



C261 Archaeology Early East
Ham and Wick Targeted Watching Brief Fieldwork
Report
(XTH12)

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Non technical summary

This report presents the results of an archaeological targeted watching brief carried out by the Museum of London Archaeology (MOLA) on the site of the Ham and Wick Lane Sewer Diversion Site, Hackney Wick, London E3, in the London Borough of Tower Hamlets. The report was commissioned from MOLA by Crossrail Ltd. This work is being undertaken as part of a wider programme of assessment to quantify the archaeological implications of railway development proposals along the Crossrail route.

The worksite is located between Wrexham Road and Baldock Street to the south and Wick Lane to the north-east, west of the Blackwall Tunnel Approach Road at Bow.

Natural geology was encountered in the form of Taplow terrace gravel from 1.4m beneath ground level, at the higher part of the site west of the retaining wall for Wick Lane. On Wick Lane, modern pipes had truncated deposits to London Clay. No archaeological remains were observed. The absence of archaeological evidence is an indication of the degree of truncation by modern activity rather than a reflection of past activity in the area and its significance is only in reflecting the degree of modern truncation. It is suggested that this investigation forms part of the assessment of the wider context to remains found at the Pudding Mill Lane Portal Site.



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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.

Two new sewer access chambers and a pump chamber form part of the required work to allow tunnel construction.

The Crossrail mitigation response to archaeology is described in the Crossrail Generic WSI (Crossrail 2009) and the detailed desk based assessment (DDBA; Crossrail 2008), 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 a combined archaeological general and targeted watching brief carried out on the two sewer access shafts and a pump chamber at Wick Lane, (Figure 1), London Borough of Tower Hamlets, London E3 by Museum of London Archaeology (MOLA) under Crossrail contract C261 Archaeology Early East.

The Pump Chamber and the Ham Sewer Access shaft were located west of the retaining wall above Wick Lane and Wick Sewer Access Shaft was located in the lower Wick Lane area of the site, near to its truncation by the Blackwall tunnel Approach Road. The centre of the site is at Ordnance Survey National Grid Reference 537540 183230.

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.

All fieldwork was conducted between 08/11/12 and 19/02/13, supervised by Portia Askew, Sam Pfizenmaier and David Sankey (MOLA Supervisors).



Task	Principal Contractor
<ul style="list-style-type: none">• (HAM) Sewer access shaft (Chamber) (10m x 6.5m) located opposite Wrexham road – General and Targeted Watching Brief	C305 Dragados-Sisk JV
<ul style="list-style-type: none">• (Wick) Sewer access chamber [Wick Caisson] (2700mm diameter precast ring) - General and Targeted Watching Brief	C305 Dragados-Sisk JV
<ul style="list-style-type: none">• Pump chamber (shaft) (7.5m x 6.5m) - General and Targeted Watching Brief	C305 Dragados-Sisk JV

Table 1 Site details

The event code (sitecode) is XTH12.

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 C122-OVE-T1-RGN-CR094-50003, Revision 4.0, which should be referred to for further detail. A brief summary is included here:

The overall framework within which archaeological work will be undertaken is set out in the Environmental Minimum Requirements (EMR) for Crossrail (<http://www.crossrail.co.uk/therailway/getting-approval/parliamentary-bill/environmental-minimum-requirements-includingcrossrail-construction-code>). The requirements being progressed follow the principles of Planning Policy Guidance Note 16 on archaeology and planning (1990). 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 Bill (2005) concern matters relating to archaeology and the built heritage and allows 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 dis-applied their existing rights to the Crossrail 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, February 2005a *Environmental Statement*
- Crossrail, February 2005b *Assessment of Archaeology Impacts, Technical Report. Part 2 of 6, Central Route Section, 1E0318-C1E00-00001*, [Specialist Technical Report (STR)]
- Crossrail 2008, Detailed Desk Based Assessments (DDBA) Ham & Wick Sewer (CR-SD-PML-EN-SR-00001)
- Crossrail 2010, C156 – Central project: Archaeological Monitoring of Ground Investigations, borehole Package 19 (C156-CSY-T1-RGN-CR146_PT004-00004).
- Crossrail Site-specific Written Scheme of Investigation (SS-WSI): *Ham and Wick, Doc No. C122-OVE-T1-RGN-CR094-50003, Revision 4.0, 20/03/12;*

5 Background

5.1 Geology and topography of site

The geological and topographical setting was covered in detail in the DDBA and WSI, and is summarised here.

