

CROSSRAIL UTILITIES DIVERSIONS: LONDON WALL, MOORGATE, BLOMFIELD STREET, OLD BROAD STREET, BISHOPSGATE PAST OBSERVATIONS OF CITY WALL OCTOBER 2008

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Archaeology Service

23/02/2009

Executive Summary

This document consists of locational information from past observations of the Roman and later city wall, a Scheduled Monument. It covers the area where below-ground remains of the city wall might be affected by Crossrail utility diversions. This is a piece of focused desk-based research, not a full DDBA (detailed desk based assessment).

The aim of this work has been to locate past observations of the city wall, assess their reliability, and digitise them, so that the previous reconstructions of the line of the city wall can be refined.

The combined results of a series of antiquarian observations, often poorly located, and more reliable recent records mean that the alignment of the city wall in this area can be reconstructed with a reasonable degree of confidence. This has produced a refined reconstruction of the line of the city wall, and in particular the mapping accompanying the Scheduled Monument descriptions.

The most important revision comes from the area around the former postern gate at the junction of Blomfield Street and London Wall, where it can now be seen that the mapping of Scheduled Monument LO26P is inaccurate. Recent observations combined with earlier records indicate very strongly that the wall ran in a straight line westwards across this junction, immediately to the north of the schedule mapping.

The extents of the various former gatehouses at Moorgate and Bishopsgate remain less well-known than the line of the wall. Areas within which the different Roman, medieval, and post-medieval gatehouse structures may have lain have been presented with the refined reconstruction of the city wall

1 Introduction

This document and the accompanying drawings present the results of desk-based research into past observations of the Roman, medieval, and post-medieval city wall (a Scheduled Monument) in an area from approximately Moorgate to Bishopsgate in the City of London.

The city wall is often referred to as London Wall; as this is also a modern road name, the historic structure is referred to here as the city wall, reserving 'London Wall' for the road.

In this area the remains of the city wall lie below ground level. They do not form a continuous structure, but where recorded have survived as individual lengths of walling damaged to various degrees by later actions. These have been noted surviving to variable heights, anywhere between c 0.3m and c 4m or more below modern street level. As will be seen from the accompanying mapping, the recorded sections of the wall form only a small proportion of its length, and survival or otherwise is unknown over the majority of its length.

The purpose of this research is to provide better locational data for the city wall than was previously available (notably an older MoLAS reconstruction, and the mapping accompanying the English Heritage schedule descriptions). This is to contribute to designs for Crossrail utility diversions, associated trial trenches, and the related archaeological mitigation strategies.

This is a piece of focused, problem-oriented, desk-based research, not a full DDBA (detailed desk-based assessment).

The work has been carried out by collecting information on observations of the city wall, from those of 19th/20th-century antiquaries to an archaeological watching brief being conducted at the time of the work (October 2008). The results were then assessed to ascertain their reliability, and digitised. These results were then analysed, and a refined reconstruction of the line of the city wall was produced.

2 Acknowledgements

MoLAS and Crossrail would like to thank Geoff Potter of Compass Archaeology for kindly providing information and plans of his recent observations of the city wall, as well as his co-operation during a visit to the site. Thanks are also due to the staff of the London Archaeological Archive and Resource Centre (LAARC) for their assistance with archive records relating to the wall.

3 Methodology

3.1 Sources consulted:

- MoLAS City Wall audit (Cohen. N, & Hill, J, 2005, *The London City Wall*, unpub rep for Corporation of London)
- MoLAS unpublished archaeological fieldwork reports
- MoLAS' London GIS
- Compass Archaeology: recent unpublished archaeological fieldwork results, including plan information
- LAARC (London Archaeological Archive & Research Centre), primary records, site summaries, etc
- Greater London Sites and Monuments Records (GLSMR)
- Text and mapping accompanying the English Heritage scheduled monument descriptions.
- Published material relating to antiquarian observations and historical maps (including those held by the Museum of London library & Guildhall Library)

3.2 Method

Each reference relating to the city wall in the above sources was examined to determine whether it included locational data or not. Those observations producing plan data have been categorised according to the reliability of both the source data and the method(s) required to locate it onto the Ordnance Survey national grid. These are, in descending order: Accurate, Good, Moderate, and Poor (see below). The digitised observations are colour coded on the accompanying digital drawing and the source data for each site included in the table.

Modern digital surveys tied in to the Ordnance Survey (OS) have provided the most accurate locations. Where no OS references are available in site archive material, observations have been digitised as a 'best fit' to modern OS mapping. Similarly, where plans of antiquarian observations are available, these have been digitised as best fits, using historical OS mapping as reference points for calibration where possible.

In many cases, the wall was recorded in section only. The extent of the wall in each relevant section was digitised and offset 0.2m each side of the section line as appropriate (ie where it did not represent the wall face) to create a polygon.

The distinctive colours, and typical examples for assigning degrees of reliability are noted below:

• Accurate (green): surveyed and/or located onto the Ordnance Survey to modern standards (eg directly surveyed with EDM or total Station, or via a local site grid similarly tied in to the OS National Grid).

•	Good (light blue):	eg digitised from a plan drawing with a recent OS mapping background.
•	Moderate (dark blue):	eg where site records suggest that the city wall may not have been located to modern standards, and/or multiple stages are required to locate the record onto the OS National Grid.
•	Poor (red):	eg antiquarian observations with a sketch plan that has been 'best-fitted' via reference points on a historic map onto the OS National Grid. Such points might be metres from the location of the original observations, and should be treated with considerable caution.

4 Notes on the observations of the city wall

With the exception of the scheduled section preserved in the car park beneath London Wall, it is unclear from the published accounts whether the masonry exposed during the various interventions during the 20th century survives *in situ*. The wall is also known to survive at the junction of London Wall and Copthall Avenue.

A brick foundation, *possibly* the west wall of the 17th-century rebuild of Moorgate, as it projected north from the city wall, was recorded at the north-west corner of the junction of London Wall and Moorgate (site code MOO80).

