place on the site.

6 Proposed development impact and conclusions

- 6.1.1 Taking into account the results in all the trenches it appears that archaeological deposits where they survive are probably limited to the 19th century and these probably relate to backfilling of quarry cuts or demolition of previous buildings on the site.
- 6.1.2 The proposed redevelopment at the site involves demolition of the existing buildings and construction of new buildings that would include construction of an extensive single and double basement across much of the eastern and central part of the site. This will have an impact on any surviving archaeological deposits.
- 6.1.3 The decision on the appropriate archaeological mitigation to the deposits revealed rests with the Local Planning Authority.

7 Acknowledgements

- 7.1.1 The author would like to thank the following at Westfield Ltd for their assistance during the evaluation; Ray Agozzino, Piotr Jaroszewicz and Noel Talbot, and the following at MOLA; Cat Godsiffe and Helen Vernon who supervised the evaluation, also Sarah Jones and Raoul Bull for geomatics support. The project was managed at MOLA by Michael Smith.

8 Bibliography

Chartered Institute for Archaeologists, (CIFA), 2014 *By-Laws, Standards and Policy Statements of the Chartered Institute for Archaeologists, Standard and guidance: field evaluation*

Chartered Institute for Archaeologists (CIFA), supplement 2014, *By-Laws, Standards and Policy Statements of the Chartered Institute for Archaeologists: Standards and guidance: the creation, compilation deposition and transfer of archaeological archives*

Historic England Greater London Archaeology Advisory Service, 2015 *Guidelines for Archaeological Projects in Greater London*

MOLA, 2013 (Band), *Historic Environment Assessment for Westfield London Development, Ariel*

Way, Shepherd's Bush, London W12, MOLA unpub report (v6 25 Nov 2013)

MOLA 2014a (Smith) Westfield London – Phase 2, Ariel Way, London W12

Written scheme of investigation for an archaeological evaluation MOLA unpub report Oct 2014

MOLA 2014b (Smith) Westfield London – Phase 2, Ariel Way, London W12

Interim summary report on archaeological evaluation trench 8 MOLA unpub report Nov 2014

MOLA 2015a (Smith) Westfield London – Phase 2, Ariel Way, London W12

Interim summary report on archaeological evaluation trench 7 MOLA unpub report May 2015

MOLA 2015b (Smith) Westfield London – Phase 2, Ariel Way, London W12

Interim summary report on archaeological evaluation trench 6 MOLA unpub report June 2015

MOLA 2016a (Smith) Westfield London – Phase 2, Ariel Way, London W12

Interim summary report on archaeological evaluation trench 2 MOLA unpub report July 2016

MOLA 2016b (Stewart) Westfield London – Phase 2, Ariel Way, London W12

Written scheme of investigation for an archaeological evaluation MOLA unpub report August 2016