The worksite is located on Taplow Thames terrace gravels forming the lower side of the Lea Valley, overlooking the alluvium-filled floodplain and the modern course of the River Lea some 50m to the north-east. Geoarchaeological deposit results from boreholes, indicates that an early Holocene tributary runs to the north of the worksite (WSI Fig 2). However, it was not predicted that this palaeochannel extended to the locations of the site Ham and Wick Sewer diversion chambers and shaft.

Ground Level rises from south to north, from approximately 108.5m ATD at the southern end of the site, to 108.6 to 108.7m ATD at the HAM Sewer Access Shaft and Pump Chamber (level surveys supplied for Crossrail EIA).

Geotechnical borehole PML 5A in the southern part of the site (Contamination Appraisal, Appx B) indicated that the terrace gravels lay 2m below ground level at 106.49m ATD, overlain by 1.25m of made ground, sealed in turn by 0.75m of modern overburden. These levels were considered likely to vary across the site, eg depths increasing eastwards across the slope of the valley side. The potential depth of deposits may be considerably deeper at the Sewer Access Chamber, as it lies further eastwards and therefore downslope. These predicted sub-surface deposit models were in broad agreement with the exposures observed during archaeological monitoring.

5.2 Archaeological and Historic Background

The overall archaeological and historic background was covered in detail in the DDBA (Crossrail 2008d) and the WSI (Crossrail 2012), and is summarised here.

The site comprised large fields until the early 19th-century, when significant development took place within the surrounding area and the Great Eastern Railway was constructed c 30m north of the site. Wick Lane was formerly named Old Ford Road.

The Grove Hall Lunatic Asylum, visible on the 1862 Stanford map and 1896 Ordnance Survey map, was established c 1820 for ex-servicemen, and functioned as an asylum through the 19th century. The area of the Asylum had expanded considerably, south of what is now Wrexham Road, by the time of the 1896 survey. The three chamber and shaft sites for the HAM and Wick works lie within the grounds of the Asylum. Although the HAM Sewer Access Shaft, and possibly the Pump Chamber, lie in the vicinity of a block of Asylum buildings seen on the 1896 map,

The 1914 Ordnance Survey map shows Wrexham Road and Baldock Street, which had been laid out following the closure and demolition of the Asylum in 1905. The land had been sub-divided and formed part of the timber yards adjacent to the railway line or converted to housing.



6 Research objectives and aims

6.1 Objectives of the fieldwork

The overall objectives of the investigation were to establish and preserve by record the nature, extent and state of preservation of any surviving archaeological remains that will be impacted upon by the development.

Specifically, archaeological investigations at the Ham and Wick Lane Sewer Diversion had the potential to recover:

- Prehistoric occupation and agricultural deposits, although environmental evidence and organic artefacts and structures are likely to be poorly preserved in the dry soils that existed within the development sites in the past. The emphasis will be on evidence surviving in the surface of the gravel river deposits.
- Post-medieval foundation evidence associated with the Grove Hall lunatic Asylum.

The Assessment of Archaeological Impacts (Crossrail 2005b, 4.14.1) also notes:

- potential for Roman remains on the terrace gravels eg burials, a kiln, ditches, pits, field systems/cultivation.

