



## **9 & 11 DUKE STREET AND 1 DUKE'S MEWS London W1**

City of Westminster

Post-excavation assessment and updated project design

October 2010

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## Executive summary

This report is intended to inform the reader of the results of the watching brief and excavation commissioned by Paul Davis and Partners architects on behalf of the Portman estate at 9 and 11 Duke Street and 1 Duke's Mews. This report will: describe what was found on the site, indicate what post-excavation work has been done so far and what work still needs to be completed and why, provide an assessment of the potential and significance of the site and indicate how and where the results of the investigation should be made public. The report is written and structured in a particular way to conform to the standards required of post-excavation analysis work as set out in *Management of Archaeological Projects* (English Heritage, 1991).

The archaeological investigation followed the scheme of work set out in the *Method Statement for archaeological excavation* (MOLA, 2009c). The watching brief began at 11 Duke Street in May 2010, and was followed by a phase of excavation at 9 Duke Street in June 2010. The watching brief continued during July and August 2010, with the monitoring of piling at 9 and 11 Duke Street and 1 Duke's Mews. 1 Duke's Mews and 9 Duke Street had been completely demolished prior to the archaeological investigation, and 11 Duke Street had been partially demolished and the remaining structure supported by a frame of reinforced steel joists.

The site lies on the margins of the Tyburn valley, very near head-waters or source of the River Tyburn. The earliest deposits recorded at the site consisted of water-lain and hill-washed sediments, which are thought to be Pleistocene in date (over 10,000 years old).

The earliest archaeological features at the site dated to the 18th century. A possible quarry pit (or ditch) dug to extract gravel, had been backfilled after an episode of flooding. The pit had been flooded from the east, indicating that the course of the River Tyburn was to the east of the site. In the west of the site a substantial ditch (possibly a boundary ditch or a drainage ditch) ran north–south, and had been backfilled by a dump of possible house clearance material dating to 1763–1770. The assemblage of pottery from this ditch is of particular note, as it is tightly dated and is primarily made up of fine wares associated with dining and tea and coffee taking.

In the east of the site, another cut-feature ran north-east–south-west, and was filled layers of dumped material, rich in organic matter. This feature dated to the 18th century, and may have been associated with the management of the River Tyburn. Structures (walls, drains, a well and soakaways) associated with the demolished 9 Duke Street, and partially demolished 11 Duke Street (built between 1770 and 1776) were also recorded.

The report recommends a level of further analysis commensurate with the significance of the site and the results to be published in a national peer-reviewed journal article such as the *Society of Post-Medieval Archaeology*. The major significance of the site lies with the ceramic assemblage. The size of the ceramic collection excavated and the range of fabrics and forms present allow detailed analysis to be carried out on the taste and preferences of the household that originally owned them, on availability, marketing and the prevailing fashions of the day as reflected in everyday items used in cooking, dining, taking tea and various other activities. The possibilities for tying the individual assemblage into wider developments and trends open up the significance of the material considerably.

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# 1 Introduction

## 1.1 Site location

The site comprises 9 and 11 Duke Street, and 1 Duke's Mews, London W1, in the City of Westminster. The site is bounded by buildings fronting onto: Wigmore Street to the south and east, Duke Street to the west and Duke's Mews to the north. The centre of the site lies at National Grid reference 528322 181300.

The site is located within the Portman Estate Conservation Area as designated by the City of Westminster, and 9 and 11 Duke Street are Grade II listed buildings. The site is not in an Area of Special Archaeological Priority as defined by the City of Westminster, although it is immediately adjacent to the Tyburn Settlement Area.

The site lies in the valley of the now culverted River Tyburn, close to or over the course of the river itself. The present day street levels reflect the underlying river valley: the level falls significantly from Orchard Street to the west (c 26.00m OD), to Marylebone Lane (c 21.50m OD) and then rises again to Cavendish Square (c 26.00m OD). Present day Wigmore Street slopes down from the east towards the site, with a drop from c 24.0m OD at the corner of Welbeck Street and Wigmore Street down to c 22m OD adjacent to the site. Further west the ground remains relatively level. Street level adjacent to the site is at 23.7m OD at the Duke Street frontage and 22.8m OD at the east of 1 Duke's Mews (MOLA, 2009c).

## 1.2 The scope of the project

This post-excavation assessment describes the results of: a watching brief at 11 Duke Street and 1 Duke's Mews, and an excavation at 9 Duke Street; undertaken by Museum of London Archaeology (MOLA). An archaeological evaluation and historic building survey had previously been carried out at the site by MOLA in 2009 (MOLA, 2009a, MOLA, 2009b).

During the soft-stripping of 9 and 11 Duke Street in 2009, structural problems were identified, and the properties were deemed to be in an unsafe condition. Following discussions with the local planning authority 9 Duke Street was completely demolished and parts of 11 Duke Street were also demolished to make the rest of the structure safe. At this stage MOLA carried out an historic building survey (MOLA, 2009a) and archaeological evaluation (MOLA, 2009b) at the site. In March 2010, the surviving walls of 11 Duke Street were bolted to a steel frame to ensure their stability. MOLA monitored the temporary works associated with the insertion of the reinforced steel joists. The archaeological excavation and watching brief began in May 2010 and works were carried out at basement level within: the footprint of 9 Duke Street (c 21.21m OD), and the propped, standing remains of 11 Duke Street (c 21.04m OD). At 1 Duke's Mews the piling took place at street level, c 23.24m OD.

All of the archaeological deposits and features recorded at the site were post-medieval in date; however, residual medieval glass and possible medieval tile were also recovered. A substantial ditch, backfilled between c 1763 and 1770 was recorded along the western boundary of the site, running north–south. In the east of the site, a cut-feature extended beyond the confines of the excavation, and this may have been associated with the management of the River Tyburn. Make-up and dumped deposits associated with the preparation of the land prior to the construction of 9 and 11 Duke Street were also recorded, along with the remains of structures



associated with 9 and 11 Duke Street; including: drains, wall foundations, a brick-lined well, and brick-lined soakaways.

Contemporary documentary records relating to the site survive from the post-medieval period; and those which directly relate to 9 and 11 Duke Street are held in the archives of the Portman Estate and the Westminster Archives.

### 1.3 Circumstances and dates of fieldwork

The archaeological investigation (excavation and watching brief) was carried out in fulfilment of a condition placed on planning consent (planning application no. 07/03088/FULL, condition ref 18). As detailed in the *Method Statement for archaeological excavation* (MOLA, 2009c), works at 11 Duke Street and 1 Duke's Mews were categorised as a watching brief, whilst 9 Duke Street was designated an excavation.

Temporary works associated with the insertion of a steel frame to support 11 Duke Street began in March 2010. Four pits were hand-excavated by the contractor Richardsons, monitored by a MOLA Senior Archaeologist. Ground reduction works began in 11 Duke Street in May 2010. A MOLA Senior Archaeologist monitored the removal of the basement slab by Richardsons, and the slab and modern material were cleared by the 17/05/2010. After the initial clearance of the basement area, MOLA archaeologists monitored machine excavation down to formation level (c 20.33m OD), and the excavation of service trenches; recording the archaeological remains encountered in plan and in section. This watching brief was completed on the 24/05/2010, and up to three MOLA archaeologists were in attendance.

Richardsons' ground clearance prior to archaeological excavation at 9 Duke Street began on the 28/05/2010; however, the basement slab of 9 Duke Street had been previously removed during the demolition of the property. Archaeological excavation began on the 03/06/10 and was completed on the 17/06/2010. Archaeology was recorded in plan and in section. The instability of 9 Duke Street's foundations (despite underpinning), meant that the entire site could not be excavated down to natural deposits. Instead, an east–west trench, c 1.30m wide, 6.00m long and 1.00m deep, was dug by machine through the centre of 9 Duke Street. Up to three MOLA archaeologists were present on site during this phase.

Across 9 and 11 Duke Street MOLA Senior Geoarchaeologists used a power auger to take 7 sample cores, which they logged. A Senior Archaeologist also intermittently monitored the piling at 9 and 11 Duke Street and 1 Duke's Mews; this began on the 05/07/2010 and MOLA completed their monitoring on 11/08/10.

An on-site grid was installed by MOLA's Geomatics section and levels were calculated using a temporary benchmark established using a closed traverse from an Ordnance Survey benchmark on Marylebone Lane.

### 1.4 Organisation of the report

The *Post-excavation assessment and updated project design* is defined in the relevant GLAAS guidance paper (Paper VI) as intended to 'sum up what is already known and what further work will be required to reach the goal of a well-argued presentation of the results of recording and analysis' (VI/1).

The principle underlying the concept of post-excavation assessment was established by English Heritage in the *Management of Archaeological Projects 2* (MAP2), (1991). More recent GLAAS guidance has emphasised the need for this stage to be seen as 'brief and transitional', the document acting as a 'gateway' to further analysis and eventual publication (EH, GLAAS, 1999 VI/1).

This report contains a summary of the archaeological and historical background of the site, based on that provided within the *Archaeological Impact Assessment* (MoLAS, 2005) and the *Historic Building Survey Report* (MOLA, 2009a). The original research aims for the project are set out in Section 3. The archaeological features and deposits recorded during the investigations are described in Section 4. This is followed by the quantification and assessment of the finds and environmental assemblages from the site in Section 5 including: the building material (Ian Betts and Deborah Bolf), the pottery (Jacqui Pearce), the clay pipes (Jacqui Pearce), the accessioned finds, nails and bulk glass (Beth Richardson), the slag (Beth Richardson), the botanical remains (Karen Stewart), the animal bone (Alan Pipe), conservation (Liz Barnham), and the geoarchaeology (Craig Halsey) (with specialist tables presented as an appendix (Section 14)). In Sections 6 and 7 the potential and significance of the site are considered. Section 8 outlines the aims of the proposed publication programme; listing revised research aims and an outline publication synopsis. Section 9 provides method statements and lists the tasks which will be required to complete the proposed publication.

## 2 Historical and archaeological background

This is a summary of the: topographical, historical and archaeological background of the project as described in the *Archaeological Impact Assessment* (MoLAS 2005), and the *Method Statement for archaeological excavation* (MOLA 2009c).

The following approximate time scales are used in this report:

<i>Prehistoric</i>		
Palaeolithic	(Old Stone Age)	c. 500,000 - 10,000 BP
Mesolithic	(Middle Stone Age)	c. 9,000 - 4,300 BC
Neolithic	(New Stone Age)	4,300 - 2,000 BC
Bronze Age		2,000 - 600 BC
Iron Age		600 BC - AD 43
<i>Roman</i>		AD 43 - AD 410
<i>Saxon</i>		AD 410 - AD 1066
Early Saxon		AD 410 - AD 650
Middle Saxon		AD 650- AD 850
Late Saxon		AD 850- AD 1066
<i>Medieval</i>		AD 1066 - AD 1500
<i>Post-medieval</i>		AD 1500 – Present

### 2.1 Topography

The Thames valley forms a wide basin cut into the Cretaceous chalk, which outcrops as the Chilterns to the north of London and the North Downs to the south. The basin is filled with marine and estuarine sands and clays such as the Reading-Woolwich beds and the London Clay. The Thames valley also contains a number of substantial gravel terraces deposited by the river during successive glaciations c 450,000 - 10,000 years ago. In general the oldest terraces are the highest, for example there

are occasional surviving outcrops of Boyn Hill gravel in the London area at around +45m OD. However the substantial terrace plateau that crosses Westminster in an east–west direction at around +25m OD is the younger Lynch Hill phase. These two terraces are probably from the Wolstonian glaciation c 250,000 - 150,000 years ago and the Lynch Hill phase in particular is noted for Palaeolithic artefacts, e.g. Acheulian handaxes. These flint implements within the gravels are not normally *in situ*, having been eroded by the Thames out of earlier riverside occupation sites during the substantial changes in river regime associated with glaciation (MOLA, 2009c).

The main terrace sequences in Westminster are further complicated by the formation of the Tyburn river valley which flowed south across the general area, towards the Thames. Although in later times the river was reduced to a small stream, originally it must have been fairly extensive to create the large valley depression, topographically located to the west of Avery Row. Although most of this depression is now filled, originally it probably consisted of a V-shaped valley with its own associated terraces, deposited above the main Taplow terrace, along the eastern and western sides of the valley (MOLA, 2009c).

The site is located in the centre of the City of Westminster, in the valley of the now culverted River Tyburn, close to the course of the river itself. By the post-medieval period the Tyburn was reduced to a small stream, although it must have originally (ie in glacial periods) have been large enough to create the valley depression previously discussed. Most of this depression was levelled up in the post-medieval period. The Tyburn would have deposited its own prehistoric gravel terraces and later alluvium (deposits of mixed sand, gravels, clay and silt) as its channels meandered from east to west within the valley. Examples of the early Tyburn channels and alluvial deposits have been found on several sites in the vicinity including the lower deposits at 5–6 Picton Street (site code PCT98) to the south where the archaeological sequence consisted of silts and gravels overlain by a layer of peat, and in Wigmore Street (site code WIG78) evidence of the Tyburn river system was also recorded (MOLA, 2009c).

## 2.2 Prehistoric

Artefacts of Palaeolithic age have been recovered from the London region but few of these have been found in the City of Westminster itself. Any *in situ* evidence of post-glacial prehistoric settlement or land use from the Mesolithic period onwards would normally occur on or in the brickearth stratum which may overlie the terrace gravels. The Tyburn valley may have provided an attractive location for such activities. Stray finds have been made in the vicinity, but these are not necessarily indicative of settlement or land use patterns (MOLA, 2009c).

The most significant stray finds consist of a number of handaxes, dating mainly to the Lower Palaeolithic period of the Old Stone Age. These include isolated Acheulian pointed hand-axes recorded on the Greater London Sites and Monuments Records (GLSMR) in Wigmore Street, Vere Street, Henrietta Place and Oxford Street. These are considered to represent unstratified chance finds from the terrace gravels. There is no evidence for *in situ* settlement from the prehistoric period in the vicinity of the site, although the Tyburn valley, with its streams and water meadows, should have provided an attractive location for both hunter-gatherer communities and the first farmers (MOLA, 2009c).

The main prehistoric potential would be in the river deposits themselves, if these do survive beneath the site. These may contain important archaeo-environmental sequences which provide evidence of both: past river regimes and man's effect on

the adjacent landscape (via seeds and pollen which may survive in such alluvial deposits) (MOLA, 2009c).

### 2.3 Roman

The site is close to the main east–west Roman road which ran under present day Oxford Street between the Roman City of London, Londinium, and Silchester ‘*Calleva Atrebatvm*’. This road is thought to have been laid above an original Iron Age trackway, and to have crossed the river Tyburn via a timber bridge close to Bond Street Station. About one mile to the south, another stretch of more tentative Roman road may have existed, closer to the river Thames. This route ran from the western side of Roman Londinium, roughly parallel with the Oxford Street road. Further west, these two roads merged just to the east of Brentford (MOLA, 2009c).

Along the line of these roads, there were probably: occasional settlements, farmsteads, burial areas and agricultural systems. Along the northern side of Oxford Street, the GLSMR records a Roman well, flagon and glass were recorded in Welbeck Street and Wigmore Street, and Roman tile has been recovered to the north and south of the site. Further west a hoard of Roman coins was found during building works at Selfridges in the 1840s. These finds may suggest that a more permanent Roman settlement existed around the bridge where the Oxford Street road crossed the river Tyburn, in the vicinity of what is now Bond Street Station. These finds are complemented by a small excavation carried out in 1989 at 1 Tenterden Street (site code TEN89) where parts of two Roman ditches were recorded (MOLA, 2009c).

### 2.4 Saxon

The boundary of the Late Saxon Westminster estates proceeded north from the Thames, following the Tyburn to the point where it crossed the Broad Military Way (Oxford Street) around what is now in the vicinity of Bond Street Station. From here, the boundary ran east along Oxford Street towards St Andrews church (Holborn). There are thus indications that the Broad Military Way (the Roman road) continued to be in use into the Saxon period, and it may be speculated that any settlement activity also focused around the Tyburn bridge area. The site therefore appears to fall just outside the Saxon Abbey estate. The first documentary reference to Tyburn manor is in the Domesday Book (1086) where it is described as belonging to Barking Abbey (MOLA, 2009c).

Although the surrounding area was mainly agricultural, to the north of the site along the eastern side of the Tyburn, a small Saxon settlement probably developed. Archaeological evidence for this is very limited, but it seems to centre around a church dedicated to St John the Evangelist built next to the Tyburn, to the north of the Broad Military Way, with an associated cemetery (MOLA, 2009c).

### 2.5 Medieval

During the 14th century, St John the Evangelist was robbed and desecrated, and a new church was built further north, within what became Marylebone. This was c 700m to the north opposite the manor house and was dedicated to St Mary. The later medieval village appears to have shifted with the church and probably stretched as a ribbon development along Marylebone High Street (MOLA, 2009c).

Archaeological features which may be related to the Tyburn settlement include fragments of medieval field ditches. The ditches seem to confirm that surrounding the Tyburn settlement, the area was used for agricultural purposes. These have been recorded in the vicinity of Wigmore Street, and in 1989 this suggestion was reinforced by the Tenterden Street (TEN89) excavations, where a scatter of 13th-

century pottery was found directly above the Roman field ditches. This may suggest that the field systems and agricultural activities continued into the 13th/14th century (MOLA 2009c).

A major factor affecting the development of this area was the River Tyburn. Further north it seems that the Tyburn was a small stream, rising from Shepherds Well on the south side of Hampstead. It flowed southwards through Swiss Cottage down to Regent's Park. Where it crossed Oxford Street has been debated for some time but part of the medieval bridge has possibly been recorded; a series of wooden stakes were found in Oxford Street, variously dated from the Roman to medieval periods (MOLA 2009c).

From the early medieval period, it is clear that the Tyburn and other rivers across this area were utilised as sources for clean water to supply the City of London and it was during this period that a major alteration affecting the topography was made. This was the diverting in 1236 of the majority of the water of the Tyburn stream at a point near Oxford Street from where it was sent to the City via conduits. Whether this conduit siphoned off all the Tyburn water or just a proportion of it below Oxford Street is uncertain, but it is clear that around this time the course of the Tyburn was diverted eastwards and may travel down the line of Avery Row to the east (Blatherwick, Bowsher and Hoad, 1991) (MOLA, 2009c).