The southern edge of the truncated wall core observed in section at AOP99 (close to the junction of London Wall and Copthall Avenue) appears to extend a little to the south of the reconstructed alignment (based on a uniform width) and it may be that there is a minor local variation here.

Between Moorgate and Blomfield Street, a change in alignment was discussed by Norman and Reader in 1905. However, this wall observation is poorly located; a degree of error is also noted in the archive material relating to the BLM87 observation to the east.

It has been noted in earlier work for Crossrail that between Circus Place and just east of Blomfield Street, the Scheduled area (LO26P) appears to lie to the south of the likely line of the wall, and in particular, the fragments recorded at Blomfield House (BLM87).

The site of a postern (small gateway) is shown on 17th- and 18th-century maps and noted on modern Ordnance Survey mapping at the junction of London Wall and Blomfield Street. Whilst a change in alignment, eg a dog-leg, might have occurred in the area of a postern, the historic mapping depicts the wall as a straight line pierced by the small postern gateway.

As a result, the schedule mapping in this area should be used with extreme caution. It is noted that a fragment of wall foundation has recently been recorded by Compass Archaeology in the northern carriageway of London Wall at this junction. The fragment was observed during a visit to this site by a MoLAS archaeologist, and Compass Archaeology have kindly provided a plan which has been incorporated into this project. It

is not entirely certain whether the northern edge of this fragment represented the original northern face of the wall, or if the facing stones had been removed. The newly-exposed section lies in line with those seen to the east at Blomfield House and All Hallows on the Wall (BLM87, Scheduled Monument LO26A, CAP86, etc), and also at some distance to the west in London Wall (LON82 & AOP99).

The Compass Archaeology findings, in conjunction with those to the west and east, indicate very strongly that the wall ran in a straight line in this area. Previous theories about curves or dog-legs in the line of the wall near the junction at Blomfield Street can now be discounted. Similarly, it indicates that the mapping of Scheduled Monument LO26P is in need of substantial revision, and cannot be used as a guide to the precise location of the wall.

Note that a 1905 observation a short distance west of Blomfield Street (GM333) does not fall within the reconstructed alignment, but it is recognised that this record is of poor reliability and it may be discounted.

The wall may survive beneath Old Broad Street itself.

Between Old Broad Street and Bishopsgate, the wall is known to survive at 22–24 Wormwood Street (WOE94). Although no location plan could be found for the exposed city wall in the archive, the rear wall of the property apparently conformed to the alignment of its external face. This was accurately located, and by offsetting to the south, the line of the wall can be plotted in this area with a reasonable degree of confidence.

The location of Bishopsgate is poorly defined. To the east of the gate, between Bishopsgate and Outwich Street, the only evidence of the wall is a small, poorly identified fragment of foundation recorded at KPH05, with antiquarian observations (GM349) and more recent excavations (HSD89) reflecting a change in the wall alignment further East.

5 Conclusions

5.1 Reconstructed line of the city wall

The combined results of a series of antiquarian observations and more recent interventions mean that the alignment of the city wall from the area east of Coleman Street to west of Bishopsgate can be projected with a reasonable degree of confidence. Although a number of the observations plotted from antiquarian records are of Poor reliability, there are sufficient records of Accurate to Moderate reliability, which form consistent lines, to refine previous reconstructions of the line of the city wall, and in particular the mapping accompanying the Scheduled Monument descriptions.

The most important revision comes from the area around the former postern gate at the junction of Blomfield Street and London Wall, where it can now be seen that the mapping

of Scheduled Monument $LO26P^1$ is inaccurate. Recent observations combined with earlier records indicate very strongly that the wall ran in a straight line westwards across this junction, immediately to the north of the schedule mapping.

This refined reconstruction is presented in the accompanying digital mapping as the '2008 reconstruction' of the line of the city wall.

5.2 Reconstructed gatehouses

The plans of gatehouses at Moorgate and Bishopsgate are much less well known than the line of the wall. The areas marked in the 2008 reconstruction represent assessments of the areas in which the gatehouses might lie. They have been chosen to include the areas of English Heritage schedule mapping, but expanded to include the observations plotted in the course of this assessment, and to produce inner and outer faces orthogonal to the streets indicated by historic mapping. They do not represent the individual plans of the various gatehouses in different periods; for instance they cover both the likely Roman gatehouses extending within the line of the wall, and also medieval and post-medieval structures extending outside it.

¹ Received from National Monuments Record August 2007.

6 Data

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
BHC02	Wood Street	0.36m bGL (14.18– 14.52m OD)	Wood Street (former Cripplegate). CAD plan available, but as this is to the west of the Crossrail works, only the depth is directly relevant.	Accurate, but plan not directly relevant	Unpub MoLAS Watching Brief report, Feb 2003	Approx 532388 181641 (S) to 532394 181654 (N) [scaled from report].
SAM 26323 (= Merrifield ref W37)	London Wall, opposite the west end of Austral House	Survives to maximum height of 12.65m OD (level information	Scheduled Monument (formerly LO26J). Wall exposed in underground car park, beneath London Wall. Accurately located by MoLAS in 2000 using modern survey techniques. The project included locating the wall fragment relevant to OS mapping, sectional and plan drawings of the	Accurate (digital survey by MoLAS, 2000)	MoLAS Geomatics original survey data (2000) MoLAS Audit of the City Wall,	532578 181580
		from MoLAS survey)	structure, rectified photography and a condition survey.Also part of GM109 (see below).Surviving section is <i>c</i> 11.1m long.		unpub report for CoL	