7 Methodology of site-based and off-site work

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

- Crossrail, 2009 *Archaeology Generic Written Scheme of Investigation*, Doc No. CR-PN-LWS-EN-SY-00009
- Crossrail *Site-specific Written Scheme of Investigation (SS-WSI): Ham and Wick*, (Doc No. C122-OVE-T1-RGN-CR094-50003, Revision 4.0, 20/03/12). [WSI]
- MOLA *Method Statement (for an) Archaeological General and Targeted Watching Briefs at the Ham and Wick Lane Sewer Diversion Site* (Doc. no. C261-MLA-X-RGN-CR140-5012 Revision 1.0 25.09.2012), which was developed between MOLA and the principal contractor
- 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, June 1998 *Archaeological Guidance Papers 1–5*

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 XTH12 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 Targeted watching brief methodology

The C305 Principle Contractor (Dragados Sisk) removed modern overburden down to the first significant deposit not truncated by modern activity, exposing potential archaeological remains at the interface with underlying Pleistocene geological deposits. The trenches were examined by MOLA (C261) Senior Archaeologists. The Principle Contractor installed the required shoring before the MOLA Senior Archaeologist entered the trench at depths below 1.0m bGL. No archaeological remains were exposed at the top of Pleistocene deposits. A previously unknown tunnelled brick sewer was exposed deep within London Clay, at a depth below that of the watching Briefs. It was recorded photographically from the surface.

A written and drawn record of all significant deposits encountered was made in accordance with the principles set out in the Museum of London site recording manual (MoL 1994).

8 Results and observations including stratigraphic report and quantitative report

8.1 Wick Sewer Access Chamber



Photo 1 London Clay at 102.9m ATD

Wick Sewer Access Chamber	
Location	Wick Lane, near to cutting for Blackwall Tunnel Approach Road
Dimensions	5m x 5m (top) 4m x 4m (2 nd frame)
LSG grid coordinates	87924.0432 37818.5476
OS National grid coordinates	537534.542 183247.529
Modern Ground Level/top of the slab	105.9m ATD
Modern subsurface deposits	A series of modern pipes <3m to 102.9m ATD
Level of base of archaeological deposits observed and/or base of trench	Observations ceased at 102.9m ATD
Natural observed (truncated/not truncated ?)	London Clay 102.9m ATD
Extent of modern truncation	102.9m ATD
Archaeological remains	Dating Evidence, Finds, and Samples

None	
Interpretation and summary	
Modern truncation had removed deposits with potential for archaeological remains	



Photo 2 Excavating between pipes at 103.5m ATD (approx.)

8.2 Ham Sewer Access Shaft

Ham Sewer Access shaft	
Location	West of Wick Lane
Dimensions	10m x 6.5m
LSG grid coordinates	87944.3104 37788.9749
OS National grid coordinates	537555.543, 183218.482
Modern Ground Level/top of the slab	108.5m ATD
Modern subsurface deposits	Modern fill including geotextile, late 20 th - or 21 st -century. 2m deep (to 106.5m ATD)
Level of base of archaeological deposits observed and/or base of trench	Observations ceased at 102.9m ATD
Natural observed (truncated/not truncated ?)	Terrace Gravel 106.5m ATD
Extent of modern truncation	106.5m ATD

Archaeological remains	Dating Evidence, Finds, and Samples
None	
Interpretation and summary	
Modern truncation had removed deposits with potential for archaeological remains.	
<p>Also exposed was a culvert in the Ham Sewer Access shaft. This was at a depth below the normal requirement of the archaeological watching brief – at 96m ATD. It was observed only from ground level, but was apparently made in a tunnel or heading, of yellow brick and must be late 19th- or early 20th-century in date</p>	