From the GLSMR it is clear that this conduit was one of several laid out in the medieval period, as demonstrated by the conduit heads constructed in: Oxford Street Wigmore Street, Marylebone Lane, North Audley Street, and a cistern in Stratford Place. Eventually, the land upon which the Conduit House was built (present-day Stratford Place) became the property of the City of London and a Banqueting House was constructed for the Mayor and the Aldermen. A watching brief at Stratford Place recorded an undated rectangular masonry structure which may have been the cistern of this house. To the south of Oxford Street the area was referred to as Conduit meadow from at least 1589 onwards. Correspondingly, also to the south-east of the site, Conduit Street was named after a medieval conduit, which tapped into a rising spring across this area in the 15th century (Weinreb and Hibbert 1993, 197). The conduit heads were small stone buildings in the fields constructed over the water systems primarily to keep cattle from fouling the water supply (MOLA, 2009c).

## **2.6 Post-medieval**

In the 15th and 16th centuries the area round the Tyburn/Marylebone village system was still essentially rural and only became urban from the 17th century onward. By the 18th century, little trace of either the Tyburn or any open conduit remained on the contemporary maps suggesting that the river had been culverted and was principally flowing underground as it travelled through this part of Westminster. An archaeological evaluation at Horse Shoe Yard (site code HOY97) to the south-east of the site revealed that eroded London Clay was sealed by thick dumped deposits, into which was cut a channel, possibly the Tyburn Conduit. The channel appears to have gone out of use by the 17th century, and was sealed by a marshy-type soil deposit into which a drain was dug. Post 17th-century dumped deposits and brick structures, indicating urbanisation of the area, were also recorded (MOLA, 2009c).

By the mid 18th century, the area between Piccadilly and Oxford Street, westwards to what is now Park Lane was beginning to be developed. Up until the creation of Bond Street in the 18th century the general area consisted of a few large houses and estates, surrounded by smaller settlements and fields (MOLA, 2009c).

Reflecting the previous settlement shift to the north, Homann's map of c 1705 shows the study area as open fields along Marylebone Lane to the south of the later medieval village and its church of 'St Mary le Bon'. To the south of the site the Tyburn is still shown as a water course. The Oxford Street bridge over the Tyburn was widened in c1737 (Barton 1992, 34), indicating that at least parts of the Tyburn were still visible at this time (MOLA, 2009c).

Urbanisation had also extended, to a lesser extent, north of Oxford Street. In 1729 the 'Old Court House' was built on the triangle of land at the south end of Marylebone Lane, almost certainly on the site of the medieval church. East of Marylebone Lane, Rocque's map of 1746 shows the recently constructed: Wigmore Row, Welbeck Street, Henrietta Street and Cavendish Square, although open fields remained beyond, towards Marylebone village. Here large quarries and a tile kiln are shown, typical of areas on the fringes of urbanisation, which consumed quantities of brickearth and gravel. Further east, development north of High Holborn extended as far as Great Russell Street and Great Ormond Street. In the vicinity of the site, a number of probable quarry pits are also shown. Investigation at 5-6 Picton Street encountered a large feature thought to be a backfilled 18th-century quarry, possibly for brickearth. The site lies in a field next to 'Marybone Lane'. A small stream also flows to the east of the site, presumably the reduced remains of the Tyburn though this disappears from view, presumably into a culvert, when it reaches the built up area on the south side of what was then referred to as Tiburn Road (Oxford Street). A tile kiln is identified by the GLSMR and marked as adjacent to the site on the 1746 map and it is possible that the ponds in the area were originally used as quarry pits that first extracted the clay and then quarried into the gravel (MOLA, 2009c).

By the time of Richard Horwood's map of 1813, the urban development of London had spread to the west of Marylebone Lane and the site was no longer open fields. Duke Street has already been established and Wigmore Street is shown as Edwards Street. Numbers 9 and 11 Duke Street can be seen with a stable yard to the rear. This same general layout can be seen in the remaining historic maps to the early 20th century (MOLA, 2009c).

The site lies within the Portman Estate Conservation Area, which was first designated in 1967. It was extended in 1979 and again in 1990. The Conservation Area is characterised by the formal layout of the Portman Estate, based on a grid pattern spreading north and west from Portman Square. The formal 18th-century planned hierarchy of squares, thoroughfares and side streets is mirrored by a hierarchy in the design of the houses, with 'first' and 'second' rate houses on main roads and squares and 'third' rate houses on side streets. In general, these houses are stock brick with modest stucco dressings, but some buildings illustrate the emerging early 19th-century vogue for a more extravagant use of stucco (MOLA, 2009c).

At the north end of Duke Street, Manchester Square was laid out in 1770, and 9 and 11 Duke Street would have been built between 1770 and 1776; the first leases for 9 and 11 Duke Street (originally numbered 19 and 18 Duke Street) ran for 96 years from 1776, expiring in 1872 (MOLA, 2009a). The original lease for No 9 included the stable-yard property behind, which would eventually become 1 Duke's Mews (MOLA, 2009a). The terraced houses (with later shops) were constructed by two different builders: No 9 was built by John Elkins and No 11 was built by John Piper (MOLA, 2009a). They were built of stock brick with slate roof, of four storeys, although 9 Duke Street had an added dormered mansard. The shop fronts were altered in the Victorian period (MOLA, 2009c).

### 3 Original research aims

The following research aims were established in the *Method Statement for excavation* (MOLA 2009):

- What are the earliest deposits identified?
- What was the natural topography and environment of the site area in the past? Does the site lie within or adjacent to the river Tyburn?
- Is there evidence from the postulated Roman settlement around the river crossing on the principal road (Oxford Street) and from the medieval Tyburn settlement focused around the original church (prior to its removal northwards to Marylebone c 1400). (Such evidence was not seen during the evaluation (Howell 2009, 8))?
- Since the site may have been on the river bank, there could be evidence of flood/erosion episodes and also attempts at river control, such as timber revetments. Is there evidence for these (the evaluation did not find evidence, although it may exist (Howell 2009, 8))?
- The evaluation found that the site lies in a 'river' zone (Howell 2009, 8). Is there evidence of the alluvial sequence and what is its date? Are there any low water regression phases that might be marked by weathered or organic peaty horizons?
- Can dating evidence be obtained from both any contemporary dumped refuse within the river deposits and from analysis of any organic materials (e.g. dendro chronology or C14 dating) from the site?
- Is there evidence of land reclamation on the site? It is likely that the river was progressively managed, reclaimed and eventually infilled/culverted from the medieval period, but particularly from the 16–17th century onwards. Evidence of medieval culverts conduits, cisterns and subsequent post-medieval building development could be present, although it is anticipated that the current basements will have truncated this phase in particular, and hence such evidence may be localised and principally confined to deeper cut features.
- Is there evidence of quarrying or other similar activities?
- What are the latest deposits identified?

All research is undertaken within the priorities established in the Museum of London's *A research framework for London Archaeology* (Museum of London 2002).

## **4 Site sequence: interim statement on field work**

### **4.1 Natural and topography**

At 9 Duke Street apparently untruncated London Clay was recorded at 19.44m OD (in section), but London Clay was not observed in any of the geoarchaeological auger holes (AH) in 11 Duke Street. At 9 Duke Street a natural concave-based channel cut through the London Clay (running north-east–south-west), filled with alternating beds of gravel and fine grained bluish-grey/greenish-grey silty clays (see Fig 5). These channel fills were fluvial in nature and would have been deposited rapidly (Halsey, 2010).

Fluvial sands were recorded at 18.85m OD in AH1 at 11 Duke Street, and deposits representing standing water or ‘ponding’ were recorded at 19.12m OD in AH3 and at 19.24m OD in AH4. In section at 11 Duke Street, a possible alluvial deposit: compact, mottled green and orange gravels in a clay matrix was recorded at 19.58m OD. At both 9 and 11 Duke Street fluvial deposits were sealed by layers of possible colluvial material, seen at 19.82m OD in section at 11 Duke Street.

The fluvial and colluvial deposits recorded at the site were probably associated with a former course of the River Tyburn during the Pleistocene epoch, but may also represent the Lynch Hill Terrace gravels (Halsey, 2010)

### **4.2 Roman**

There was no evidence of Roman activity at the site.

### **4.3 Saxon**

There was no evidence of Saxon activity at the site.

### **4.4 Medieval**

No medieval features were recorded; however, residual medieval glass was recovered from an 18th-century dump layer (sgp009) at 11 Duke Street, and a possible fragment of medieval tile was found in a layer of 18th-century consolidation material (sgp008) at 9 Duke Street.

### **4.5 Post-medieval**

A possible quarry pit or ditch (sgp002) was recorded towards the western end of 9 Duke Street; this measured: c 1.75m northwest-southeast, c 2.10m northeast-southwest and 0.96m deep (see Fig 5). The top of this feature was recorded at 19.68m OD. This was backfilled with subgroup 004, a: moderately firm, mid yellowish-brown and mid blueish-grey sandy clay with lenses of gravelly clay; containing pottery dating to 1700-1800. A lense of soft, dark grey fine silty sand (sgp003), c 0.10m thick, also filled subgroup 002 from the east (see Fig 5). This was a waterlain deposit and would have represented a flood event. Small fragments of pottery from this deposit date to 1720–1780. Subgroup 002 may potentially have represented a precursor to a later ditch (sgp007).

A stiff, light orange-brown poorly sorted gravelly clay (sgp006) sealed cut-feature (sgp002). This deposit was c 0.40m thick, and was recorded at 20.08m OD. This probably represented a consolidation deposit lain down after the flooding episode.



Truncating this consolidation layer, towards the western end of 9 Duke Street, was a ditch (sgp007) running north–south, in alignment with Duke Street. This feature was cut from 20.08m OD and measured at least: 4.00m east-west, 2.85m north-south and at least 1.62m deep (see Fig 3). The earliest fill of this ditch was a: soft, dark blueish-black clay containing occasional flecks of organic material, c 0.10m thick. This deposit was characteristic of standing water, indicating that the ditch had been left open for a period of time before being backfilled. The ditch appeared to have been backfilled in one episode, with a loose, dark greyish-brown clayey silt containing: frequent fragments of pottery (tightly dated to 1763-1770), occasional animal bone, lenses of slag (medium to large fragments), moderate clinker, moderate oyster shell, occasional glass fragments, and moderate medium to large fragments of brick and tile.

Towards the eastern end of the site, consolidation deposit (sgp006) was truncated by subgroup 008, an amorphous cut-feature running approximately north-east–south-west, filled by layers of silty dumped material (see Fig 3 and Fig 5). Only the gradually sloping, western edge of this feature was recorded, but it would have measured at least: 3.30m north-south, 5.70m east-west and 0.61m deep, and its fills were also observed further east during the piling of 1 Duke's Mews. The top of this cut-feature was recorded at 20.06m OD. The earliest deposit in this feature was a compact, light yellowish-grey clayey silt, recorded at 19.52m OD to 19.66m OD, and containing frequent medium to large fragments of: brick, tile and mortar. Pottery from this layer dated to 1720–1780. The large quantity of rubble in this deposit may indicate that it was dumped to consolidate boggy ground.

This was overlain by a: soft, dark blueish-black, clinker-rich, coarse sandy silt, containing occasional fragments of: pottery (dating from 1763-1780), leather, and animal bone (see Fig 5). This deposit was recorded at 19.60m OD to 19.95m OD. This was sealed by a firm, dark greyish-brown organic-rich silt, recorded at 19.91m OD, containing: leather and bone fragments and pottery dating to 1720-1780 (see Fig 5). Both of these organic-rich deposits were similar in nature to subgroup 009, a layer of dumped material which appeared to extend across 11 Duke Street at 20.51m OD and dated to 1750-1780 (the cut of the feature was not observed during the watching brief at 11 Duke Street).

Subgroup 008 may have been an 18th-century attempt to alter or manage the River Tyburn and its environs.

Both ditch (sgp007) and cut feature (sgp008) were sealed by a layer of made ground (sgp010), up to 0.81m thick. This deposit was recorded at 20.60m OD in 9 Duke street and up to 20.86m OD in 11 Duke Street, and extended across the entirety of the site. Subgroup 010 was a: moderately compact, dark brownish-grey sandy clayey silt with lenses of gravel and cess, and was dumped in preparation for the construction of 9 and 11 Duke Street. Pottery from this deposit dates to 1720-1780.

Structural remains associated with the demolished 9 Duke Street, and the partially demolished 11 Duke Street were also recorded (see Fig 4). These structures were primarily made of bricks dating from 1750-1900. Interestingly, despite being constructed by two different builders, both properties had north–south load bearing walls with foundations which also incorporated culvert-like voids, which may have fed into the drain runs of the property.

To the rear of 11 Duke Street, in the south-east of the site, a circular well (sgp021) was lined with bricks dating from 1666-1900, and its backfill contained pottery dating from 1700-1800 (see Fig 4). A heavily truncated possible yard surface (or culvert

base (sgp014)) composed of reused broken red brick was recorded to the north of the well at 20.56m OD (see Fig 4). To the rear of 9 Duke Street, two brick-lined soak-aways were also recorded (sgp027 and sgp028) (see Fig 4). It has been speculated that the rear wings of both 9 and 11 Duke Street were later additions (MOLA, 2009a), and the presence of the backfilled well and the possible yard surface to the rear of 11 Duke Street may confirm this.

## 5 Quantification and assessment

### 5.1 Post-excavation review

The following tasks have been completed as part of the post-excavation assessment:

- site matrix checked and established on ArcEd.
- subgrouping completed and subgroup matrix established on ArcEd.
- all relevant plans have been digitised.
- all finds and samples have been processed, and specialist assessments for finds and environmental assemblages have been completed.
- all ceramic finds have been provisionally dated

The following tasks should be completed in the next stage of analysis:

- all photographs to be cross referenced and indexed
- final group structure established
- land use sequence and diagrams established
- external specialists to further assess selective finds (eg the slag, intaglio and 18th-century footwear).

### 5.2 The site archive and assessment: stratigraphic

Table 1. Stratigraphic archive			
Type	Description	Quantity	Notes
Contexts	Excavation and watching brief	52	9 Duke Street (28) 11 Duke Street (24)
Plans	1:20 (no. of sheets)		Trench 1 (108) Trench 2 (16) Watching brief (1)
Sections	1:20 (no. of sheets)	3	9 Duke Street (2) 11 Duke Street (1 )
Matrices		Yes	Digital and paper copies
Photographs		Colour (80)	Digital (includes duplicate images)

### 5.3 Site archive and assessment : finds and environmental

Building material	Three crates of ceramic building material (bulk of material discarded after assessment). Total 11.31kg 31 brick samples (not weighed) and 3 accessions. Three shoes boxes bulk BM retained
Post-medieval pottery	845 sherds, 472 ENV, 26358 g
Clay pipes	0.5 box (bulk); 4 accessions
Accessioned finds	26 objects (including 8 ceramic, 4 clay pipe, 3 wall tiles, 4 copper alloy, 3 leather, 1 wood and 3 glass)

Bulk environmental samples	One dry flot; one wet flot in one archive box
Animal bone	Estimated 170 fragments. Total 0.750 kg; 1 standard archive box.
Slag	6.15 kg, 9 fragments of slag.

*Table 1 Finds and environmental archive general summary*

**See appendix (Section 14) for specialist tables**

### **5.3.1 The building material**

By Ian M. Betts and Deborah Bolf

#### *5.3.1.1 Introduction/methodology*

All the building material has been recorded using the standard recording forms used by the Museum of London. This has involved fabric analysis undertaken with an x10 binocular microscope. The information on the recording forms has been added to an Oracle database.

#### *5.3.1.2 Roman building material*

None.

#### *5.3.1.3 Saxon building material*

None.

#### *5.3.1.4 Medieval building material*

None.

#### *5.3.1.5 Post-medieval stone building material*

##### *Roofing/paving*

A purple coloured roofing slate was found in the backfill of a ditch ([142], sgp007), whilst grey roofing slate was found in a 18th-century dump layer ([121], sgp009)

##### *Rubble*

The only rubble was a small piece of Reigate stone from Surrey from a ditch infill ([142], sgp007).

##### *Form?*

A very small fragment of fine grained laminated sandstone of uncertain function came from silty dump layer ([147], sgp008).

#### *5.3.1.6 Post-medieval ceramic building material*

##### *5.3.1.6.1 FABRICS*

###### *Tudor fabrics*

2318

###### *Later fabrics*

3032, 3064, 3067, 3078, 3086, 3202, 3259, 3268

###### *Undated fabrics*

2816, 3033, 3046?, 3210?, 3272, 3257

### 5.3.1.6.2 FORMS

#### *Floor tile*

Low Countries 'Flemish' glazed?

A possible Flemish floor tile with what may be the remains of a white slip on the top surface was recovered from dumping ([155], sgp008). Alternatively, the slip could be a layer of crushed mortar, in which case the tile would be unglazed.

Low Countries 'Flemish' unglazed  
Fabric 2318

Two definite unglazed post-medieval floor tiles were found on the site. One came from a backfill of a possible quarry pit ([145], sgp004), the other from a silty dump layer ([147], sgp008). These are probably 18th century in date. One is in a slightly silty fabric (type 2318) suggesting a Low Countries origin. The other is in an undiagnostic fabric (type 2317) but has a nail hole in one corner, which would again suggest it may be from the Low Countries. On the other hand, the second tile is made from very poorly mixed clay which suggests it may be of English manufacture. The tile measures 247–254mm square by 30mm in thickness.

#### *Wall tile*

Tin glazed wall tile

Fabric: 3064, 3067, 3078, 3086

From backfill of a ditch ([142], sgp007) were found five tin-glazed wall tiles. These comprised one bluish-white plain glazed tile and four decorated examples. The decorated tiles comprise:

Accession <9>

Blue and white tile with probable landscape scene. There is no corner or border decoration. The clouds are similar to certain tiles in Betts and Weinstein (2010, 131-133, nos. 217–225). Dutch or English, 18th century.

Accession <10>

Blue and white tile with landscape scene set in circular border with barred ox-head corners. Dutch 18th century.

Accession <11>

Purple and white tile set in circular border with barred ox-head corners. Probable biblical tile showing what appears to be 'The Temptation in The Wilderness' (Matthew 4 v. 3). Dutch or English, mid–late 18th century.

To Accession

Combed slip-marble decoration in purple and white. Dutch similar to Pluis (1987, 579) D.08.00.03 but of 18th century date.

#### *Roofing tile*

Peg tile

Fabric: 2276

The only peg tiles came from a ditch backfill ([142] sgp007) and an 18th-century dump layer ([121], sgp009). These are London-made tiles of post-medieval date. One tile has two distorted round nail holes 9mm diameter located near the top edge.

