



C261 ARCHAEOLOGY EARLY EAST
Fieldwork Report
Archaeological Evaluation and Watching Briefs
Stepney Green Shaft (XRV10)

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Non technical summary

This report presents the results of an archaeological field evaluation and three watching briefs carried out by the Museum of London Archaeology (MOLA) on the site of Stepney Green, London E1, in the London Borough of Tower Hamlets. This report was commissioned from MOLA by Crossrail Ltd. The worksite at Stepney Green shaft site consists of the proposed shaft area and surrounding worksite. It incorporates Garden Street and land to either side of it.

The results of nine evaluation trenches and the watching briefs broadly confirm anticipated findings. Natural terrace gravels are overlaid with brickearth. In one trench there are truncated small features (possibly of natural origin) containing small fragments of prehistoric pottery. There were no remains of Roman or definite medieval date.

The substantial brick foundations of Worcester House probably date from the 16th century, the gatehouse of which survived into the 19th century. These were revealed in several trenches and include a substantial south range wall in trench 3, ranges of building foundations and walls in both trenches 2 and 3, possibly a major wall in Garden Street, and a foundation forming one angle of an octagon west of Garden Street in trench 5. Bricks indicate that elements of this courtyard house were built at various stages throughout the 16th and 17th centuries. Other foundations from this period on the west edge of the site are thought to have been from a neighbouring, perhaps associated, property.

A row of features filled with soil at the centre of the site are thought to be planting holes for fruit trees, bushes, or similar. Probably they date to the 18th-century (when there is comparable map evidence). A wall nearby may date to the later 18th century or beginning of the 20th.

No evidence could be positively identified of the 17th-century meeting house which once stood near to Bull Lane (Stepney Way). A slate covered mortar spread is thought to have been a 19th-century or later garden feature. The foundations of the 19th-century Congregationalist Church and those of the nearby Congregationalist School were also recorded. On the north side of the site a wall of the 19th-century Baptist College was exposed with cess pits along it, the fills of which have material dating to the tenure of the college.

19th-century cess pits were found across the area west of Garden Street (trenches 4 and 6). A series of buildings 'damaged beyond repair' in WW2-bombing and a paved yard were exposed on the west side of Garden Street, with a slightly older well in the centre of the yard, below paving. Further 19th-century building remains fronting King John Street were exposed in trench 2.

The archaeological results from the evaluation trial work at Stepney Green will be used by the C123 design archaeologist to revise and finalise the mitigation strategy for the site.

The site has potential to document an important mansion of the 16th- to the 17th centuries and its subsequent development, in particular its contribution to the non-conformist movement. This can be tied in to cartographic and documentary sources, including a number of prominent occupants and owners. Remains of this period and those of the later evolution of the site have the potential to contribute to the historical identity of Stepney, which was compromised by the combination of bomb damage and post-war slum clearance.

Contents

Non technical Summary

1	Introduction.....	1
2	Planning background	2
3	Origin and scope of the report	2
4	Previous work relevant to archaeology of site.....	2
5	Geology and topography of site.....	3
5.1	Archaeological and Historical Background	3
6	Research objectives and aims.....	5
6.1	Objectives of the fieldwork	5
6.2	Research Aims	5
7	Methodology of site-based and off-site work.....	6
7.1	General and Targeted Watching Brief Methodology	6
7.2	Evaluation Methodology	6
8	Results and observations including stratigraphic report and quantitative report	7
8.1	General Watching Brief on a water-pipe trench.....	7
8.2	General Watching Brief on ground works and installation of pig wallow.....	10
8.3	Evaluation Trenches.....	12
8.4	Targeted Watching Brief on Sewer Diversion in Garden Street	34
8.5	General Watching Brief on protective measures for Worcester House	38
9	Assessment of results against original expectations and review of evaluation strategy	40
9.1	Research aims.....	40
9.2	Assessment criteria.....	40
10	Statement of potential archaeology	43
11	Conclusions	44
11.1	Geology.....	44
11.2	Prehistoric Remains	44
11.3	Worcester House (King John's Tower/Palace/Court).....	44
11.4	18th-century remains.....	45
11.5	19th-century remains.....	45
12	Recommendations for appropriate mitigation strategy	46
13	Publication and dissemination proposals.....	46

14	Archive deposition	46
15	Bibliography.....	47
16	Acknowledgements	48
17	NMR OASIS archaeological report form	49
	OASIS ID: molas1-94376.....	49
	OASIS ID: molas1-94376 (cont'd).....	50
	OASIS ID: molas1-94376 (cont'd).....	51
18	Appendices:	52
18.1	Building materials.....	52
18.2	Post-Roman pottery.....	55
18.3	Clay tobacco pipes	57
18.4	Glass	59
18.5	Other finds.....	59

List of Figures

At end of document

Figure 1 Site Location

Figure 2 Location of archaeological investigations

Figure 3 Multi-context plan of archaeological remains in trenches 1 and 2

Figure 4 Multi-context plan of archaeological remains in trench 3

Figure 5 Multi-context plan of archaeological remains in trench 4

Figure 6 Multi-context plan of archaeological remains in trench 5

Figure 7 Multi-context plan of archaeological remains in trench 6

Figure 8 Multi-context plan of archaeological remains in trench 7

Figure 9 Multi-context plan of archaeological remains in trench 8

Figure 10 Multi-context plan of archaeological remains in trench 9

Figure 11 Late Medieval, Tudor or Stuart wall [166] north end of Garden Street

List of Photos

Photo 1	Water pipe trench, looking south, with 20th-century walls (front)	7
Photo 2	Modern walls at the north end of the water pipe trench, looking north (above) and Congregational Church wall revealed at north end (below)	9
Photo 3	Cutting concrete, Stepney City Farm, looking south	10
Photo 4	Machine excavating ground for a pig wallow, 20th-century brick wall (centre).	11
Photo 5	Trench 1 looking east	12
Photo 6	Trench 2 looking north	15
Photo 7	Tudor–Stuart building remains south end of Trench 2. Remains of later (19th-century) structures are visible in the section at the level of the trench steps out	17
Photo 8	Tudor–Stuart coal cellar north end of Trench 2, built over part of the massive foundations exposed in Trench 1	17
Photo 9	Trench 3, looking north	18
Photo 10	Machine dug <i>sondage</i> south of the main east–west wall foundation	20
Photo 11	Trench 4, looking south	21
Photo 12	Trench 4, looking west	22
Photo 13	Trench 5, looking south, showing buildings bombed in World War 2	23
Photo 14	1500–1666 (part octagonal) brick wall	25
Photo 15	A well which had been covered by a later courtyard	25
Photo 16	Trench 6, looking south	26
Photo 17	Trench 7, looking east	28
Photo 18	Trench 8, looking south-east	30
Photo 19	Foundations of the Congregational church	32
Photo 20	North Manhole looking north,	35
Photo 21	Voids filled with sand in Trench 1	38
Photo 22	Geotextile and sand in trench 3	38
Photo 23	Sand filling trench 3 to 200mm above brick remains at side of trench	39
Photo 24	Sand filling trench 3 to 200mm above brick remains at side of wall [47]	39

1 Introduction

This report describes four phases of archaeological excavation carried out at Stepney Green Shaft site by the C261 Museum of London Archaeology (MOLA).

The Stepney Green Shaft is located in a narrow corridor of Stepney Green parkland between Stepney Way and Stepney Green at OS Grid Reference 535780 181640.

The site falls within the London Borough Tower Hamlets (LBTH), between the all weather sports ground to the west and Garden Street and Stepping Stones Farm to the east (Figure 1).

All fieldwork was conducted, as described in FDC Notifications, between 21/07/10 and 14/01/11. It was supervised by Robert Hartle and Dave Sankey (MOLA Supervisors), and included the following:

Task	FDC Notification	Principal Contractor	Date
<ul style="list-style-type: none"> • General Watching Brief water pipe trench at Stepney City Farm 	C123-0001	Bam Nuttal	21/07/10.
<ul style="list-style-type: none"> • General Watching Brief groundworks at Stepney City Farm 	C123-0001	McNicholas	20/08/10
<ul style="list-style-type: none"> • General Watching Brief protective measures at Stepney City Farm 	C123-0001	McNicholas	31/01/11 to 04/02/11
<ul style="list-style-type: none"> • Targeted Watching Brief on a sewer diversion Garden Street 	C123-0001	McNicholas	13/01/11 to 02/02/11
<ul style="list-style-type: none"> • Evaluation Trenches 1 to 9 Stepney City Farm and Stepney Green Park 	C123-0001	McNicholas	06/12/10 to 21/01/11
<ul style="list-style-type: none"> • Community Archaeology Event Trenches 1 to 3 Stepney City Farm 	C123-0001	McNicholas	24/01/11 to 29/01/11

The event code (sitecode) is XRV10.

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 and addendum – Document Number: C123-JUL-T1-RGN-CR094 SH005 Z 00001.

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.

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, MDC4 Archaeology Updated Baseline Assessment, January 2008; and
- Crossrail, Archaeological Monitoring of Ground Investigations, Borehole Package 11, Limehouse to North Woolwich, January 2008.
- Crossrail, Archaeology Detailed Desk Based Assessment Stepney Green Shafts (Document number CR-SD-STG-EN-SR-00001) Version 1.0, April 2008

All on-site archaeological work was carried out in accordance with the following documents:

Site Specific Written Scheme of Investigation and addendum – Document Number: C123-JUL-T1-RGN-CR094-SH005 Z-00001

The Method Statement for an Archaeological Evaluation and Watching Briefs at Stepney Green Shaft R.2 – Document Number: C261-MLA-T1-GMS-CR094-SH005-00001 was developed between MOLA and the principal contractors.

5 Geology and topography of site

The geological and topographical setting is covered in detail in the Crossrail WSI (Crossrail, 2010a) and is summarised below.

The site lies on the Taplow Thames terrace gravels, which overlie London Clay across the site. In the northern and western parts of the site these are overlain by brickearth (Langley Silt complex).

The ground level rises gradually from north to south (109.58 –110.27m ATD). There is a significant increase in the south-east corner, in the vicinity of the former congregational church, where the level rises to 111.34m ATD. This may be as a result of raising the ground level rather than removing the foundations. Information from geotechnical boreholes (SG9, 10, 15R, 12A, 12, 17, 13, 11A) within the site and in the immediate vicinity demonstrated that Made Ground was present across the whole site at an average depth of 2.00m. SG10 showed an increase of 0.5m in the depth of the Made Ground, which may result from the construction of Mowlem House, a former secondary school. The Made Ground was overlying occasional areas of alluvial deposition and a layer of River Terrace Deposits, suggesting that the natural geology of the area had not been significantly truncated by human activity.

The area is generally flat with the exception of the farm, parts of which are raised c 0.5 to 1m above the level of the surrounding streets. In particular, the ground where the Congregational Church originally stood is c 1m higher than that to the north and east. This indicates that the floor of the church was raised above its contemporary ground level and indeed a basement is documented, probably infilled with demolition debris after the church was damaged by bombing in WWII. Crossrail borehole SG11R encountered probable brick foundations from the church c 0.7m thick at c 1.2m bGL (below ground level) (Crossrail 2005).

5.1 Archaeological and Historical Background

The archaeological and historical background of the site is described in sections 2.5 to 2.7 of the WSI (Crossrail 2010a), and summarised briefly below.

The site has a **low potential** for remains of **Bronze Age or Iron Age** activity, as seen c 50m to the east on site SHS79, where fragments of two Late Bronze Age or Early Iron Age pots were found. Such evidence might be in the form of residual artefacts redeposited in later features, or heavily disturbed features. However, prehistoric remains may survive beneath the foundations of some of the later buildings.

There is also **low-medium potential** for **Roman activity** on the site; the presence of finds in the surrounding area indicates activity at this time; however, the circumstances of the find offer little evidence as to its association with more structured archaeological remains.

Despite the proximity of St Dunstan's church and Stepney High Street, there is only limited potential for medieval activity: later maps suggest that the site lay outside the settlement (unless there was a medieval predecessor to Worcester House).

The site contains **known post-medieval** remains: the below-ground remains of the **16th-century and later Worcester House** were left *in situ* after the 1985 evaluations in the northern corner of the site (sitecode WOR85). In addition, there are **standing remains of two ruined 19th-century buildings**: parts of the **Baptist College** and the

Congregational Church, both demonstrating the continued use of the lands of Worcester House by non-conformist organisations.

In addition, there is **high potential for further below-ground remains of 16th-century and later post-medieval buildings and occupation** across the area of the site. In particular, remains of Worcester House and associated gardens, yards and related structures including the non-conformist chapel, the Baptist Chapel; the Congregation Church; the early 19th-century Sunday school; and other Post-medieval occupation including terraced housing.

6 Research objectives and aims

6.1 Objectives of the fieldwork

The purpose of the Watching Brief was to mitigate the impact of the development works upon archaeological remains; by making an adequate record of them in advance of and during the specified construction ground works (a mitigation strategy of *preservation by record* in line with Crossrail requirements).

The purpose of the evaluations was to provide information on the presence or absence, character, extent, date, preservation, and importance of the potential archaeological remains currently predicted on the site, in particular those from Tudor Worcester House, in order to inform the mitigation design, which will comprise both *preservation-by-record* (eg archaeological excavation and/or additional watching briefs) and *preservation-in-situ* (eg protective measures for buried remains relating to Worcester House).

Specifically, the archaeological investigations had the potential to recover:

- Archaeological remains of prehistoric date relating to occupation of the area;
- Archaeological remains of Roman date relating to occupation of the area;
- Archaeological remains of medieval date relating to the expansion of Stepney Green;
- Archaeological remains of Post-medieval, or earlier date relating to Worcester House or its predecessor;
- To establish the presence or absence of archaeological remains surviving below the foundations of building shown on the 19th-century Ordnance Survey map;
- Archaeological remains of modern and post-medieval date relating to the Baptist Chapel, Congregational church, Sunday school and the former street layout at the site;
- Record the character and extent of archaeological remains identified during trial trenching.

6.2 Research Aims

Selected research themes derived from *A Research Framework for London Archaeology 2002* (Nixon et al, 2003) are included in the *WSI* (Crossrail 2010a) and are set out below.

Evidence relating to the religious buildings and history of the site may contribute to the following research themes:

- To examine the changing roles and diversity of religions in London society at different times; and
- To identify the extent to which religious minorities and non-conformists had a distinct material culture in London, and developing archaeological models for future analysis.

7 Methodology of site-based and off-site work

All archaeological excavation and recording during the evaluation was carried out in accordance with the Crossrail WSI, the MOLA *Method Statement* and the *Archaeological Site Manual* (MoL 1994).

The site finds and records can be found under the site code XRV10 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 and Targeted Watching Brief Methodology

A water-pipe trench, general groundworks were monitored in advance of the evaluation. At the end of the evaluation, during and after a community archaeology event, works for a sewer diversion exposed significant remains and were also monitored, together with the installation of protective measures for the remains of Worcester House.

Both general and targeted watching briefs consisted of a basic monitoring presence, by a MOLA Senior Archaeologist, to observe works carried out by the Principal Contractor. Excavation was by machine, operated by the Principal Contractor down to the first significant archaeological horizon under supervision of a MOLA Senior Archaeologist. Further manual cleaning, investigation and recording were then undertaken by the MOLA Senior Archaeologist. A written and drawn record of all archaeological deposits encountered was made in accordance with the principles set out in the Museum of London site recording manual (MoL 1994). Trenches dug for a sewer diversion in which remains were recorded were surveyed along with the evaluation trenches, see method below.