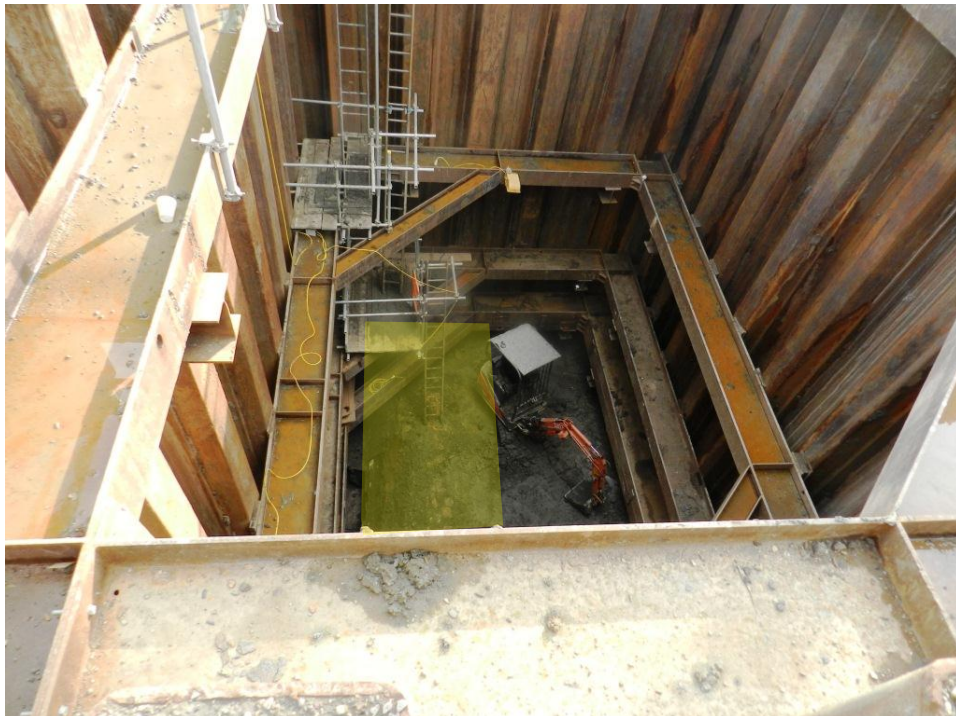


Photo 3 Ham Sewer Access shaft, late 19th- or early 20th-century culvert at 96m ATD as highlighted in yellow



Photo 4 detail of above photograph – Ham Sewer indicated by arrow

8.3 Pump chamber

Pump chamber	
Location	West of Wick Lane, north of sewer access chamber
Dimensions	7.5m x 6.5m
LSG grid coordinates	87933.4071 37795.1751
OS National grid coordinates	537544.489, 183224.405
Modern Ground Level/top of the slab	108.6m ATD
Modern subsurface deposits	Mixed modern fills including concrete rubble 1.7m deep and roots to top 400mm
Level of base of archaeological deposits observed and/or base of trench	Base of trench 106.9m ATD
Natural observed	Truncated coarse gravel at 107.2m ATD

truncated	and fine laminated sand at 106.9m ATD (both River Lea Terrace Gravel)
Extent of modern truncation	Retaining-wall trench cuts below base of observations on NE side of trench. Horizontal truncation 1.4m – 1.7m deep
Archaeological remains	Dating Evidence, Finds, and Samples
None	
Interpretation and summary	
Natural geology in the form of Pleistocene Taplow Terrace gravel truncated to 107.2m ATD and below. No archaeological remains were observed.	

9 Assessment of results against original research aims

9.1 Research aims

Because of the degree of truncation, no evidence of prehistoric environment or settlement, Roman cut features or Post-medieval Bow Lunatic Asylum structural remains were observed.

10 Statement of potential archaeology

The targeted watching brief has demonstrated that the observations do not contribute to the archaeology of the Lower Lea Valley.

10.1 Importance of Resources

The absence of archaeological remains within the chambers and shaft does not represent an absence of settlement activity in these locations in the past; rather it provides evidence for the degree of modern truncation within the site.



11 Conclusions

The drift geology consists of Pleistocene Taplow Terrace Gravel, which was exposed at 107.2m ATD above London Clay. Truncated coarse gravel at 107.2m ATD and fine laminated sand at 106.9m ATD (both Taplow Terrace Gravel)

12 Publication and dissemination proposals

The Targeted Watching Brief results will initially be disseminated via this report and the summary in the annual round up published in London Archaeologist and on the London Archaeological Archive and Research centre (LAARC) website. The results and supporting site archive records (including digital data) will be included in Any publication proposals will then be considered in relation to fieldwork on the Pudding Mill Lane Portal site, in contributing to *CRL17 Archaeology discoveries at Pudding Mill Lane, the River Lea and Limmo*, and also the wider context of archaeological potential and results within the Crossrail scheme.

