EXCAVATIONS AT 6–12 BASINGHALL STREET AND 93–95 GRESHAM STREET, CITY OF LONDON EC2

Sadie Watson

With contributions by Ian Betts, Joanna Bird, Julian Bowsher, Nigel Cameron, Nigel Jeffries, Alan Pipe, Beth Richardson, Mary Ruddy, Rob Scaife, Karen Stewart, Amy Thorp, Angela Wardle, John E Whittaker and Virgil Yendell

SUMMARY

Excavations at 6–12 Basinghall Street/ 93–95 Gresham Street in the City of London found part of a tributary of the Walbrook stream and evidence for the use of the site during the Roman, late Saxon and medieval periods.

The Walbrook tributary ran west–east across the site and was subsequently recut as a drainage channel, possibly as part of the infrastructure works associated with the amphitheatre which lay immediately west of the site. In the late 1st century AD, this channel was realigned within a timber drain. A rare sherd link between a samian bowl found on the site and on the Guildhall Yard (amphitheatre) excavations was part of a pottery assemblage that included several examples of hunting scenes and possible gladiatorial imagery on decorated samian vessels and reflected the proximity of the arena.

After a period of abandonment, the site was in use, albeit sparsely, by the start of the 11th century, but remained open ground used for pitting until at least the end of the 12th century (by which time St Stephen's church Coleman Street, existed to the west of the site). One late 13th-century ceramic assemblage or 'clearance group' may be associated with the departure of the Jewish community during this period.

INTRODUCTION

This article presents the results of archaeological work at Princes and Bartlett Houses (6–12 Basinghall Street/93–95 Gresham Street), henceforth 'the site' or '93–95 Gresham Street', in the City of London. The site's approximate centre is at Ordnance Survey National Grid reference (NGR) 532570 181310 (Fig 1).

The site potential was initially defined in an archaeological desk-based assessment (Mills Whipp Partnership 2005). The development incorporated two earlier properties, both of which dated to the 1920s and were basemented throughout. In the southern property (Princes House) the basement slab level (9.90m OD) was 0.6m lower than that in the northern property (Bartlett House). A sub-basement occupied the south-western part of Bartlett House. Museum of London Archaeology (MOLA; then MoLAS), commissioned by Standard Life Investments, undertook an archaeological evaluation in 2006 (MoLAS 2006) and monitored a geotechnical pit and four boreholes during early 2007 (MoLAS 2007a). A preliminary excavation, during demolition of the standing building in 2007 (MoLAS 2007b) was followed by a second, larger excavation during 2008 (MOLA 2009). The excavated area is shown in Fig 2. Groundworks on the southern part of the site were recorded under watching brief conditions. Here the truncation by existing basements had effectively removed all archaeology. There

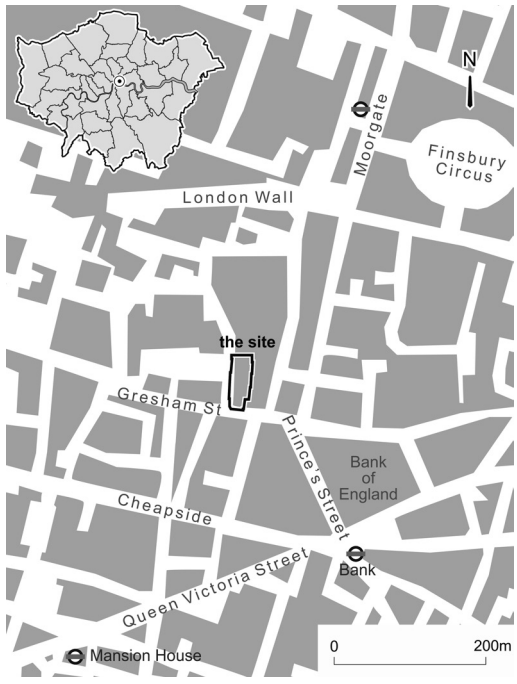

Fig 1. Site location (scale 1:10,000)