7.2 Evaluation Methodology

Nine evaluation trenches were excavated within the area of preparatory ground reduction. Trenches were excavated by machine by the contractors down to the first significant archaeological horizon under supervision of a MOLA Senior Archaeologist. Further manual cleaning, investigation and recording were then undertaken by MOLA staff. A written and drawn record of all archaeological deposits encountered was made in accordance with the principles set out in the Museum of London site recording manual (MoL 1994).

The locations of the trenches were recorded by MOLA Geomatics by optical survey. The survey utilised Crossrail London Survey Grid control stations, which were then tied into the OS. A Survey Report was produced by MOLA Geomatics (MOLA, December 2010).

8 Results and observations including stratigraphic report and quantitative report

For trench locations see Figure 2

8.1 General Watching Brief on a water-pipe trench



Photo 1 Water pipe trench, looking south, with 20th-century walls (front)

Water Pipe Trench	
Location	The central south area of Stepney City Farm, between fields 10 and 9, as well as 5 and 6, east of the standing remains of the 19th-century Congregational church, north of Stepney Way, within the Stepney Green Shaft site. Pipe trench (c 25m long x 0.6–1.5m wide x 0.55–0.85m deep) dug N–S parallel to and 2.8m east of the standing remains of the Congregational Church.
Dimensions	c 25m long x 0.6–1.5m wide x 0.55–0.85m deep
London Survey grid coordinates	86176 36223
OS National grid coordinates	535828 181610
Modern Ground Level (adjacent to pit)	109.87m ATD (9.87m OD) at north, c 111.48m ATD (c 11.48m OD) at south end
Modern subsurface deposits	The ground east of the standing remains of the church wall was uniformly mid-grey-brown clay silt with frequent inclusions of modern brick, concrete fragments and occasional small gravel. Modern rubble and build demolition, with only approx. 20% brown clay silt, south of the standing building remains.
Level of base of archaeological deposits observed and/or base of trench	Base of trench: c 109.30m ATD (c 9.30m OD) at north and c 110.33m ATD (c 10.33m OD) at north
Natural geology observed (truncated/not truncated ?)	Not reached
Extent of modern truncation	Whole area of trench
Archaeological remains	Date
None	
Trench interpretation and summary	
<p>The Congregational church wall was exposed at south end of the trench beneath the ground at c 110.93m ATD (c 10.93m OD) and continued south on the same line as the standing remains. It was preserved <i>in situ</i>, with the pipe to run over the top.</p> <p>No earlier archaeology was observed.</p> <p>Remnants of three modern buildings seen, including:</p> <p>20th-century walls were seen at the north end of the trench, traces of which survived at ground level (109.87m ATD; 9.87m OD). These were built of red and yellow brick, frogged and marked 'FARCO', dimensions 220x110x70mm, with hard white mortar, and one step at base of the wall, under which it is possibly sitting on a concrete foundation (0.6m bGL).</p> <p>Fragments of a concrete slab approximately 200mm thick were encountered on the eastern limit of excavation, opposite the corner of the church wall approx 0.5m below ground level.</p>	

Probably the foundation for one of the terrace houses.

A return was seen for the yellow brick wall still attached to the south end of the standing remains of the church wall. This return continued across the trench and beyond the eastern limit of excavation, and was associated with a brick floor surface, seen on its interior. The wall was made of yellow brick (230x100x60mm) and was 230mm wide (ie one brick thick). 4 courses = 330mm high. Grey mortar. The floor (c 110.42m ATD; c 10.42m OD) was on the interior of the yellow brick building and 1.06m below the top of the standing wall (c 111.48m ATD; c 11.48m OD). It was made a single course of smooth, apparently modern, bricks (220x70x110mm, frogged, bevelled edged and bisected on the top) lain flat on a 150mm thick bed of crush.

The ground east of the standing remains of the church wall was uniformly mid grey brown clay silt with frequent inclusions of modern brick, concrete fragments and occasional small gravel.

South of the standing building remains and the yellow brick building was modern rubble and demolition debris, with only approx. 20% soil.



Photo 2 Modern walls at the north end of the water pipe trench, looking north (above) and Congregational Church wall revealed at north end (below)

8.2 General Watching Brief on ground works and installation of pig wallow



Photo 3 Cutting concrete, Stepney City Farm, looking south

This watching brief involved archaeological monitoring of the removal of a concrete slab being conducted as part of a refurbishment of Stepney City Farm. An area of concrete in the north-eastern corner of field 10 was removed and a shallow pit dug to create a pig wallow.

Pig Wallow Pit	
Location	The central south area of Stepney City Farm, north-eastern corner of field 10, north of the standing remains of the 19th-century Congregational church, north of Stepney Way, within the Stepney Green Shaft site.
Dimensions	4.2m long (N–S) x 2.6m wide (E–W) x 0.6–0.8m deep
London Survey grid coordinates	86173 36312
OS National grid coordinates	535825 181621
Modern Ground Level (adjacent to pit)	110.42m ATD (10.42m OD)
Modern subsurface deposits	20th-century brick wall, 0.5m wide, running N–S. Made of red brick, frogged and marked 'FARCO' (dimensions 220x110x70mm), with hard yellow white mortar. To the west of the 20th-century wall: mid yellow-brown silt with frequent inclusions of modern

	brick, concrete fragments and occasional small gravel. East of the 20th-century wall: mid brown sandy silt with modern rubble
Level of base of archaeological deposits observed and/or base of trench	N/A
Natural geology observed (truncated/not truncated ?)	Not reached
Extent of modern truncation	Whole area of trench
Archaeological and built heritage remains	Date
None	
Trench interpretation and summary	
No significant archaeology was encountered during this watching brief. The only feature was a 20th-century wall, running approximately N–S.	



Photo 4 Machine excavating ground for a pig wallow, 20th-century brick wall (centre).

8.3 Evaluation Trenches

See Figure 2 for trench locations

8.3.1 Trench 1



Photo 5 Trench 1 looking east

Trench 1 (Figure 3)	
Location	North side of Stepney City Farm
Dimensions	14.3m long x 9.45m wide x 2m deep (10m long x 5.5m wide below 1.2m)
London Survey grid coordinates	86162 36307
OS National grid coordinates	535812 181693
Modern Ground Level	109.78m ATD (9.78m OD)
Modern subsurface deposits	Loose mixed modern demolition rubble 1.5m – 1.8m thick
Level of base of archaeological deposits observed and/or base of trench	107.4m ATD (7.4m OD)

Natural observed	Brickearth
Extent of modern truncation/overburden	to 1.8m bGL across trench
Archaeological remains	Dating Evidence, Finds, and Samples
Green-grey silt-clay [100] at 107.97m ATD (7.97m OD), cut by:	No finds
Two parallel wall foundations [77] and [78], 1.0m – 1.1m wide, aligned north–south crossed the trench, the second of which returned at a right-angle and was exposed at the southern limit of the trench (made of 55mm-thick / two-inch bricks), at 107.97m – 107.87m ATD (7.97m – 7.87m OD)	Bricks suggest approximately late 15th or 16th-century
A rough but very compacted layer of mortar between the two main wall foundations	No finds
A structural wall foundation at right angles to – and east of – these main foundations 0.7m-wide and continuing east of the trench [75] and [76], was made of 60mm-thick bricks set in lime mortar, at 107.98m ATD (7.98m OD)	
A wall parallel to the main foundations, 0.6m-wide and also of 60mm bricks [73]	Brick sample 1500–1666
A 115m line of bricks attached to the east side of the main foundation mentioned above, made of both 55mm- and 60mm-thick bricks and terminating at the structural foundation mentioned above [72]	
An internal brick partition between the two main foundations [74]	
A dump layer above walls in the east part of the trench [50]	No finds
Brick channel or drain, built with 55mm-thick bricks, in line with the return of the turret [175] [180] [177]	No finds
Internal gravel make-up [176]	No finds
Mortar / brick-rubble spread [178] [179]	No finds
Interpretation and summary	
The substantial brick foundations [77] & [78] made of two-inch (55mm) bricks belong to the foundations of the brick-built late-medieval or Tudor gatehouse that formed part of Worcester House (also known as King John's Tower). Part of the half-octagonal turret was recorded in the earlier archaeological work on the site in 1985 (sitecode WOR85).	

Further walls represent additions or partitions, still made with lime mortar, but with slightly thicker bricks, Probably reflect changes to the courtyard house reflecting the growing wealth and status of the occupants in the early 17th century.

Later remains have been truncated by a thorough reworking after World War 2 bomb damage and demolition.

8.3.2 Trench 2



Photo 6 Trench 2 looking north

Trench 2 (Figure 3)	
Location	East side of site, parallel and adjacent to King John's Street and meeting Trench 1 to the north
Dimensions	17.9m long x 6.2m wide x 2.0m deep (15.5m long x 3m wide below 1.2m)
London Survey grid coordinates	86161 36294
OS National grid coordinates	535811 181680
Modern Ground Level	109.76m ATD (9.76m OD)
Modern subsurface deposits	Loose mixed modern demolition rubble 1.3m thick
Level of base of archaeological deposits observed and/or base of trench	107.6m ATD (7.6m OD)
Natural observed	Brickearth

Extent of modern truncation/overburden	to 1.3m bGL across trench
Archaeological remains	Dating Evidence, Finds, and Samples
A southern group of structures including a structural wall forming the west side of the trench made of 55mm-thick soft red bricks [101]. 5.7m of wall was exposed with one section having a series of holes for floor joists. The wall had been truncated at 108.4m ATD (8.4m OD). Burnt wood also found here. A sleeper wall of 60mm-thick bricks [89] may have been associated with the wooden floor it once supported, and a parallel east wall [83] and curved north wall [93] and a parallel internal wall [84].	Brick thickness suggests approximately late 15th or 16th-century date
The structural wall was associated with a series of partition walls [87] and [90] and a brick floor [104] [86] [88] [92] with a clay under-floor water seal [182]. They were also made of 60mm-thick soft red bricks.	
Rebuilds and modifications include walls [81] [85] and [91] and pier base [82]	as above
A northern group of structures including a structural wall [102] [103] and two layers of brick floors made with 66mm-thick brick [95] [96], built over the top of the main structural walls in trench 1 [77] (where the two trenches joined), with coal dust adhering to the brick	Brick thickness suggests approximately 17th-century date
Demolition and dump layers above both groups [106] [No finds
A group of later structures including walls and floors above earlier remains [97] [105] and external dump [107].	19th-century yellow stock frogged brick and concrete (not retained)
Interpretation and summary	
Despite the southern group including a wall of 55mm-thick bricks, the main phase of structural remains relate to a series of semi-basement cellars from a domestic range of buildings built behind the gatehouse (King John's Tower), relating to the period when the private house became a Baptist College. The gatehouse remained standing through this period, so the fact that the northern group partially overlay its foundation indicates that they were tied into the earlier structure. They probably dated to the 17th and 18th centuries. Over the top of these were 19th-century outhouses to the rear of terraces facing King John Street	



Photo 7 Tudor–Stuart building remains south end of Trench 2. Remains of later (19th-century) structures are visible in the section at the level of the trench steps out



Photo 8 Tudor–Stuart coal cellar north end of Trench 2, built over part of the massive foundations exposed in Trench 1

8.3.3 Trench 3



Photo 9 Trench 3, looking north

Trench 3 (Figure 4)	
Location	On the east side of Garden Street, north side of the site
Dimensions	15.9m long x 6.3m wide x 1.2m deep
London Survey grid coordinates	86136 36291
OS National grid coordinates	535786 181676
Modern Ground Level	109.6m ATD (9.6m OD)
Modern subsurface deposits	Loose mixed modern demolition rubble 1.2m thick
Level of base of archaeological deposits observed and/or base of trench	Base of archaeological deposits was mostly 108.0m ATD (8.0m OD), but 107.06m ATD (7.06m OD) south of a structural wall at the south end of the trench. Base of trench 108.38m ATD (8.38m OD)

Natural observed	Gravel 107.43m ATD (7.43m OD), Brickearth 107.98m ATD (7.98m OD)
Extent of modern truncation/overburden	1.2m
Archaeological remains	Dating Evidence, Finds, and Samples
At 108.58m ATD (8.58m OD) were found a group of orthogonal brick walls (0.6m wide) made of 60mm-thick red bricks, forming a range of rooms [50][52][53]. They were butted up to an east–west aligned structural wall foundation, 0.6m wide, which crossed the south end of the trench [47]. It was made of 60mm-thick soft red bricks and was founded in a trench [49] dug through brickearth [65][67] into terrace gravels [68] to 106.78m ATD (6.78m OD) (1.56m below the level it had been truncated) and the construction cut backfilled [48] to the north and [71] to the south. To the south of the wall natural deposits had been truncated 0.9m deeper than to the north of it. Above construction backfill [71] were two layers of demolition debris [70] & [69].	Bricks [50]: 1500–1666 [52]: 1500–1666 [53]: 1666–1800/1900 [47]: 1500–1666
A Red brick wall built over the earlier group, over 10m long and 0.5m wide, aligned with the standing remains of the Baptist chapel and surviving up to 109.6m ATD (9.6m OD) [51]	1700–1900
A series of brick-lined cess pits built onto the west face of the later wall above and cutting through the earlier walls [56][55][54], [59][58][57], [62][61][60]	[54]: Pot 1830–1900, Tobacco pipe 1820– 1840 [57]: Pot 1825 – 1830, Tobacco pipe 1820– 1840 [60]: Pot 1830 – 1900, Tobacco pipe 1820– 1840
Interpretation and summary	
<p>The east–west aligned wall is thought to have been from the south range of a courtyard house: Worcester House (King John’s – or St John’s – Court). It may have been the north wall of the south range. Butting against it were the remains of either a west wing of the courtyard house or later buildings filling the courtyard.</p> <p>They had been truncated to form the later (early 19th-century) Baptist College buildings. In this case a structure, the north part of which was the college chapel.</p> <p>The series of cess pits dated from the use of the area by the Baptist College (1810 – 1855), unless the finds were residual.</p> <p>Whilst the chapel remained in use, the wall foundation south of it was re-used to form the east wall of a row of terrace slum dwellings facing onto Garden Street.</p>	



Photo 10 Machine dug *sondage* south of the main east–west wall foundation

8.3.4 Trench 4



Photo 11 Trench 4, looking south

Trench 4 (Figure 5)	
Location	North-west of the site, west of Garden Street, next to the park all-weather pitch
Dimensions	17.2m long x 6.6m wide x 1.54m deep (below 1.2m: 15m long x 3.5m–2m wide)
London Survey grid coordinates	86112 36296
OS National grid coordinates	535761 181680
Modern Ground Level	109.74m ATD (9.74m OD)
Modern subsurface deposits	Loose mixed modern demolition rubble 1.5m thick
Level of base of archaeological deposits observed and/or base of trench	Base of the trench 108.22m ATD (8.22m OD), 19th-century cess pit continues below 107.22m ATD (7.22m OD) at north end
Natural observed	Brickearth 108.22m ATD (8.22m OD)
Extent of modern truncation/overburden	1.5m bGL

Archaeological remains	Dating Evidence, Finds, and Samples
A right-angle (south-east) corner of a brick-walled structure. Made of 55mm-thick Tudor-style bricks [162]. Was exposed on the west side of the trench at 108.51m ATD (8.51m OD) (1.2m bGL). A 0.25m wide wall [165] built with the same bricks butted against the south side of the structure.	1500–1665 bricks
To the south of the brick-walled structure was a brick-edged cess pit made with frogged bricks [157], filled with nightsoil [156].	[157] bricks 1840+ (frogs) left <i>in situ</i> [156] pot 1825–1900, tobacco pipe 1840–1880
At the north end of the trench a circular cess pit [160], fill [159], was cut through by modern structures. It continued below 107.55m ATD (7.55m OD).	None
Interpretation and summary	
The structure made of Tudor-style 2-inch thick bricks was set aside from the main Worcester House complex. It may have been an outbuilding set in its grounds, or it may have been the east edge of a neighbouring property. A building is shown in this approximate area and orientation on Gascoigne's map of 1703.	