Museum of London, 2002 *A research framework for London archaeology 2002*

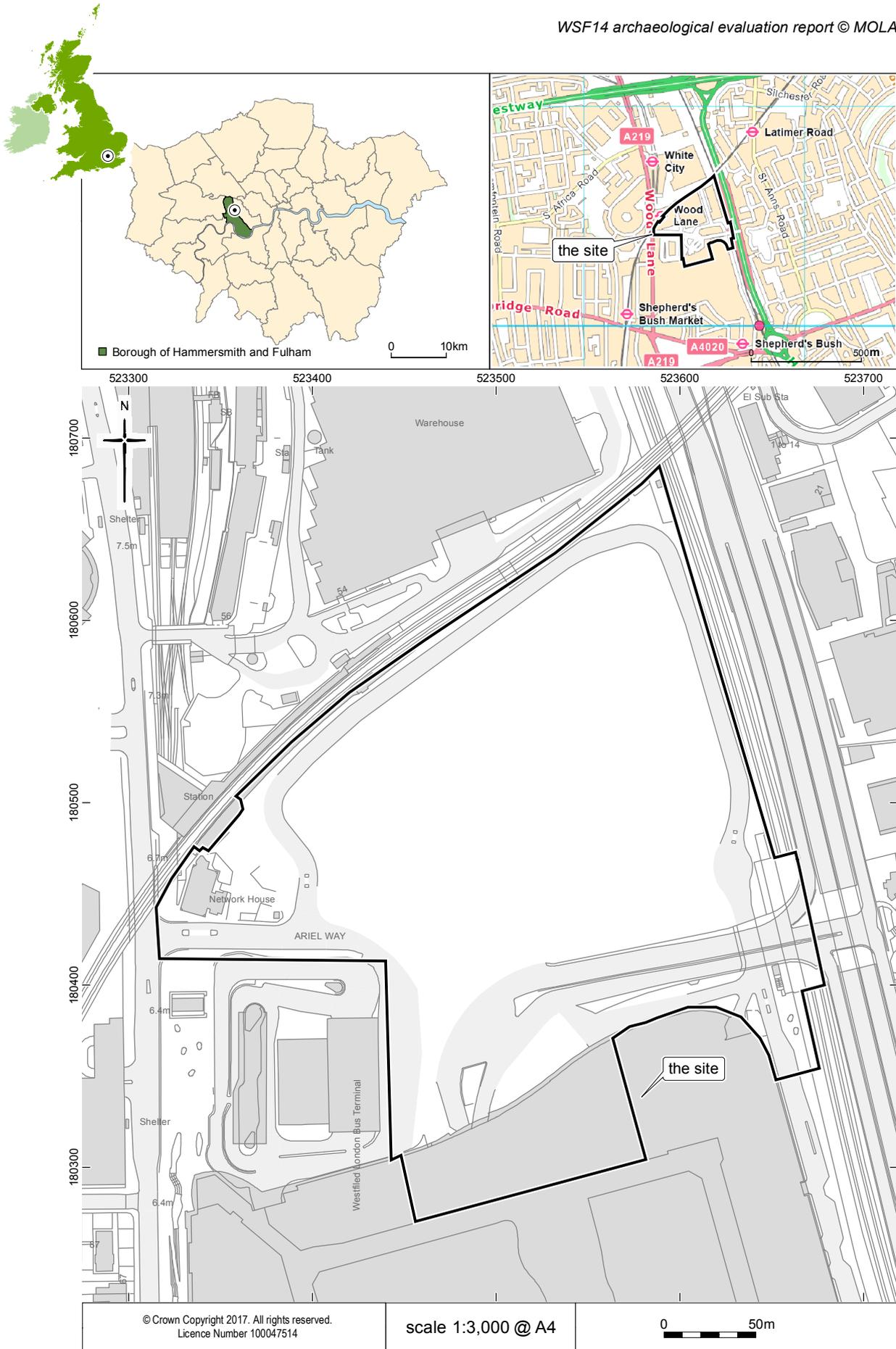


Fig 1 Site location

9 OASIS archaeological report form

OASIS ID: molas1-272583

Project details

Project name	Westfield London, Ariel Way, W12
Short description of the project	Five evaluation trenches (out of the eight proposed) were excavated between October 2014 and September 2017. Much of the site was known to be disturbed by 19th century quarrying and 20th century railway tunnels. Only post-medieval deposits were found and these are backfilling the 19th century quarry pits identified from cartographic sources.
Project dates	Start: 14-10-2014 End: 14-09-2017
Previous/future work	No / No
Any associated project reference codes	WSF14 - Sitecode
Type of project	Field evaluation
Site status	None
Current Land use	Industry and Commerce 1 - Industrial
Monument type	QUARRY Post Medieval
Methods & techniques	"Targeted Trenches"
Development type	Urban commercial (e.g. offices, shops, banks, etc.)
Prompt	Planning condition
Position in the planning process	After full determination (eg. As a condition)

Project location

Country	England
Site location	GREATER LONDON HAMMERSMITH AND FULHAM HAMMERSMITH Westfield London, Ariel Way
Postcode	W12
Study area	68000 Square metres
Site coordinates	TQ 23502 80462 51.509078217777 -0.22016932818 51 30 32 N 000 13 12 W Point
Height OD / Depth	Min: 3.5m Max: 6m

Project creators

Name of Organisation	MOLA
-----------------------------	------

Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	Michael Smith
Project director/manager	Michael Smith
Project supervisor	Tony Mackinder
Project supervisor	Catherine Godsiffe
Project supervisor	Helen Vernon
Type of sponsor/funding body	Client
Name of sponsor/funding body	Westfield Europe Ltd

Project archives

Physical Archive recipient	Museum of London Archaeological Archive
Physical Archive ID	WSF14
Digital Archive recipient	Museum of London Archaeological Archive
Digital Archive ID	WSF14
Digital Media available	"Images raster / digital photography","Text"
Paper Archive recipient	Museum of London Archaeological Archive
Paper Archive ID	WSF14
Paper Media available	"Context sheet","Photograph","Plan","Section","Unpublished Text"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Westfield London - Phase 2, Ariel Way, London, W12
Author(s)/Editor(s)	Mackinder, T
Date	2017
Issuer or publisher	MOLA
Place of issue or publication	London
Description	A4 client report

Entered by **Tony Mackinder (tmackinder@mola.org.uk)**
Entered on **2 October 2017**

OASIS: Please e-mail [Historic England](#) for OASIS help and advice
© ADS 1996-2012 Created by [Jo Gilham and Jen Mitcham, email](#) Last modified Wednesday
9 May 2012
Cite only: <http://www.oasis.ac.uk/form/print.cfm> for this page