### Pantile

Fabrics: 3202, 3259

A small number of pantiles were found in the backfill of a ditch ([142], sgp007), a quarry pit ([145], sgp004), a silty dump ([147], sgp008) and an 18th-century dump later ([121], sgp009). In addition there are two black glazed pantiles from a make-up layer ([120], sgp012). These pantiles could be either Dutch or English, or a mixture of the two. They are probably of 18th–19th century date.

### Ridge tile

Fabric: 2816

A ridge tile with a green glaze covering almost all the surviving outer surface was found in a make-up layer ([120], sgp012). Glazed ridge tiles are normally medieval in date but on these the glaze usually only covers to top of the tile. It is possible therefore that the Duke Street example, which was found with 18th-century pottery, could be later in date.

### Brick

Fabric: 3032, 3046?, 3210?, 3257, 3272

The majority of brick is of London-area dark red type (fabric 3032). Many are fairly sharp edged and at least one has a shallow frog. These bricks probably date to the period c 1750–1900, and would therefore fit in with the urbanisation of the area in the 18th century. Most unusual was a brick from the brick culvert ([127], sgp025) which has four finger holes in a line in the stretcher face and five finger holes, arranged in the same manner as a dice, in the header end. These were added at the brickworks before firing, but their purpose is uncertain.

Various bricks were collected from the brick structures on the site, notably from north-south walls ([104], [124], [125], [126], sgps015, 022, 023, 024), the brick lining of a soakaway ([138], [140], sgps027, 028), at least one brick culvert ([116], [127], sgps014, 025) and the lining of a well ([108], sgp021). One brick from a north–south wall ([125], sgp023) has two different types of mortar attached (cream and grey) suggesting it could have been reused from an earlier brick structure

There are also three thinner brighter red bricks, all in slightly different fabrics (types 3210?, 3257, 3272) from a ditch backfill ([142], sgp007). One was used as paving whilst the other two may have been used for decorative effect around a door or window opening.

#### 5.3.1.7 *Post-medieval mortar*

A thin mortar slab of uncertain function was found in a ditch backfill ([142], sgp007).

#### 5.3.1.8 *Assessment work outstanding*

None.

### 5.3.2 **The pottery**

By Jacqui Pearce

### 5.3.2.1 Introduction/methodology

The post-medieval pottery from DUM09 was spot-dated and recorded in accordance with current Museum of London Archaeology procedure, using established codes for fabric, form and decoration. The data were entered onto the Oracle database, along with quantification by sherd count (SC), estimated number of vessels (ENV) and weight in grams. A summary of the spot dates assigned to each context is given in Table 3.

### 5.3.2.2 Post-medieval (c 1500–1900)

#### 5.3.2.2.1 SUMMARY/INTRODUCTION

No pottery predating the 18th century was recovered; the contexts containing more than one sherd are all dated to the middle decades of the 18th century, with no fabrics or forms post-dating c 1780 identified. This fits in well with the known development of the area, and with the town houses constructed at Nos 9 and 11 Duke Street.

Pottery from 14 contexts was recorded. One of these ([121], sgp009) is large, with 180 sherds, and one very large ([142], sgp007), with 565 sherds. The remaining contexts are all small, with fewer than 30 sherds in each, but all fall within the same date range as the two larger groups, which have every appearance of forming part of a wholesale household clearance. There are numerous large joining sherds and reconstructable vessels, with no obvious residual or intrusive material, allowing a very close date range of c 1763–70 to be proposed for the deposition of sgp007. Taken together, these factors suggest that large quantities of household goods were thrown away at one time or over a very short period (cf Pearce 2000, 144–45). The reasons for such an event are seldom clear, but may be related to a change of ownership or use of the property, or a clearout of goods following the death of the owner. Further research may uncover clues to the reasons behind the large-scale clearance of household ceramics on the site.

#### 5.3.2.2.2 FABRICS AND FORMS

The pottery from DUM09 is considered together here, because of the narrow date range assigned to the recorded finds. A breakdown of the main fabric types is given in

Table 4, with the broad functional groups outlined in

Table 5. These figures are based on all pottery recovered, although 67% of the sherds come from context [142] (sgp007). A more detailed breakdown of fabrics and forms will be carried out at analysis.

The assemblage is dominated by finewares, a pattern that emerges in the individual contexts and in the collection as a whole. The single most common ware is Chinese export porcelain, which accounts for a quarter of all sherds recovered. A large proportion of this is blue and white ware decorated in patterns popular in the middle of the 18th century and made chiefly for the Western market. These include numerous variations on floral and foliate themes based on peonies and chrysanthemums, bamboo, pine trees and willows, and give a good idea of the taste of the original owners of the excavated finds. There are also river landscapes and, to a lesser extent, figurative scenes, as well as vessels decorated with dragon and cloud scroll motifs. The main forms come from dinner and tea services, including plates, teabowls, cups and saucers. A minimum of 113 vessels are represented in Chinese porcelain, most of these from context [142] (sgp007), which is a considerable number. This does include sherds from 11 vessels in Chinese Imari,

with underglaze blue and overglaze red enamelled and gilded decoration (all context [142], sgp007), with three plates from the same service, as well as saucers decorated in different patterns. There are also sherds from seven vessels decorated with enamels in *famille rose* palette and one in *famille verte*. Rather more unusual is part of a teabowl with underglaze blue decoration, clumsily overpainted in red and gilded in a process known as 'klobbering', which was carried out on finished imported ware in the Netherlands and in London. These enamelled and gilded wares would have been more costly than standard blue and white, which would of course be increased by the purchase of sets rather than individual vessels. The assemblage also includes forms less commonly found archaeologically, such as a square dish and ink pot.

The taste exhibited by the Chinese porcelain is further reflected in the other fine ceramics in the assemblage. Chinese-inspired floral and landscape patterns are also carried through into tin-glazed ware or delftware, which accounts for 18.8% of all sherds, with a minimum of 26 plates recorded, all decorated in blue and white. Other delftware vessels include several jars decorated with simple blue-painted bands, as well as bowls, serving dishes and a chamber pot with plain pale blue glaze. By the end of the 18th century, delftware was falling out of favour as more durable wares gained in popularity. The quantity recovered in the Duke Street assemblage is entirely consistent with a mid 18th-century date.

The other main finewares represented consist of white salt-glazed stoneware, creamware and English porcelain. The first named of these was produced c 1720–70 and was widely used for table- and teawares. Sherds from at least 44 plates were recovered, 26 of them from context [142] (sgp007), displaying a variety of popular moulded rim designs. Other forms include: teabowls and saucers, teapots, bowls, dishes, jugs and a sauceboat. Creamware is less frequent in the assemblage. Developed in the 1740s, the early ware was characterised by a dark cream-coloured glaze that was made much lighter and paler by the 1760s. Most of the DUM09 creamwares have the darker early glaze colour and were probably made in the 1750s. They occur in a similar range of forms used for dinner and tea services. There are also creamwares decorated with coloured glazes, typical of the mid 18th century, including part of a green-glazed pickle leaf (dish).

An unusually large number of vessels in English porcelain (26 sherds from 22 vessels) were identified, most but not all of them from context [142] (sgp007). Further work will be required to identify the various factories, but initial recording showed that wares from the Bow manufactory in Stratford and from Worcester were present. English porcelain is never as common in archaeological contexts as Chinese wares, and the occurrence of both in the same assemblage provides a valuable insight into ceramic supply, taste and fashion in 18th-century London (Pearce, 2010).

Other finewares are less frequent in the assemblage and include teapots and their lids in red stoneware and refined red earthenware, and part of a teapot and a large dish in agate ware. Everyday household pottery was catered for by the London-area redware and Surrey-Hampshire border ware industries, which provided sturdy, practical red earthenwares chiefly for use in the kitchen (bowls, dishes, pipkins, storage jars). Jars and bottles in English brown salt-glazed stoneware were also recovered, alongside sherds from mugs and a bowl in the finer Nottingham stoneware and jugs, mugs and chamber pots in imported Westerwald stoneware from the Rhineland. A more unusual find is a complete whistle in red border ware from subgroup 007. This makes an interesting companion to part of a horn (the mouthpiece) made in agate ware and found in the same context.



#### 5.3.2.2.3 DISCUSSION

The Duke Street assemblage (both overall and in the two larger contexts) shows a marked bias towards ceramics used for dining and for taking tea and coffee (see Table 5). The pottery is entirely domestic in character and in the breakdown of fabrics and forms very much in keeping with the larger and better appointed households that were being established in the developing Mayfair area in the 18th century. Further analysis will be directed at elucidating the context of the find and making comparison with other contemporaneous assemblages across London.

#### 5.3.2.3 *Assessment work outstanding (all periods)*

There is no outstanding assessment work.

### **5.3.3 The clay pipes**

By Jacqui Pearce

#### 5.3.3.1 *Introduction/methodology*

The clay tobacco pipe assemblage from DUM09 was recorded in accordance with current MOLA practice and entered onto the Oracle database. The English pipe bowls have been classified and dated according to the Chronology of London Bowl Types (Atkinson and Oswald 1969), with the dating of some of the 18th-century pipes refined where appropriate by reference to the Simplified General Typology (Oswald 1975, 37–41). The prefixes AO and OS are used to indicate which typology has been applied. Quantification and recording follow guidelines set out by Higgins and Davey (1994; Davey 1997).

#### 5.3.3.2 *Provenance, dating and character of the clay pipes*

The only datable clay pipes recovered come from context [142] (sgp007), the large clearance assemblage that yielded a considerable quantity of ceramics for which a deposition date of 1763–70 has been proposed. The pipes from this group are dated on the basis of typology to c 1740–70, providing a close match to the pottery dating. Possible refinement may result from identification of the pipe makers whose initials were recorded on their workmanship. Two sets of initials were found on three pipes of mid 18th-century shape. The maker's initials IC were moulded in relief on the sides of the heel in two instances, both bowls of type OS12 (c 1730–80) and typical of London manufacture. Several pipe makers are recorded with these initials at this date and it is difficult to be certain which of them made these pipes. The other marked pipe has the initials WT, which most likely stand for William Tappin, who is recorded in Blackfriars in 1750–70 (Oswald 1975, 147). The only other marked pipe has the arms of the City of London stamped in relief on the back of the bowl, facing the smoker. The front of the bowl and the heel are missing so the maker's initials (if originally present) have not survived. Pipes with the City arms are relatively common on sites across London. No decorated clay pipes were recovered in the Duke Street assemblage. The remaining finds consist of stem fragments in contexts [121] (sgp009) and [120] (sgp012). In the absence of datable bowls, a date range embracing the entire period of production has been assigned.

#### 5.3.3.3 *Marked pipes*

Four clay pipe bowls carry makers' marks, listed in Table 8.

#### 5.3.3.4 *Assessment work outstanding*

None.

### 5.3.4 The accessioned finds, nails and bulk glass

By Beth Richardson

#### 5.3.4.1 Introduction/methodology

The registered finds were packed and recorded in accordance with current MoLA practice and entered onto the Oracle database. The metal finds were x-rayed (X 10110).

#### 5.3.4.2 Categories by dating and materials

##### 5.3.4.2.1 POST-MEDIEVAL

###### *Copper alloy*

There are four copper-alloy pins (<2>, <3>, <4>). All are 17th- or 18th-century 'sewing' or 'laundry' pins, used in the late post-medieval period, as today, for a variety of sewing and other generally textile-related purposes. Two pins from [[121], sgp009 (<2>)] are complete, with spherical wound-wire heads and lengths of 25-30mm. A pin from [142] (sgp007 (<3>)) (head and upper shaft) also has a wound-wire spherical head. There is also a pin shaft from [155] (sgp008 (<4>)). They are common post-medieval finds on London sites.

###### *Glass*

The three registered glass finds consist of a mould-made natural light blue glass spherical object (<5>, [114], sgp011) which is probably an 'alley' (or marble) but could be a stopper, a natural light green glass base with a pontil mark, probably from a small bottle (<7>, [142], sgp007), and a light purple glass intaglio from a ring or a brooch (<6>, [121], sgp009).

The intaglio depicts Christ wearing a crown of thorns on the cross, with two crossed spears/ lances which bisect the lower section of the cross. On the left and between the spear shafts there is a rounded 'm' like symbol which could be a serpent or, possibly, a Greek letter (?lambda). The reverse of the intaglio has been worked into a convex shape, to be mounted into a piece of jewellery; possibly to be used as a seal. This should be shown to another specialist for a second opinion.

###### *Wood*

A small worked wood (?pine) object (incomplete) (<16>, [121], sgp009) looks like the base of a classical column; it could be part of an architectural detail from a piece of furniture, mantelpiece or fireplace – or possibly from the outside of a building (although it is small).

###### *Leather*

A small piece of worn and curved leather (<17>, [121], sgp009) with a straight edge (? two worn stitch holes) may have come from the heel of a shoe but the straight edge and possible stitching is unusual. It may have been re-used. There is a short length of two-ply thread with the leather – not attached. <18> and <19> are 18th century boots. They are in conservation and therefore not included in this assessment.

###### *Ceramic*

The clay tobacco pipes and part of a ceramic figurine have been assessed by Jacqui Pearce.

#### 5.3.4.2.2 BULK GLASS

There is a small amount of wet-sieved bulk glass from two contexts: [121] (sgp009) and [142] (sgp007). It is largely post-medieval, with two small fragments of probable medieval glass from [121] (sgp009).

[121] (sgp009): 10 fragments of wet-sieved glass, <1mm (WS <100>). These include 6 fragments of green and clear window glass, 2 fragments of natural green bottle glass and 2 fragments of vessel glass, one heavily patinated. The vessel glass may be medieval.

[142] (sgp007): 13 fragments of wet-sieved glass, <1mm (WS <101>). These include 9 fragments of natural green bottle glass, one piece of natural light green window glass and 3 fragments of clear and natural blue phial glass. One of the phial fragments is from a small panelled phial.

[142] (sgp007): Rim and neck from a clear glass cylindrical pharmaceutical phial. This is a late 17th- or 18th-century glass type and form combination - the pottery from [142] is mid 18th-century.

#### 5.3.4.2.3 IRON NAILS

[121] (sgp009): ten nails, mainly incomplete. Fragmentary, but seven are pieces from large rectangular- or square-sectioned nails, one with a cylindrical head. The other three pieces are from smaller round-sectioned nails or tacks.

#### 5.3.4.3 *Assessment work outstanding*

None.

### **5.3.5 *The slag***

By Beth Richardson

#### 5.3.5.1 *Introduction/methodology*

There are 4 large ferruginous slag concretions from [142] (sgp007) and 5 much smaller (wet-sieved) but very similar pieces of slag from [121] (sgp009).

#### 5.3.5.2 *Discussion*

The large concretions of slag were found in a ditch (subgroup 007) with a large group of mid 18th-century pottery and a much smaller quantity of other domestic finds. It may have been dumped from a nearby metalworking site.

#### 5.3.5.3 *Assessment work outstanding*

None

### **5.3.6 *The plant remains***

By Karen Stewart

#### 5.3.6.1 *Introduction/methodology*

Two environmental samples were taken for the retrieval of archaeobotanical and other remains in order to assess their potential to contribute to the interpretation of the site. Sample {100} was taken from [121] (sgp009), an external dump deposit. Sample {101} was taken from [142] (sgp007), a fill of a ditch. Both samples date to the post-medieval period.

These samples were processed by flotation, using a Siraf flotation tank, with meshes of 0.25mm and 1.00mm to catch the flot and residue respectively. The flots were stored in water to maintain waterlogged conditions. The residue was dried and sorted by eye for artefacts and environmental material. The flot was scanned briefly, using a low-powered binocular microscope, and the abundance, diversity and general nature (method of preservation, unusual features) of plant macrofossils and any faunal or artefactual remains were recorded on the MOLA ORACLE database. The following two scales were used to record this material:

Abundance 1 = 1–10 items, 2= 11–50, 3 = 50+ items

Diversity 1 = 1–3 items, 2 = 4–7 items, 3 = 7+ items

Plant material was preserved primarily by waterlogging but also by charring.

#### 5.3.6.2 *Waterlogged remains*

Both samples were found to contain rich and diverse assemblages of waterlogged plant material.

Sample {100} contained many fragments of waterlogged wood, including roundwoods. Waterlogged remains of many food species were noted in the sample, including cherries (*Prunus avium/cerasus*) and grape (*Vitis vinifera*). Other possibly economic species noted included hemp (*Cannabis sativa*) and possible hops (*Humulus lupulus*). This sample also contained many species of wild plants including elder (*Sambucus nigra*), sedge (*Carex* sp.) and buttercups (*Ranunculus* spp.), as well as mosses and fragments of possible straw material which may indicate stabling waste.

Sample {101} likewise contained a diverse assemblage of waterlogged wild seeds but less waterlogged wood than sample {100}. However some food species were also noted in this sample including grape seeds. Wild species represented included celery-leaved crowfoot (*Ranunculus sceleratus*) and buttercups (*Ranunculus* spp.).

#### 5.3.6.3 *Charred remains*

Charcoal was noted in both samples. In both cases it was it was found only in low concentrations.

#### 5.3.6.4 *Faunal remains*

Animal bones were noted in both samples. These will be assessed in the faunal remains assessment. Many oyster shell fragments were also noted in both samples.

Water flea, or ephippia, eggs were noted in sample {101}. These indicate a very wet environment.

Sample {100} contained low concentrations of beetle fragments and also occasional fly puparia. The presence of fly puparia is a good indicator of the presence of rotting organic matter.

#### 5.3.6.5 *Assessment work outstanding*

None.

### 5.3.7 The animal bone

By Alan Pipe

#### 5.3.7.1 Introduction/methodology

This report identifies, quantifies and interprets the animal bone from samples [100] and [101], respectively derived from two 18th-century contexts; waterlogged dump [121] (sgp009) and ditch fill [142] (sgp007). Wet-sieved animal bone from [121] {100} and [142] {101} was recorded directly onto Excel spreadsheets. Each sample group was described in terms of weight (kg), estimated fragment count, species, carcass-part, fragmentation, preservation, modification, and the recovery of epiphyses, mandibular tooth rows, measurable bones, complete long bones, and sub-adult age groups. The assemblage was not recorded as individual fragments or identified to skeletal element. All identifications referred to the MOLA reference collection; and Schmid 1972. Fragments not identifiable to species or genus level were generally allocated to an approximate category, particularly unidentified fish, herring family, cod family, unidentified bird, 'ox-sized' and 'sheep-sized', as appropriate. Each context/sample assemblage was then grouped with available dating and feature description.