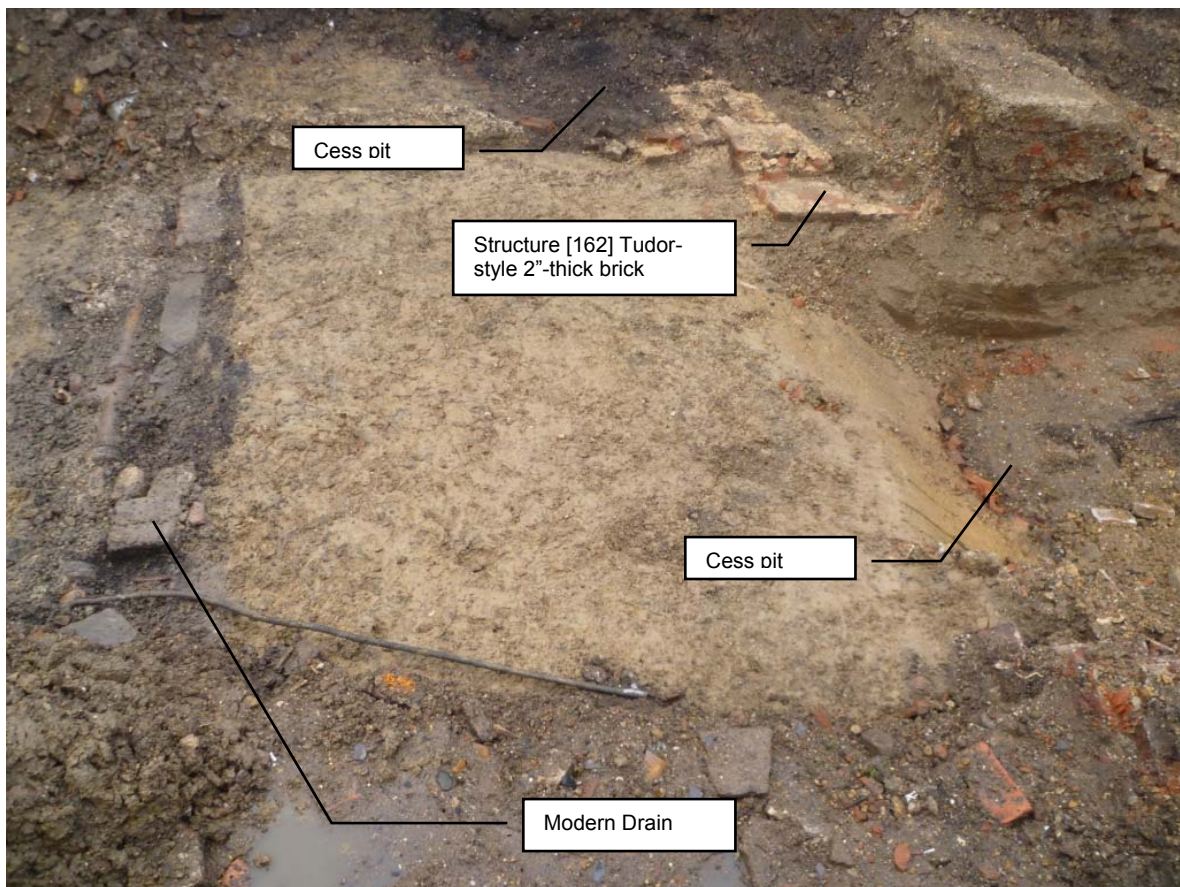


Photo 12 Trench 4, looking west

8.3.5 Trench 5



Photo 13 Trench 5, looking south, showing buildings bombed in World War 2

Trench 5 (Figure 6)	
Location	On the west side of Garden Street
Dimensions	18.7m long x 6.4m wide x <2m deep (below 1.2m: 16m long x 4m wide)
London Survey grid coordinates	86116 36279
OS National grid coordinates	535766 181663
Modern Ground Level	109.38m ATD (9.38m OD)
Modern subsurface deposits	Loose mixed modern demolition rubble 1.5m thick
Level of base of archaeological deposits observed and/or base of trench	Base of trench 108.0m ATD (8.0m OD)
Natural observed	107.7m ATD (7.7m OD)
Extent of modern truncation/overburden	

Archaeological remains	Dating Evidence, Finds, and Samples
<p>The earliest remains were spread brick footings made with Tudor-style 2-inch thick bricks [153]. They were not orthogonal with other remains of the same period, but formed a wall with a 135-degree corner. They were dug into natural gravel, construction cut [155] backfilled with gravely sand [154]. These remains had been truncated by a “robber trench” [152] filled with brickearth gleyed gray [151]</p>	<p>1500–1666 bricks</p>
<p>The brick foundations above, had been truncated and were one of a series of features that had been isolated by trench-wide truncation, the rest of which were apparently much later in date. They included the base of a well, cut [150], brick lining [149], fill disuse [148] and two pits, [147] fill [146] and [173] fill [172].</p>	<p>[146] 1760–1900 pottery, residual paving brick and floor tile 1600/1630–1800.</p>
<p>The well-preserved remains of buildings dating from the 19th century and bombed in World War 2. They included a small paved internal courtyard which previously had a small well [116] [117] [118] [119] [120] [121] [123] [124] [125] [126] [127] [128] [129] and [130] to [145] inclusive</p>	<p>19th-century–1940s Cartographic evidence</p>
Interpretation and summary	
<p>The 16th-17th-century brick foundation [153] has an internal angle that corresponds with that of an octagon. No polygonal structures are shown on the historic maps held by MOLA for the area and scanned for Crossrail. It is sufficiently substantial and well-built that it probably supported a brick, rather than timber, superstructure.</p> <p>This could have been the foundations of a polygonal tower at the south-western corner of the Worcester House complex, similar to that known on the northern side, or a free-standing structure, such as a brick dovecot. More extensive remains of this structure, and Worcester House, would need to be exposed to resolve this question.</p> <p>All other remains were constructed in the late 18th or 19th centuries, and heavily truncated by building remains that correspond with buildings (and a small courtyard) north of Garden Place and between schools, on the 1870 Ordnance Survey map. They are marked as totally destroyed on the London County Council bomb maps.</p> <p>Note: a 1.7m-deep machine <i>sondage</i> north of this trench on the projected line of the deep east–west foundation in trench 3 did not expose it. It is possible that the wall continued this far at a lower depth than could be dug (for local logistical reasons).</p>	



Photo 14 1500–1666 (part octagonal) brick wall



Photo 15 A well which had been covered by a later courtyard

8.3.6 Trench 6



Photo 16 Trench 6, looking south

Trench 6 (Figure 7)	
Location	Southernmost of three trenches west of Garden Street
Dimensions	19.6m long x 4.16m wide x 1.05m deep
London Survey grid coordinates	86100 36245
OS National grid coordinates	535751 181628

Modern Ground Level	109.78m ATD (9.78m OD)
Modern subsurface deposits	Loose mixed modern demolition rubble 1m thick
Level of base of archaeological deposits observed and/or base of trench	108.7m ATD (8.7m OD)
Natural observed	Brickearth 108.69–108.81m ATD (8.69– 8.81m OD)
Extent of modern truncation/overburden	1m
Archaeological remains	Dating Evidence, Finds, and Samples
Two adjacent square cut 19th-century cess pits [113] and [115], one of which contained very large quantities of oyster shell [112], the other not [114]. Also exposed was a square post hole [111] (fill [110]) and an oval rubbish pit [109] (with clinker in fill [108]) were the only remains exposed in this trench.	[112] pot 1820–1900, tobacco pipe 1820– 1840 [114] pot 1807–1900 [110] pot 1760–1830 [108] pot 1807–1900, tobacco pipe 1800– 1820
Interpretation and summary	
The level of natural brickearth in this trench is higher than elsewhere, This suggests the approximate level that it would originally have been elsewhere on the site before truncation. It may be significant that no medieval or earlier remains were exposed. The large amounts of oyster shell in cess-pit fill [112] suggests a pre-1850 date (which agrees broadly with the date of the tobacco pipe). The neighbouring cess pit without oyster shells in fill [114], may have been disused at a later date, despite its earlier <i>TPQ</i> (1807 compared to 1820).	

8.3.7 Trench 7



Photo 17 Trench 7, looking east

Trench 7 (Figure 8)	
Location	Central, east of Garden Street (in the City Farm)
Dimensions	14.5m long x 6m wide x 1.26m deep (below 1.2m: 9.5m long x 3.3m wide)
London Survey grid coordinates	86136 36247
OS National grid coordinates	535787 181632
Modern Ground Level	110.09m ATD (10.09m OD)
Modern subsurface deposits	Loose brick rubble and some more modern structures from the school that previously overlay it
Level of base of archaeological deposits observed and/or base of trench	108.07m ATD (8.07m OD) base of trench
Natural observed	Gravel to 108.45m ATD (8.45m OD) and brickearth to 108.9m ATD (8.9m OD)
Extent of modern truncation/overburden	1.2m

Archaeological remains	Dating Evidence, Finds, and Samples
The earliest remains were a series of ill-defined horizontally- truncated small holes , some of which may have been natural in origin, which contained small fragments of undecorated prehistoric pottery [10][11], [12][13], [14][15], [18][19],[22][23],[24][25].	Undiagnostic prehistoric pot
Over them was an east–west red brick (English Bond) wall with bricks 65mm–70mm thick [45]	c late 17th–/18th-century or early 19th-century (bricks <i>in-situ</i> identification)
The wall was truncated by a circular 19th-century brick-lined cess pit [26][27][28]	Pot 1830–1900, tobacco pipe 1820–1840
Tree extraction hole or similar shallow feature [17][16]	Pot 1800–1830, tobacco pipe 1840–1880
Structural cut and backfill [20][21]	Tobacco pipe 1800–1900
These remains were truncated by a yellow stock-brick wall on large concrete pads [44]	19th-century brickwork left <i>in situ</i> map
Interpretation and summary	
<p>The prehistoric remains are difficult to interpret, it is possible they are residual pottery contained in natural features such as a tree throw or rabbit run, although [25][24] appears to be a square-dug feature. Nonetheless, they indicate (together with Late Bronze Age/Early Iron Age pottery found c 50m east of the Crossrail site in 1979, site code SHS79) prehistoric activity, and potentially occupation, in the vicinity.</p> <p>Red brick wall [45] appears to lie too far north to be that of the 17th-century Meeting House, and probably reflects the gradual filling in of the land between the Meeting House and the former Worcester House.</p> <p>The cess pit [26][27][28] appears to have been within buildings depicted north of the (Sunday) School depicted on the 1870s OS map.</p> <p>The LCC Bomb Map indicates that the school had been extended northwards by the 1940s, and it is this northern extension built after 1870 that had the large concrete base.</p>	

8.3.8 Trench 8



Photo 18 Trench 8, looking south-east

Trench 8 (Figure 9)	
Location	Central, south of Tr 7, west of Congregational Church Wall
Dimensions	21m long x 6.5m wide x 2m deep (below 1m: 18.5m long and 4m wide; and below 1.2m: 5.5m long x 2.8m wide)
London Survey grid coordinates	86146 36225
OS National grid coordinates	535797 181610
Modern Ground Level	111.35m ATD (south) (11.35m OD) to 110.82m ATD (north) (10.82m OD)
Modern subsurface deposits	Loose brick rubble
Level of base of archaeological deposits observed and/or base of trench	Base of trench 109.0m ATD (9.0m OD)
Natural observed	108.9m ATD (8.9m OD)
Extent of modern truncation/overburden	0.5m–1.2m deep

Archaeological remains	Dating Evidence, Finds, and Samples
A palaeosol , or buried soil [42]	Undated
A line of rounded linear pits [41] filled with topsoil and dirty brickearth [40].	None
They had been truncated by an orthogonal arrangement of yellow stock brick walls [36][38][39], construction cut [37] and a concrete floor at 109.6m ATD (9.6m OD) [33], bedding [34], construction fill [33].	19th-century structure left <i>in situ</i> To be compared with 1870s and later Ordnance Survey maps
Demolition dump and landscaping deposit [32]	Post-WW2 maps
Interpretation and summary	
Despite the area that was excavated to brickearth being close to Trench 7, no prehistoric remains were found in this trench. The line of features cut into brickearth are thought most probably to have been bedding trenches for bushes or trees (orchard), comparable with those seen on historic maps such as Rocque, 1746. The brick and concrete remains are those of the Congregational School. They are linked to the standing remains of the Congregational church on the site.	

8.3.9 Trench 9



Photo 19 Foundations of the Congregational church

Trench 9 (Figure 10)	
Location	South of site, within City Farm
Dimensions	16.5m long x 6.5m wide x 2m deep (below 1.2m: 4.5m long x 4m wide)
London Survey grid coordinates	86146 36199
OS National grid coordinates	535798 181584
Modern Ground Level	111.43m ATD (11.43m OD)
Modern subsurface deposits	Imported topsoil and clay
Level of base of archaeological deposits observed and/or base of trench	Base of trench 109.39m ATD (9.39m OD)
Natural observed	Loose sand 109.39m ATD (9.39m OD)
Extent of modern truncation/overburden	0.7m thick

Archaeological remains	Dating Evidence, Finds, and Samples
<p>A 19th-century quarry [8] had truncated natural terrace gravel (sand at this location), through the backfill of which was cut a primitive concrete pad foundation, made of lime mortar, pebbles and brick [7] and a spread of mortar with slate over it [6], cut through by a drain [5][4]</p>	
<p>These were overlain by a coal-ashy dump of nightsoil (and possibly industrial waste) [3]</p>	
<p>Cutting through dump and concrete pads was a yellow stock-brick buttressed foundation [1] (110.73m ATD; 10.73m OD), cut through or supported by mass primitive concrete [2]</p>	<p>19th-century structure left <i>in situ</i> Historic map evidence</p>
Interpretation and summary	
<p>There were no remains of the 17th- century Meeting House exposed in this trench . Quarrying is likely to have been a short-lived event shortly before the construction of the Congregational Church.</p> <p>The brick foundation [1] is part of the demolished section of the 19th-century Congregational Church, parts of which stand above ground level on the site.</p> <p>The primitive concrete pads were probably to provide a firmer footing both for the church and for construction activities, the dump that followed being merely an event in the construction sequence. The yellow-brick buttressed foundation closely matches the wall illustrated in the 1870 Ordnance Survey map.</p>	

8.4 Targeted Watching Brief on Thames Water Sewer Diversion in Garden Street

Works to divert the main sewer that flows down Garden Street comprised new gully pipes feeding storm water drains into manholes at the north and south ends of Garden Street, and a length of deep drain at the south end of Garden Street. Archaeological remains were recorded in the north manhole and the west of two pipe trenches directing gully water into it.

