



CENTRAL SECTION PROJECT ARCHEOLOGY FRAMEWORK C257- CENTRAL PACKAGE

Summary of LSS85 archive – Broadgate Excavations

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1.0	14 Jul 10	Rob Hartle	Nick Elsdon	Elaine Eastbury	To support C138 design
		<i>R.H.</i>	<i>N.E.</i>	<i>E.E.</i>	
2.0	02 Feb 12	Various	Nick Elsdon	Elaine Eastbury	Additional information

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Jay Carver

Date: ~~28 September 2010~~ 15/5/12

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1 Purpose

C257 (MOLA) have been instructed by the PDP to provide a summary report on information contained within the Museum of London Archive on excavations carried out within the vicinity of the known burial ground at Broadgate, Liverpool Street Station. The information is provided to supplement desk study material assessed by C138 as part of their archaeological design for Liverpool Street Station.

2 Scope

The fieldwork archive for MOL Site Code LSS85, held by the Museum of London has been inspected and is summarised (Section 4). Additionally summary information from other relevant observations within the vicinity (including level data) has been summarised (Table 1, Section 5) The work was undertaken by Rob Hartle at MOLA under the supervision of Nick Elsdon. An email note accompanying the report is included at Section 6.

A drawing (Figure 1- Section 7) has been produced summarising the locations inspected during previous investigations. This was produced from the archive plans and by re-plotting the more recent LVB06 watching brief pits.

3 Definitions

PDP – Project Delivery Partner

MOL – Museum of London

MOLA - Museum of London Archaeology

Site Code – a unique identifier assigned by MOL for each archaeological investigation undertaken within the Greater London area

4 LSS85 Archive – Summary Report

- Test Pit 7 produced 400 partial or complete skeletons, and two brick constructed burial vaults – the larger contained 6 lead coffins
- Watching Briefs of Test Pits 8 & 9 produced some 200 skeletons
- The base of the burials was noted as c 2 metres below 1985 ground level, c 10.8m OD, under which is c 0.5m of make up dumping for New Churchyard (consolidating the Moorgate Marsh?). This is less deep than the burials in LVB06 phase 2 which continued down to 3.2m below ground level.
- ‘An average of 8 individual burials per cubic metre of ground were recorded throughout the main area of excavation.’ (archive report)
- ‘Most of the later burials were coffined, the exceptions in the most part being infant or neonate burials. Coffin decoration was variable from none on many to extremely fine pin and stud work on some. In general the survival of material was good but generally where the wood of the coffin survived well the skeleton did not and vice versa. Badly corroded iron breastplates were in evidence throughout the main sequence but unfortunately none could be fully deciphered.’ (archive report)

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- The maximum southern limit of the LSS85 excavation/watching brief was approximately on the modern pavement line at the top/north of Liverpool St (see plan FIG_1.pdf).
- As part of LSS85, a watching brief was carried out on ground works during development of the Broadgate site, in the area of Broad St Station, which revealed large amounts of disturbed and fragmented human remains which had been used as backfill in the foundations of the station. Most, possibly all, remains were removed during the watching brief/construction. The archive plan notes a northern boundary of the redeposited material seen in this work (which will not affect the Crossrail works), but is unclear if the southern limit of excavation was also the southern limit of the watching brief and potentially cleared area.
- Replotting the site outlines onto an OS background (see plan FIG_1.pdf) has shown that the LVB06 shafts lay outside the LSS85 site outline (contrary to previous comments from NJE). Therefore survival in the LVB06 shafts is not relevant to whether all of the burials were cleared from the LSS85 area of excavations.
- Eight specially constructed skips, each of eight cubic meters, filled with human bone – were reburied in the area of TP7 after excavation.
- Limited osteological investigation was conducted, other than age, gender, and general condition

5 Summary Data - Burials found in Liverpool Street

Table 1

Site	Depth of modern overburden	Area of burials	Depths of burials	Number of burials	Notes	Thickness	Density (bods/m ³)
LVB06 Phase 1 (Ref. 1063) [N corner of Liverpool St w Blomfield St.]	1.23m bGL (GL = 12.8m OD)	1.2 x 0.6m	1.28m to <i>below</i> 1.56m bGL	5 contexts = minimum of 10 individuals		0.28m	10 bods / 0.2m ³ = 50 !
LVB06 Phase 2	1.5m bGL (GL = 12.8m OD)	1.4 x 1.8m (x 5.1m deep shaft)	1.65m bGL to 3.2m bGL (charnel pit) = 1.55m Burials overlay Roman to medieval Walbrook/Moorgate Marsh deposits (continued <i>below</i> base of pit at 5.1m bGL).	9 contexts, some ex-situ = minimum of 24 individuals	some ex-situ remains ?disturbed in 19th-century drains	Bods: 1.55m +1.9m Marsh	24 bods / 3.9 m ³ = 6.15
Ref. 1084 [S side of Liverpool St, adjacent to bus stops outside		c 3m long		multiple	Police call-out to disturbed remains on contractor's soil heap		