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
GM109 GLSMR 040490 040493 (= site code WFG23 and Merrifield ref W37)	London Wall, between Aldermanbury and Coleman Street	See above	During clearance for the new road London Wall in 1956, a stretch of about 210ft of the Roman City wall was exposed, extending from about 60ft west of Coleman St. Much of the external N face had survived standing 2–6 ft above the footings with its chamfered sandstone plinth and levelling tile course. The thickness of the wall was recorded as 8ft 3 in.– 8ft 6in. (<i>c</i> 2.50–2.58m) Equivalent to WFG23 - watching brief by RMLEC in 1957. The archive for this site is incomplete and very little data regarding the details of the wall survive. A series of brick arches against its inner face were interpreted by Grimes as belonging to the work of Mayor Joceline (1477). Also note that the full extent of this section was numbered W37 by Merrifield. Survival: GM109 includes the portion now preserved in the underground car park (see SAM 26323 above), which is the only surviving part of GM109.	Moderate Digitised from 16ft to 1 inch plan of London Wall (Basinghall/Cole man Streets) dated 1957 (GM109 archive, LAARC), using 1952 OS map and MoLAS 2000 survey (see above) for reference.	GM109 site archive (LAARC). Note that location plan was wrongly archived under GM108. RMLEC WFG23 site archive (LAARC) Grimes, F 1968 The Excavation of Roman and Medieval London, 82–4 Merrifield, R 1965, The Roman City of London, 309	532605 181575 (as digitised)

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
GM334 GLSMR 040495 (= Merrifield ref W36) Also appears as W.26 on plan in GM253 site archive	122 London Wall (corner with former N part Coleman Street)	<i>c</i> 0.3m bGL (1920)	Demolition of 122 London Wall in 1920 exposed a section of the Roman wall cut back almost to the building line and down about 10' below the level of the pavement. Section shows top of wall as 1.5' below ground level. The whole face of the wall was exposed at the west end of the site. (NB Merrifield describes this section as 'adjoining' GLSMR 040493 at 123 Coleman Street - not included in this table. They were in fact divided by Coleman Street.) Survival: unclear	Poor Digitised from photocopy of original publication plan as reproduced in Lambert 1921 (an approximate location), using 1913 OS for reference points. An alternative location has been digitised from a plan in the site archive for GM253 where it is shown as W26. The source of information for this plan is unclear and is therefore equally unreliable.	Guildhall Museum GM253 site archive (LAARC) Lambert, F., 1921, Some Recent Excavations in London, <i>Archaeol</i> , Vol. LXXI, 73–75	532660 181565 (as digitised) SMR: 532655 181567

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
GM108 GLSMR 040496	London Wall (N side, immediately west of Moorgate)	<i>c</i> 1.8m bGL 1.2m aGL in 1882, down to 2.4m bGL	Site notes for GM108 dated 1961 state that 'At a depth of about 6ft from the modern pavement an irregular double course of Roman bonding tiles in yellow cement was seen'. This is the same piece as was observed in 1882 (see GLSMR 040496, Merrifield ref W35 below) Note that the published grid reference and address details place this site location opposite the end of Coleman Street, while the site notes state that the masonry was observed immediately west of Moorgate. Survival: It is unclear form the archive whether the masonry exposed survives <i>in situ</i> .	Poor GM108 archive consists of site notes with sketch plan only, dated 1961. However, this wall observation is shown (as W.25) on a plan in the site archive for GM253 and has been digitised from this. It is unclear what information this plan was based on.	Guildhall Museum GM108 and GM253 site archives (LAARC)	532700 181555 (amended)

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
GLSMR 040496 (= GM108) (= Merrifield ref W35)	London Wall, immediately west of Moorgate Street	1.2m aGL in 1882	Building work monitored by Loftus Brock in 1882 revealed <i>c</i> 43ft (13.11m) of the city wall lying beneath the street frontage. It was 9ft 2in (2.8m) thick (2ft (0.6m) of this being medieval thickening). A series of perhaps 6 supporting arches were noted on the inner face. These were semi-circular 2ft 6in (0.76m) wide, 1ft 11in (0.58m) deep, with piers 1ft 11in (0.58m) wide & lay <i>c</i> 15ft (4.55m) below ground level. The wall itself is recorded as standing 4ft (1.22m) above the surface (of the excavated site) & extending 'quite 8ft below'.	No plan	Loftus Brock, E P, The Roman Wall of London at Moorgate, JBAA vol 38, 424–426, RCHME 1928. Roy Comm Hist Momuments Engl, An inventory of the historical monuments in London: Vol 3, Roman London, 89 VCH. London, vol 1, p 61, Lambert F. 1921, Some recent excavations in London, Archaeol Vol LXXI, 74	532691 181560

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
MOO80	London Wall, near junction with Moorgate	Top of wall at <i>c</i> 9.5m OD	A GPO tunnel beneath the south carriageway of London Wall near its junction with Moorgate probably went through the brick foundations of the 15th-century Moorgate. A substantial brick wall was recorded: possibly the west wall of the 17th-century rebuild of Moorgate, as it projected north from the city wall, or a building fronting onto the road north of the gate. Survival: unclear.	Poor Limits of brick wall as recorded in section digitised in relation to hand drawn approximate trench location on photocopy of contemporary OS map (MOO80 site archive, LAARC)	DUA MOO80 Level 2 site archive (LAARC)	532705 181565
Radar survey	Junction of Moorgate & London Wall	<i>c</i> 1.8m bGL (measured from Fig 03 by MoLAS)	Approx. east–west radar anomaly corresponding to MoLAS prediction of S edge of the Moor Gate	Good Digitised from hard copy Stratascan radar plot (1:500) on OS background	Stratascan assessment of Subtechnics' utilities radar survey (Fig 03, July 2008)	532705 181550