North Manhole Garden Street Sewer Diversion (Figure 11)	
Location	North end of Garden Street
Dimensions	2m x 2m x 2.5m deep
London Survey grid coordinates	86130 36315
OS National grid coordinates	535778 181700
Modern Ground Level	109.34m ATD (9.34m OD)
Modern subsurface deposits	Loose mixed modern demolition rubble
Level of base of archaeological deposits observed and/or base of trench	Base of trench 106.84m ATD (6.84m OD)
Natural observed	Gravel 107.43m ATD (7.43m OD), Brickearth 107.98m ATD (7.98m OD)
Extent of modern truncation/overburden	1.3m
Archaeological remains	Dating Evidence, Finds, and Samples
A 0.6m-wide red brick wall foundation [166] aligned north–south, and made of 55mm-thick bricks, was recorded from 108.04m ATD (8.04m OD) (where it had been truncated by modern activity) to 106.84m ATD (6.84m OD)(limit of observations). It was recorded over a distance of 12m, and continued beyond the trench to the north and south.	Late 15th or 16th-century structure left <i>in situ</i>
Interpretation and summary	
The foundation was probably part of Worcester House, or an associated structure/building.	



Photo 20 North Manhole looking north

North pipe trench Garden Street Sewer Diversion (Figure 11)	
Location	North end of Garden Street
Dimensions	Two trenches merging to one a north manhole , one trench north of manhole 24.2m x 1m x 1.3m deep
OS National grid coordinates	535778 181700
Modern Ground Level	109.34m ATD (9.34m OD)
Modern subsurface deposits	Loose mixed modern demolition rubble
Level of base of archaeological deposits observed and/or base of trench	Base of trench 108.01m ATD (8.01m OD)
Natural observed	Not observed
Extent of modern truncation/overburden	1.0m
Archaeological remains	Dating Evidence, Finds, and Samples
A 0.6m-wide red brick wall [166] foundation aligned north–south, made of 55mm-thick bricks was recorded from 108.87m ATD (8.87m OD) (where it had been truncated by modern activity). It continued beyond the trench to the north, in the north manhole.	15/16th-century structure left <i>in situ</i>
Interpretation and summary	
The foundation was probably part of Worcester House, or a n associated structure/building.	

South pipe trench and manhole Garden Street Sewer Diversion	
Location	South end of Garden Street
Dimensions	Two trenches merging to one 9m from north end, 37m to the south manhole which measured 4m x 2.3m, one trench south of manhole, total trenches 63.6m x 1m x 1.3m deep
London Survey grid coordinates	86124 36201
OS National grid coordinates	535777 181586
Modern Ground Level	110.07m ATD (10.07m OD)
Modern subsurface deposits	Loose mixed modern demolition rubble
Level of base of archaeological deposits observed and/or base of trench	Base of trench 108.01m ATD (8.01m OD)
Natural observed	Brickearth 109.02m ATD (9.02m OD)
Extent of modern truncation/overburden	1.0m

Archaeological remains	Dating Evidence, Finds, and Samples
Made ground, dark grey – brown nightsoil and brickearth [169] 109.7m ATD (9.7m OD)	19th-century made ground
Interpretation and summary	
19th-century landfill dumps and/or the disturbed surface of brickearth.	

8.5 General Watching Brief on protective measures for Worcester House

The protective measures on remains of Worcester House (King John's Tower/Palace) were supervised by a MOLA Senior Archaeologist. They were recorded and documented for future reference and as an aid for works during the construction phase of Stepney Green Shaft.

Firstly, voids were filled with salt-free sand



Photo 21 Voids filled with sand in Trench 1

Then the area of masonry remains was covered with a geotextile fabric and a minimum of 200mm of sand applied over areas of masonry.



Photo 22 Geotextile and sand in trench 3

In the case of trench 3, where historic brick walls were recorded in the side of the trench, the trench was filled above the top of walls



Photo 23 Sand filling trench 3 to 200mm above brick remains at side of trench

The trenches were then filled to ground level with general spoil that was retained from excavation. In trench 2, within the rectangular area of the proposed shaft, above the sand, a layer of peagrit was applied beside a Tudor wall [47].



Photo 24 Sand filling trench 3 to 200mm above brick remains at side of wall [47]

9 Assessment of results against original expectations and review of evaluation strategy

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 Research aims

The original research objectives were met as follows; information was recovered on:

- Archaeological remains of prehistoric date relating to occupation of the area;
- There were no archaeological remains of Roman date relating to occupation of the area;
- There were no archaeological remains of medieval date relating to the expansion of Stepney Green:
- Substantial *archaeological remains of Post-medieval, or earlier date relating to Worcester House or its predecessor*, were recovered. Structural remains potentially date from the very end of the War of the Roses or the beginning of the Tudor period; they continue throughout the 17th century and are widespread. They include remains of King John's Tower and domestic ranges of buildings;
- The evaluations *established the presence...of archaeological remains surviving below the foundations of building shown on the 19th-century Ordnance Survey map*;
- The evaluation exposed and recorded *archaeological remains of modern and post-medieval date relating to the Baptist Chapel, Congregational church, Sunday school and the former street layout at the site*;
- *The character and extent of archaeological remains identified during trial trenching*, were recorded and the differences in archaeological potential across the site identified.

9.2 Assessment criteria

Criterion 1: period

The remains fall into the following groups,

- Ill-defined prehistoric features, potentially of the Late Bronze Age or Early Iron Age
- 15th- to 18th-century remains of Worcester House (King John's Tower/Palace) and contemporary structures, mostly without small finds or occupation debris, but with possible garden or horticulture features
- 19th-century structural remains associated with the religious and social functions of the site, including walls of the Baptist College built in 1810 and the Congregational Church and School
- 19th-century secular housing remains, including cess pits of slum houses which succeeded the Baptist College and some deposits relating to the last use of these buildings during WW2

Criterion 2: rarity

Whilst brick building remains from late medieval and Tudor London are far from unique, eg brick extensions to the City Wall and Lincoln's Inn Old Hall 1590 they have not been commonly excavated in the modern era.

Criterion 3: documentation

Documentation survives from the 17th-century and later. The origins of King John's Palace/Worcester House potentially predate this by a hundred year or more. Much of the documentation refers to individual structures such as the ownership of King John's Tower or the construction of the Congregational Church. Contemporary drawings can be scaled and compared with excavated remains

Criterion 4: group value

Two types of group value may be considered, the group within the excavated area which comprises Worcester House/King John's Palace and gardens (together with elements of potentially neighbouring properties, and the wider group of Stepney village, a wealthy and nationally significant extra-mural suburb of late medieval and Tudor London; for instance (cf documentation above) The Place, home to Thomas Cromwell during the Dissolution of the Monasteries.

Criterion 5: survival/condition

Survival differs by period:

- Prehistoric features were truncated to very near their base, to an extent that it is difficult to interpret them.
- 15/16th- to 18th-century remains are largely structural, deep features such as wells and cess pits may exist elsewhere on site, but were not exposed during the evaluation. Where brick remains have been exposed, no debris from everyday use was recovered. Remains are divided between major foundations (Worcester House/King John's Tower and the potentially-octagonal element in trench 5) and internal walls in trench 2.
- Similarly, the 19th-century religious and school structural remains were without occupation debris. They too may be divided between foundations in trench 9 and 3, and a floor in trench 8.
- 19th-century cess pits and unstratified deposits above buildings constructed in the later 19th century do have significant individual finds.

Criterion 6: diversity

The social diversity of the remains is large, from private wealth evolved into religious and institutional use to the creation of slum neighbourhoods following the advent of rail travel in the middle of the 19th century, and the flight of elites from the East End of London.

Criterion 7: potential

Unless there was a chance discovery of a deep well or shaft – as yet unknown – the truncated prehistoric remains have limited potential other than to record an element of

activity. Any more extensive remains, however, could potentially help refine the date and nature of this activity.

The site has potential to document an important mansion of the 16th- to the 17th centuries and its subsequent development, in particular its contribution to the non-conformist movement. It can illustrate the development of one major household through this period, and its subsequent division in multiple occupation. This can be tied in to cartographic and documentary sources, including a number of prominent occupants and owners of Worcester House (eg the dispossessed 2nd Marquess of Worcester – inventor of a steam engine – father of the 1st Duke of Beaufort, or the reverend Matthew Mead, whose doctor son Richard promulgated a rationalist interpretation of “demons” as medical conditions).

Remains of this period and those of the later evolution of the site, relating to standing remains and houses bombed in WW2, have the potential to contribute to the historical identity of Stepney, which was compromised by the combination of bomb damage and post-war slum clearance. The site also has the potential to inform the history of the development of structures that have been retained as landmarks but are isolated and without context in the modern landscape.

10 Statement of potential archaeology

The evaluation, supported by the results of the watching brief in Garden Street has demonstrated that the site has the following potential:

- A low potential for prehistoric remains, probably heavily truncated as were those seen in trench 7. The date of the remains seen in this evaluation was undefined, but activity from the adjacent SHS79 site was of Late Bronze Age/Early Iron Age date, and this could be similar.
- High potential for foundations and structural remains from Worcester House and associated structures/outbuildings (including the enigmatic angled structure in trench 5). The may have a 16th-century, possibly late 15th-century, origin, and continue in use and expansion in subsequent centuries (see next item). There appears to be a much more limited potential for associated occupation deposits and features.
- High potential for remains of the later development within the grounds of Worcester House and its surroundings, notably the non-conformist institutions that culminated in the Baptist College and Congregational Church, of which partial remains stand above ground level.
- High potential for the later development of the area, including 19th-century terraced housing, both foundations and occupation/clearance deposits in their cess pits.

11 Conclusions

11.1 Geology

The underlying archaeologically sterile natural deposits are of Thames Terrace gravel overlain with a thin sandy clay layer of brickearth. In this locality these deposits are thought to be archaeologically sterile (earlier terraces and silt pockets have the potential for Palaeolithic remains).

11.2 Prehistoric Remains

Prehistoric features have been heavily truncated [10][11], [12][13], [14][15], [18][19],[22][23],[24][25]. Their presence, along with earlier excavated prehistoric remains (site SHS79), suggest activity, perhaps occupation, in the vicinity. It is possible that deeper prehistoric features, such as wells, pits and ditches could be present on the site.

11.3 Worcester House (King John's Tower/Palace/Court)

Substantial remains were exposed of a large courtyard house, potentially dating from the end of the end of the 15th or 16th centuries, through to the end of the 17th century. Possibly the earliest remains are those of the defensive gatehouse [77] [78] [175] [176] [177] [178] [179][180] (a little below 108.0m ATD). Brick gate towers of this type were built in the late 15th through the early 16th centuries, and it is possible that this pre-dates the remainder of Worcester House. In this case later modifications [72][73][74] reflect the known later history of the tower in the 17th century (it remained in use to the 19th-century).

Of similar early date was the foundation made of 55mm-thick bricks with an internal angle equivalent to that of an octagon in Trench 5 [153][154][155] (107.33m ATD). Although the bricks can only be dated very broadly to 1500–1666 the octagonal form was particularly favoured at the beginning of that period. It is unclear what sort of structure this foundation derived from, but it appears to be sufficiently substantial that it probably had a brick superstructure, not timber.

The name 'King John's Palace' was applied locally to masonry buildings of some antiquity, another King John's Palace was to be found at Bow. No actual association with King John should be assumed (he pre-dates the building by some three centuries). Equally, the main period when the name Worcester House was applied appears to relate to the restoration in the later 17th-century, when the Marquesses of Worcester were returned their titles and made Dukes of Beaufort, and were contesting for the return of their Stepney properties through Parliament. It is conceivable that the name was applied when Henry Somerset was made 1st Marquess of Worcester in 1642 (he became Earl in 1628). There is a degree of confusion with Henry Somerset's father Edward Somerset, 4th Earl of Worcester, who lived at Worcester Park House (Worcester Park was where Nonsuch Palace was built) and the family's Worcester House, in the Strand.

The courtyard house adapted and evolved through its history and we might expect to see considerable investment during Henry Somerset's ownership as he increased his personal fortune by a significant amount. Certainly, building foundations [72][74][75][76][78], around the gatehouse, reflect modification. Whilst some elements of the range of rooms on the west of the site may date to 1500–1666 [50][52] another wall that would appear to be part of the same structure [53] dates to 1666–1800/1900 (to

108.85m ATD). Similarly, remains of buildings at the east of the site [83][84][89][93][101] (to 108.52m ATD), included alterations between wooden suspended floors and brick floors and new partition walls [86][87][88][90][92][104][182]. There were also several later partitions and rebuilds [82][81][85][91]. The gatehouse foundation [77] was overlapped by later rooms with at least two successive brick floors [95][96][102][103]. The bricks they were made of broadly date to the 17th century.

A substantial wall exposed in Garden Street [166] (108.87m ATD) may relate either to a Tudor west wing of the courtyard house, or a perimeter garden wall. The isolated foundation in Trench 4 on the west of the site [162][165] (108.83m ATD) probably was a fragment of a neighbouring property.

No 17th-century remains were found of the historic meeting house known to have been located to the south of the site. This might be because it lay outside the areas of evaluation trenches, or just south of the Crossrail site, or that remains were removed by subsequent truncation in the area of Trench 9.

These remains were concentrated in the northern half of the site, across both the area of the City Farm and Stepney Green Park.

11.4 18th-century remains

18th-century maps of Stepney (Gascoignes's 1703 survey of Mile End Hamlet and John Rocque's 1746 London, Westminster and Southwark map) show Worcester House as a Courtyard House, part of a built-up frontage onto Stepney Green Road, with Gardens behind and Stepney Meeting House facing onto Bull Lane (Stepney Way). A red brick wall [45] (109.34m ATD) was probably built after the middle of the 18th century. A row of repeated shallow holes [41] (109.0m ATD) may also be 18th-century planting holes for fruit trees or similar planting.

11.5 19th-century remains

Potentially early 19th-century quarrying was identified at the south of the site [8] the ground consolidated by mass primitive concrete [7][2]. A mortar spread overlaid with slate [6] is probably a 19th-century garden feature. This was cut through [5], and overlaid with nightsoil [4][3] to make the ground up to the level at which the foundations of the Congregational Church (New Stepney Meeting House) were truncated: 110.73m ATD. This was below the floor level of the church.

The remains of the Congregational School were recorded. In its final phase this school included walls [36][38][39], construction cut [37] and a concrete floor at 109.6m ATD [33], bedding [34], construction fill [33] in trench 8 and wall [44] on large concrete pads in trench 7. This is larger than the 'Sunday School' marked on the 1870 map, and the school had expanded over a range of buildings off an entry. Earlier use is represented by a cess pit [26][27][28], shallow feature [17][16] and Structural cut [20][21].