Site	Depth of modern overburden	Area of burials	Depths of burials	Number of burials	Notes	Thickness	Density (bods/m ³)
Austin Reed]							
XRD92 BH L11 [Liverpool St – S carriageway, junct w Blomfield St]	1.35m bGL	borehole	c 2.5m bGL (burial ground deposits interpreted down to c 2.8m bGL).	1 ?	Skull fragments in BH	Bods: 1.45m + 3.95m Marsh etc	
LSS85 (Broadgate)	Highly variable		1985 'adjacent road level': 12.8m OD 'Cemetery' at 11.4m OD (c 1.4m below 1985 road level). Base of burials: c 2m below 1985 ground level Land reclamation/make up dumps for cemetery 10.2–10.8m OD. Top of Marsh deposits 9.7–9.8m OD Base of Marsh deposits 8.5–9.5m OD Base of Walbrook deposits 6.3–8m OD.	over 400 partial or complete burials were encountered and 200 more came from further test-pits Most of the later burials were coffined. Ground work carried out during the development of the Broadgate site in the area of Broad Street station revealed large amounts of disturbed and fragmented human remains which had been used as backfill in the foundations of the station. Two brick burial vaults, with lead coffins.	It is believed that all burials within the basemented footprint of Broadgate South were removed. However, disarticulated bone may be encountered.		Average (or 'up to' ?) 8 per m ³
FWD04	c 0.55–		Articulated skeleton	Minimum 22			



Site	Depth of modern overburden	Area of burials	Depths of burials	Number of burials	Notes	Thickness	Density (bods/m ³)
[W end of Liverpool Street] Multi/1079	1.2m		at 1.22m bGL (top) Disarticulated may have extended up to c 1.1m bGL	individuals. large quantity of disarticulated human bone, along with 2 articulated skeletons			

6 Note from MOLA to C138

From: Elsdon, Nick [mailto:nelsden@museumoflondon.org.uk]

Sent: 14 July 2010 12:18

To: Mike Court; Jay Carver

Cc: Hartle, Robert; Eastbury, Elaine

Subject: LSS85 archive

Dear Mike, please find attached the notes from our search of the LSS85 archive, with a plan (in both PDF and Microstation), and a revised version of the burials/levels document that I sent previously (I took the opportunity to clarify the levels of the burials from FWD04, as well).

These do not answer all of the questions, but that is the nature of records from a quarter of a century ago, I am afraid.

We can be pretty certain that most of the burials have been cleared from the LSS85 watching brief area (shown hatched on the plan FIG 1), but it is not clear if ALL of them were.

The 8 'skips' (containers) of human remains were reburied in Trench 7 (see plan).

Annoyingly, the only level for the top of the burials comes not for the archive but from our old 'deposit survival' form and a comment on the level of the base of the cemetery. These need to be treated as approximate figures. I have updated [Table 1] the 'Liverpool St Burials' with these.

I hope that these are helpful,
Nick

7 Figure 1 -C257-MLA-T1-XMP-C101_WS102-00002

Analysis of previous site in the Liverpool Street Broadgate Area

NB MoLAS' digitisation of the extent of BG208 seems to be poorly located and drawn, in particular, it should extend W into E side of Blomfield Street, allowing for road widening (and both N and S sides should be further S by approximately the width of a carriageway, and the N side should have a slight bend in it (cf Ogilby & Morgan 1676) but this is less critical as both edges remain under existing railway buildings/cuttings).

The plan of "Old Bethlehem Burying Ground" by Dance 1767 shows the area to be:



trapezoidal, the northern run 212' 8", the eastern run 136' 10", the southern run 261'7", and the western run 163' 5". The perimeter is approximately 615' enclosing an area of some 36,000 sq. feet, or about .8 of one acre.

New Churchyard = Burial Ground of St Mary Bethlem, July 1569–post-1714 (c mid-18th century).



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Fig 1 Previous sites in the Broadgate area

Annex: additional information, February 2012

Email from Excavator of LSS85

From: Nielsen, Robin
Sent: 01 February 2012 13:22
To: 'Gary Tompkins'
Subject: RE: Broadgate & Archaeology

I knew that there was some reburial of remains, and I have checked this out with the archaeologist (now retired to Devon) who actually ran the site in question. He wrote:

"The large amount of human remains from the site which was recovered from the ground clearance work was reburied on site. Most of the stuff came from secondary reburial anyway and was packed around the brick and concrete foundations of Broad Street Station. As far as I know, the excavated skeletons are still in the museum collection. As for all that other material which included a few lead coffins it was mixed with a lean mix concrete and buried in our old excavation hole. The site code for the trench where the remains are is LSS85 and it was approx 12 m X 4m. I would imagine that the now solid block of lean mix and human bone will prove an interesting deposit to deal with."

Further communication

Further communications from the excavator to Robin Nielsen have confirmed that the burials (and some lead coffins) were placed in Tr 7 (not in the skips as implied by the archive report, but set in concrete as described in the email above). [R. Nielsen, MOLA, pers comm].

[The location of Tr 7, and therefore the burials, remains as shown in Fig 1 above. NJE].