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
GM253 (= Merrifield ref W34)	Opposite 108– 115 London Wall	Less than or equal to c 1.2m bGL	In 1930 a tunnel for telephone cables was cut through the Roman wall which was exposed for a length of more than 105ft [c 32m] immediately east of the junction of London Wall and Moorgate. There was a single course of tiles at 4ft below street level, a double course at 6½ft, and a triple course at 10ft. In the western part of the trench, a triple facing-course of tiles was seen on the internal face of the wall at a depth of 13 ft.	Poor Digitised from wall location plan from GM253 site archive (LAARC)	Schofield & Maloney 1998 Guildhall Museum GM253 site archive (LAARC)	532730 181550 (as digitised)
LWL87 (within area of Merrifield ref W32)	Opposite 45–50 London Wall	Top of wall recorded at <i>c</i> 10.33m OD	A British Telecom trench was excavated in the middle of the road along London Wall, east of Moorgate. For a short distance the trench ran parallel to the south (internal) face of the wall where a 3.6m length was recorded. A medieval culvert conducted a tributary of the Walbrook through the Roman wall. This was 1.2m wide at its base and 0.9m from roof to floor. It extended S from the inner face of the wall. Survival: unclear	Moderate Digitised from hand drawn 1:100 trench location plan (measured in relation to contemporary pavements/buildi ngs) and 1:20 section location, with limits of City wall marked as recorded in section (LWL87 site archive, LAARC).	DUA Level 2 site archive for LWL87 (LAARC)	532766 181540 (as digitised)

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
AOP99 GLSMR085088 -9 (within area of Merrifield ref W32)	London Wall (near junction with Copthall Avenue)	11.80m OD (0.83m bGL). Foundation continues below 8.60m OD.	Replacement of a large telephone manhole in the centre of the road re-exposed two sections across the Roman and Medieval city wall Both faces of the wall had been cut back by later intrusions (including the 1934 manhole*), except at the east end, where the outer (north) face of the wall was intact. This face was interpreted as a medieval refacing. At this location the wall was at least 2.6m wide. *see also GM72 Survival is indicated beneath the floor of the manhole and immediately to the east and west of the recorded sections.	Accurate Trench and section surveyed by MoLAS to OS grid. But note that as Section 1 is missing from the archive, the exact location of N face of wall within section at east end of trench is unclear. Photographic evidence suggests the face was c 0.2m from the northern limit of the recorded section location and it has been digitised as such.	Westman, A 1999 BT Hole in London Wall, EC1, An Archaeological watching brief, unpub MoL rep MoLAS Geomatics original survey data	532780 181538 (as digitised).

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
GM72 GLSMR 044360	London Wall (near junction with Copthall Avenue)	<i>c</i> 3.7m bGL? (but see AOP99) core of wall at <i>c</i> 3m bGL	In 1934 at a depth of 12ft 3in the back of the city wall was exposed and a 'tunnel' cut through it. The wall was just over 7 ft (2.13m) thick. *see also AOP99	No Plan. GM72 archive contains no accurate site location.	Schofield & Maloney 1998	532785 181540
LON82 (within area of Merrifield ref W32)	London Wall, junction with Copthall Avenue	<i>c</i> 10.35m OD	Opposite no. 55 and 57 London Wall. Observations during work on a telephone manhole in London Wall street. A 2m–2.5m stretch of the Roman city wall was exposed. (N.B. Archive summary grid reference is wrong) Survival: unclear	Good Digitised from LON82 1:100 site/section location plan (with OS refs) and 1:10 sections/elevation s (LAARC)	DUA LON82 Level 2 site archive (LAARC)	532810 181530 (as digitised).
GM333 (= Merrifield ref W31)	London Wall, opposite Carpenters' Hall	1.6m bGL	In 1905, a shaft was sunk on the outside face of the wall at this point. The wall, 4' thick, was encountered 5' 3" down. The base of the wall was 19' below the surface. Survival: unclear	Poor Digitised from plan in Archaeologia 1906 article, related to copy of 1894 OS	Norman, P and Reader, F 1906, Recent Discoveries in connexion with Roman London, in <i>Archaeologia</i> LX pt 1, 171	532900 181515 (as digitised)

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
WBH06 (part) Blomfield Street	Junction of London Wall and Blomfield Street	0.8m bGL	Eastern side of the junction of Blomfield Street and London Wall (TW water main replacement). There was a fairly smooth/regular face to the north, although this may be the core exposed by robbing of the facing blocks.	Good Digitised from image of wall locations on OS mapping supplied by Compass Archaeology	Compass Archaeology communications and plan	

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
BLM87 GLSMR 041918	85 London Wall. Blomfield House, Junction of London Wall and Blomfield Street	<i>c</i> 9.30m OD (c3.2–3.25m bGL)	 85–86 London Wall, 53 New Broad Street. Part of the external face of the city wall was recorded at the southern edge of the site in 1988. The observed, external face of the Roman wall includes the sandstone plinth, 4 ragstone courses and the first tile string course, but the core of the wall survived to a height above the second tile string course. NB This puts the remains of the wall to the north of the scheduled area. Survival: the city wall in the south face of current building survives in two arches in the south-west corner of site; it was destroyed in two others. 	Moderate Digitised from BLM87 1:100 hand drawn trench and section location plan, site grid plan referenced to OS, and City wall projection plan (LAARC) A note in the site archive suggests that there is a fairly large degree of error in the plotting of the wall in relation to the site grid.	DUA Level 2 site archive for BLM87 (LAARC)	532950 181505 (as digitised)

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
CAP86	Capel House, 54-62 New Broad Street	Base of plinth recorded at 10 to 10.66m OD; only few courses survive	The external (north) face of the city wall formed the southern boundary of the site (immediately north of All Hallows on the Wall). The wall itself was not observed in the excavation trenches but within test pits dug prior to demolition. The wall was recorded in TP 1 to the west of the church (base of wall at 10m OD), TP 3 and 4 on east side of church (base at 10.25 and 10.66m OD) and TP 2 north of vestry Survival: a survey in 1991-2 found that the outer face of the wall is visible in a basement area of 54– 62 New Broad Street for a distance of c 23m west and c 24m east of bastion 11 (the vestry of All Hallows) and part of the bastion fabric is also visible.	Good Digitised from CAP86 1:100 site & trench location and 1:10 elevations, best fitted to OS using church of All Hallows on the Wall (LAARC)	DUA CAP86 Level 2 site archive (LAARC)	533006 181494
GLSMR 041922 (= Merrifield ref W29)	London Wall, All Hallows Churchyard (west of church)		The city wall forms the northern boundary of the churchyard. When the external face of the city wall was uncovered in 1905, Roman work was found remaining to a height of 12 ft (i.e. to about contemporary ground level). Above the plinth were 4 courses of squared ragstone, a triple bonding course, 5 courses of ragstone, a second triple bonding course, 6 courses of ragstone, a double bonding course, and 3 more courses of ragstone. Below the plinth, a brick-lined culvert passed through the foundation. It lay in a hollow depression, possibly a stream bed, apparently pre-dating the city ditch.	Moderate Digitised from published plan dated 1906 (pl XXV) in Archaeologia vol LX pt 1, using 1894 OS map as reference.	Norman P & Reader FW. 1906, Recent discoveries in connexion with Roman London, Archaeologia vol LX pt 1, 207–210 and pl XXV	533000 181492