By far the most complete remains were those of buildings demolished after being damaged beyond repair in WW2 bombing, on the west side of Garden Street (Trench 5). They included a small paved internal courtyard which previously had a small well [116] [117] [118] [119] [120] [121] [123] [124] [125] [126] [127] [128] [129], and [130] to [145] inclusive. They survived to 108.72m ATD. 19th-century cess pits [113] [112] and [115][114], a square post hole [111] [110] and an oval rubbish pit [109] (with clinker in fill [108]) indicated domestic settlement further south, with some small-scale industrial activity. Cess pits were also recorded on the far west of the site (Trench 4) [157][156],

On the east side of Garden Street the red-brick wall [51] of the Baptist College, in line with the remains of the college chapel, was exposed at 109.3m ATD. A line of regularly-spaced cess pits, 4m- apart, [62][61][60], [59][58][57], and [56][55][54] had finds with a TAQ of 1840. This suggests they date to the tenure of the college (on site until 1855) unless they all contained residual material (contrary to the working assumption before the finds were dated, that they were from the small dwellings that re-used the college wall as a foundation, after its relocation).

The remains of buildings fronting onto King John Street included walls and concrete floors above earlier remains [97] [105] (to 109.7m ATD) and external dump [107].

12 Recommendations for appropriate mitigation strategy

A significant area within the proposed Stepney Green shaft work site has been evaluated. Through the area of the remains of Worcester House/King John's Court/Palace, within the worksite (construction compound), truncation below 108.4m ATD should be avoided if at all possible. The C123 design archaeologist will produce recommendations for further work during the Stepney Green Shaft excavation.

13 Publication and dissemination proposals

The watching brief and evaluation results will initially be disseminated via this report; the supporting site archive of finds and records (including digital data) and by incorporation into the wider predictive deposit modelling for the Crossrail scheme. Any publication proposals will be considered in relation to later fieldwork on this site, and also the wider context of archaeological potential and results within the Crossrail scheme.

14 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.

15 Bibliography

Atkinson, D R and Oswald, A, 1969 London clay tobacco pipes, *J British Archaeol Assoc* 32, 171–22

Crossrail, 2005a *Assessment of Archaeology Impacts, Technical Report, Part 4 of 6, South-East Route Section*. Crossrail (doc No. 1E0318-E2E00- 00001)

Crossrail, 2005b *Environmental Statement*

Crossrail, January 2006, *Amendment of Provisions 1*

Crossrail, November 2006a, *Amendment of Provisions 3*

Crossrail, November 2006b, *Archaeological Programming Assessment*, Report Number 1E0318-G0E00-00006 (Rev B)

Crossrail, 2008a, MDC4 Archaeology, Updated Baseline Assessment

Crossrail, 2008b, *Archaeological Monitoring of Ground Investigations, Borehole Package 11, Limehouse to North Woolwich*

Crossrail, June 2010a *C123 Stepney Green Shaft Document No C123-JUL-T1-TPL-CR094_SH005_Z-00001, Revision 6.0*

Crossrail, October 2010b *Addendum to SSWSI: Trial Trench Evaluation and Detailed Excavation – Stepney Green Shaft* (Document Number: C123-JUL-T1-RGN-CR094_SH005_Z_00001)

English Heritage, 1991 *Management of Archaeological Projects (MAP2)*

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*

Higgins, D A and Davey, P, 1994 *Draft guidelines for using the clay tobacco pipe record sheets*, unpublished report

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)*

MOLA, December 2010, *C261 Early East Section Method Statement for an Archaeological Evaluation and Watching Briefs at (C123) Stepney Green Shaft*, (Document Number: C261-MLA-T1-GMS-CR094_SH005-00001)

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

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

Oswald, A, 1975 *Clay pipes for the archaeologist*, BAR 14, Oxford

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17 NMR OASIS archaeological report form

OASIS ID: molas1-94376

Project details

Project name	Stepney Green Shaft
Short description of the project	Evaluation and Site monitoring exposed small prehistoric truncated features with late Bronze Age or Iron Age pot. NO Roman or earlier medieval finds. Brick foundations of King John's Tower, a late 15th-c or 16th-c defensible gatehouse, ranges of rooms from Tudor-Stuart Courtyard mansion
Project dates	Start: 21-07-2010 End: 03-02-2011
Previous/future work	Yes / Yes
Any associated project reference codes	xrv10 - Sitecode
Type of project	Field evaluation
Site status	Area of Archaeological Importance (AAI)
Current Land use	Other 11 - Thoroughfare
Current Land use	Cultivated Land 1 - Minimal cultivation
Current Land use	Other 14 - Recreational usage
Current Land use	Other 5 - Garden
Monument type	GATEHOUSE Medieval (to 1540)
Monument type	GATEHOUSE Post Medieval (after 1540)
Monument type	COURTYARD HOUSE Medieval
Monument type	COURTYARD HOUSE Post Medieval
Monument type	COLLEGE Post Medieval
Monument type	TERRACED HOUSE Post Medieval
Significant Finds	POT Post Medieval
Significant Finds	TOBACCO PIPE Post Medieval

OASIS ID: molas1-94376 (cont'd)

Methods & techniques	'Targeted Trenches'
Development type	Rail Tunnel Shaft and work site
Prompt	crossrail act
Position in the planning process	After full determination (eg. As a condition)

Project location

Country	England
Site location	GREATER LONDON TOWER HAMLETS STEPNEY Stepney Green Shaft
Postcode	E1
Study area	8358.15 Square metres
Site coordinates	TQ 3578 8164 51.5168423431 -0.04287886090280 51 31 00 N 000 02 34 W Point
Height OD / Depth	Min: 7.80m Max: 8.80m

Project creators

Name of Organisation	MOLA
Project brief originator	Crossrail
Project design originator	Crossrail
Project director/manager	Elaine Eastbury
Project supervisor	David Sankey
Type of sponsor/funding body	Developer
Name of sponsor/funding body	Crossrail

OASIS ID: molas1-94376 (cont'd)

Project archives

Physical Archive recipient	LAARC
Physical Contents	'Ceramics','Glass','other'
Digital Archive recipient	LAARC
Digital Contents	'Ceramics','Glass','Survey','other'
Digital Media available	'Images raster / digital photography','Images vector','Survey','Text'
Paper Archive recipient	LAARC
Paper Contents	'Ceramics','Glass','Survey','other'
Paper Media available	'Context sheet','Correspondence','Manuscript','Matrices','Notebook - Excavation',' Research',' General Notes','Photograph','Plan','Report','Survey ','Unpublished Text'

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	C261 ARCHAEOLOGY EARLY EAST Fieldwork Report Archaeological Watching Briefs and Evaluation C123 Stepney Green Shaft - XRV10
Author(s)/Editor(s)	Sankey, D.
Date	2011
Issuer or publisher	Museum of London
Place of issue or publication	London
Description	A4 report
Entered by	David Sankey (DSankey@museumoflondon.org.uk)
Entered on	24 February 2011

18 Appendices:

18.1 Building materials

Ian M Betts

A total of 29 fragments of building material were recovered from XRV10. These mainly comprise brick samples, but there are also a few peg roofing tiles, a fragment of either thin brick or floor tile and an unstratified piece of large curved chimney pot or garden furniture.

The building material from XRV10 has been fully recorded and the information added to the MOLA Oracle database.

Listed below is a summary of the building material in each context:

Context	Fabric	Type	Date
[+]	3101	Chimney pot/ garden furniture	1830–1950
[14]	2586	Peg roofing	Prob 1180–1480
[22]	2271	Peg roofing tile	Prob 1180–1480
[47]	3046	Brick	1500–1666
[50]	3033, 3046	Brick	1500–1666
[51]	3032, 3046	Brick	1700–1900
[52]	3033, 3046	Brick	1500–1666
[53]	3032, 3036	Brick	1666–1800/1900
[73]	3033	Brick	1500–1666
[108]	2275	Pantile	1630–1800/1900
[146]	3036	Paving brick	1630–1800
[146]	2320?	Floor tile / Brick	1600–1800
[153]	3046	Brick	1500–1666
[162]	3033	Brick	1500–1666
[165]	3046	Brick	1500–1666
[166]	3046	Brick	1500–1666

Table 1 building material by context

Discussion

Medieval?

A few small fragments of what are probably peg roofing tile were recovered from contexts [14] and [22]. Their thickness (c 9–12mm) and the presence of a grey reduced core suggest these are of medieval date.

Post-medieval

Brick

Brick samples make up the majority of the post-medieval building material collected. Many are very similar in fabric (3033, 3046), colour (red) and size (218–232 x 103–113 x 51–63mm), suggesting they may be of similar date. These bricks were found in contexts [47], [50], [52], [153], [162], [165] and [166]. Although dating brick on size needs to be treated with caution, many would appear to be dated to around 1500–1666 which would suggest they formed part of Worcester House. Some of these brick have sunken margins, a feature more commonly associated with pre-1666 London-made bricks.

Sharp edged, dark red bricks (fabric 3032) measuring 217 x 103 x 60–62mm were recovered from context [51]. These are probably 18th or 19th-century. They were found with reused fragments of earlier red brick (fabric 3046) of probable 1550–1666 date.

Later dark red brick (fabric 3032) was also found in context [53], although these have more rounded edges and so could be slightly earlier in date (1666–1800/1900). Again they were found reused with earlier red brick (fabric 3046) of probable 1550–1666 date. Evidence of reuse comes in the form of two different mortar types attached to the brick sides. The earliest mortar is cream in colour; this is overlain by a light grey mortar layer.

Dutch paving brick

Other building material present includes two types which were brought into London from the Low Countries. The first are small yellow Dutch paving bricks of the type found in context [146]. These first arrived in London around 1630 and were in widespread use during the 17th–18th centuries. They were set in a herringbone pattern in the floor to provide a tough hard wearing surface. The XRV10 example was clearly used in such a floor as there are wear marks on one stretcher face.

Floor tile / brick

Found with the Dutch paving brick was a flat red tile measuring 29mm in thickness. The fabric type (a possible finer variant of 2320) is undiagnostic, so the function of this tile is uncertain. It may be an unglazed floor tile or a thin brick.

Pantile

Around the time that Dutch paving brick started arriving in London, pantiles began to appear in increasing numbers, although they were used spasmodically before 1630. All the earliest London pantiles were also from the Netherlands, until production started at Tilbury around in 1694/1695. The fabric (type 2275) of the XRV10 example from context [108] suggests it is probably of Dutch type dating to 1630–1800, or perhaps a little later.

Chimney pot / garden furniture

Found unstratified was a large piece of a decorated circular object with an internal diameter of approximately 230mm. This could be either a chimney pot or a piece of garden furniture. It would appear to be made of some kind of mortar. There are in fact two mortar layers. The initial object was made from a circular pinkish-white mortar layer 14mm thick. On to this was attached a second pinkish mortar layer (up to 45mm thick) applied as decoration.

18.2 Post-Roman pottery

Jacqui Pearce

18.2.1 Introduction

The pottery from XRV10 was spot-dated in accordance with current MOLA procedure, and recorded by fabric, form and decoration using standard accepted codes. Quantification was carried out using sherd count (SC), estimated number of vessels (ENV) and weight in grams. The data were entered onto the Oracle database. A total of 58 sherds from a minimum of 50 vessels (total weight 2100 g) were recovered from 12 small contexts, none of which yielded more than 14 sherds. All pottery was post-medieval in date, with nothing earlier than the late 18th century identified.

18.2.2 The post-medieval pottery

The bulk of the pottery dates to the early to mid 19th century, with no types introduced after c 1830 recorded. The evidence of clay tobacco pipes (see below) offers some refinement of this chronology, placing a number of contexts in the middle decades of the century (see Table 1). Although contexts [110] and [146] have been spot-dated at c 1760–1830, they are most likely to have been deposited in the 19th century, as the date range given covers the period of production of developed creamware, with no other finds to offer refinement. The small size of the contexts, probably representing samples only, makes it difficult to clarify the chronology further.

Ctxt	TPQ	TAQ	SC	ENV	Wt
16	1807	1830	7	6	36
26	1830	1900	2	2	21
54	1830	1900	14	12	1004
57	1825	1830	10	8	72
60	1830	1900	3	3	85
108	1807	1900	2	2	152
110	1760	1830	1	1	9
112	1820	1900	4	4	153
114	1807	1900	3	3	38
146	1760	1830	3	2	272
148	1794	1900	5	3	224
156	1825	1900	4	4	34
Total			58	50	2100

Table 2 chronological distribution of pottery

All pottery recovered is typical of everyday domestic usage across London in the early to mid 19th century. The range of fabrics and forms is relatively limited, dominated by tea and table wares in factory-made refined earthenwares from a variety of sources. This

utilitarian household 'china' would have been widely available to households across the social spectrum, although there is little of particularly high quality in the sample collected. This is further reflected in the types of decoration represented. Transfer-printed wares mostly carry the more common underglaze blue designs such as 'willow', 'wild rose' and 'Eton College'. These are mostly found on dinner and tea plates, with further examples on saucers, a cup, jug and tureen lid.

Transfer-printed wares with other underglaze colours (green, black, mauve) were also found in small numbers, including a plate marked on the back with the pattern name 'Windsor star'. Sherds from two vessels decorated in 'flow blue' were found in contexts [54] and [60], indicating a date after c 1830 when this distinctive type was introduced, initially with the American market in view. A more basic decorative type is represented by sherds from bowls in yellow ware (introduced in the 1820s) and refined white earthenware with zones of banded slip. Vessels of this kind formed part of the kitchen crockery in daily use by most households at this date.

A bowl and a saucer in refined whiteware have simple painted decoration, the saucer with part of a motto or verse written in cursive script and probably derived from a nursery set. Undecorated creamware is found in the form of sherds from a number of plates, including a soup plate, two of them with moulded royal pattern rims. This was a very popular and widely available pattern for tablewares made from the mid 18th century onwards.

Six sherds of bone china include a cup, eggcup base and two saucers, one of them in the Chelsea sprig pattern, with applied blue details. By the mid 18th century, plain or simply decorated bone china was in common use across the country and although more expensive than refined earthenware, in its plainer and more basic forms it does not necessarily indicate higher status. The only other pottery recorded consists of sherds from a pipkin and a small flared dish for use with flowerpots in Surrey-Hampshire red border ware, and two sherds of brown salt-glazed stoneware (bottles).

18.2.3 Significance and potential

The sample of post-medieval pottery recovered from XRV10 is typical of everyday domestic usage in the early to mid 19th century. Some large sherds were recorded but few joining pieces, and the material is very much in keeping with routine household waste disposal. Some further chronological refinement could be achieved through more detailed study of patterns, but this is unlikely to provide greater clarification of the site sequence. Comparison could also be made with other sites of the same date in the vicinity, but the overall size of the assemblage limits its potential for closer analysis unless this is undertaken as part of a wider research project covering Crossrail sites in this part of London.

18.2.4 Recommendations

No further work is proposed, except if this were to form part of a more comprehensive study.

18.3 Clay tobacco pipes

Jacqui Pearce

18.3.1 Introduction

The clay tobacco pipe assemblage from XRV10 was recorded in accordance with current MOLA practice and entered onto the Oracle database. The pipe bowls have been classified and dated according to the Chronology of London Bowl Types (Atkinson and Oswald 1969), identified by the prefix AO. Quantification and recording follow guidelines set out by Higgins and Davey (1994; Davey 1997).