Table 11 (see appendix) gives a summary of the wet-sieved sample groups in terms of weight (kg), estimated fragment count, fragmentation, preservation, faunal composition, and the recovery of evidence with potential for estimation of age and stature.

Table 12 (see appendix) gives a detailed summary of the wet-sieved samples in terms of taxon, carcass-part, modification and the recovery of sub-adult age groups.

#### 5.3.7.2 Summary, post-medieval

This wet-sieved assemblage provided 0.750 kg, estimated 170 fragments, of well-preserved wet-sieved animal bone with a minimum fragment size generally between 25-75 mm.

The bulk of the wet-sieved bone derived from sheep/goat *Ovis aries/Capra hircus*, 'ox-sized' and 'sheep-sized' fragments with smaller quantities of fish, poultry, pig and game.

Waterlogged dump deposit [121] (sgp009) {100} produced 0.450 kg, approximately 90 fragments, of animal bone derived largely from sheep/goat head, vertebra, rib, upper limb, lower limb and adult foot with occasional fragments of thornback ray *Raja clavata* dermal spine, herring family Clupeidae vertebra, cod family Gadidae head and vertebra, plaice/flounder Pleuronectidae, unidentified fish vertebra, chicken *Gallus gallus* juvenile and adult lower limb, goose *Anser anser* lower limb, pig *Sus scrofa* juvenile vertebra, wild duck Anatidae adult upper limb and brown hare *Lepus europaeus* juvenile head, upper and lower limb. In addition, the sample produced a few fragments of exoskeleton of a large marine/estuarine crustacean, probably common lobster *Homarus gammarus* or edible crab *Cancer pagurus*. Clear evidence of butchery was noted on ox-sized upper limb; charring and calcination was seen on sheep/goat lower and upper limb.

Ditch fill [142] (sgp007) {101} produced 0.300 kg, approximately 80 fragments, of animal bone, derived largely from sheep/goat *Ovis aries/Capra hircus* infant and adult head, with adult vertebra, rib, upper and lower limb with small counts of unidentified fish, mackerel *Scomber scombrus* vertebra, unidentified bird, chicken *Gallus gallus* head and juvenile upper and lower limb; goose *Anser anser* head,

upper limb, lower limb and foot. In addition, this sample produced a single fragment of sea turtle Cheloniidae, perhaps green turtle *Chelonia mydas*, carapace or plastron. Clear evidence of butchery was seen on a sheep/goat adult vertebra; there was no evidence of burning.

Generally, poultry and the major domesticates were mainly represented by elements of the vertebra, rib, upper limb and lower limb, areas of moderate and good meat-bearing quality, with only occasional recovery of the head and feet, and no recovery of cattle or sheep/goat horn core. Clear evidence of butchery was seen on 'ox-sized' upper limb and sheep/goat vertebra only. There was no recovery of human bone. There were no foetal, neonate or infant animals. There was no evidence of gnawing, pathological change or any other modification.

The assemblage produced some evidence for age at death of the major domesticates with no mandibular tooth rows and 20 epiphyses; metrical evidence comprised only three measurable bones but no complete long bones. There was no evidence for working, gnawing, pathological change or any other modification.

#### *5.3.7.3 Assessment work outstanding*

There is no outstanding assessment work.

### **5.3.8 Conservation**

By Liz Barnham

#### *5.3.8.1 Introduction/methodology*

The following assessment of conservation needs for the accessioned and bulk finds from the excavations at 9-11 Duke Street, encompasses any requirements for finds analysis, illustration, analytical conservation and long-term curation. Work outlined in this document includes any needed to produce a stable archive in accordance with MAP2 (English Heritage 1992) and the Museum of London's Standards for archive preparation (Museum of London 1999).

Conservation is carried out under the guiding principles of minimum intervention and reversibility. Whenever possible, preventative rather than interventive conservation strategies are implemented. Procedures aim to obtain and retain the maximum archaeological potential of each object: conservators therefore work closely with finds specialist and archaeologists.

All conserved objects are packed in archive quality materials and stored in suitable environmental conditions. Records of all conservation work are prepared on paper and on the Museum of London collections management system (Multi MIMSY) and stored at the Museum of London.

#### *5.3.8.2 Finds analysis/investigation*

The accessioned finds were assessed by visual examination of both the objects and the X-radiographs, closer examination where necessary was carried out using a binocular microscope at high magnification. The accessioned finds were reviewed with reference to the finds assessments by Beth Richardson and the ceramics with reference to the assessments by Lyn Blackmore and Jacqui Pearce.

No further investigative work was identified on the accessioned finds.

#### *5.1.1.2 Further work required for illustration/photography*

The following items of pot were identified as needing further reconstruction prior to illustration/photography. They are relatively few sherds but because of the depth of their foot rings which might make taping less successful, some prior reconstruction by a conservator would be helpful to facilitate photography.

- [142] CHPOBW PLATE OCT – 6 sherds
- [142] CHPOBW PLATE CHRY – 4 sherds
- [142] AGAT VITRI DISH – 13 sherds
- [142] CHPO IMARI PLATE – 8 sherds

### **5.3.9 Geoarchaeology**

By Craig Halsey

#### *5.3.9.1 Introduction/methodology*

This document reports on the results of a geoarchaeological auger survey carried out on the site of 9 and 11 Duke Street, Westminster, between the 19th May to the 11th June 2010. A total of seven auger holes were drilled across the site to assess the depth of the archaeological sequence and also to assess the characteristics and potential of the underlying natural stratigraphy. In addition to the auger holes, an archaeological section within the northern part of the site was also examined.

The methods employed during the drilling of the geoarchaeological augers and the subsequent off site work are described in the section below. All geoarchaeological on-site and off-site work, was carried out in accordance with the *Method Statement* (MOLA 2009), the *MOLA Archaeological Site Manual* (MOLA 1994) and also guided by the recommendations outlined in the *English Heritage Guidelines for Environmental Archaeology and Geoarchaeology* (EH 2002; 2004 respectively). This section also presents tabulated stratigraphic data obtained from the auger hole cores.

##### 5.3.9.1.1 ON-SITE METHODOLOGY

The auger holes (AH) were drilled by MOLA geoarchaeologists with a hand held, petrol driven, Cobra pneumatic power auger fitted with various diameter window sampling bits ranging from 100–50mm. All auger holes were drilled as far into the Quaternary sequence as possible or until the surface of the Eocene London Clay was reached.

All the core samples were cleaned and described, using standard sedimentary criteria, as outlined in Jones *et al* (1999) and Tucker (1982). This attempts to characterise the visible properties of each deposit, in particular relating to its colour, compaction, texture, structure, bedding, inclusions, clast-size and dip. For each profile, every distinct lithological unit was given a separate number (e.g. for AH: 1.1, 1.2 etc from the top down). The auger holes were numbered sequential and given the additional prefix DUM09.

The level at the top of the augers holes was calculated from an on-site benchmark of known OD height. All the auger locations were planned on permatrace to the site grid and converted to six figure ordnance grid references. The auger holes formed two transects running roughly west to east across the site. The location of the auger holes and transects is illustrated on Fig 2.

#### 5.3.9.1.2 OFF-SITE METHODOLOGY

The auger hole data was entered into a digital (Rockworks 2006) database. Each lithological unit (gravel, sand silt etc) was given a unique colour and pattern allowing cross correlation of the different sediment and soil types across the site. By examining the relationship of the lithological units (both horizontally and vertical) correlations can be made between soils and sediments, and associations grouped together on a site-wide basis. The grouping of these deposits is based on the lithological descriptions, which define distinct depositional environments. Thus a sequence of stratigraphic units, representing certain depositional environments, and/or landforms can be reconstructed both laterally and through time for the site. Six distinct stratigraphical units (Deposits 1–4, 5A and 5B) were identified and are illustrated on the two transects (Fig 8 and 9).

#### 5.3.9.2 Auger hole logs

The lithological units recorded in each borehole are presented in tabulated form in the appendix (see section 14). The 'Deposit' units are discussed in detail in section 5.3.9.3.

#### 5.3.9.3 Discussion on Stratigraphy

This section discusses the stratigraphy in chronological order from the oldest to the most recent. Dates in BP (before present) are given as calendar years.

##### 5.3.9.3.1 DEPOSIT 1: PLEISTOCENE FLUVIAL SAND AND GRAVELS

The basal Quaternary deposit recorded across the site consisted of moderately well sorted medium to coarse sands, with occasional gravel inclusions. These deposits were only noted within AH1, 3 and 7. Only in AH7 was the base of these deposits reached where the contact with the Eocene London clay was recorded at c 18.7 m OD. These deposits were generally yellowish/orangey brown in colour although greenish sands were noted in AH1. The predominately orangey brown colour occurs due to sub-aerial weathering and the formation of iron (III) oxide compounds (i.e. ferric oxides).

These units accumulated within a fluvial environment possibly consisting of a partially braided sand bedloaded river. Within AH1 the sands were observed to display ripple cross bedding indicative of low flow regimes (Miall 1996), which may have prevailed in shallower threads towards the distal parts of the braidplain. Overlying the sands within AH3 were gravel rich sands (unit 3.7), which may represent the accumulation of higher relief mid channel gravel bars.

The ferruginous nature of these deposits indicates that they are likely to be of Pleistocene origin and possibly accumulated during the last cold stage of Devensian Glaciations (The Dimlington stadial c 18 000–15 000 BP).

##### 5.3.9.3.2 DEPOSIT 2: PLEISTOCENE SLACK/STANDING WATER FINE GRAINED UNITS.

This deposit was only recorded within AH 4 and AH3. It consisted of a firm pale whitish green massive clay silt, with very occasional small rounded gravel inclusions. The fine grained nature of the deposit suggests deposition in either low flow regimes or standing water. This environment of deposition probably occurred as a result of channel abandonment, resulting in 'ponding' within former active channel threads of the braidplain.



5.3.9.3.3 DEPOSIT 3: PLEISTOCENE/HOLOCENE FLUVIAL AND ALLUVIAL DEPOSITS WITH POSSIBLE INFLUX OF COLLUVIAL MATERIAL

This depositional unit was recorded across the majority of the site apart from within AH5 where the unit had been truncated by post-medieval activity (Deposit 5B). It forms what is perhaps the most curious depositional unit encountered on the site, being highly variable in colour, size, structure and general lithology. It is generally observed to be a structureless, heterogenous unit, consisting of sands, silts, clays and gravels. It varies in colour from orangey brown weathered, iron stained units, to darker grey/green gleyed units indicative of ground waterlogging (through either surface water, or high water table impeding oxidation).

In the majority of the AHs the unit predominately appeared to be a poorly sorted matrix supported gravelly clay. This type of sediment is usually attributed to debris flows which rapidly deposit poorly sorted sediments by colluvial and/or fluvial agency. Poorly sorted sediments can accumulate through colluvial hill wash eroding earlier sediments located on steep valley sides. Colluviation can occur simply from gravity enforced soil creep, or by periods of high run off which erode and wash down slope considerable quantities of sediment. Of particular note within these sediments are what appear to be elements of a stiff, slightly fissured clay derived from the London Clay. The fact that this clay retains a large part of its original sedimentary structure suggests rapid deposition of large units of the London Clay.

Poorly sorted matrix supported gravel sediments can also accrue in flashy high energy fluvial environments. Seasonally high flashy discharge, which can result from high rain fall and runoff can erode banksides and channel beds, rapidly depositing mixed unsorted sediments. Such accumulations are termed high viscosity debris flows (i.e. high sediment input coupled with high discharge, Miall 1996).

An opportunity to examine the structure of these sediments in greater detail was offered by the excavation of a small slot trench across the northern part of the site (see Fig 2 and Fig 5). This revealed a quarry feature (sgp002) cutting through natural deposits (sgp001). These natural deposits were infilling a concave based channel feature cut through London Clay, infilled with symmetrical channel fills consisting of alternating beds of gravel and fine grained material. The fine grained material consisted of mottled bluish grey/greenish 'gleyed' grey silty clays. In places this material was stiff and slightly fissured again suggesting the material was partially derived from eroded London Clay. The gravel beds were fairly heterogeneous but predominately consisted of clast supported fine to medium rounded and sub-rounded gravel in a sand silt and clay matrix. The sedimentary structure of these gravels is clearly fluvial, indicating the deposition of gravel lags during high flow, interspersed with alluvial fills accumulating during waning flow. Deposition was most likely rapid.

The lithology, gravel clast size and general characteristics of the deposits observed within the section and the AHs are similar. Only the sedimentary structure differs significantly. All these units occur at between c 19.8–19.2m OD, which when considered with the similarities of the sedimentary characteristics suggests a correlation between the units. The lack of sedimentary structure observed within the AHs is probably a result of the small window offered onto these sediments by the auger rather than a necessarily true representative of the deposits.

A chronology for deposition is difficult to determine for this grouping. However, given that the deposits contained 'gleyed' deposits which require organic material and ferrous iron to form the colouration, the deposits are likely to relate to a warm temperate cycle rather than cold one. Therefore these deposits are probably of a Holocene date.

#### 5.3.9.3.4 DEPOSIT 4: POST-MEDIEVAL CHANNEL FILLS

Within AH 1, 2 and 7 channel fills possibly associated with a Post-medieval course, alteration or extension to the Tyburn channel were identified. These were also recorded in the slot trench (Fig 5, sgp008). Within AH2 and AH7 (units 2.5 and 7.5) the basal fills consisted of a homogenous dark grey clay silt. This deposit probably accumulated within shallow standing water. The main fill of the feature consists of black gritty, heterogeneous organic fills containing frequent bone, pot, leather and detrital organic material. These fills do not represent fluvial channel fills, but rather relate to the dumping of domestic waste into the damp waterlogged hollow of the former channel.

#### 5.3.9.3.5 DEPOSIT 5: POST-MEDIEVAL LAYERS (5A) AND CUT FEATURE FILLS (5B)

The upper fills across the site consisted of various post-medieval dumps and demolition layers (5B). These were variable across the site consisting of sand, silts and clays rich in brick and tile fragments, pot, bone and other waste material. AH5 sampled a cut feature towards the north western corner of the site. The fills of this feature consisted of a basal homogenous clay silt indicative of deposition in standing water, overlain by a thick unit of dark reddish brown clay silt rich in brick, bone, oyster shell pot and Fe slag. This feature was also excavated archaeologically (sgp007).

#### 5.3.9.4 Conclusion

According to BGS mapping (sheet no 256) the site is located towards the western margins of the Tyburn valley lying directly upon Lynch Hill Terrace Gravels. London Clay outcrops further to the south, while the Holocene alluvial deposits of the Tyburn are recorded towards the east. The natural stratigraphy across the site does not fit this present picture of the spatial distribution of the various formations. While the lowest deposits (Deposit 1 and 2) may possibly form part of the Pleistocene Lynch Hill Terrace Gravels, the majority of the sequence is likely to be Holocene or possible Late Glacial at the earliest. (c 15–10 000 BP). There is little evidence to ascertain whether these basal deposits form an earlier terrace associated with the Tyburn rather than the Thames

The heterogeneous, mixed nature of the majority of the deposits (Deposit 3) can be explained by the topographic location. The site is located on the margins of the Tyburn valley, where slope process (i.e colluviation and hill wash) are likely to have been a dominant depositional agent. In addition to this the site lies very near to the head waters of the Tyburn. These upper reaches are likely to have had a very steep gradient, enhanced through time as the river down cut into the raised terraces of the Thames during the numerous climatic shifts occurring during the Pleistocene epoch. This steep gradient, when coupled with seasonal flashy discharges can account for the occurrence of the thick debris flow deposits recorded across the site. However, fluvial debris flows during the Holocene were most likely episodic, with the majority of the sediment input across the site occurring through slope processes.

#### 5.3.9.5 Assessment work outstanding

None.

## 6 Potential of the data

### 6.1 Realisation of the original research aims

- What are the earliest deposits identified?

The earliest dateable deposits were subgroups 003 and 004, representing the backfill of a possible quarry pit or ditch (sgp002). Subgroup 003 contained pottery dating to 1720–1780, and the pottery from subgroup 004 dates to 1700–1800. This cut-feature truncated a natural channel, which may have been Pleistocene in date.

- What was the natural topography and environment of the site area in the past? Does the site lie within or adjacent to the river Tyburn?

The geoarchaeological auger holes and east–west slot through 9 Duke Street have indicated that the site lies on the margins of the Tyburn valley, very near to the head waters of the Tyburn. The basal deposits all consisted of fluvial and colluvial sediments likely to be of a Pleistocene date. These sediments may have accumulated within a wide expansive braidplain associated with a former course of the Tyburn during a cold glacial episode. These sediments may also be partly associated with the Lynch Hill Terrace gravels. There was little evidence to suggest the deposits were associated with a more recent course of the Tyburn (i.e. the last 10,000 years). However, post-medieval deposits infilling a feature on the eastern part of the site may define an anthropogenic alteration to the course of the Tyburn (Halsey, 2010).

- Is there evidence from the postulated Roman settlement around the river crossing on the principal road (Oxford Street) and from the medieval Tyburn settlement focused around the original church (prior to its removal northwards to Marylebone c 1400). (Such evidence was not seen during the evaluation (Howell 2009, 8))?

No evidence for the Roman settlement was observed, and no medieval features were recorded. However, residual medieval glass was recovered from an 18th-century dump layer (sgp009) at 11 Duke Street, and a possible fragment of medieval tile was found in a layer of 18th-century consolidation material (sgp008) at 9 Duke Street.

- Since the site may have been on the river bank, there could be evidence of flood/erosion episodes and also attempts at river control, such as timber revetments. Is there evidence for these (the evaluation did not find evidence, although it may exist (Howell 2009, 8))?

A lense of alluvium (sgp003) may have represented an episode of flooding; a layer of soft, dark grey, fine silty sand, containing pottery dating to 1720–1780 appeared to have rapidly filled possible ditch or quarry pit (sgp002) from the east. This deposit also overlay the fluvial deposits associated with the natural channel seen in Fig 5. This alluvial deposit may indicate that the course of the River Tyburn lay to the east of the site.

No evidence for timber revetments was found. A cut-feature recorded in the east of the site (sgp008), running approximately north-east–south-west, and truncating

alluvium subgroup 003, may have represented the management or alteration of the course of the Tyburn in the 18th century (see Fig 3 and 5). As recorded in the geoarchaeological cores, the earliest deposit filling this feature was a homogenous dark blueish-grey clayey silt, indicating that the feature contained standing water. This feature was backfilled with consolidation and organic-rich dump layers, containing pottery dating to 1720–1780 and 1763–1780.