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
GM332 GLSMR 041924–5 (= Merrifield refs B11, W28)	All Hallows on the Wall church, London Wall (vestry)		Excavation in 1905 by the Society of Antiquaries revealed the vestry of All Hallows Church to have its foundations set on a bastion of the city wall. It was 19ft (5.79m) in diameter & projected 15ft (4.57m) from the face of the wall. It survived to a height of 8ft, of which 3ft extended below the plinth of the city wall. Its N edge overlay the S edge of the Roman ditch. (SMR grid ref (533028 181496) is not accurate – c 6m from bastion) This work also revealed the lower part of the city wall, which forms N boundary of church/churchyard. The wall consisted of he plinth, with four courses of squared ragstone and a triple bonding course.	Good Digitised from published plan dated 1906 (Archaeologia vol LX pt 1, pl XXV), relative to extant vestry of All Hallows church on modern OS mapping.	Norman P & Reader FW., 1906, Recent discoveries in connexion with Roman London, <i>Archaeol</i> vol LX pt 1, 200 ff Norman, P, & Reader, FW, 1912, Further discoveries relating to Roman London, <i>Archaeol</i> vol LXIII, p 271 ff	Centre of Vestry / bastion on OS = 533021 181491

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
GLSMR 041926 (= Merrifield ref W27)	London Wall, East of All Hallows Church		Building work monitored by P Norman & FW Reader in 1905 revealed a small portion of the Roman fabric of the city wall 45ft (13.72m) E of All Hallows church. The plinth & 2 courses of squared ragstone were exposed. (see also 041923)	Moderate Digitised from published plan dated 1906 (pl XXV) in Archaeologia vol LX pt 1, using 1894 OS map as reference.	Norman P & Reader FW. 1906, Recent discoveries in connexion with Roman London, Archaeologia vol LX pt 1, 211-212 and pl XXV	533050 181482 (as digitised)

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
WOE94 GLSMR 044079	22–24 Wormwood Street	c 13.24m OD	The Roman city wall survived to its full width through the north side of the basement of 23–24 Wormwood Street, retained by a 1 brick thick wall The top of the Roman masonry was exposed in 24 Wormwood Street. The north basement wall of 22 Wormwood Street had been constructed on the line of the city wall in the post-medieval period out of reused stone from the wall. This wall was recorded by means of rectified photography. Survival: city wall preserved and covered over in basement.	Good There is no site location or plot of the wall in the archive. In the absence of such information, OS values of photo targets on back wall of property (from MoLAS survey data archive sheet, (LAARC)) were digitised, to give N face of wall, and offset 2.53m to the south to provide alignment across Nos. 23–24 Wormwood Street.	MoLAS WOE94 Level 2 site archive (LAARC) Sankey, D 1998, 22–24 Wormwood Street, An archaeological watching Brief, unpub MoL rep	533165 181460

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
WOD86 GLSMR 044244 & 041927 See also WOE94	22 Wormwood Street	Localised area of clay and flint foundation recorded at 11.82m OD	The northern face of a post-medieval wall of reused ragstone, forming the north cellar wall apparently conformed to the alignment of the external face of the City wall. However, the only surviving evidence of the original structure was a localised patch of clay and flint foundation material.	Moderate (but no actual survival of wall superstructure) Line of post- medieval rebuild digitised from WOD86 1:200 site /section location (manually plotted onto OS 1:1250 tracing) and 1:20 elevation (LAARC)	Sankey D, 1994 22 Wormwood Street, An archaeological evaluation (unpub MoL rep) MoLAS Level 2 site archive for WOD86 (LAARC)	533170 181455
WOM94 GLSMR 044147, 044149–50, 044441, 044437	20–21 Wormwood Street, 105–107 Bishopsgate		20–21 Wormwood Street, 105–107 Bishopsgate. The City wall had been entirely removed from 20–21 Wormwood Street. At no. 21 a post-medieval masonry wall on the north perimeter had replaced it. Further work under this site code at 105–107 Bishopsgate in 1996 revealed no trace of the City Wall.	No wall recorded	Sankey D, 1996 20 and 21 Wormwood Street, An archaeological evaluation, unpub MoL rep	533180 181455

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
WBH06 (part) Bishopsgate	Wormwood street/ Bishopsgate junction	1.1–1.4m bGL (more heavily truncated elsewhere)	Western carriageway of Bishopsgate, opposite No. 105/106 (TW water main replacement). To N: wall probably from 17th-century gatehouse. 'start of the masonry was just about' at the N edge of the SAM mapping (G. Potter, CA, pers comm). To S: wall of medieval/Roman city wall or gate.	Good Digitised from image of wall locations on OS mapping supplied by Compass Archaeology	Compass Archaeology summary and plan	(approx. NGR 533206 181450 – as digitised)
GLSMR 041929/02	Bishopsgate	1.5m bGL	NW corner of junction of Bishopsgate and Wormwood Street A mass of ragstone rubble <i>c</i> 6 ft 6 in square, at a depth of 5ft (1.5m). This extended to a depth of 10ft (3.0m) below the surface. It contained fragments of Roman tile & was apparently carefully faced on its S side. This rested on a puddling of flint & clay, <i>c</i> 10 ft square (whole of manhole being observed). The remains probably formed part of the S face of a gatehouse of the Roman Bishopsgate & projected <i>c</i> 20ft (6m) inside (S of) the city wall.	Poor Digitised from Norman & Reader's published Fig 3 sketch plan (<i>Archaeologia</i> Vol LX pt 1, 186), but this does not tally with accompanying text, & is difficult to locate to street/building lines	Norman, P, & Reader, FW, 1906 <i>Archaeologia</i> Vol. LX. pt 1, 184–187	533205 181445 (as digitised)