Total no. of fragments	15
No. of bowl fragments	13
No. of stem fragments	2
No. of mouthpieces	0
Accessioned pipes	11
Marked pipes	10
Decorated pipes	7
Imported pipes	0
Complete pipes	0
Wasters	0
Kiln material fragments	0
Boxes (bulk\accessioned)	0.5 box

Table 3 clay tobacco pipe quantification

18.3.2 Character of the assemblage

A total of 15 fragments including 13 bowls were recovered from nine contexts. All date to the late 18th to mid 19th century, in some cases clarifying the dates derived from pottery. All pipes are typical of London production, with a high proportion of the collected sample marked with makers' initials.

Three pipes, of types AO27 and AO27A (c 1780–1820) carry the initials IF, moulded in relief on the sides of the heel. These stand for John Ford, a well known pipe maker recorded in Stepney between 1805 and 1865 (Oswald 1975, 136). All three were found in context [108] and are decorated with moulded wheatsheaf seams at the front and back of the bowl.

Two pipe bowls marked WS may have been made by the Whitechapel pipe maker William Squalfield (1799–1805; *ibid*, 146), although there were other pipe makers with these initials working at the same period. Two bowls with the initials HS (types AO28 and AO29) may have been made by Henry Strutt, recorded in Stepney in 1839–54 (*ibid* 145). One of these is decorated with moulded leaf seams and the other (from [156]) with the slightly more elaborate oak leaf seams.

All these pipes most likely have a local source, which is very much in keeping with the usual pattern of distribution whereby clay pipes were sold and used within a fairly limited radius of the workshops where they were made.

Ctxt	TPQ	TAQ	B	S
16	1840	1880	1	
20	1800	1900		2
26	1820	1840	1	
54	1840	1880	1	
57	1820	1840	1	
60	1820	1840	1	
108	1800	1820	5	
112	1820	1840	1	
156	1840	1880	2	
Total			13	2

Table 4 clay pipe dating and quantification

The latest types recorded are pipe bowls of type AO29 (c 1840–80), with examples found in contexts [16], [54] and [156], and including one of the HS pipes. Only two stem fragments were recorded and are not capable of close dating.

18.3.3 Marked pipes

Ctxt	Acc	Form	ED	LD	Dec	Mark	Type	Meth	Pos	Pipe maker?
108	6	AO27	1780	1820	WB	??	R	M	SH	
112	10	AO28	1820	1840	LB	?SC	R	M	SS	
60	4	AO28	1820	1840	LB	HS	R	M	SS	Henry Strutt, Stepney 1839-54?
156	11	AO29	1840	1880	OAKS	HS	R	M	SH	Henry Strutt, Stepney 1839-54?
108	9	AO27A	1800	1840	WB	I?	R	M	SH	
108	7	AO27	1780	1820	WB	IF	R	M	SH	John Ford, Stepney 1805– 65
108	8	AO27	1780	1820	WB	IF	R	M	SH	John Ford, Stepney 1805– 65
16	1	AO29	1840	1880		J?	R	M	SH	
108	5	AO27A	1800	1840		WS	R	M	SH	William Squalfield, Whitechapel 1799–1805?
57	3	AO28	1820	1840		WS?	R	M	SS	William Squalfield, Whitechapel 1799–1805?

18.3.4 Potential and significance

The sample of clay pipes from XRV10 is relatively small and is limited in date and type, although there is a high proportion of marked pipes which can be linked to local makers.

These offer some chronological refinement for the contexts in which they were found. They are significant mainly in the local context, and could form part of a wider survey of pipe makers in the East End, although that probably lies beyond the remit of the present project.

18.3.5 Recommendations

No further work is suggested within the context of the site alone.

18.4 Glass

Jacqui Pearce

Four glass vessels and one fragment of window glass were recovered. Two items have been accessioned; all date to the late 18th to 19th century.

The complete base of a cylindrical phial in colourless glass was found in context [16], which is dated by pottery to c 1807–30. The base has a low dome and is 30mm in diameter. The phial was mould-blown and is typical of 19th-century forms, used to hold a wide range of pharmaceutical preparations. A fragment from an octagonal bottle, of a kind also used for medicines, was found in context [60], dated by pottery to c 1830–1900. The bottle was mould-blown in natural green glass and again represents a type in widespread use during the 19th century.

A near-complete small glass vessel (<13>), probably an eggcup, was found in context [54], dated at the latest by clay pipes to c 1840–80. Crudely made in pale green glass, it was formed in a four-piece mould, with the seams remaining very visible on the surface. The item has a pedestal foot, with rim and base diameters of 50mm and a height of 68mm. It has relief-moulded decoration all over the cup and foot and a generally heavy appearance.

A single unstratified glass marble or alley (<12>) was found on the site. It is of green glass with white marbling and dates to the second half of the 19th century or later. One small fragment of natural green window glass was found in context [20] and most likely dates to the 19th century, in common with other finds from this context.

18.4.1 Potential and significance

The glass assemblage from XRV10 is very small and throws little light on the chronology or use of the site. No further work is proposed.

18.5 Other finds

Jacqui Pearce

Five fragments of charcoal and two small pieces of slag were found in context [22], and two small fragments of charcoal in context [10].

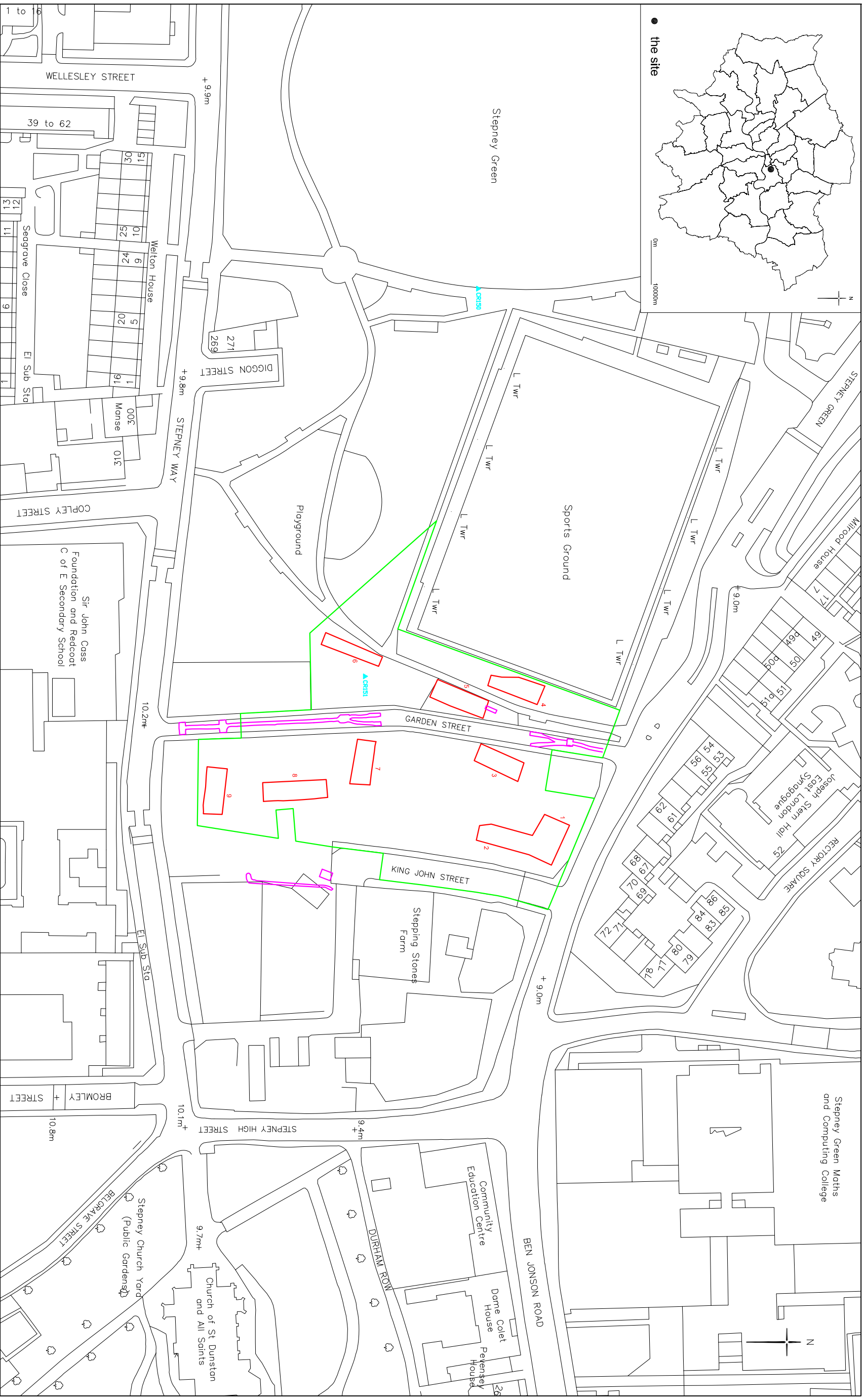
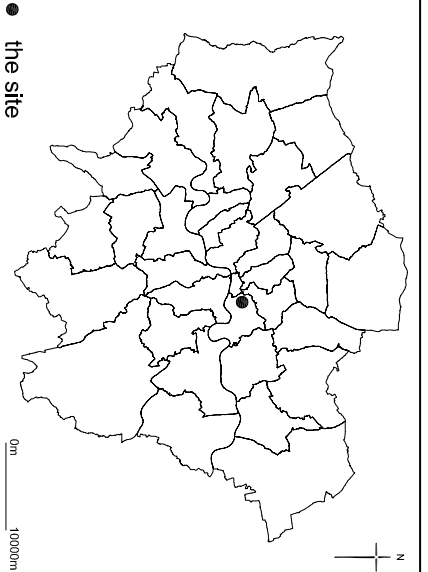


Fig 1 : Site location

- Area of ground reduction
- Area of GWB
- Area and location of evaluation trenches
- ▲ CR100
- ▲ Crossrail control stations used by MOLA



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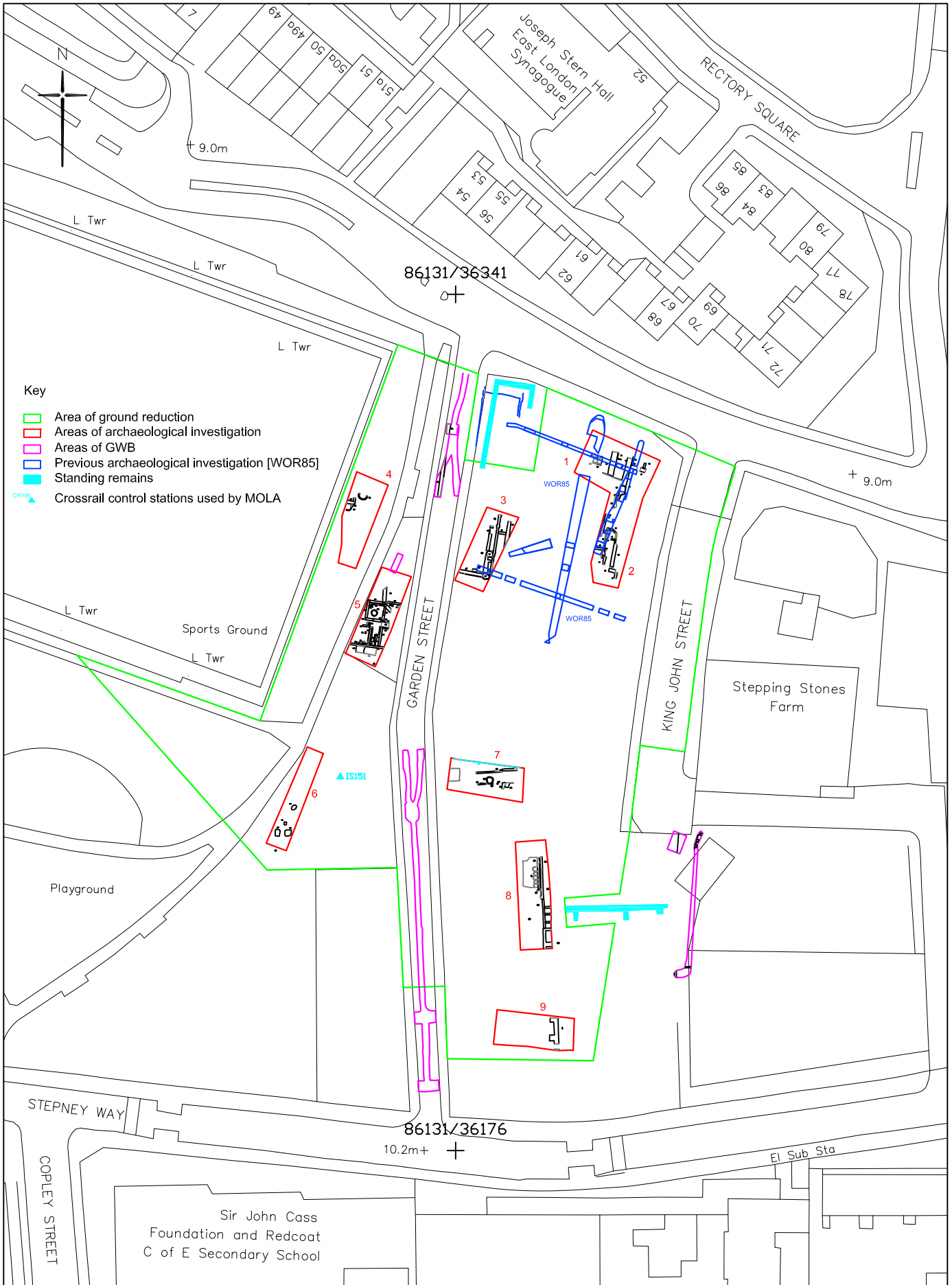


Fig 2: Location of archaeological investigations

Event code / Site code: XRV10

Site Address: Stepney Green Shaft

Type of fieldwork: GWB / Evaluation

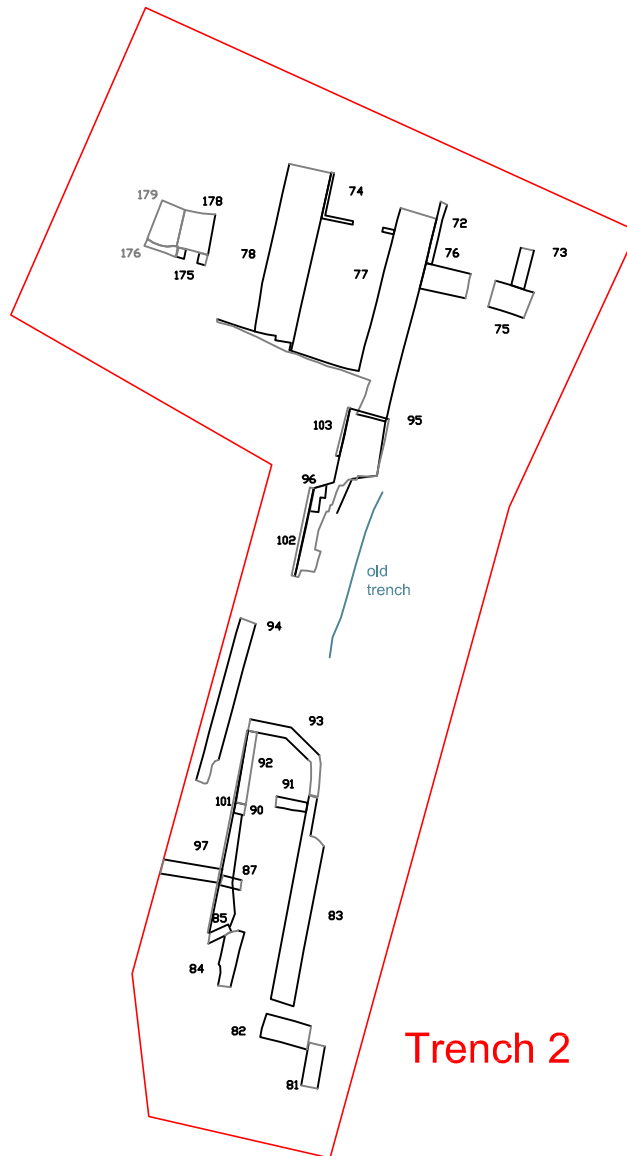
0 Print scale 1:1000 @ A4 50m

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Trench 1



Trench 2

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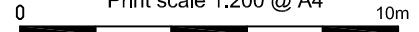
Fig 3: Multi-context plan of archaeological remains in trenches 1 & 2