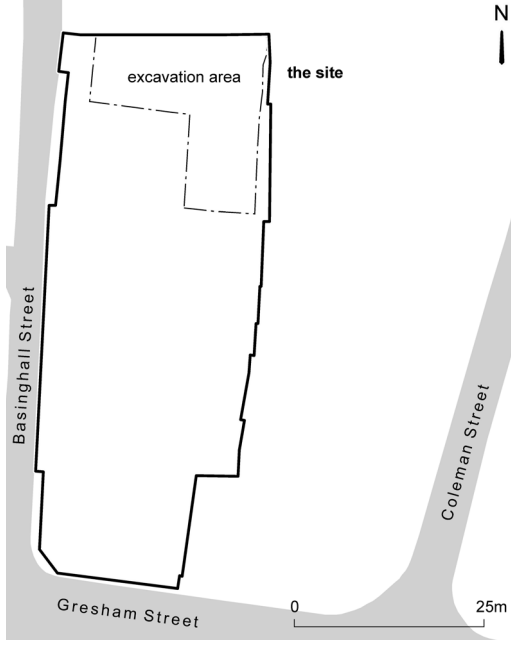

Fig 2. Trench location (scale 1:1000)

are no published archaeological discoveries from the 1920s development of the site.

All interventions were undertaken under the site code GHB06: the site archive is available at the London Archaeological Archive Research Centre (LAARC), Eagle Wharf Road, London N1 7ED. This article employs standard Museum of London codes for ceramics and building materials, complete lists of these codes, their expansions and date ranges are available online.[1]

The archaeological sequence is divided into periods and phases and described in terms of land use such as Buildings (B), Open Areas (OA) and Structures (S). The period definitions are specific to the site and do not directly equate to similarly numbered periods on adjacent sites. The accompanying plan figures illustrate the principal developments. Within the text, numbers in square brackets ([1] *etc*) refer to contexts and those within angle brackets (<1> *etc*) denote the accession numbers for finds. The illustrated finds are assigned an alpha-numeric sequence, also presented within angle brackets, which include a letter prefix: <P1> *et seq* pottery; <S1> *et seq* accessioned finds including glass; and <T1> *et seq* tile or stone building material.

In the text individual features or deposits are identified by their context numbers, and all context details concerning the illustrated finds are given in the concordance (Table 2) in Appendix 3. The illustrated small finds are also described in Appendix 3.

THE SITE SEQUENCE

Natural topography

The underlying drift geology of the City of London are Pleistocene Thames Terrace Gravels capped with a layer of brickearth. Natural gravels were observed across the site at truncated levels of *c.*10.00–10.20m OD (Open Area 1, not illustrated). Very little natural brickearth survived due to truncation caused by the buildings previously standing on the site, although a small area was observed during the evaluation at 10.40m OD in the centre of the northern part of the site (MoLAS 2006). The natural topography would have sloped down gently eastwards towards the main channel of the Walbrook

stream, which would have lain *c.*140m further east. The site itself was crossed by a natural stream channel, *c.*7m wide with its base at 7.87m OD, a previously unidentified west–east aligned Walbrook tributary similar to those identified immediately to the west at the Guildhall Yard (site code GYE92) excavations (Bateman *et al* 2008, 15, fig 9). It represents a branch of GYE92 tributary 3 (*ibid*). This was recut in the early Roman period, as Structure 1 (see below).

Early Roman use of the site, *c.*AD 75–250 (period 2)

The site lies 30m to the east of the Roman amphitheatre (Fig 3), originally built in timber in *c.*AD 75. It was reconstructed in *c.*AD 125 and remained in use to *c.*AD 365, when it was abandoned (Bateman *et al* 2008, 19, 39, 87). The development of the amphitheatre seems to have been associated with a more general north-westerly expansion of Roman London. An east–west road, *c.*85m to the south of the site, was established about this time. Excavations at 54–66 Gresham Street (GSJ06) indicate that by *c.*AD 120 much of the area between the site and this road was characterised by gravel yards and buildings. Subsequent uses of this space include a possible shrine and, in the 3rd century AD, the construction of a large masonry building with at least one tessellated floor (*ibid*, 116, 118, 122; Wroe-Brown in prep).