13 Archive deposition

The site archive containing original records and finds will be stored temporarily with MOLA pending a future decision over the longer-term archive deposition and public access process for the wider Crossrail project.



14 Bibliography

Crossrail, February 2005a *Environmental Statement*

Crossrail, February 2005b *Assessment of Archaeology Impacts, Technical Report. Part 2 of 6, Central Route Section, 1E0318-C1E00-00001*, [Specialist Technical Report (STR)]

Crossrail 2008, *Archaeology Detailed Desk Based Assessment, Pudding Mill Lane Portal (including Ham & Wick Sewer Diversion)* (CR-SD-PML-EN-SR-00001).

Crossrail, 2009 *Archaeology Generic Written Scheme of Investigation*, Doc No. CR-PN-LWS-EN-SY-00009

Crossrail 2010, *C156 – Central project: Archaeological Monitoring of Ground Investigations, borehole Package 19* (C156-CSY-T1-RGN-CR146_PT004-00004).

Crossrail 2012 *Site-specific Written Scheme of Investigation (SS-WSI): Ham and Wick*, Doc No. C122-OVE-T1-RGN-CR094-50003, Revision 4.0

English Heritage Greater London Archaeology Advisory Service, June 1998 *Archaeological Guidance Papers 1–5*

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,

Institute for Archaeologists, (IFA), 2001 *By-Laws, Standards and Policy Statements of the Institute for Archaeologists*, (rev. 2001), *Standard and guidance: field evaluation*

Institute for Archaeologists (IFA), supplement 2001, *By-Laws, Standards and Policy Statements of the Institute for Archaeologists: Standards and guidance – the collection, d)*

Museum of London, 1994 *Archaeological Site Manual 3rd edition*

15 Acknowledgements

The author would like to Pdraig Mullen and Benjamin Burton (Dragados Sisk) for their assistance on site. The fieldwork was commissioned and managed for Crossrail by Mike Court and Jay Carver

The targeted watching brief was supervised by Portia Askew, Sam Pfizenmaier and David Sankey. The fieldwork was managed by MOLA Project Managers, Elaine Eastbury and Nicholas Elsdon.



16 NMR OASIS archaeological report form

OASIS ID: molas1-152039

Project details

Project name	Ham and Wick shafts
Short description of the project	Monitoring Ham and Wick sewer-diversion shafts for Crossrail tunnel excavations exposed natural terrace gravel at 7.2m OD and truncated London Clay elsewhere
Project dates	Start: 08-11-2012 End: 18-02-2013
Previous/future work	No / No
Any associated project reference codes	XTH12 - Sitecode
Type of project	Recording project
Current Land use	Transport and Utilities 1 - Highways and road transport
Investigation type	"Watching Brief"
Prompt	Crossrail Act

Project location

Country	England
Site location	GREATER LONDON TOWER HAMLETS BOW Ham and Wick Shafts
Postcode	E3
Study area	1730.00 Square metres
Site coordinates	TQ 3754 8323 51 0 51 31 50 N 000 01 00 W Point
Height OD / Depth	Min: 3.00m Max: 7.00m

Project creators

Name of Organisation	MOLA
Project brief originator	Crossrail
Project design originator	MOLA
Project director/manager	Nicholas Elsden
Project supervisor	Sam Pfizenmaier
Project supervisor	Portia Askew
Project supervisor	David Sankey



Type of sponsor/funding body	Developer
Name of sponsor/funding body	Crossrail
Project archives	
Physical Archive Exists?	No
Digital Media available	"Images raster / digital photography", "Text"
Paper Media available	"Notebook - Excavation', ' Research', ' General Notes', 'Unpublished Text"
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	C261 Archaeology Early East Ham and Wick Targeted Watching Brief (XSF10) Fieldwork Report
Author(s)/Editor(s)	Sankey, D
Date	2013
Issuer or publisher	MOLA
Place of issue or publication	London
Description	A4 report
Entered by	David Sankey (DSankey@mola.org.uk)
Entered on	4 June 2013