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
BTB89 GLSMR 041929	Bishopsgate	<i>c</i> 12.75m OD	Bishopsgate, north of junction with Wormwood Street & Camomile Street. Watching brief during British Telecom tunnelling by DUA revealed foundations of Kentish rag & clay with mortared ragstones, recorded in section. These were thought to represent part of the Roman Bishopsgate.	Good Site surveyed by DUA to OS grid. Locations of wall foundations recorded in section digitised from 1:10 sections in relation to hard copy 1:100 site plan tied to OS.	DUA BTB89 Level 2 site archive (LAARC)	533208 181442 (S) 533217 181453 (N) (as digitised)
GLSMR 041929/01	Bishopsgate	0.9m bGL	Excavation "on the N side of" 108 Bishopsgate by WC Edwards in 1921 revealed 'Roman masonry, apparently a wall c 5ft (c 1.5m) thick, at a depth of 3ft from the surface. This ran N–S (ie at right angles to the city wall) & may have formed part of the gateway'	No plan	Edwards, 1922 (<i>TransLAMAS</i> NS IV, 332)	SMR: 533220 181450 (minimum 10m)

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
CMI00 & KPH05 GLSMR 085135	Kempson House and Bishops(gate) House	Possible city wall: 11.42m OD	 25–37 Camomile Street, 106–126 Bishopsgate. <u>Site</u> centre: NGR 533250 181450. CMI00: two test pits in the SE and SW corners of the underground car park confirmed that no trace of the City wall, or its robbing in antiquity, survived. The City wall, therefore, must originally have been situated either along the southern edge of the present buildings or even further to the S, outside the [CMI00] site boundaries. KPH05: In one of two test pits along the S frontage of the site a possible Roman wall foundation survived beneath the modern truncation. The remains continued beyond the N and E limits of excavation, but not in a westerly direction as might perhaps be expected for the Roman City wall foundation. It may therefore be either an isolated deep level foundation for the City wall, or part of an earlier structure. 	Good (good location, but poor identification) MoLAS digital survey data	MoLAS KPH05 digital survey data Tyler, K. Evaluation at Kempson House, unpub MoL rep	KPH05 533260 181425 (as digitised)

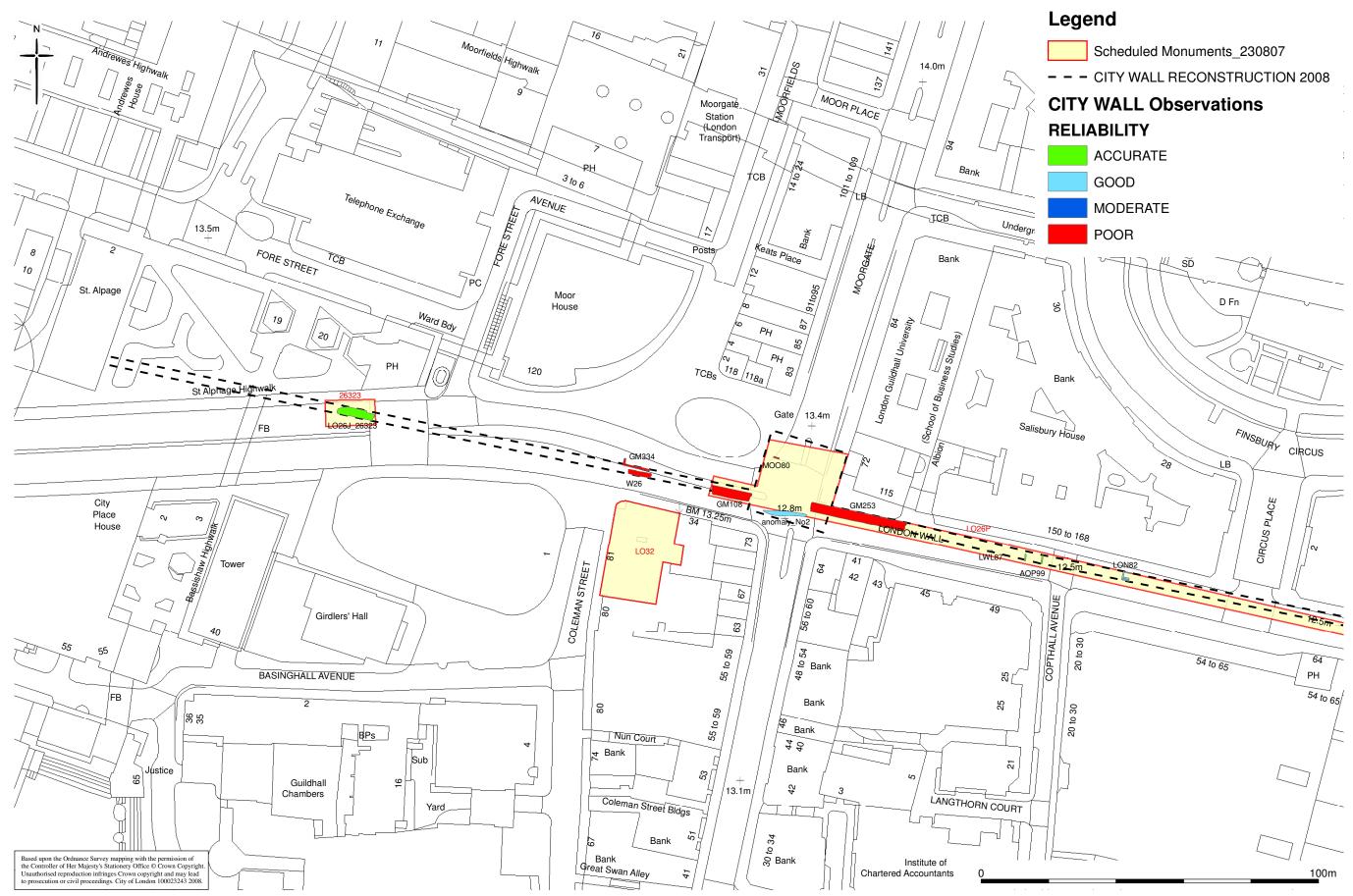
Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
GM349 GLSMR 041932–3	27–33 Camomile St, junction with Outwich St		Demolition work monitored by JE Price in 1876 revealed a stretch of the city wall <i>c</i> 88ft (46.82m) in length. It was 8ft (2.44m) thick. It was destroyed above the plinth. Also a semi circular bastion attached to the city wall. This was 20ft (6.10m) in diameter & projected 14ft 9in (4.50m) from the walls face. Uncertainty exists regarding the bastion's exact location.	Poor Digitised from photocopy of RCHM 1928 plan, using contemporary OS for reference points	Price JE, 1880, On a bastion of London Wall, or, Excavations in Camomile Street Bishopsgate, London, 23–25, Fig. reproduced in RCHM, 1928, London, III, Roman London, 86, 101	SMR: 533274 181421
HSD89 GM288 GLSMR 041935	58–60 Houndsditch	Foundation of wall at 12.03m OD. Wall survives to a maximum height of 4m in places	 HSD89: The Roman city wall was exposed running along the SW edge of the site: the stones of the outer face were cut away by later cellaring, leaving only the core. The surviving portion was 5.2m long and 4m high and is to be preserved. GM288: Part of the city wall forming the rear (S) of 58–60 Houndsditch and dividing it from the graveyard of St Martin Outwich was recorded by P Norman and F W Reader in 1905, again in 1926. In 1926 the bottom of the plinth was seen 8ft 4in. below street level. The fragment of wall stood in 1905 to a height of 14ft 6in. above the base of the plinth. The site records for 1926 could not be located. 	Accurate Digitised from HSD99 1:100 site plan/section location (with survey points referenced to OS) and 1:200 plan showing City wall (LAARC)	DUA, HSD99 site archive (LAARC)	Site centre: NGR 533320 181400 SMR: 533293 181412