An early drainage ditch (Structure 1) (c.AD 75–100)

The primary Roman activity on the site was to recut the Walbrook tributary channel as a steep-sided ditch with a V-shaped profile (Structure 1; Fig 4). It flowed eastwards, with the level of its base dropping from 8.56m OD to 8.45m OD within the excavated area. The pollen data from its fills indicate a predominantly grassy local environment from which woodland had already been cleared, presumably grazed to prevent the

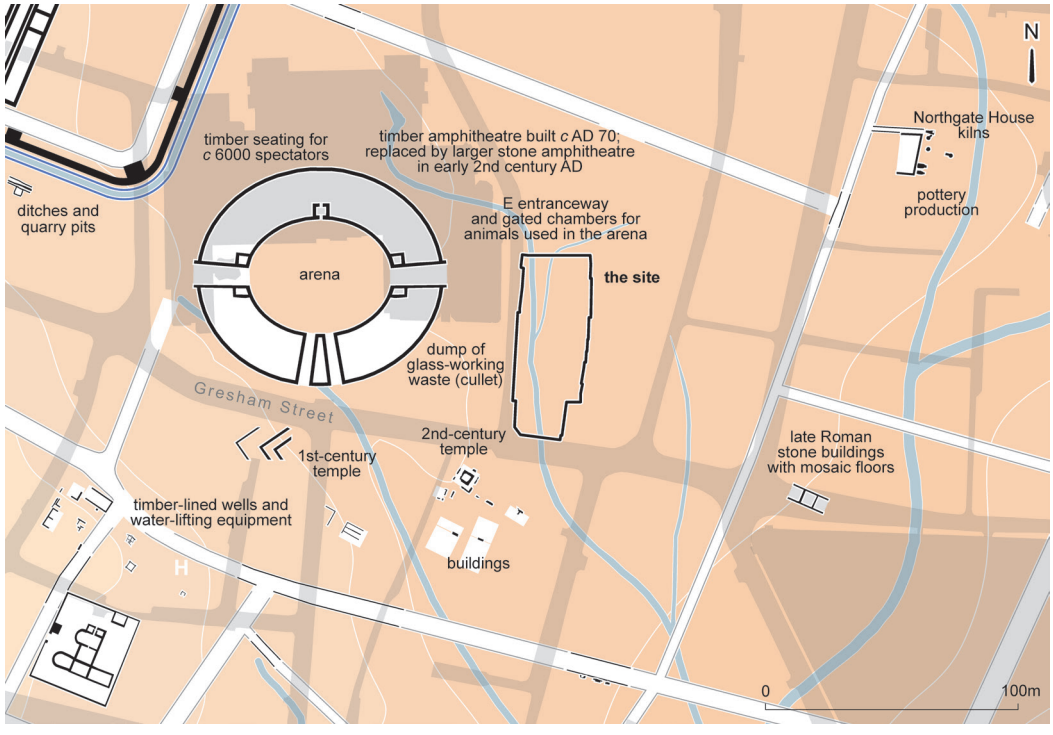

Fig 3. The site against the background of the Roman London map (after MOLA 2011). Roman features are shown in light tone. The modern streets and principal buildings are shown in grey (scale 1:3000)

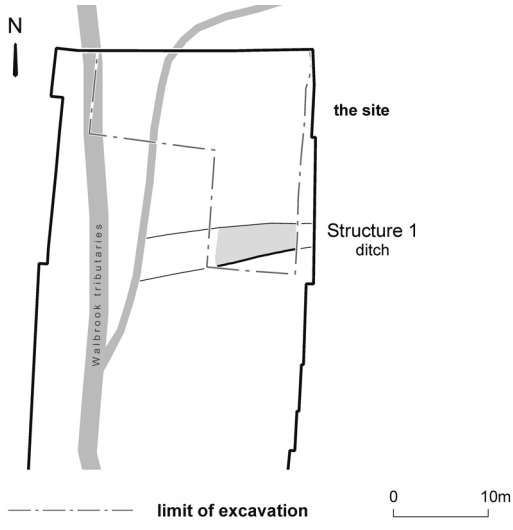

Fig 4. Structure 1 in relation to the Roman topography, and observed and conjectured Walbrook tributaries in the vicinity of the site (scale 1:800)

growth of shrubs and trees. Other plant evidence indicated that, as is often the case, there were a range of habitats within the ditch: wetland taxa such as water-plantain (*Alisma* sp) were present as well as those that prefer drier nitrogenous ground such as dock (*Rumex* sp).[2] The remains of food plants were, however, sparse. Given its stratigraphic position, Structure 1 probably dates to the last quarter of the 1st century AD. Its primary fill was submitted for radiocarbon dating, but the calibrated result of AD 80–240, did not help refine its date range (see Appendix 1, Table 1 for details).