- The evaluation found that the site lies in a 'river' zone (Howell 2009, 8). Is there evidence of the alluvial sequence and what is its date? Are there any low water regression phases that might be marked by weathered or organic peaty horizons?

As discussed above, the basal fluvial and alluvial deposits found at the site may have been associated with the Tyburn, but were probably Pleistocene in date. There was little evidence for a more recent course of the Tyburn (from the last 10,000 years), but the thin spread of alluvium (sgp003) from an 18th-century flooding episode probably indicates that the more recent course of the Tyburn lay to the east of the site. There was no evidence for low water regression phases.

- Can dating evidence be obtained from both any contemporary dumped refuse within the river deposits and from analysis of any organic materials (e.g. dendro chronology or C14 dating) from the site?

Ceramic assemblages have been used to date all dumped deposits to the 18th-century. The site assemblage has no potential for dendrochronological or C14 dating.

- Is there evidence of land reclamation on the site? It is likely that the river was progressively managed, reclaimed and eventually infilled/culverted from the medieval period, but particularly from the 16–17th century onwards. Evidence of medieval culverts conduits, cisterns and subsequent post-medieval building development could be present, although it is anticipated that the current basements will have truncated this phase in particular, and hence such evidence may be localised and principally confined to deeper cut features.

As previously discussed, subgroup 008 may have been associated with the management of the Tyburn in the 18th century. However, no evidence of land reclamation was observed, and the only structures on site were those associated with 9 and 11 Duke Street, built in the 1770s.

- Is there evidence of quarrying or other similar activities?

Subgroup 002, a possible quarry pit (or ditch) was identified in section at 9 Duke Street (see Fig 5). This was backfilled in the 18th-century.

- What are the latest deposits identified?

The latest deposits identified were make-up layers (sgp010, sgp011 and sgp 012), lain to level the ground in preparation for the construction of 9 and 11 Duke Street in the 1770s. These deposits contained pottery dating from 1720-1780.

## 6.2 General discussion of potential

The stratigraphic and artefactual data gathered from the site has had little relevance to the original research questions discussed in section 6.1. However, with further analysis there is potential for several new research questions to be addressed.

This archaeological investigation has indicated that there was little notable activity at the site until the 18th century; and prior to the construction of 9 and 11 Duke Street in the 1770s, the features recorded appear to have had a relatively short usage. The assessment of the stratigraphy and finds from the site indicate that the earliest man-made feature appears to be a quarry pit or north–south ditch (sgp002, 003 and 004) which was swiftly backfilled, and the surrounding area consolidated, after c 1720, following an episode of flooding. Truncating the consolidation deposits in the west of the site was a north–south ditch representing a boundary or an attempt at water management (sgp007), its basal fill was organic in nature and Water flea, or ephippia, eggs were noted in sample {101}; indicating a very wet environment (Stewart, 2010). Further analysis of documents and maps may assist with the interpretation of the ditch’s function.

The ditch (sgp007) appeared to have been backfilled rapidly (at one time or over a very short period) with a large quantity of ceramic household goods; these include numerous large joining sherds and reconstructable pottery vessels, with no obvious residual or intrusive material, allowing a very close date range of c 1763–1770 to be proposed for the filling of the ditch (Pearce, 2010). The assemblage is dominated by domestic finewares associated with dining and refreshments; and its deposition may have been associated with a large scale house clearance (Pearce, 2010).

Also recovered from this feature (sgp007) was a fragment of sea turtle, an exotic delicacy, along with: a varied range of fish, poultry, and at least two ‘game’ species, wild duck and brown hare (Pipe, 2010). The remains of the major domesticates (cow, sheep *etc*) also represent cuts of good meat bearing value (Pipe, 2010). Thus, the animal bone recovered from this feature indicates some degree of affluence (Pipe, 2010). Food species, including grape seeds were also recovered from this feature (Stewart, 2010)

The tight date range provided by the ceramic assemblage supports documentary sources relating to the construction of 9 and 11 Duke Street (formerly 18 and 19 Duke Street respectively). The site remained as open fields until 1761, when Henry William Portman began to develop the Portman family estates, following his inheritance of the land (MOLA, 2009a). Manchester Square, to the north of Duke Street was established in 1770 (Portman Estate, 2007), and the first leases for 9 and 11 Duke Street began in 1776 (MOLA, 2009a).

If the likely source of the house clearance can be identified, whether through documentary research, or through further analysis of the assemblage; the pottery, tin-glazed ‘delft’ wall tiles, animal bone and botanical remains found in the ditch’s backfill could provide real insight into the material culture and diet of a wealthy 18th-century household. Even, if the source of the clearance cannot be identified, the tight dating of the pottery assemblage will allow detailed analysis of pottery trends and fashions, and of ceramic supply and demand, especially when compared to other assemblages excavated in London and further afield.

In the east of the site, a north–south cut feature (sgp008) was backfilled with dumps of organic-rich material which would have included rotting matter (Stewart, 2010). This feature appeared to extend beyond the eastern limit of the site and may have been an attempt at managing the Tyburn. The fills of this feature contained pottery dating from 1720–1780 and 1763–1780. It is probable that a dump layer sampled in

11 Duke Street (sgp009) is the same as the fills of subgroup 008, and it contained pottery dating to 1750-1780. The analysis of the artefacts recovered from subgroup 009, including: a glass intaglio and two 18th-century dress boots has potential to further our understanding of 18th-century fashion and aesthetics.

There is little potential for further analysis of the: geoarchaeology, slag (from subgroup 007).

## 7 Significance of the data

The archaeological structures and features recorded at the site are of local significance. Both the archaeological investigation and the *Historic Building Survey* have contributed to our understanding of the construction of 9 and 11 Duke Street; for example this excavation has apparently confirmed that 11 Duke Street would have originally had an open yard area with well at the rear of the property. This investigation has also indicated that there was little activity in the area of the site until the 18th century, when possible water management associated with the Tyburn took place.

Excluding the pottery assemblage recovered from subgroup 007, the artefactual, faunal and botanical data retrieved from the rest of the site is largely of local significance. The accessioned finds (including the intaglio, architectural timber and dress boots from subgroup 009) recovered from the site (excluding those from subgroup 007) are of London-wide significance.

The building material is of local significance in helping identify the types of building material used on the various brick structures located on the site. Most of the other building material could relate to development of the area in the mid 18th century onwards, or represent 18th century material dumped on to the site from elsewhere. Items of individual interest include the brick with finger holes in two sides, what may be an unusual post-medieval glazed ridge tile and the various decorated tin-glazed Delft tiles. The later were probably originally installed in fireplace surrounds

The tightly dated ceramic assemblage found in possible house clearance assemblage (subgroup 007) provides an invaluable opportunity to study mid 18th-century material culture in depth (Museum of London, 2002 L3/70, L3/71, L7/73, L10/76, TD7/82, TE3/84, TE4/84, TS7/86, TS8/86-87) and has an undoubted regional and national significance (Pearce, 2010). This pottery assemblage may also give greater significance to the botanical and faunal remains found in subgroup 007; which may provide further insight into 18th-century lifestyle and material culture. The significance of the assemblage from subgroup 007 will be greatest if it is possible to identify the likely source of the material, through analysis and documentary research.

Assemblages such as that from Duke Street are important for many reasons. The size of the ceramic collection excavated and the range of fabrics and forms present allow detailed analysis to be carried out on the taste and preferences of the household that originally owned them, on availability, marketing and the prevailing fashions of the day as reflected in everyday items used in cooking, dining, taking tea and various other activities. The possibilities for tying the individual assemblage into wider developments and trends open up the significance of the material considerably.

## 8 Publication project: aims and objectives

### 8.1 Revised research aims

RRA01: Can the ditch (sgp007) running north–south through the west of the site be identified in historical records, and its function confirmed?

RRA02: Can the source of the material used to backfill the ditch (sgp007) be identified through documentary research or through further analysis of the: artefactual, faunal and botanical assemblage?

RRA03: To what extent can the dating of individual ceramics from subgroup 007 be refined?

RRA04: To what extent can ceramic sources be clarified and, if possible, narrowed down to individual factories? (Museum of London, 2002 L10/76)

RRA05: Can the makers of the marked clay tobacco pipes from subgroup 007 be identified with any certainty?

RRA06: How do the marked pipes from subgroup 007 fit into the distribution pattern of similarly marked pipes from other sites in London?

RRA07: What are the characteristics of the local crustacean, fish and meat diet in terms of the selection of species, carcass-part and age-group (from sgp007)?

RRA08: How do the other finds from subgroup 007 (building material, faunal and botanical) complement and expand understanding of the ceramic assemblage? (Museum of London, 2002 TE4/84)

RRA09: What interpretation of consumer lifestyle, affluence and status is suggested by this faunal, artefactual and botanical assemblage? (Museum of London, 2002 L3/70-71, L7/73, L10/76, TD7/82, TE3/84, TS7/86, TS8/86-87)

\*RRA10: Have any parallels been found for the intaglio <6> found in subgroup 009? Can a maker be identified? (Museum of London, 2002 L10/76)

\*RRA11: What can the dress boots (<18> and <19>) found in subgroup 009 add to our understanding of 18th-century fashion? (Museum of London, 2002 L10/76)



## 8.2 Preliminary publication synopsis

It is recommended that the results of the archaeological investigation at 9 and 11 Duke Street and 1 Duke's Mews be published as an article in a national journal, such as *Society of Post-Medieval Archaeology*. The illustrated article of approximately 10,000 words will present a very brief overview of the archaeology found at the site, but will primarily focus on the tightly dated assemblage of finds and faunal remains retrieved from the backfill of a substantial ditch (subgroup 007), which ran north-south through the west of the site.

Working title: The archaeology of 9 and 11 Duke Street: a localised insight into the development of the Portman Estate.

Principal author: Ruth Taylor and Jacqui Pearce

Estimated word count: 10,000 words

Estimated figure count: approx 5; stratigraphic (site location/trench plan), historical map, photographs (site image and selected finds images).

Contributors: Ian Betts, Karen Stewart and Alan Pipe

Introduction (c 500 words)

Site location

Circumstances and dates of fieldwork

Archaeological background and the history of this area of the Portman Estate

Archaeological sequence (c 1000 words)

This section will establish a chronological narrative for the site, describing the interpreted archaeological sequence in chronological order.

Genteel rubbish (c 8000 words)

This section will concentrate on the possible house clearance assemblage used to backfill ditch (sgp007); and how it enhances our understanding of domestic life, diet and leisure activities in a wealthy household.

Conclusion (c 500 words)

Bibliography (c 500 words)

## **9 Publication project: task sequence**

All work carried out on this project is subject to the health and safety policy statement of MOLA as defined in *Health And Safety Policy*, MOLA 2009. This document is available on request. *It is MOLA policy to comply with the requirements of the Health and Safety at Work Act 1974, the Management of Health and Safety at Work Regulations 1992 and all Regulations and Codes of Practice made under the Act which affect MOLA operations.*

### **9.1 Stratigraphic method statement**

*Task 1: Check all assessment data is present on the relevant databases and up to date.*

*Task 2: Define group sequence by arranging c 28 subgroups into groups, allowing c 3 subgroups per group and c 30 subgroups per day, forming c 10 groups. The groups will be defined using: stratigraphic, spatial and chronological analysis.*

*Task 3: Describe c 10 groups by writing a brief text for each, noting the formative subgroups and including references to dating information, at a rate of 20 groups per day.*

*Task 4: Add the grouping data to MOLA's ORACLE database at a rate of c 200 groups per day.*

*Task 5: Create group matrix.*

*Task 6: Establish land use sequence by arranging c 10 groups into identified: buildings, open areas and structures, at a rate of c 20 groups a day.*

*Task 7: Describe land uses by writing a brief interpretative text for each.*

*Task 8: Add the land use data to MOLA's ORACLE database.*

*Task 9: Define periods representing chronological phases of activity across the site; using the group matrix and land use data.*

*Task 10: Describe periods by writing a brief text for each.*

*Task 11: Produce detailed synopsis.*

*Task 12: Prepare 'fact pack' and word count advice for specialist contributors.*

*Task 13: Attend finds review, project meetings and liaise with other contributors.*

### **9.2 Building material method statement**

*Task 14: Attend finds review*

*Task 15: The building material assemblage from subgroup 007 should be compared with the stratigraphical sequence and all available dating evidence.*

*Task 16: Write publication text.*

### **9.3 Clay pipe method statement**

*Task 17: Attend finds review*

*Task 18: Research into the identities of the makers of marked pipes from subgroup 007, and to determine which, if any, have been published before.*

*Task 19: Research the distribution of similarly marked clay pipes from subgroup 007.*

*Task 20: Write publication text.*

### **9.4 Pottery method statement**

*Task 21: Attend finds review*

*Task 22: Integrate stratigraphic and finds record.*

*Task 23: Research into the source and dating of the post-medieval ceramic assemblage.*

- Research into source and dating of ceramic assemblage
- Comparison with excavated clearance assemblages from London sites (UX85, BRE77, XWL79, SRP98, ASQ87)
- Comparison with excavated clearance groups from sites outside London

*Task 24: Statistical analysis and the preparation of tables and charts.*

*Task 25: Write publication text.*

### **9.5 Accessioned finds method statement**

*Task 26: Attend finds review*

*Task 27: Research into the glass intaglio <6>, from subgroup 9.*

*Task 28: Examination of, and research into the 18th-century footwear (<18> and <19>) from subgroup 9.*

*Task 29: Write catalogue and short finds report for publication.*

### **9.6 Botanical method statement**

*Task 30: Analyse sample {101}.*

*Task 31: Tabulate data.*

*Task 32: Write publication report (including editing).*

### **9.7 Animal bone method statement**

The material should be recorded, as individual bones, directly onto the MOLA Oracle animal bone post-assessment database and then analysed as a discrete assemblage with reference to available stratigraphic data and then to contemporary local sites, particularly those which have produced marine turtle bones.

*Task 33: Record the assemblage onto database.*

*Task 34: Analysis of data, preparation of report, editing and archive deposition.*

### **9.8 Conservation method statement**

*Task 35: Complete treatment of: boots <18> and <19>, and the repacking of items <6>, <16> and <17>.*

*Task 36: Reconstruction of four pots from subgroup 7 prior to illustration/photography.*

### **9.9 Graphics method statement**

Final requirements will be agreed at the finds review and updated publication synopsis stage.

*Task 37: CorelDraw completion of site location/layout plan(s) and possible historical map.*

### **9.10 Photographic method statement**

The final requirements for photographic illustration will be agreed at the finds review and updated at the publication synopsis stage.

*Task 38: Approximately 1 site image.*

*Task 39: 2 Finds images*

### **9.11 Documentary research method statement**

*Task 40: Consult the Portman Estate Archives or Westminster Archives for documentary evidence associated with the construction of 9 and 11 Duke Street.*

### **9.12 Integration of publication text method statement**

*Task 41: Preparation of integrated publication report (first draft).*

*Task 42: Specialist edit*

### **9.13 Project management method statement**

*Task 43: Project management*

*Task 44: Technical edit*

*Task 45: Corrections*

*Task 46: Production*

*Task 47: Archive deposition*

<b>Task</b>	<b>Done by</b>	<b>Task Description</b>	<b>Time required</b>
-------------	----------------	-------------------------	----------------------

No.			(person days)
<b>Stratigraphic</b>			
Task 1	RT	Task 1: Check all assessment data is present on the relevant databases and up to date.	0.25
Task 2	RT	Task 2: Define group sequence by arranging c 28 subgroups into groups, allowing c 3 subgroups per group and c 30 subgroups per day, forming c 10 groups. The groups will be defined using: stratigraphic, spatial and chronological analysis.	1
Task 3	RT	Task 3: Describe c 10 groups by writing a brief text for each, noting the formative subgroups and including references to dating information, at a rate of 20 groups per day.	0.5
Task 4	RT	Task 4: Add the grouping data to MOLA's ORACLE database at a rate of c 200 groups per day.	0.25
Task 5	RT	Task 5: Create group matrix.	
Task 6	RT	Task 6: Establish land use sequence by arranging c 10 groups into identified: buildings, open areas and structures, at a rate of c 20 groups a day.	0.5
Task 7	RT	Task 7: Describe land uses by writing a brief interpretative text for each.	0.5
Task 8	RT	Task 8: Add the land use data to MOLA's ORACLE database.	
Task 9	RT	Task 9: Define periods representing chronological phases of activity across the site; using the group matrix and land use data.	0.5
Task 10	RT	Task 10: Describe periods by writing a brief text for each.	
Task 11	RT	Task 11: Produce detailed synopsis.	0.25
Task 12	RT	Task 12: Prepare 'fact pack' and word count advice for specialist contributors.	0.25
Task 13	RT	Task 13: Attend finds review, project meetings and liaise with other contributors.	1
<b>Subtotal (Stratigraphic)</b>			<b>5.5</b>
<b>Building material</b>			
Task 14	IB	Task 14: Attend finds review	2.25
Task 15	IB	Task 15: The building material assemblage from subgroup 007 should be compared with the stratigraphical sequence and all available dating evidence.	
Task 16	IB	Task 16: Write publication text.	
<b>Subtotal (Building material)</b>			<b>2.25</b>
<b>Clay pipes</b>			
Task 17	JP	Task 17: Attend finds review	1.25

Task 18		Task 18: Research into the identities of the makers of marked pipes from subgroup 007, and to determine which, if any, have been published before.	
Task 19	JP	Task 19: Research the distribution of similarly marked clay pipes from subgroup 007.	
Task 20	JP	Task 20: Write publication text.	
<b>Subtotal (Clay pipes)</b>			1.25
<b>Post-medieval pottery</b>			
Task 21	JP	Task 21: Attend finds review	
Task 22		Task 22: Integrate stratigraphic and finds record.	
Task 23	JP	Task 23: Research into the source and dating of the post-medieval ceramic assemblage.	
Task 24	JP	Task 24: Statistical analysis and the preparation of tables and charts.	
Task 25	JP	Task 25: Write publication text.	
<b>Subtotal (post-medieval pottery)</b>			20.0
<b>Accessioned finds</b>			
Task 26	BR	Task 26: Attend finds review	4.25
Task 27		Task 27: Research into the glass intaglio <6>, from subgroup 9.	
Task 28	BR	Task 28: Examination of, and research into the 18th-century footwear (<18> and <19>) from subgroup 9.	
Task 29	BR	Task 29: Write catalogue and short finds report for publication.	
<b>Subtotal (Accessioned finds)</b>			4.25
<b>Botanical remains</b>			
Task 30	KS	Task 30: Analyse sample {101}.	1.5
Task 31	KS	Task 31: Tabulate data.	
Task 32	KS	Task 32: Write publication report (including editing).	
<b>Subtotal (Botanical)</b>			1.5
<b>Animal bone</b>			
Task 33	AP	Task 33: Record the assemblage onto database.	0.5
Task 34	AP	Task 34: Analysis of data, preparation of report, editing and archive deposition.	0.75
<b>Subtotal (Animal bone)</b>			1.25
<b>Conservation</b>			
Task 35	LB	Task 35: Complete treatment of: boots <18> and <19>, and the repacking of items <6>, <16> and <17>.	2