Record	General Location	Depth/Level	Location information	Plan reliability	Source	National Grid Reference
WHB06 (part) Goring Street	Goring Street	<i>c</i> 0.4–0.6m bGL (truncated more deeply elsewhere)	(TW water main replacement). As this is well to the east of the Crossrail works, only the depth is directly relevant .	Good Digitised from image of wall location on OS mapping supplied by Compass Archaeology	Compass Archaeology summary and plan	Approx. 533380 181330

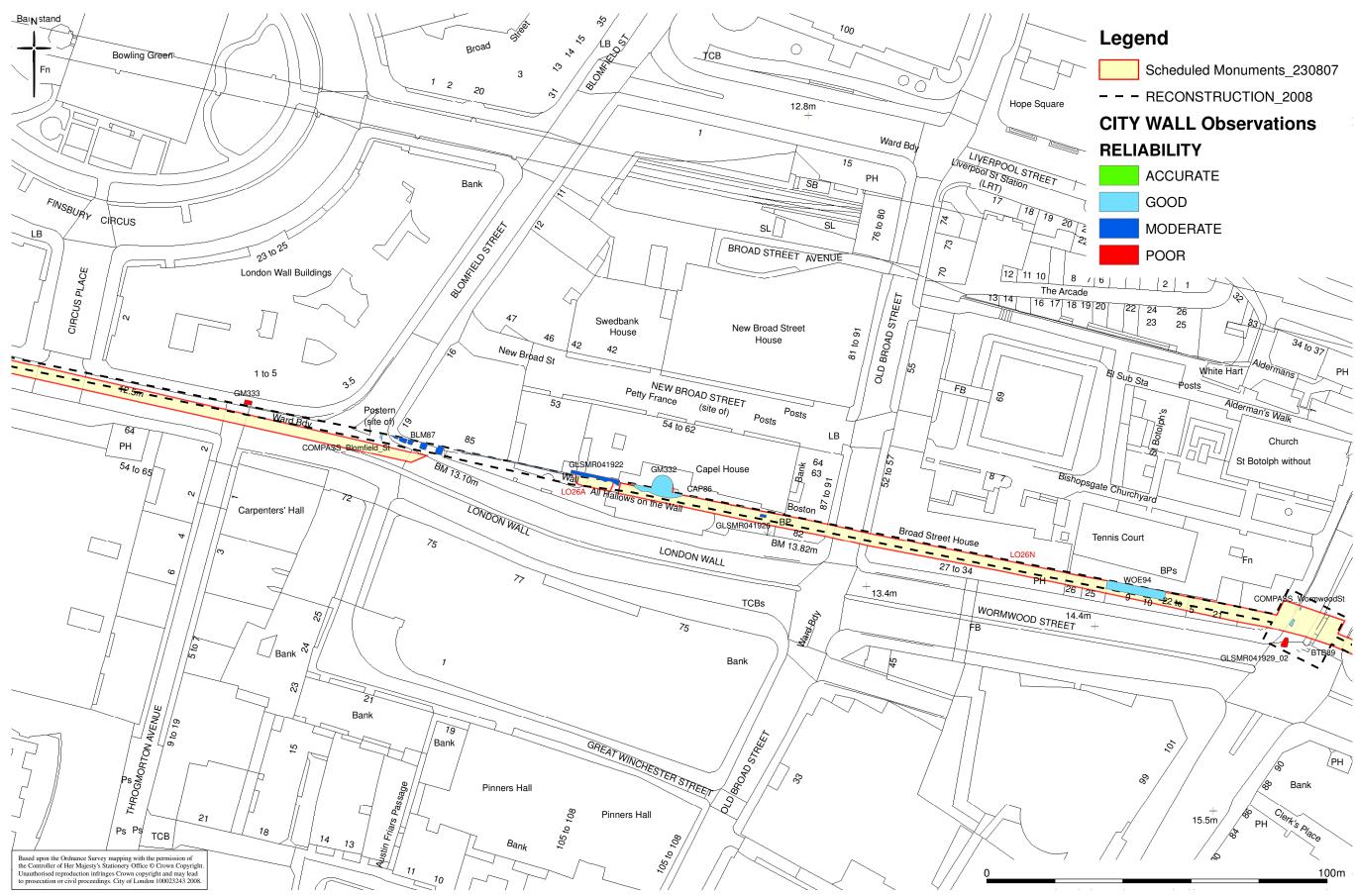
6.1 Abbrev	viations
aGL	above ground level
bGL	below ground level
DUA	Department of Urban Archaeology (Museum of London)
GLSMR	Greater London Sites and Monuments Record
OS	Ordnance Survey
LAARC	London Archaeological Archive and Research Centre
LAMAS	London and Middlesex Archaeological Society
RMLEC	Roman and Medieval London Excavation Council