Event code / Site code: XRV10

Site Address: Stepney Green Shaft

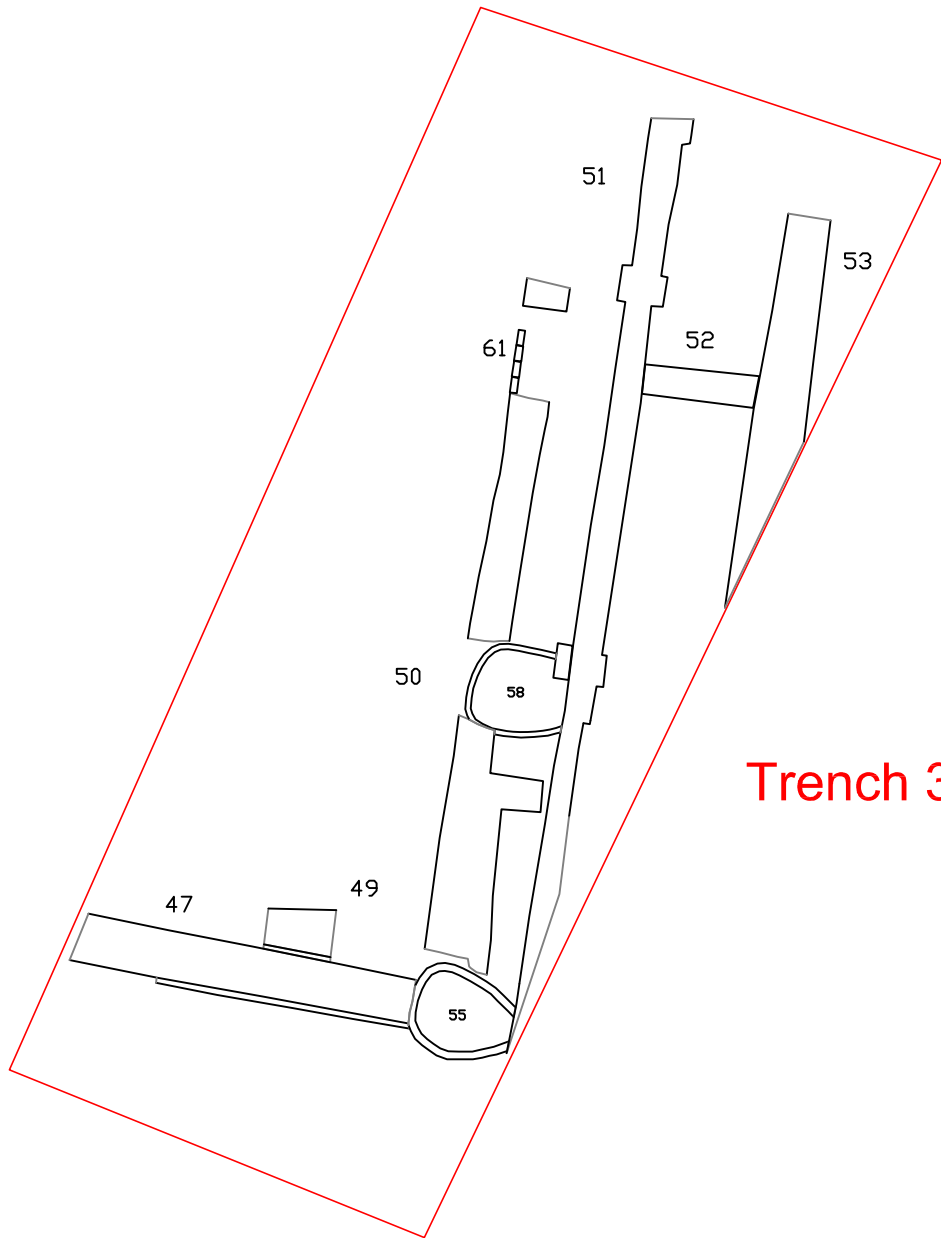
Type of fieldwork: GWB / Evaluation

0 Print scale 1:200 @ A4 10m





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Trench 3

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Fig 4: Multi-context plan of archaeological remains in trench 3

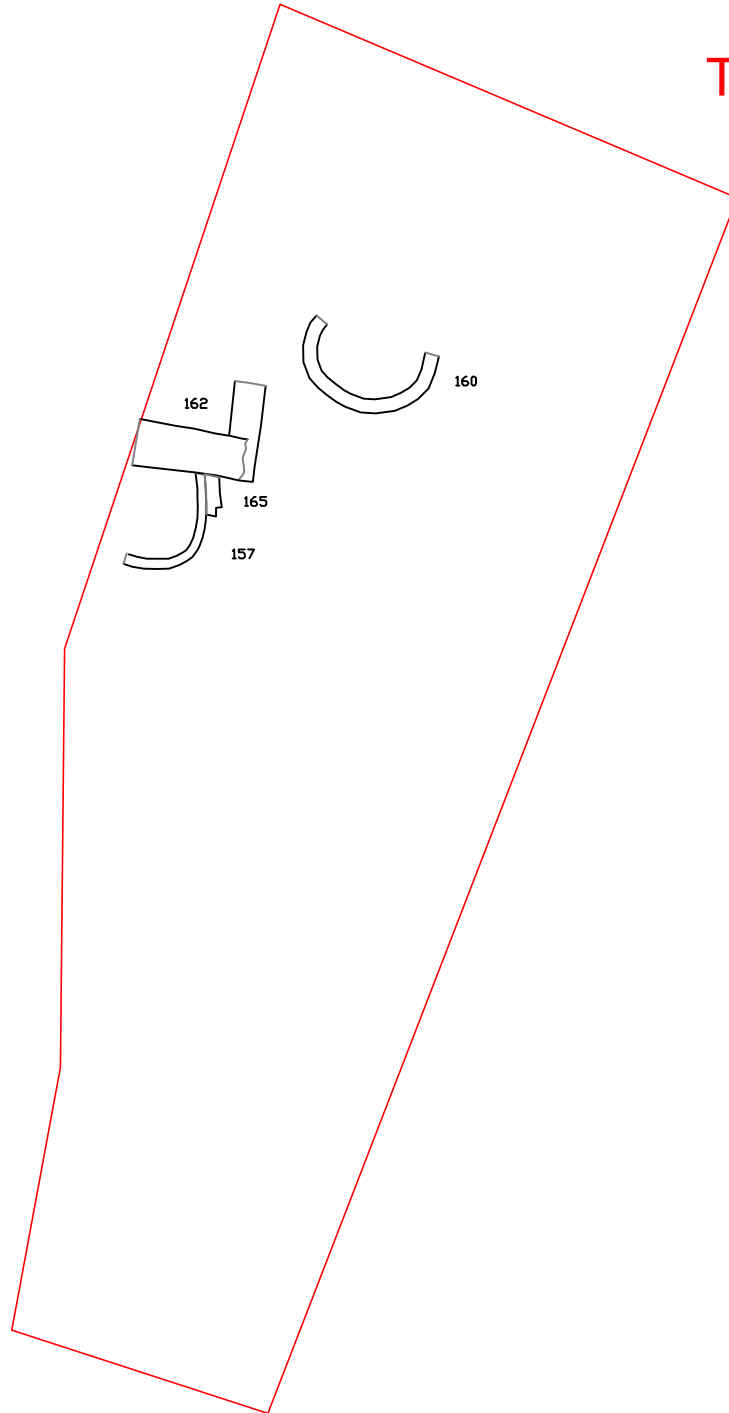
Event code / Site code: XRV10
Site Address: Stepney Green Shaft
Type of fieldwork: GWB / Evaluation

Print scale 1:100 @ A4
0 5m



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Trench 4



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Fig 5: Multi-context plan of archaeological remains in trench 4

Event code / Site code: xRV10
Site Address: Stepney Green Shaft
Type of fieldwork: GWB / Evaluation

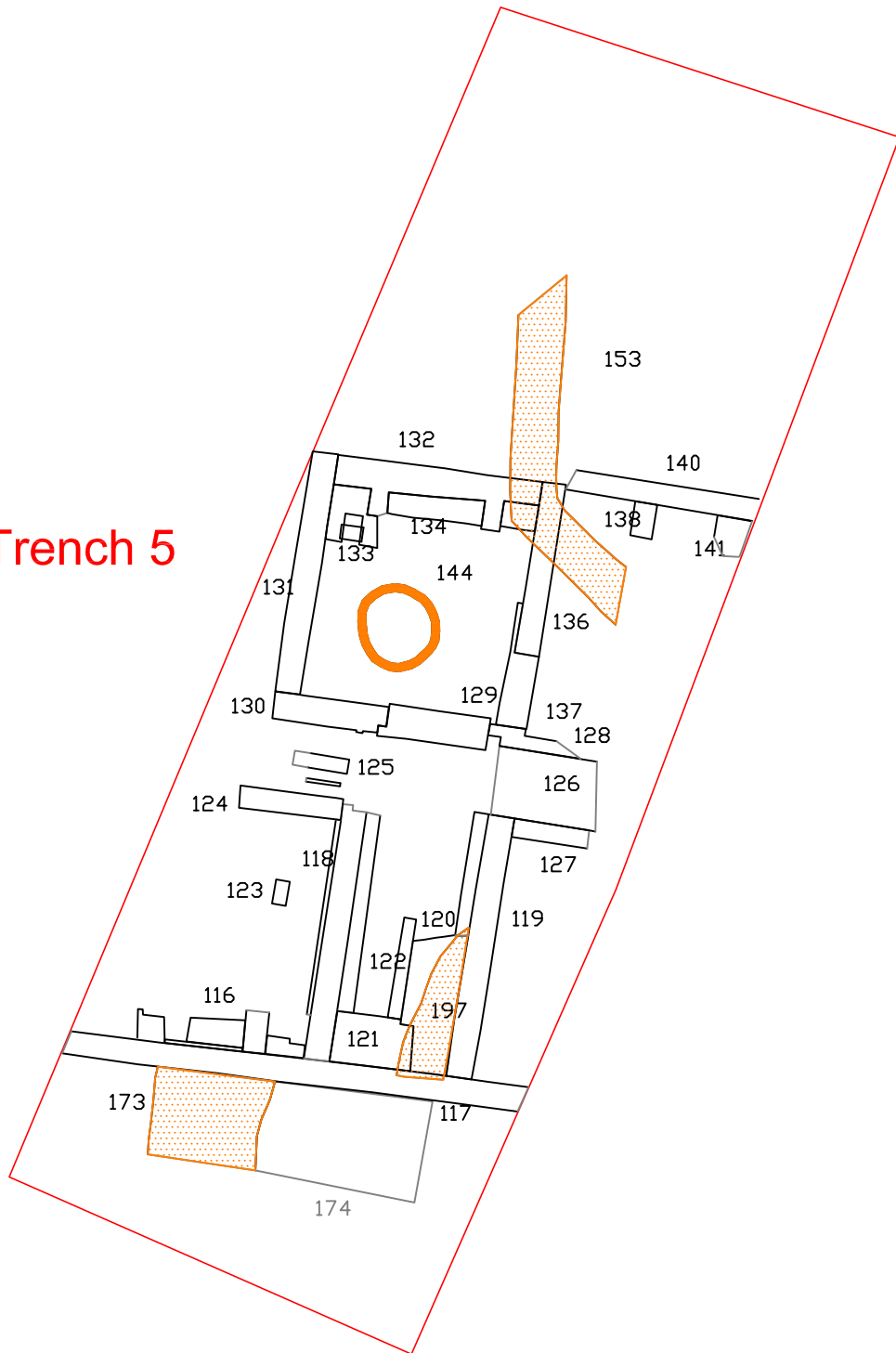
0 **Print scale 1:100 @ A4** 5m



86115/36290



Trench 5



86115/36268



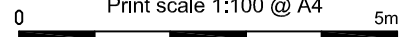
Fig 6: Multi-context plan of archaeological remains in trench 5

Event code / Site code: XRV10

Site Address: Stepney Green Shaft

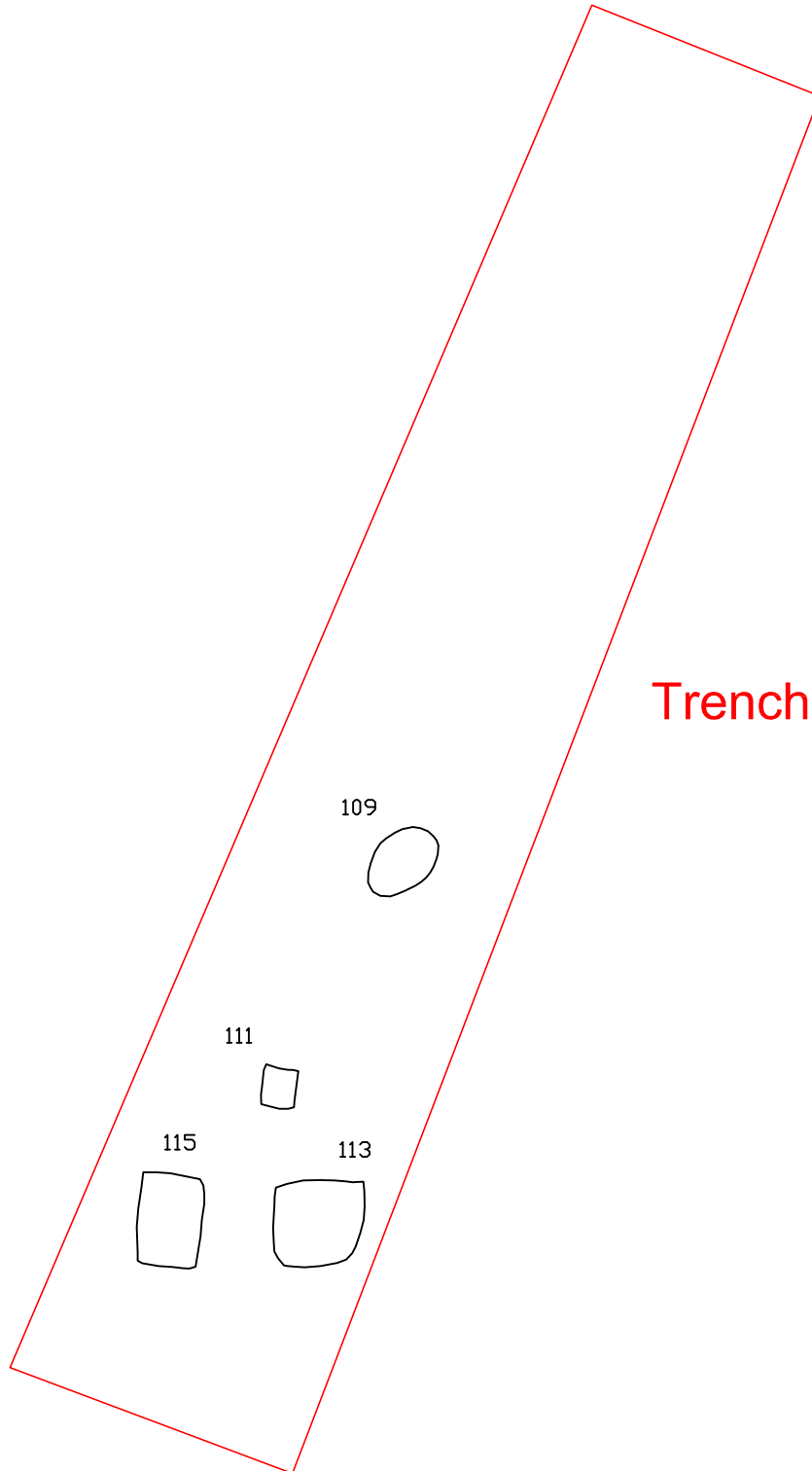
Type of fieldwork: GWB / Evaluation

Print scale 1:100 @ A4





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Trench 6

86100/36233



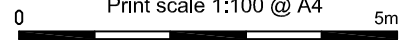
Fig 7: Multi-context plan of archaeological remains in trench 6