Task 36	LB	Task 36: Reconstruction of four pots from subgroup 7 prior to illustration/photography.	1.25
<b>Subtotal (conservation)</b>			3.25
<b>Graphics</b>			
Task 37	DO	Task 37: CorelDraw completion of site location/layout plan(s) and possible historical map.	2
<b>Subtotal (graphics)</b>			2
<b>Photography</b>			
Task 38	PHOTO	Task 38: Approximately 1 site image.	4
Task 39	PHOTO	Task 39: 2 Finds images	
<b>Subtotal (photography)</b>			4
<b>Documentary research</b>			
Task 40	RT	Task 40: Consult the Portman Estate Archives or Westminster Archives for documentary evidence associated with the construction of 9 and 11 Duke Street.	2
<b>Subtotal (documentary research)</b>			2
<b>Integration of publication text method statement</b>			
Task 41	RT	Task 41: Preparation of integrated publication report (first draft).	4
Task 42	ALL	Task 42: Specialist edit	1
<b>Subtotal (integration of publication text)</b>			5
<b>Project management method statement</b>			
Task 43	DB	Task 43: Project management	3
Task 44		Task 44: Technical edit	1
Task 45		Task 45: Corrections	1
Task 46		Task 46: Production	£1,250
Task 47		Task 47: Archive deposition	2
<b>Subtotal (Project management)</b>			7

Staff:

RT– Ruth Taylor  
 IB– Ian Betts  
 JP– Jacqui Pearce  
 BR– Beth Richardson  
 KS– Karen Stewart  
 AP– Alan Pipe  
 LB– Liz Barham  
 DO– Drawing Office  
 PHOTO– Photography  
 DB– David Bowsher

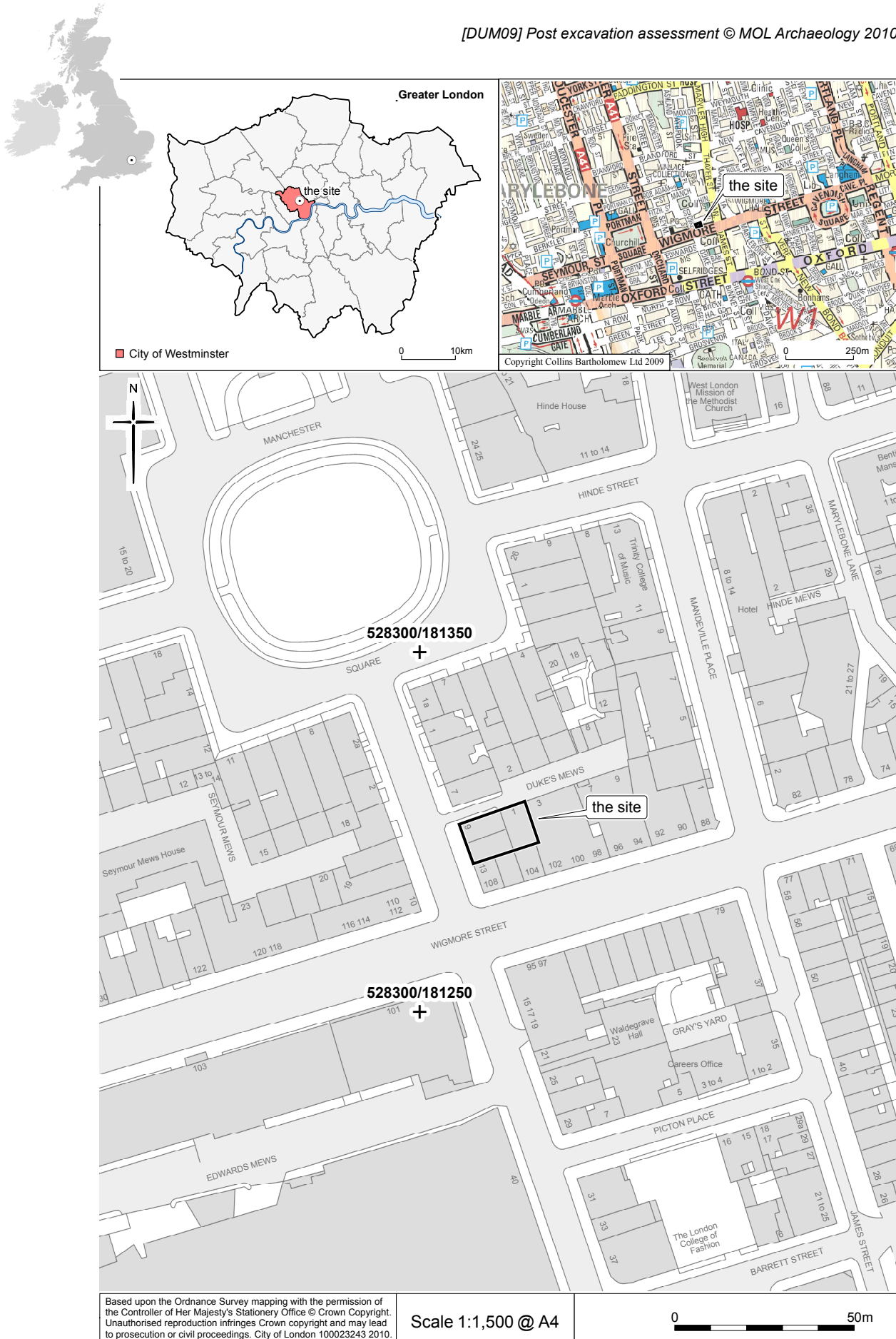
## 10 Publication project: resources and programme

Financial resources sufficient to cover the work proposed in this document have been sought via a separate document.

## **11 Acknowledgements**

The author would like to thank Paul Davis and Partners and the Portman Estate for commissioning this archaeological investigation, and their archivist Richard Bowden for his advice. The author would also like to give thanks to Kevin Coates of Richardsons and his staff for their help on site. Thanks are also due to MOLA's team: Nigel Ward, Howard Burkhill, Simon Stevens, Antonietta Lerz, Craig Halsey, Graham Spurr and Steve White.



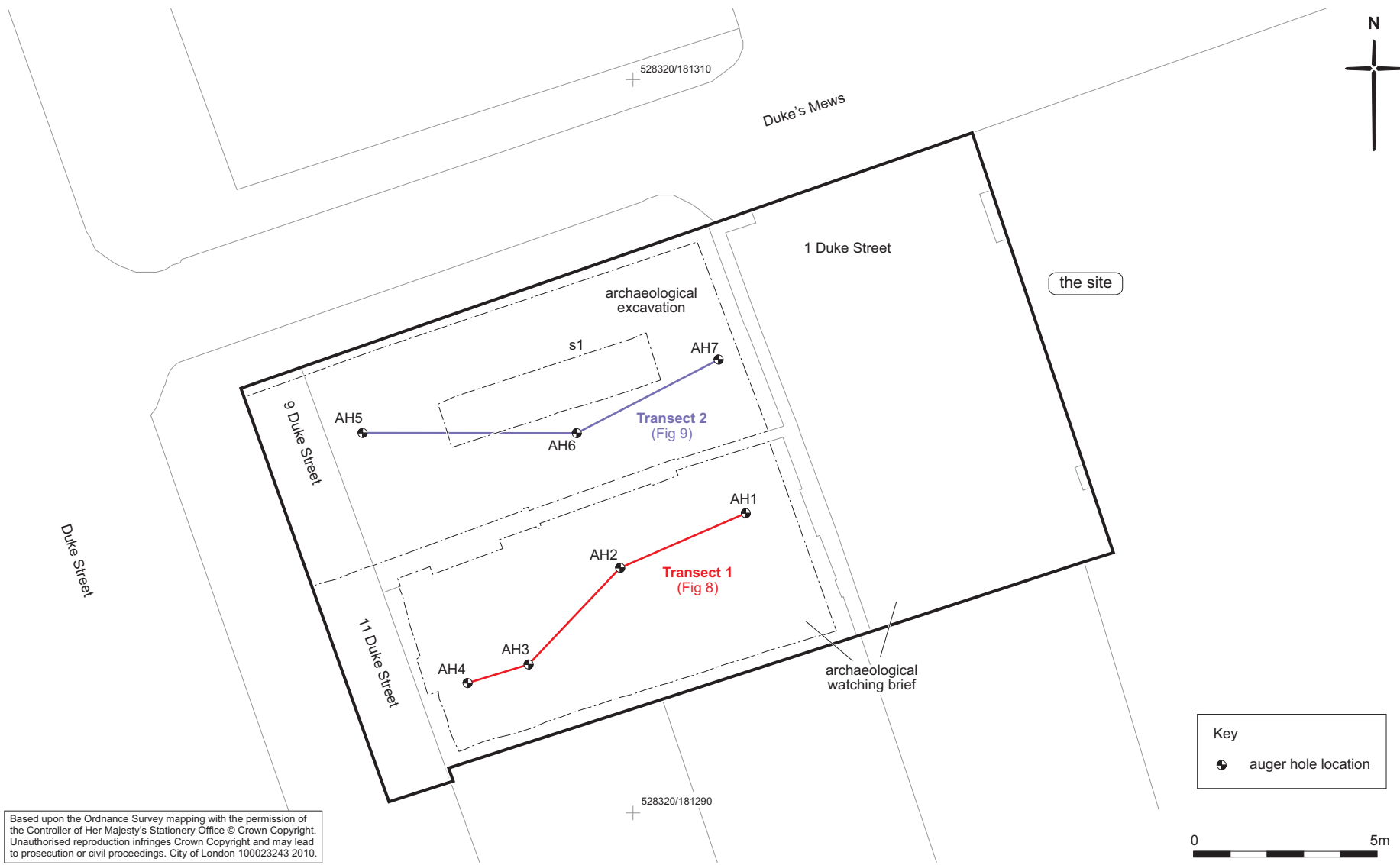


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Scale 1:1,500 @ A4

0 50m

Fig 1 Site location



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Fig 2 Areas of archaeological investigation



Fig 3 Cut-features backfilled in the 18th century

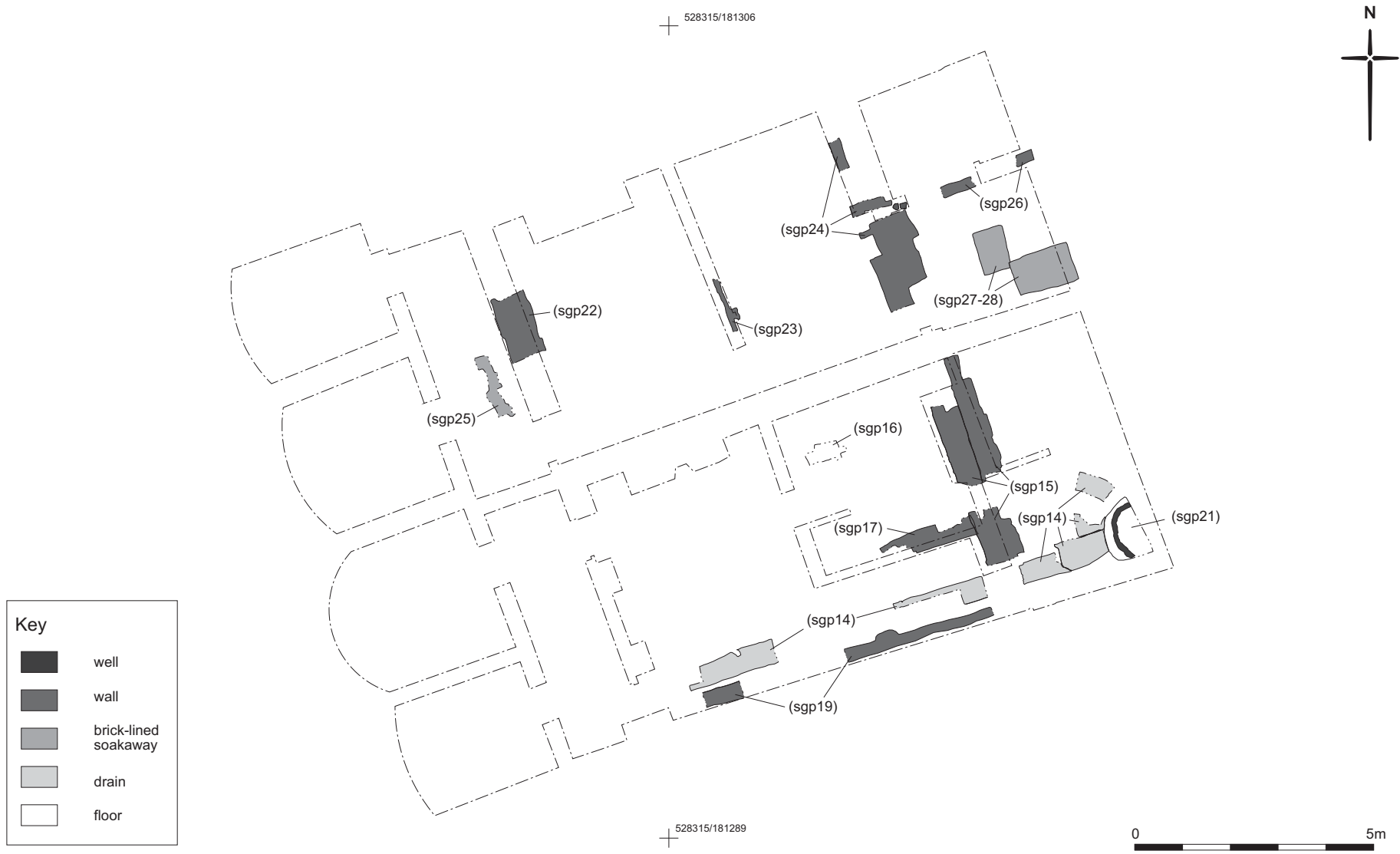


Fig 4 Structural remains recorded at the site, overlain by the basement plan of 9 and 11 Duke Street prior to demolition works (after Paul Davis & Partners, 2008)

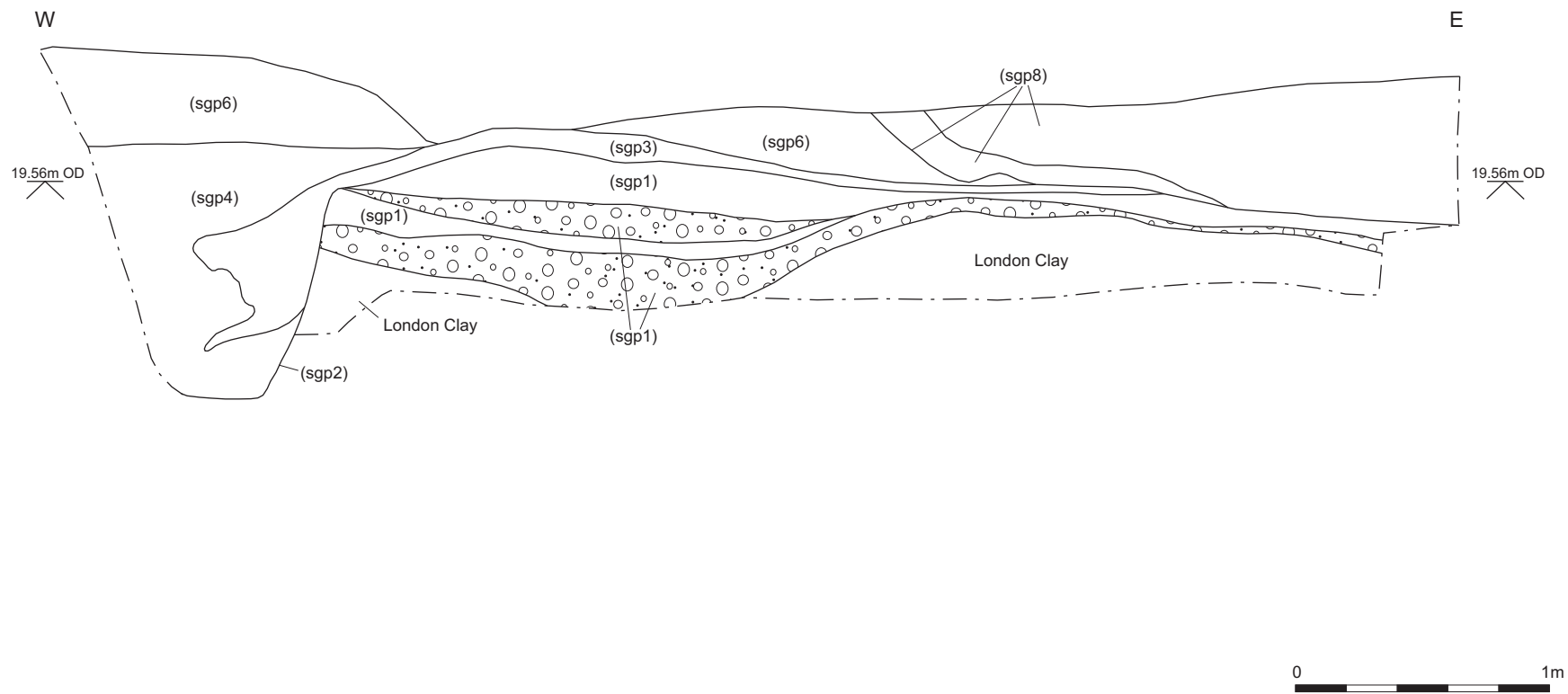


Fig 5 South facing section from 9 Duke Street showing: a possible ditch or quarry pit (sgp2), waterlogged, organic-rich dumped material (sgp8), and fluvial and alluvial channel deposits (sgp1)