MoLAS, Audit of the City Wall	Cohen. N, & Hill, J, 2005, The London City Wall, unpub rep for Corporation of London
RCHM	Royal Commission of Historic Monuments, Roman London Vol 3
Schofield & Maloney 1998	Schofield, J, with Maloney, C (eds), 1998 Archaeology in the City of London, 1907–1991: a guide to records of excavations by the Museum of London and its predecessors, Archaeol Gazetteer ser 1, MoL
Shepherd 1998	Shepherd, J D, 1998a Post-war archaeology in the City of London, 1946–1972: a guide to records of excavations by Professor W F Grimes held by the Museum of London, Archaeol Gazetteer ser 3, MoL

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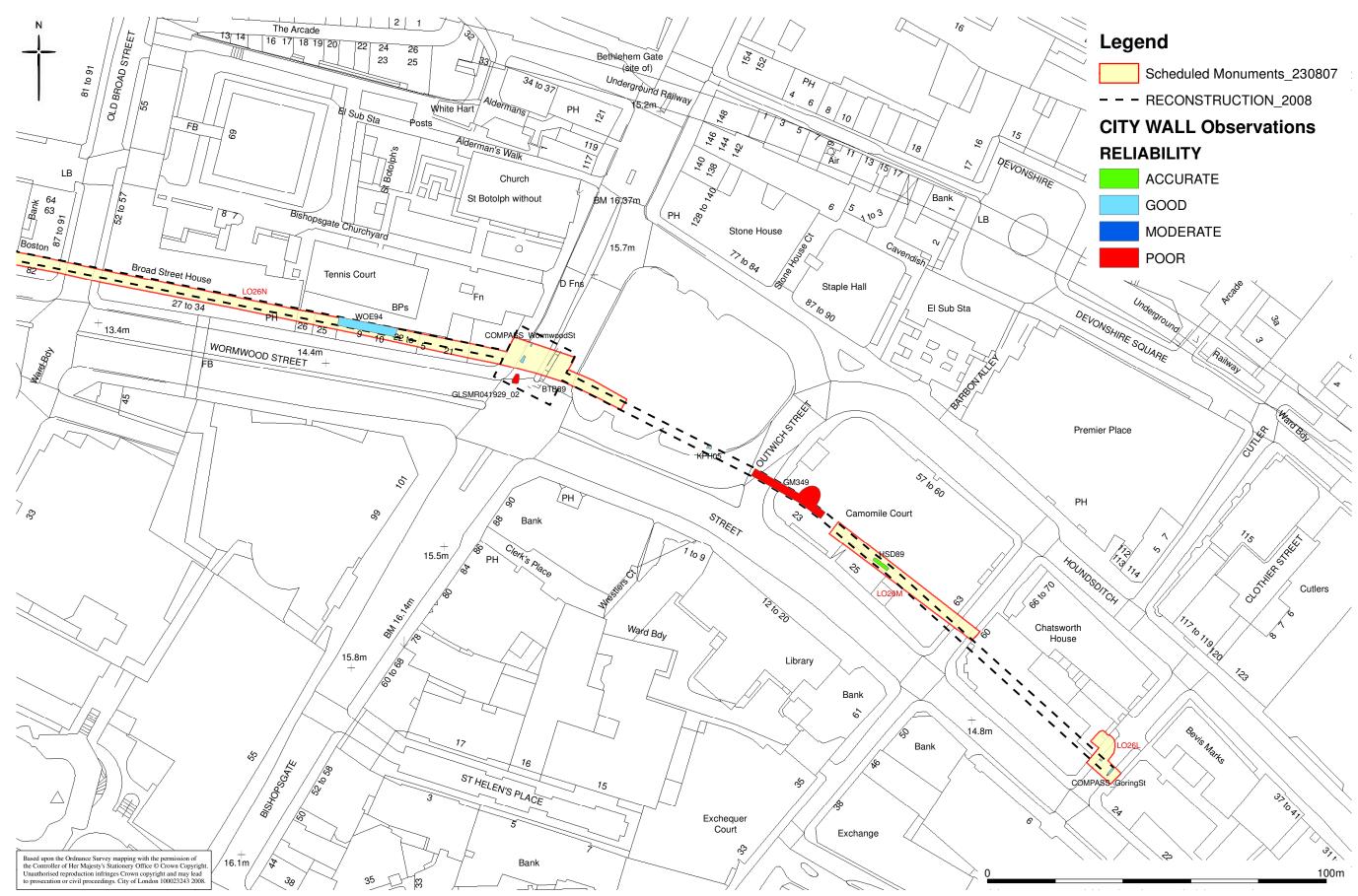


City wall DDBA: west



City wall DDBA: centre

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City wall DDBA: east