Event code / Site code: XRV10

Site Address: Stepney Green Shaft

Type of fieldwork: GWB / Evaluation

Print scale 1:100 @ A4

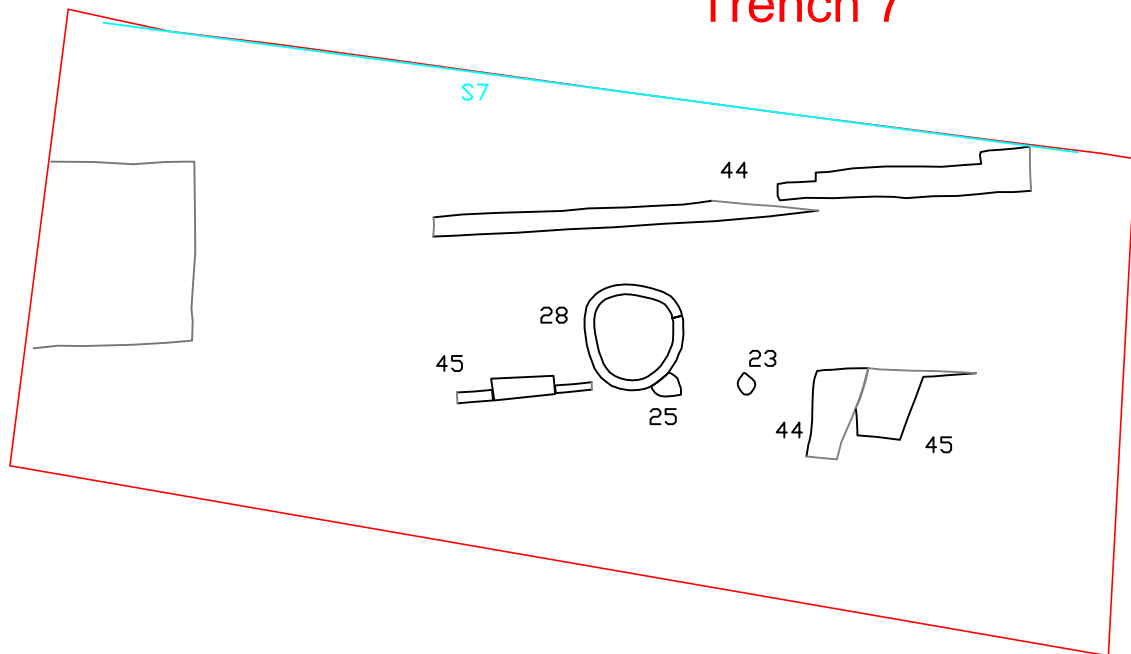




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Trench 7



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Fig 8: Multi-context plan of archaeological remains in trench 7

Event code / Site code: XRV10

Site Address: Stepney Green Shaft

Type of fieldwork: GWB / Evaluation

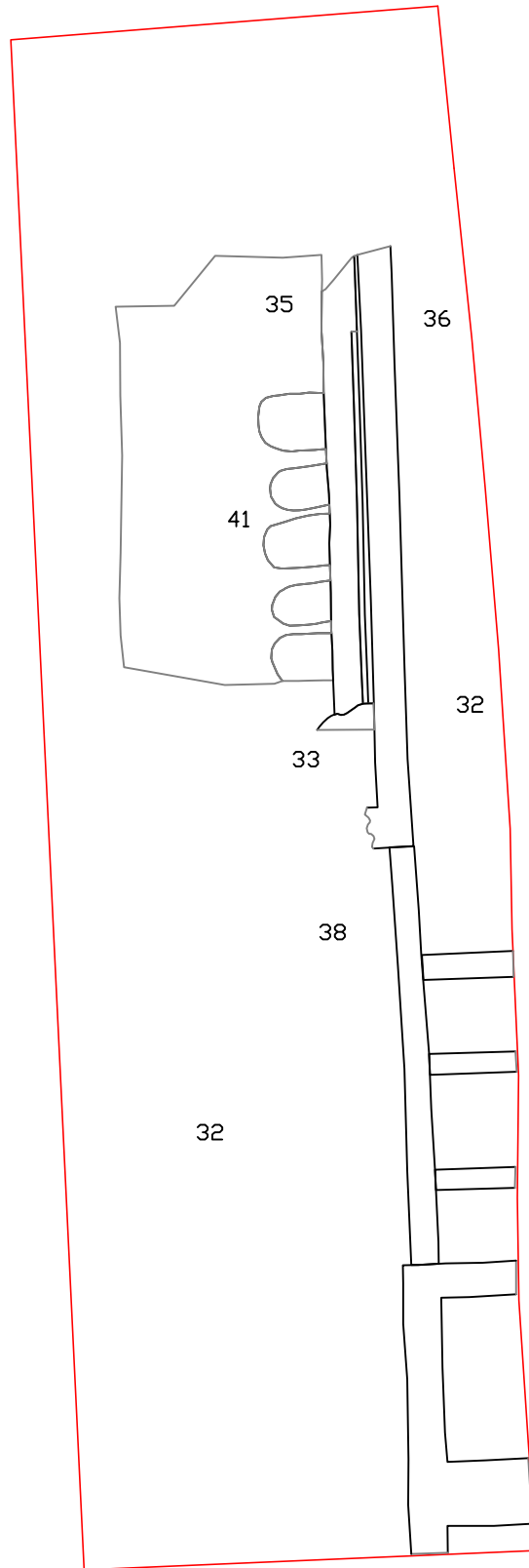
0 Print scale 1:100 @ A4 5m



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Trench 8



86145/36214



Fig 9: Multi-context plan of archaeological remains in trench 8

Event code / Site code: XRV10
 Site Address: Stepney Green Shaft
 Type of fieldwork: GWB / Evaluation

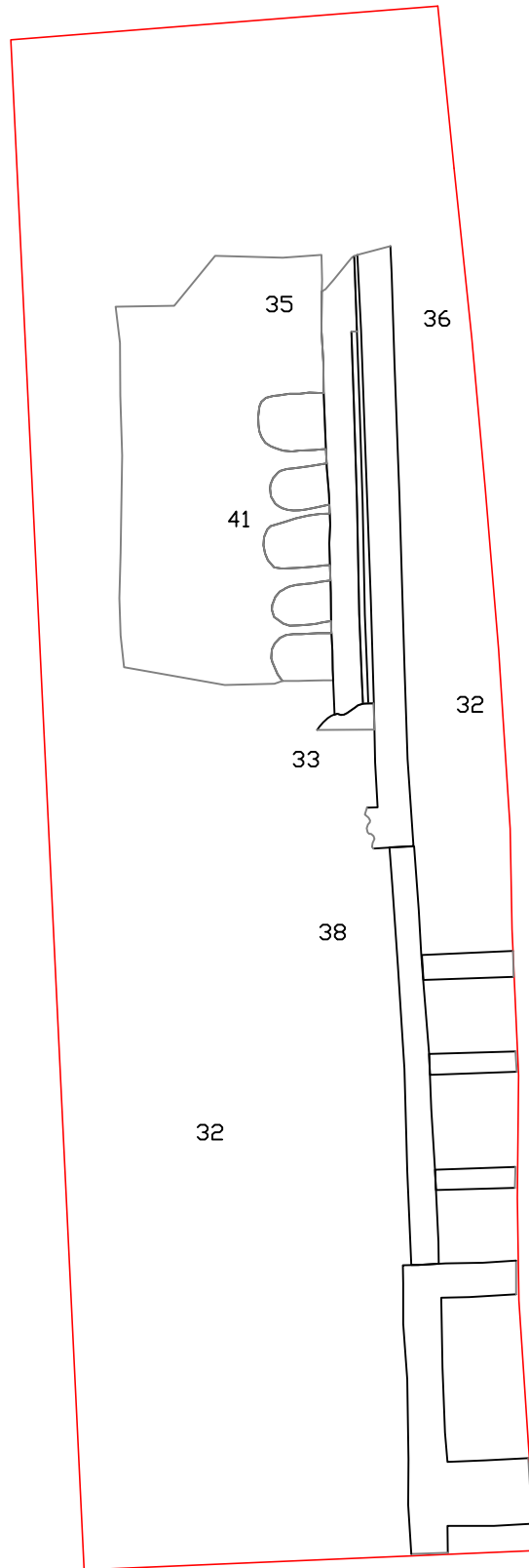
0 Print scale 1:100 @ A4 5m



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Trench 8



86145/36214



Fig 9: Multi-context plan of archaeological remains in trench 8

Event code / Site code: XRV10
 Site Address: Stepney Green Shaft
 Type of fieldwork: GWB / Evaluation

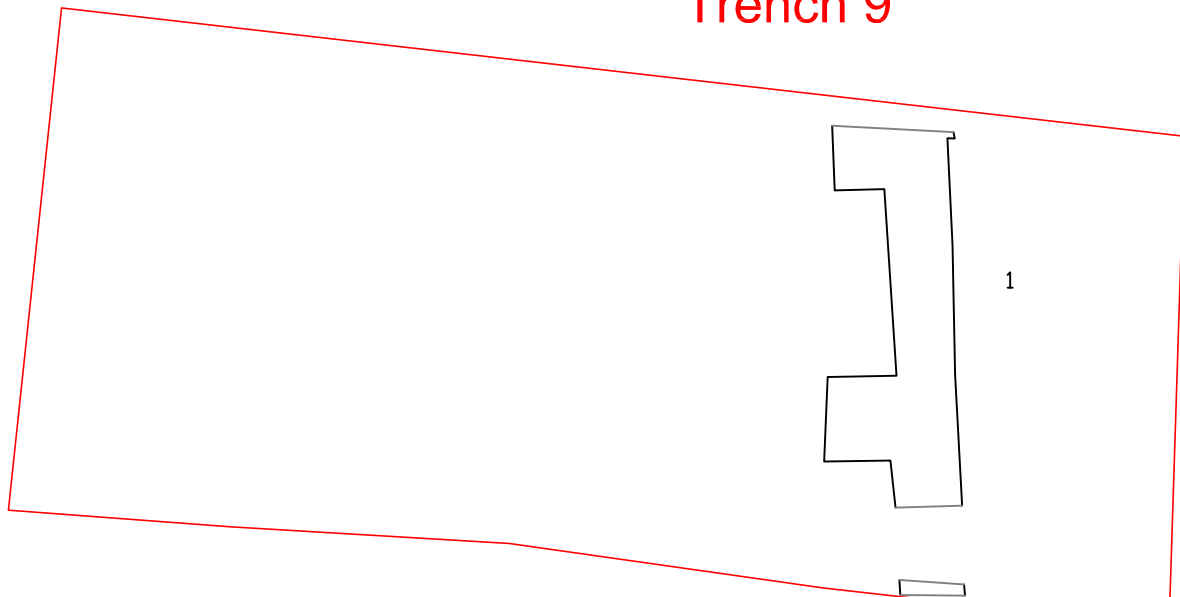
0 Print scale 1:100 @ A4 5m





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Trench 9



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Fig 10: Multi-context plan of archaeological remains in trench 9

Event code / Site code: xRV10
Site Address: Stepney Green Shaft
Type of fieldwork: GWB / Evaluation

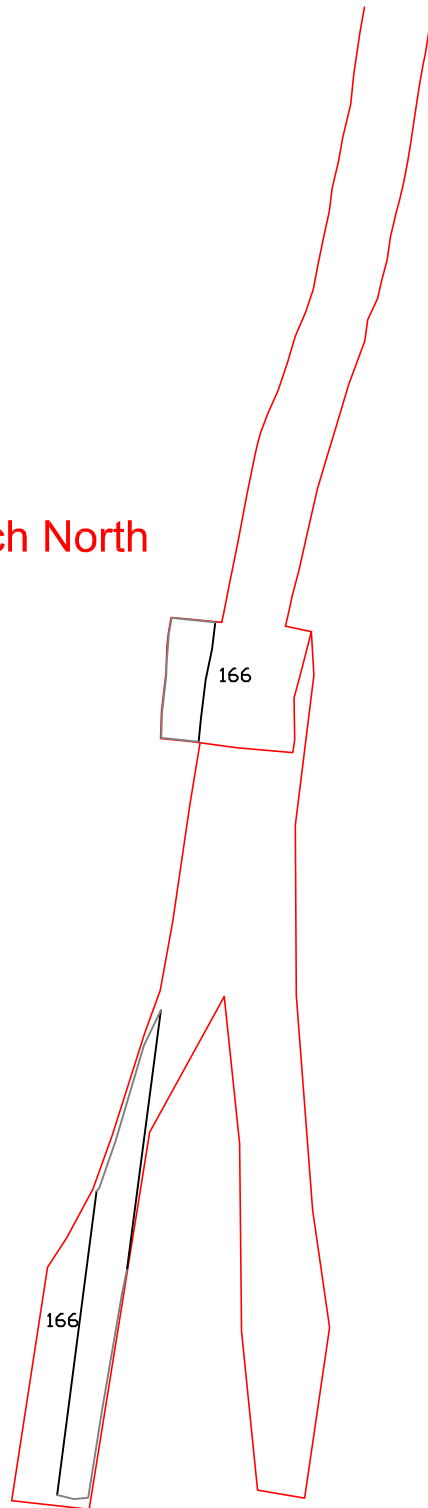
0 Print scale 1:100 @ A4 5m



86130/36327



WB Trench North



86130/36300



Fig 11: Late Medieval, Tudor or Stuart wall [166] north end of Garden Street

Event code / Site code: XRV10

Site Address: Stepney Green Shaft

Type of fieldwork: GWB / Evaluation

Print scale 1:120 @ A4