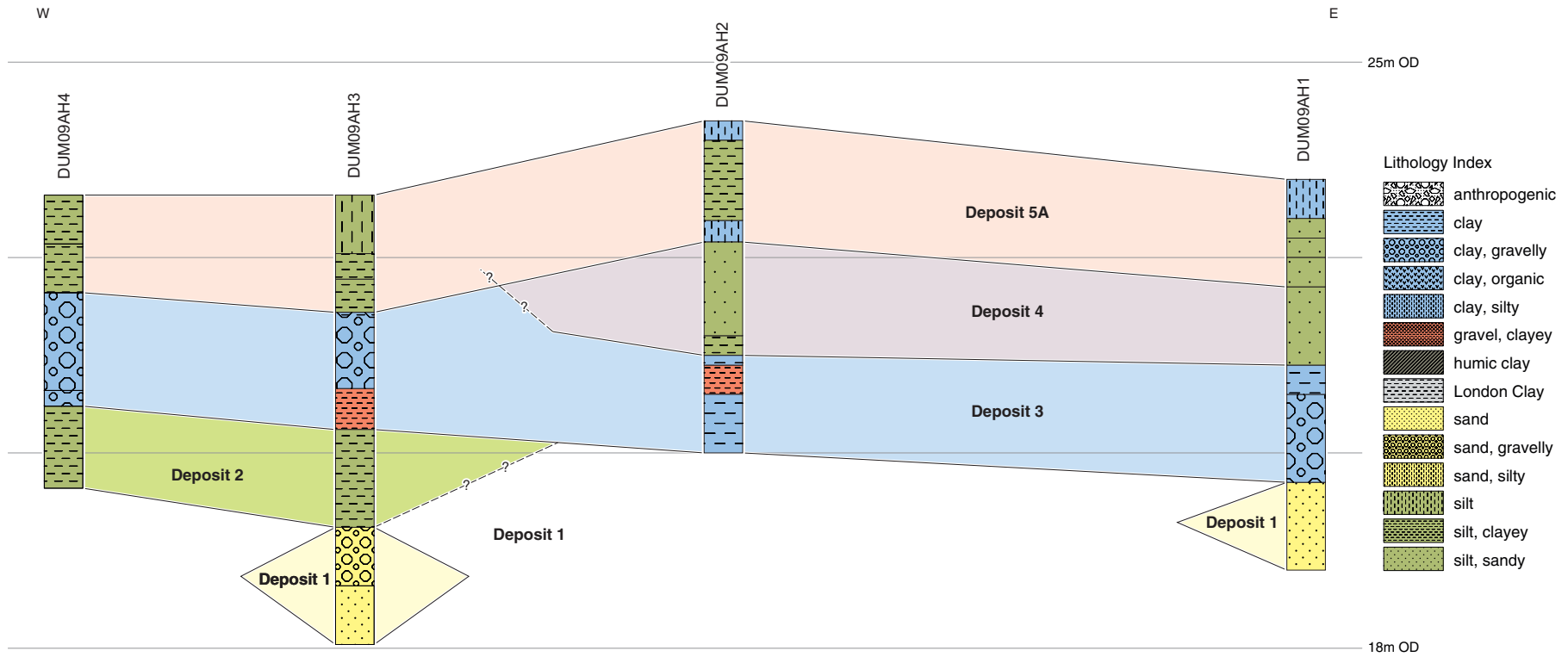


Fig 6 North-south ditch (sgp7) running through the western end of 9 Duke Street (looking north)



Fig 7 Possible quarry pit or ditch (sgp2) recorded at 9 Duke Street (looking west)





Lithology Index

[Pattern]	anthropogenic
[Pattern]	clay
[Pattern]	clay, gravelly
[Pattern]	clay, organic
[Pattern]	clay, silty
[Pattern]	gravel, clayey
[Pattern]	humic clay
[Pattern]	London Clay
[Pattern]	sand
[Pattern]	sand, gravelly
[Pattern]	sand, silty
[Pattern]	silt
[Pattern]	silt, clayey
[Pattern]	silt, sandy

- Deposit 1:** Pleistocene fluvial sands and gravels
- Deposit 2:** Pleistocene slack/standing water fine grained units
- Deposit 3:** Pleistocene/Holocene fluvial and alluvial deposits, with possible influx of colluvial material
- Deposit 4:** post-medieval channel fill deposits
- Deposit 5A:** post-medieval anthropogenic layers
- Deposit 5B:** Fill of post-medieval cut feature



Fig 8 Transect 1

WEST1368PXA10#08

[DUM09] Post excavation assessment © MOLA 2010

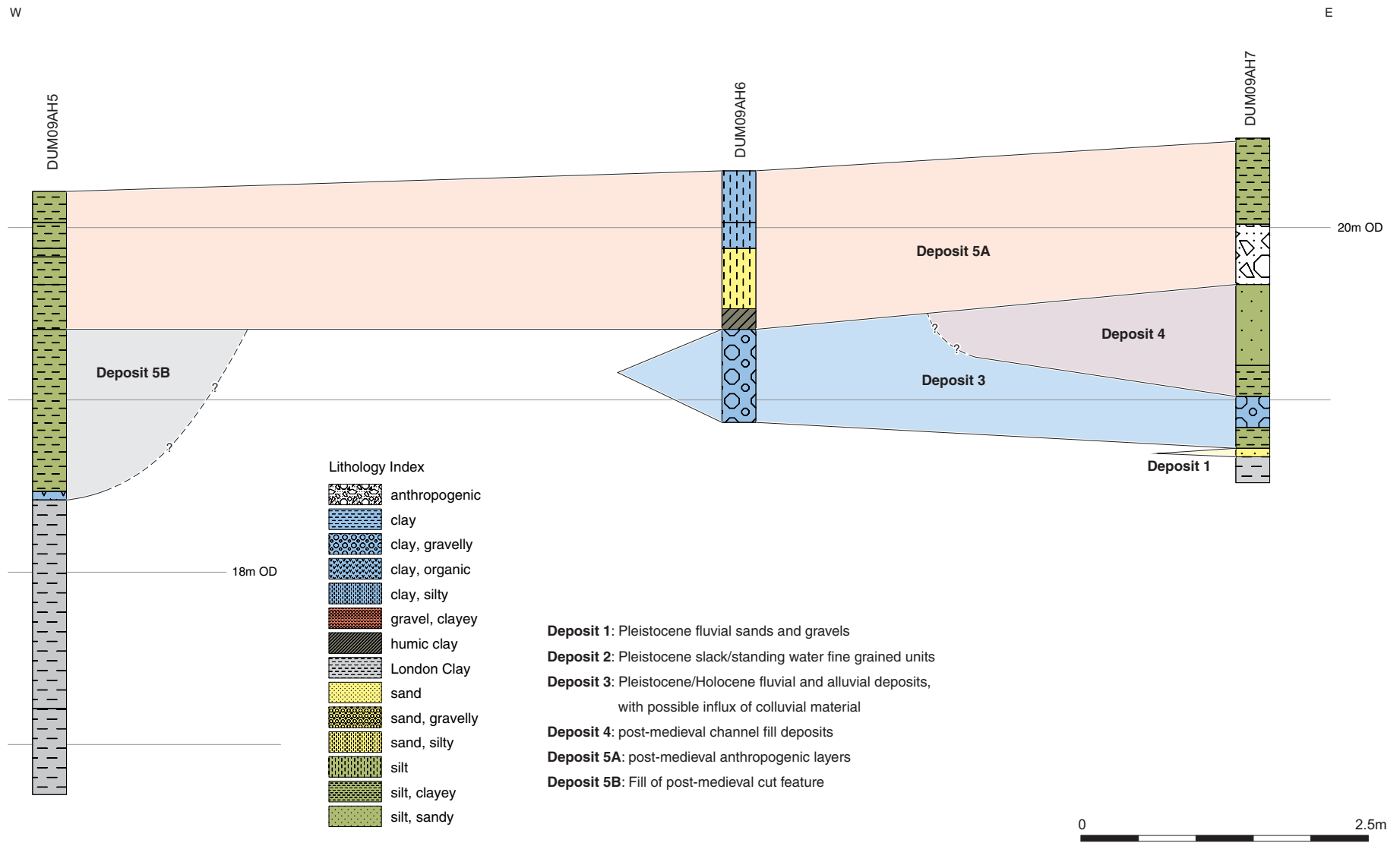


Fig 9 Transect 2



## 12 NMR OASIS archaeological report form

### 12.1 OASIS ID: molas1-85208

#### Project details

Project name	9 and 11 Duke Street and 1 Duke's Mews
Short description of the project	A natural channel cut through the London Clay; and further fluvial and alluvial deposits, probably dating to the Pleistocene epoch, were recorded throughout the site. These deposits may have been associated with the River Tyburn or the Lynch Hill Terrace gravels. A substantial ditch (possibly boundary or drainage in function) ran north-south, through the west of the site, and had been backfilled by a dump of possible house clearance material dating to 1763-1770. In the east of the site, a cut-feature ran north-east-south-west, and was filled with organic-rich material. This feature dated to the 18th century, and may have been associated with the management of the River Tyburn, which is thought to run to the east of the site. Structures associated with the demolished 9 Duke Street, and partially demolished 11 Duke Street, built between 1770 and 1776 were also recorded.
Project dates	Start: 17-05-2010 End: 11-08-2010
Previous/future work	Yes / Not known
Any associated project reference codes	DUM09 - Sitecode
Any associated project reference codes	molas1-63734 - OASIS form ID
Any associated project reference codes	molas1-64686 - OASIS form ID
Type of project	Recording project
Site status	Conservation Area
Site status	Listed Building

Current Land use Industry and Commerce 3 - Retailing

Monument type BUILDING Post Medieval

Monument type WELL Post Medieval

Monument type SOAKAWAY Post Medieval

Monument type DITCH Post Medieval

Monument type PIT Post Medieval

Monument type DRAIN Post Medieval

Significant Finds SHERD Post Medieval

Significant Finds VESSEL Post Medieval

Significant Finds SLAG Post Medieval

Significant Finds VESSEL Medieval

Significant Finds BRICK Post Medieval

Significant Finds BOOT Post Medieval

Significant Finds JEWELLERY FITTING Post Medieval

Significant Finds FLOOR TILE Post Medieval

Investigation type 'Part Excavation','Watching Brief'

Prompt Planning condition

### **Project location**

Country England

Site location GREATER LONDON CITY OF WESTMINSTER MARYLEBONE ST  
JOHNS WOOD AND MAYFAIR 9 and 11 Duke Street and 1 Duke's  
Mews

Postcode W1

Study area 230.00 Square metres

Site coordinates TQ 2832 8130 51.5155342329 -0.150468500704 51 30 55 N 000 09  
01 W Point

Height OD / Depth Min: 18.42m Max: 19.44m

### Project creators

Name of Organisation MoL Archaeology

Project brief originator Local Planning Authority (with/without advice from County/District Archaeologist)

Project design originator MoL Archaeology

Project director/manager Gordon Malcolm

Project supervisor Ruth Taylor

Type of sponsor/funding body Landowner

Name of sponsor/funding body Portman Estate

### Project archives

Physical Archive recipient LAARC

Physical Contents 'Animal Bones','Ceramics','Environmental','Glass','Leather','Metal','Wood'

Digital Archive recipient LAARC

Digital Contents 'Stratigraphic','Survey'

Digital Media available	'Database','Images raster / digital photography','Survey','Text'
Paper Archive recipient	LAARC
Paper Contents	'Stratigraphic'
Paper Media available	'Context sheet','Correspondence','Matrices','Notebook - Excavation','Research','General Notes','Plan','Report','Section','Survey'

**Project bibliography 1**

Publication type	Grey literature (unpublished document/manuscript)
Title	9 and 11 Duke Street and 1 Duke's Mews, London, WC1
Author(s)/Editor(s)	Howell, I.
Date	2009
Issuer or publisher	MOL Archaeology
Place of issue or publication	London
Description	Unpub client evaluation report

**Project bibliography 2**

Publication type	Grey literature (unpublished document/manuscript)
Title	9 and 11 Duke Street, Historic Building Survey Report
Author(s)/Editor(s)	Westman, A.
Author(s)/Editor(s)	Tetreau, M.
Date	2009

Issuer or publisher MOL Archaeology

Place of issue or publication London

Description Unpub client report

**Project bibliography 3**

Publication type Grey literature (unpublished document/manuscript)

Title 9 and 11 Duke Street and 1 Duke's Mews, W1

Author(s)/Editor(s) Taylor, R.

Date 2010

Issuer or publisher MOL Archaeology

Place of issue or publication London

Description Unpub post excavation assessment and updated project design

Entered by rtaylor (rtaylor@museumoflondon.org.uk)

Entered on 28 October 2010

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Authors: Westman, A and Tetreau, M.
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Author: Howell, I
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<http://www.portmanestate.co.uk/heritage/restoration.html> retrieved 28/10/10
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## 14 Appendix specialist tables

### 14.1.1 Building material

Table 2 Post-medieval brick

Contexts	Fabric	Size (mm)	Date range
[104]	3032	? x 97–107 x 60–65	c 1750–1900
[105]	3032	227–229 x 103–105 x 65–69	c 1750–1900
[108]	3032	215–225 x 97–103 x 60–62	1666–1900
[111]	3032	222 x 98–104 x 62–64	c 1750–1800
[115]	3032	212–222 x 92–98 x 60–65	c 1750–1900
[116]	3032	225 x 97–103 x 60–63	1666–1900
[117]	3032	229 x 93–97 x 61–62	c 1750–1900
[124]	3032	220–230 x 90–100 x 65–66	c 1750–1900
[125]	3032	c 230–c 235 x 102–106 x 68	c 1750–1900
[126]	3032	208–215 x 100–102 x 63–68	c 1750–1900
[127]	3032	220–c 225 x 94–100 x 58–68	c 1750–1900
[138]	3032	220–230 x 90–105 x 60–65	1700–1900
[140]	3032	210–c 230 x 92–102 x 62–66	c 1750–1900
[142]	3210?	? x 125 x 43–44	1680–1900
[142]	3257	? x 115 x 46–47	1680–1900
[142]	3272	? x 116 x ?	1680–1900
[145]	3032	? x 94 x ?	c 1750–1900
[155]	3046?	? x 100–102 x 52–54	1600–1900

### 14.1.2 Pottery

Table 3 Date range of assemblage

Context	TPQ	TAQ	SC	ENV	Wt
1	1590	1800	4	4	98
2	1720	1780	2	2	7
107	1700	1800	1	1	41
114	1750	1780	10	5	161
119	1720	1780	2	2	47
120	1720	1780	11	9	94
121	1750	1780	180	80	3586
130	1763	1780	20	6	558
142	1763	1770	565	320	21198
145	1700	1800	1	1	8
147	1720	1780	13	13	171
148	1763	1780	21	18	220
150	1720	1780	8	8	37
155	1720	1780	7	3	132
<b>Total</b>	<b>1763</b>	<b>1800</b>	<b>845</b>	<b>472</b>	<b>26358</b>



Table 4 Breakdown of post-medieval pottery by fabric type

Source	SC	% SC	ENV	% ENV	Wt	% Wt
Surrey-Hampshire border wares	58	6.9%	35	7.4%	1661	6.3%
Delftware	159	18.8%	80	16.9%	3364	12.8%
English brown salt-glazed stoneware	17	2.0%	14	3.0%	1464	5.6%
English porcelain	26	3.1%	22	4.7%	545	2.1%
Imports - continental	20	2.4%	9	1.9%	775	2.9%
Imports - oriental	210	24.9%	113	23.9%	3814	14.5%
Factory-made refined earthenwares	63	7.5%	34	7.2%	1645	6.2%
Factory-made refined stonewares	175	20.7%	109	23.1%	4169	15.8%
London-area redwares	48	5.7%	32	6.8%	5581	21.2%
Midlands wares	64	7.6%	22	4.7%	3142	11.9%
Non-local wares	4	0.5%	1	0.2%	173	0.7%
Unidentified	1	0.1%	1	0.2%	25	0.1%
<b>Total</b>	<b>845</b>	<b>100.0%</b>	<b>472</b>	<b>100.0%</b>	<b>26358</b>	<b>100.0%</b>

Table 5 Breakdown of post-medieval pottery by function

Function	SC	% SC	ENV	% ENV	Wt	% Wt
Cooking vessels	7	0.8%	6	1.3%	315	1.2%
Drinking vessels	11	1.3%	10	2.1%	320	1.2%
Gardening wares	4	0.5%	4	0.8%	458	1.7%
Leisure	5	0.6%	5	1.1%	165	0.6%
Lids	1	0.1%	1	0.2%	313	1.2%
Unidentified	29	3.4%	22	4.7%	140	0.5%
Pharmaceutical	49	5.8%	32	6.8%	1340	5.1%
Preparation/serving vessels	77	9.1%	42	8.9%	5043	19.1%
Hygiene	74	8.8%	25	5.3%	1388	5.3%
Serving beverages	20	2.4%	11	2.3%	296	1.1%
Serving/dining wares	242	28.6%	132	28.0%	5070	19.2%
Serving/display	185	21.9%	84	17.8%	7274	27.6%
Storage	27	3.2%	16	3.4%	2741	10.4%
Tea and coffee wares	114	13.5%	82	17.4%	1495	5.7%
<b>Total</b>	<b>845</b>	<b>100.0%</b>	<b>472</b>	<b>100.0%</b>	<b>26358</b>	<b>100.0%</b>

### 14.1.3 Clay pipes

#### 14.1.3.1 Quantification

Table 6 Clay tobacco pipe quantification

Total no. of fragments	17
No. of bowl fragments	8
No. of stem fragments	9
No. of mouthpieces	0
Accessioned pipes	4
Marked pipes	4
Decorated pipes	0
Imported pipes	0
Complete pipes	0
Wasters	0
Kiln material fragments	0

Table 7 Clay tobacco pipe dates, by context (B – bowl; S – stem)

Ctxt	TPQ	TAQ	B	S
142	1740	1770	8	5
121	1580	1910		3
120	1580	1910		1

Table 8 Marked clay tobacco pipes

Ctxt	Acc	Form	ED	LD	Marks	Type	Meth	Pos	Comments
142	14	UNK	1580	1910	City of London arms	I	S	BF	Heel/front bowl missing
142	12	OS12	1730	1780	IC	R	M	SH	Back bowl missing
142	15	OS12	1730	1780	IC	R	M	SH	Bowl missing
142	13	AO26	1740	1800	WT	R	M	SS	