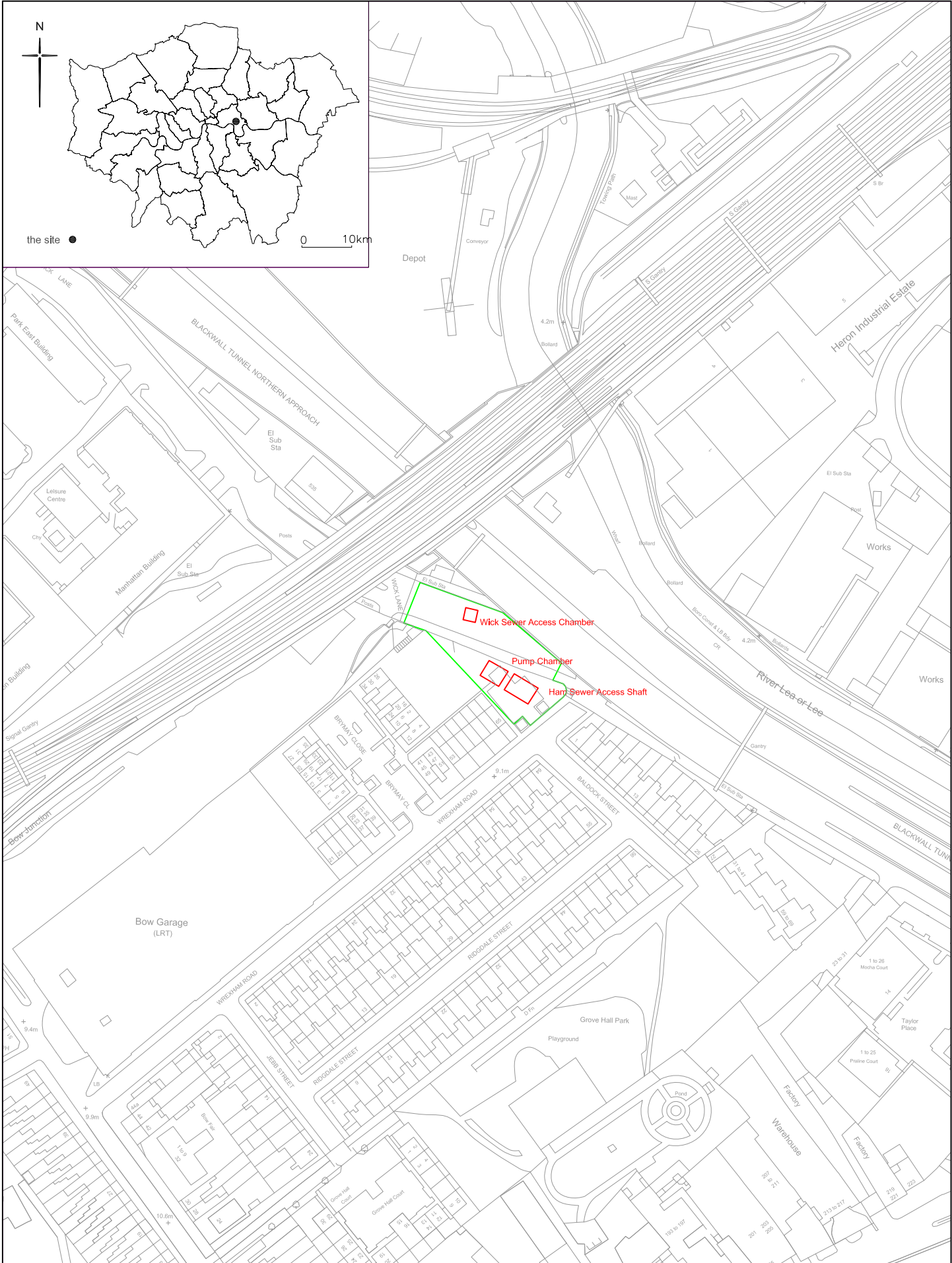


Fig 1 Site location

Site code: XTH12

- Site outline
- Trench edge

0 1:2000 @ A4 100m

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