Realignment of the ditch (Structure 2) and contemporary external activity (Open Area 2) (c.AD 100–120)

The sides of Structure 1 eroded and the channel clogged up with eroded gravel and other material with high magnetic susceptibility readings suggesting an admixture of industrial or organic waste.

A new ditch or channel, Structure 2, with a wooden drain set in its base was dug on a parallel alignment *c.*2m to the north (Figs 5 & 6). Although this was not a direct recut of Structure 1, it was presumably intended to drain the same water source towards the main Walbrook channel to the south-east. The drain would have been a buried feature and gravel dumps infilled the ditch cut to relevel the ground above it. The drain may, however, have been short-lived. The backfill of the ditch was cut by an alignment of cylindrical voids, probably substantial stakeholes associated with a degraded, U-shaped, wooden 'culvert', at least 1.80m wide (not illustrated). The fill, [404], of the culvert contained two heavily distorted sherds from a London mica-dusted ware (fine variant) (LOMIF) bowl, a vessel likely to be a waster or a second. It may have been manufactured at the Northgate kilns, which were in operation from *c.*AD 110 (Seeley & Drummond-Murray 2005) and lay only 130m to the north-east (Fig 3). However, LOMIF produced at earlier, unidentified London kilns does occur before *c.*AD 100. The fill also contained La Graufesenque (SAMLG) vessels.

Whilst the original timber drain had filled up with clean sand, the sample taken from the culvert contained wheat/rye (*Triticum* spp/*Secale cereale*) and oat (*Avena* sp) bran, both likely indicators of faecal waste.[3] A box drain carrying clean water was therefore replaced by a culvert carrying foul water and sewerage. Other food remains such as apple (*Malus* sp) pips, fig (*Ficus carica*) seed and plum/cherry (*Prunus* sp) stones were also very common, as were dill (*Anethum graveolens*) seeds, a typically Roman herb, which occurs very rarely prior to the Roman invasion.

The area to the east of the amphitheatre seems to have been characterised by an extensive and frequently altered system of drainage. Two more box drains, aligned east–west and following the line of an earlier natural stream channel, were excavated at 12–14 Masons Avenue (MAS78; Schofield 1987, 143), alongside the northern boundary to 93–95 Gresham Street.

Open Area 2, the part of the site to the north of Structure 2, was occupied by rubbish pits (Fig 5) and, in general, the pottery from the fills of these features suggests that they were in use in the late 1st–early 2nd century AD, perhaps partially to dispose of waste from the area surrounding the amphitheatre. There was no evidence of industrial waste and the assemblages within