#### 14.1.4 Accessioned finds, nails and bulk glass

Table 9 Summary of accessioned finds by material and period

Material	Roman	Medieval	Post-med	Not known	Total	Comment
Ceramic (excludes BM, CTPs, stamps)	0	0	5	0	5	
Glass	0	0	3	0	3	
Copper alloy	0	0	3	0	3	
Wood	0	0	1	0	1	
Leather	0	0	3	0	3	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>15</b>	

#### 14.1.5 Slag

##### 14.1.5.1 Quantification and description

Table 10 Slag types by context

Context	Identification	Wt	Comment
142	undiagnostic	6127	ferruginous concretions
121	undiagnostic	23	ferruginous pieces

### 14.1.6 Animal bones

Table 11 Wet-sieved animal bone from DUM09/summary

DATE	INTERP	PARENT	CONTEXT	SAMPLE	WT (kg)	FRAG (mm)	PRES	NOS	LMAM	SMAM	FISH	BIRD	AMPH	MAND	MEAS	EPI	COMPLETE
18th century	fill	ditch	142	101	0.45	25-75	good	90	82	0	3	5	0	0	2	10	0
18th century	waterlogged dump		121	100	0.3	25-75	good	80	67	0	10	3	0	1	1	10	0
<b>TOTAL</b>					<b>0.75</b>			<b>170</b>	<b>149</b>	<b>0</b>	<b>13</b>	<b>8</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>20</b>	<b>0</b>

Table 12 Wet-sieved animal bone from DUM09/detailed summary

DATE	INTERP	PARENT	CONTEXT	SAMPLE	TAXON	PART	AGE	MODIFICATION
AD 18th century	waterlogged dump		121	100	chicken	lower limb	adult	
AD 18th century	waterlogged dump		121	100	chicken	lower limb	juvenile	
AD 18th century	waterlogged dump		121	100	cod family	head		
AD 18th century	waterlogged dump		121	100	cod family	vertebra		
AD 18th century	waterlogged dump		121	100	crustacean	exoskeleton		
AD 18th century	waterlogged dump		121	100	duck, unidentified	upper limb	adult	
AD 18th century	waterlogged dump		121	100	fish, unidentified sp.	vertebra		

					1			
AD 18th century	waterlogged dump		121	100	goose	lower limb		
AD 18th century	waterlogged dump		121	100	hare, brown	head	juvenile	
AD 18th century	waterlogged dump		121	100	hare, brown	lower limb	juvenile	
AD 18th century	waterlogged dump		121	100	hare, brown	upper limb	juvenile	
AD 18th century	waterlogged dump		121	100	herring family	vertebra		
AD 18th century	waterlogged dump		121	100	ox-sized	rib		
AD 18th century	waterlogged dump		121	100	ox-sized	upper limb	juvenile	butchered
AD 18th century	waterlogged dump		121	100	pig	vertebra	juvenile	
AD 18th century	waterlogged dump		121	100	plaice/flounder	vertebra		
AD 18th century	waterlogged dump		121	100	ray, thornback	dermal spine		
AD 18th century	waterlogged dump		121	100	sheep/goat	foot	adult	
AD 18th century	waterlogged dump		121	100	sheep/goat	head		
AD 18th century	waterlogged dump		121	100	sheep/goat	lower limb		charred
AD 18th century	waterlogged dump		121	100	sheep/goat	upper limb		calcined
AD 18th century	waterlogged dump		121	100	sheep/goat	vertebra	juvenile	
AD 18th	waterlogged		121	100	sheep-sized	rib		

century	dump							
AD 18th century	fill	ditch	142	101	bird, unidentified	upper limb		
AD 18th century	fill	ditch	142	101	chicken	head	adult	
AD 18th century	fill	ditch	142	101	chicken	lower limb	juvenile	
AD 18th century	fill	ditch	142	101	chicken	upper limb	juvenile	
AD 18th century	fill	ditch	142	101	fish, unidentified sp. 2	vertebra		
AD 18th century	fill	ditch	142	101	goose	foot	adult	
AD 18th century	fill	ditch	142	101	goose	head		
AD 18th century	fill	ditch	142	101	goose	lower limb		
AD 18th century	fill	ditch	142	101	goose	upper limb	adult	
AD 18th century	fill	ditch	142	101	mackerel	vertebra		
AD 18th century	fill	ditch	142	101	ox-sized	vertebra		
AD 18th century	fill	ditch	142	101	sheep/goat	head	infant	
AD 18th century	fill	ditch	142	101	sheep/goat	head	adult	
AD 18th century	fill	ditch	142	101	sheep/goat	lower limb	adult	
AD 18th century	fill	ditch	142	101	sheep/goat	upper limb	adult	

AD 18th century	fill	ditch	142	101	sheep/goat	vertebra	adult	butchered
AD 18th century	fill	ditch	142	101	sheep-sized	rib		
<b>DATE</b>	<b>INTERP</b>	<b>PARENT</b>	<b>CONTEXT</b>	<b>SAMPLE</b>	<b>TAXON</b>	<b>PART</b>	<b>AGE</b>	<b>MODIFICATION</b>
AD 18th century	fill	ditch	142	101	turtle, unidentified	carapace/plastron	subadult	

## 14.1.7 Plant remains

Table 13 Organic remains from samples

Context	Sample	BI	Dating	Process	Constituent	Abundance	Diversity	Comment
142	101	D	0-0	F	BONE MISC	1	1	
					CHD WOOD	2	1	
					INV EPHIPPIA	2	1	
					SMLFND	3	1	CLINKER
				W	BONE FISH	1	1	
				W	BONE S MAM	1	1	
				W	MOLSC MARINE	2	1	OYSTERS 41 THROWN
				W	BONE L MAM	3	1	
				W	BONE BIRD	1	1	
				F	WLG WOOD	1	1	
WLG SEEDS	3	1	SAMNI, RAPRA, VITVI, RAN, RUB, LAM, CHE, RANSC					
121	100	ED	0-0	F	BONE S MAM	1	1	
					CHD WOOD	1	1	
					INV BEETLES	1	1	
					INV PUPARIA	1	1	



				SMLFIND	1	1	TEXTILES
				WLG MISC	3	2	MOSS, STR?, RTS
				WLG SEEDS	3	3	PRU, RAN, SAM, ARC, HULU/CAN, API, CAR, BRA, VIT
				WLG WOOD	3	1	RNDWDS, WRKD FRAGS
			W	BONE BIRD	1	1	
				BONE FISH	1	1	
				BONE L MAM	2	1	
				BONE S MAM	1	1	
				CHD WOOD	1	1	
				INV CRABS	1	1	
				MIN FRUIT	1	1	
				MOLSC MARINE	2	1	OYSTERS 21 THROWN

F=Flot; W=Retent

Table 14 Finds from samples

Subgrp	Context	Sample	BI	Dating	Constituent	Proportion
7	142	101	D	0-0	CBM	M
					CLYPIP	O
					FLINT	O
					CU OBJ	O
					GLASS	O
					SLAG	A
					POT	A
9	121	100	ED	0-0	CBM	O
					CLNK	A
					CLYPIP	O
					CU OBJ	O
					GLASS	O
					LEATHE	O
					NAIL	O
					POT	A
					SLAG	O
					SLATE	O
					TEXTIL	O

O=Occasional; M=Moderate; A=Abundant

Table 15 Processing details of samples

Subgrp	Context	Sample	BI	Dating	Proc Vol.	Wet sv Vol.	Mesh Size	Flot	Flot Vol.	Any unprocessed
7	142	101	D	0-0	20	40	1	Y	500	N
9	121	100	ED	0-0	10	40	1	Y	600	N

### 14.1.8 Geoarchaeology

Table 16 Lithology recorded in AH1

Ground level at 20.4m OD

Unit No.	Depth below ground level (m)	Description	Interpretation	Deposit Number
1.1	0–0.2	Firm mid to dark orangey brown <b>silty clay</b> with occasional sand and fine rounded gravel inclusions	Anthropogenic layers. Post-Medieval dumping and demolition layers	<b>5A</b>
Sharp				
1.2	0.2–0.3	Soft dark grey fine <b>sandy silt</b> with frequent whitish/yellowish brown mortar flecks occasional brick/tile and slate fragments		
Sharp				
1.3	0.3–0.4	Soft mid greyish brown massive fine <b>sandy silt</b> . Occasional bone and brick fragments		
Sharp				
1.4	0.4–0.55	Firm mid grey gritty <b>sandy silt</b> with small to large brick fragments		
Sharp				
<b>19.45m OD</b>				
1.5	0.55–0.95	Firm black gritty clinker very mixed heterogeneous deposit, contains brick/tile, occasional bone, pot, on a predominately <b>sandy silt</b> matrix	Anthropogenic material infilling Post-Medieval cut of the Tyburn channel	<b>4</b>
Sharp				
1.6	0.95–1.1	Very firm mottled bluish grey/light brown <b>clay</b> with occasional rounded gravel inclusions	Alluvium with gravel lag deposits	<b>3</b>
Sharp				
1.7	1.1–1.55	Very firm mottled bluish grey/light brown <b>gravelly clay</b> . Gravel rounded, and sub-rounded small to medium gravel		
Sharp				
1.8	1.55–2	Loose light greenish grey well sorted moderately coarse <b>sand</b> with occasional very fine gravel. Ripple cross bedding apparent	Fluvial sands displaying ripple cross lamination, indicative of low flow regimes within a shallow, possibly distal part of channel belt	<b>1</b>

Table 17: Lithology recorded in AH2

Ground level at 20.7m OD

Unit No.	Depth below ground level (m)	Description	Interpretation	Deposit Number
2.1	0–0.1	Firm mid orangey brown <b>silty clay</b> with occasional brick fragments and occasional fine to medium rounded and sub-rounded gravel	Anthropogenic layers. Post-Medieval dumping and demolition layers	<b>5A</b>
Sharp				
2.2	0.1–0.51	Soft mid brown <b>clay silt</b> with slight light orangey brown mottling, occasional sand within the matrix. Occasional small to medium rounded and sub-rounded gravel clasts		
Sharp				
2.3	0.51–0.62	Loose dark grey brown <b>silty clay</b>		
Sharp				
2.4	0.62–1.1	Firm black heterogeneous deposits consisting of clinker debris, occasional rounded, sub0-rounded fine to medium gravel in a fine <b>sandy silt</b> matrix. Occasional leather fragments, and organics	Anthropogenic material infilling Post-Medieval cut of the Tyburn channel. Lower unit 2.5 deposited in standing water	<b>4</b>
Sharp				
2.5	1.1–1.2	Firm dark bluish grey <b>clay silt</b>		
Sharp				
2.6	1.2–1.25	Firm light brown <b>clay</b> . possibly redeposited London Clay	Alluvial fill, with possible colluvial element derived from London clay	<b>3</b>
Sharp				
2.7	1.25–1.4	Compacted mid greenish brown heterogeneous deposit of coarse gritty poorly sorted <b>sand and clay</b> with frequent fine <b>gravel</b>		
Sharp				
2.8	1.4–1.7	Very firm mid brown <b>clay</b> with occasional fine gravel. Fines derived from London Clay		

Table 18: Lithology recorded in AH3

Ground level at 20.32m OD

Unit No.	Depth below ground level (m)	Description	Interpretation	Deposit Number
3.1	0–0.3	Loose black heterogeneous deposit consisting of clinker rich gritty <b>silts</b> with frequent oyster shell, bone, occasional brick and tile fragments	Anthropogenic layers. Post-Medieval dumping and demolition layers	<b>5A</b>
Diffuse				
3.2	0.3–0.43	Soft mid grey/light orangey brown mottled <b>clay silt</b> with occasional coarse sand, occasional brick fragments		
Diffuse				
3.3	0.43–0.6	Soft mid grey massive <b>clay silt</b> . Relatively clean and homogenous		
Diffuse				
3.4	0.6–0.99	Stiff heterogeneous deposit consisting of partially weathered light orangey brown redeposited London <b>clay</b> , with reduced mottles of light grey stiff clay. Moderate fine to coarse rounded, sub-rounded <b>gravel</b> clast	Upper unit possibly derived from sediment gravity flows (i.e. slumping of channel edges or colluvial input). Lower unit, alluvial unit.	<b>3</b>
Gradual				
3.5	0.99–1.2	Firm mid orangey brown moderately coarse <b>clayey gravel</b> . Poorly sorted		
Sharp				
3.6	1.2–1.7	Firm very pale whitish green massive <b>clay silt</b> , with occasional small rounded gravel	Episodes of standing water/ 'ponding' developing in abandoned thread of braidplain	<b>2</b>
Sharp				
3.7	1.7–2	Loose dark orangey brown moderately sorted coarse <b>gravelly sand</b> . Gravel fine to medium rounded and sub-rounded	Possible braidplain channel bar formation. with sands accumulating within main channel threads	<b>1</b>
Gradual				
3.8	2–2.3	Loose moderately well sorted coarse mid yellowy brown massive <b>sand</b>		

Table 19: Lithology recorded in AH4

Ground level at 20.32m OD

Unit No.	Depth below ground level (m)	Description	Interpretation	Deposit Number
4.1	0–0.25	Soft black heterogeneous deposit of <b>clay silt</b> with occasional clinker, occasional fine to medium rounded and sub-rounded gravel clasts	Anthropogenic layers. Post-Medieval dumping and demolition layers	<b>5A</b>
Sharp				
4.2	0–0.5	Soft mixed deposit consisting of predominately mid greyish brown <b>clay silt</b> with lenses of light tan brown clay.	Debris flow deposits, accumulating through colluvial agency or flashy discharges	<b>3</b>
Gradual				
4.3	0.5–1	Stiff light orangey brown <b>clay</b> with bright orange mottling, evidence of fine root channels. Occasional fine to medium rounded and sub-rounded <b>gravel</b> . Poorly sorted. Possibly reworked London Clay		
Sharp				
4.4	1–1.08	Firm mid orangey brown <b>clay silt</b> with frequent small to medium sub-rounded, rounded <b>gravel</b> . Poorly sorted		
Sharp				
4.5	1.08–1.5	Firm pale yellowish white massive slightly calcareous <b>clay silt</b>	Episodes of standing water/ 'ponding' developing in abandoned thread of braidplain	<b>2</b>

Table 20: Lithology recorded in AH5

Ground level at 20.21m OD

Unit No.	Depth below ground level (m)	Description	Interpretation	Deposit Number
5.1	0–0.18	Soft mid brown <b>clay silt</b> with occasional light orange brown mottling occasional detrital organics and fine brick fragments	Anthropogenic layers. Post-Medieval dumping and demolition layers	<b>5A</b>
Sharp				
5.2	0.18–0.33	Soft dark brown <b>clay silt</b> with occasional fine charcoal and brick fragments, occasional wood fragments		
Sharp				
5.3	0.33–0.38	Soft mottled dark orangey brown/ dark grey <b>clay silt</b> with occasional sand within the matrix		
Sharp				
5.4	0.38–0.54	Soft mid grey <b>clay silt</b> with occasional fine to medium sand and occasional mortar and brick flecks		
Sharp				
5.5	0.54–0.8	Soft mottled dark orangey brown/dark brown gritty <b>clay silt</b> . Occasional wood and brick fragments		
Sharp				
5.6	0.8–1.74	Very loose dark reddish brown gritty <b>clay silt</b> with frequent organic and detrital plant remains. Frequent oyster shell, brick, bone pot, Fe slag	Fill of Post-Medieval pit or linear feature	<b>5B</b>
Sharp				
5.7	1.74–1.79	Soft smooth black anaerobic <b>clay</b> with occasional detrital <b>organics</b>	Standing water deposit	
Sharp				
5.8	1.789–3	Firm mottled light tan brown/light grey <b>clay</b>	Weathered London clay	<b>N/a</b>
Gradational				
5.9	3–3.5	Firm light grey <b>clay</b>	London Clay	

Table 21: Lithology recorded in AH6

Ground level at 20.33m OD

Unit No.	Depth below ground level (m)	Description	Interpretation	Deposit Number
6.1	0–0.3	Soft mid brown gritty <b>silty clay</b> with frequent fine to medium sand within the matrix occasional brick/tile flecks and lenses of pale bluish grey clay silt	Anthropogenic layers. Post-Medieval dumping and demolition layers	<b>5A</b>
Sharp				
6.2	0.3–0.45	Firm heterogeneous mid brown/grey <b>silty clay</b> with occasional charcoal flecks, occasional pot, occasional brick and tile flecks		
Sharp				
6.3	0.45–0.8	Firm black layer of gritty clinker, coal in a <b>silty sand</b> matrix. Occasional mortar flecks and bone fragments		
Sharp				
6.4	0.8–0.92	Firm dark brown <b>humic silty clay</b> with frequent detrital plant remains and occasional bone fragments		
Sharp				
6.5	0.92–1.46	Very firm heterogeneous deposit of mottled light bluish grey/light brown <b>gravelly clay</b> . Poorly sorted. Gravel; fine to medium rounded, sub-rounded clasts. Lenses of coarse gritty sands. Tends towards a sandy gravelly clay with depth	Debris flow deposits, accumulating through colluvial agency or flashy discharges	<b>3</b>



Table 22: Lithology recorded in AH7

Ground level at 20.52m OD

Unit No.	Depth below ground level (m)	Description	Interpretation	Deposit number
7.1	0–0.5	Firm dark greyish brown <b>silty clay</b> with occasional fine to medium rounded and sub-rounded gravel and occasional brick fragments	Anthropogenic layers. Post-Medieval dumping and demolition layers	<b>5A</b>
Sharp				
7.2	0.5–0.85	Soft gritty dark orange brown crushed <b>brick</b> and <b>mortar</b> fragments		
Sharp				
7.3	0.85–1.32	Firm very gritty black <b>sandy silt</b> with occasional clay in the matrix. Occasional clinker, bone and detrital organics	Post-medieval channel backfill	<b>4</b>
Sharp				
7.4	1.32–1.5	Firm mid grey homogenous <b>clay silt</b>	Standing water	
Sharp				
7.5	1.5–1.68	Compacted poorly sorted heterogeneous deposits consisting of light greyish brown <b>gravelly clay</b> with frequent fine to coarse sand	Debris flow deposits, accumulating through colluvial agency or flashy discharges	<b>3</b>
Sharp				
7.6	1.68–1.8	Firm light greenish grey <b>clay silt</b> with occasional light grey mottles		
Sharp				
7.7	1.8–1.85	Compacted moderately well sorted greenish grey/dark grey medium to coarse <b>sand</b> with occasional fine angular and sub-angular gravel		
Sharp				
7.8	1.85–2	Stiff light orangey brown clay	Weathered London Clay	<b>N/a</b>