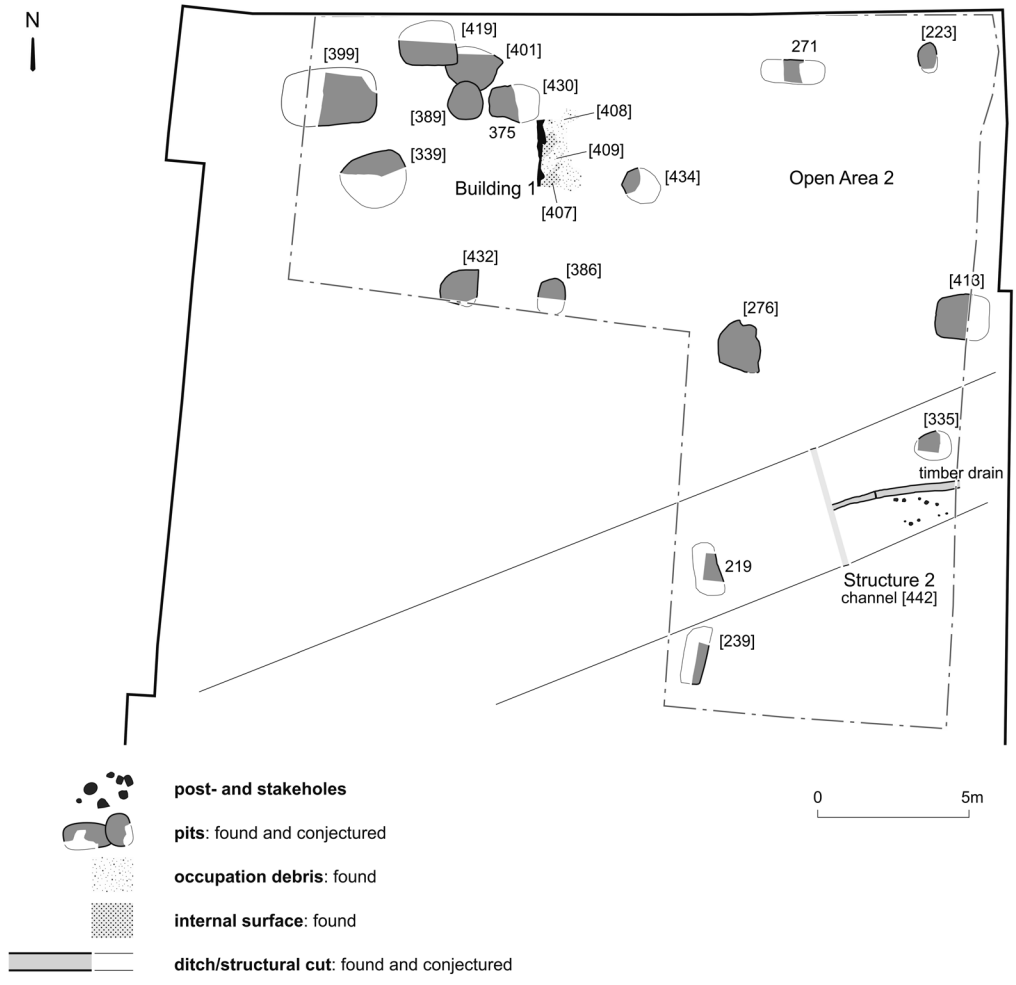

Fig 5. Early Roman features on the site dating to the late 1st and early 2nd centuries AD*: Structure 2, Building 1 and Open Area 2 (scale 1:250)*

them were not particularly high in objects domestic in origin. Pit [399] contained a distinctive graffito 'IVLIN' on a sherd from a La Graufesenque dish (SAMLG 5 <12>). However, other assemblages, such as that from pit [401], show the continued use of the open area into the 2nd century AD with sherds from several black-burnished ware vessels. A date of *c.*AD 120–160 is provided by a sherd of a black-burnished ware 1 flat-rimmed bowl with vertical wall (BB1 4G).

Two vessels from Open Area 2 have potential links to the amphitheatre. The first is a near-complete (albeit shattered) Les-Martres-de-Veyre samian Dragendorff form 37 bowl (SAMMV 4DR37; <P1>; Fig 14) from pit [432], which dates to *c.*AD 100–120 and carries hunting scenes. The second example, from pit [389], is provided by nine sherds from a well-preserved La Graufesenque samian Dragendorff 30 bowl (SAMLG 4DR30 <14>; <P2>; Fig 15) dating to AD 55–75. Parts of this same vessel were found in dumps immediately outside the amphitheatre eastern entrance. These items are further discussed in the Roman finds assemblage section (below).

Pit [432] also contained two bone needles (<S4> & <S5>; Fig 7), both broken at the base of the eye, part of a cylindrical glass

Fig 6. Structure 2 under excavation, showing the timber drain in the base of its cut, looking south-west

bottle, <66>, and an L-shaped tumbler lift key made of iron (<S7>; Fig 7), the only recognisable iron object of Roman date from the site. Eight small glass fragments from the concave base of a convex vessel, possibly a jug or flask, <61>, came from pit [335].

However, although these refuse pits (Open Area 2) are both contemporary with and only a few metres to the east of Open Area 5 on Guildhall Yard, the non-samian assemblages demonstrate no parallels. Pit [389] contained just three other sherds of pottery and the entire assemblage from GHB06 shows no sign of the concentration on London industries (particularly Northgate products) observed at Guildhall Yard.

Evidence of food plants was rare in environmental samples taken from pit [401] ({89}, {90}). Very low numbers of charred cereal grains were noted, many were too damaged for the species to be determined but some could be identified as types of wheat and a single rye grain. Blackberry/raspberry (*Rubus fruticosus/ idaeus*) seeds were observed, and small fragments of *Prunus*-type (plums, cherries *etc*) stones were noted in one sample. The wild species assemblages were likewise not particularly rich. Most taxa were present with fewer than five occurrences. Stinging nettle (*Urtica*) was relatively common in both samples and dead-nettle (*Lamium*) occurred in both. Rushes (*Juncus* sp) and sedge (*Carex* sp) were both common in one sample, while elder (*Sambucus nigra*) and fool's parsley (*Aethusa cynapium*) were present in another.

The disuse of Structure 2 (c.AD 120–160)

The disuse of the secondary, culvert phase of Structure 2 was marked by sand and gravel backfills. Pit [1121] (not illustrated), cutting through these deposits, contained an assemblage of 101 sherds dated to *c.*AD 85–110 by sherds from two La Graufesenque Dragendorff form 37 bowls (SAMLG4D R37). Dump [1126] over the backfilled culvert included a stamped La Graufesenque dish (SAMLG 5 <19>) and two fragments of an enamelled headstud brooch (<S2>; Fig 8), all of which date to the late 1st century AD.

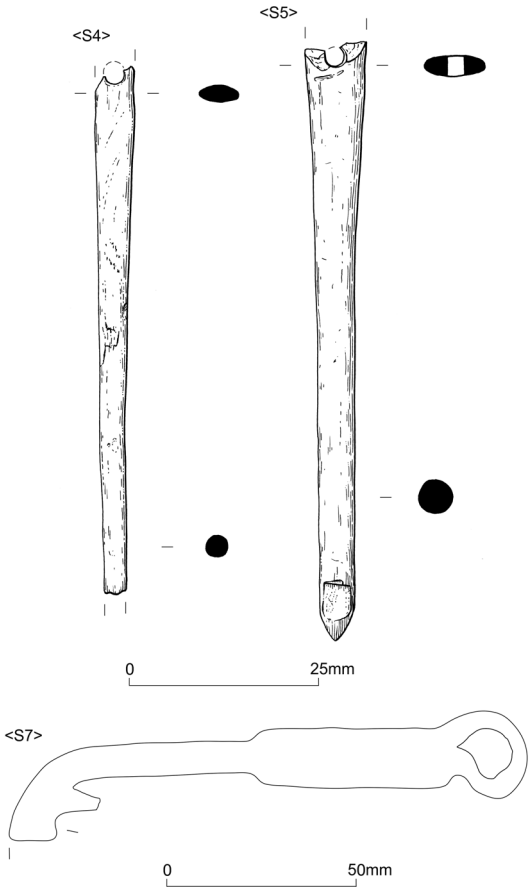

Fig 7. Domestic objects from Open Area 2: bone needles <S4> and <S5> (scale 1:1); and iron key <S7> (drawn from X-radiograph) (scale 1:2)

Roman clay and timber building (Building 1) (c.AD 120–160)

A small fragment of a clay and timber building (Building 1) was situated within Open Area 2 (Fig 5). The remains consisted of a north–south aligned brickearth wall base with brickearth floor slabs and patchy occupation evidence to its east (Fig 9). Remnants of plaster adhered to the west face of the brickearth wall, but the area to the west of the wall line was characterised by mixed dumps and may have been external. Only those parts of the building that had subsided over the fills of large pit [430] survived.

The fills of [430], and therefore the construction of the building, post-dated *c.*AD 120 and the medium-sized (38 sherds) pottery assemblage recovered from occupational debris [407] within it suggests that it was in use between this date and *c.*AD 160. The pottery, including sherds of black-burnished-style ware (BBS) and Verulamium region white ware (VRW), is typical of domestic refuse, with a high proportion of sherds from cooking or storage vessels, including a sherd from a black-burnished ware 2 jar with acute lattice decoration (BB2 2 AL) that has been heavily burnt. The only non-ceramic object associated with the occupation of this clay and timber building is a small fragment of square bottle <65>.

Building 1 was truncated by three pits dug through its floor surfaces (Open Area 3, not illustrated) and the similarity between the

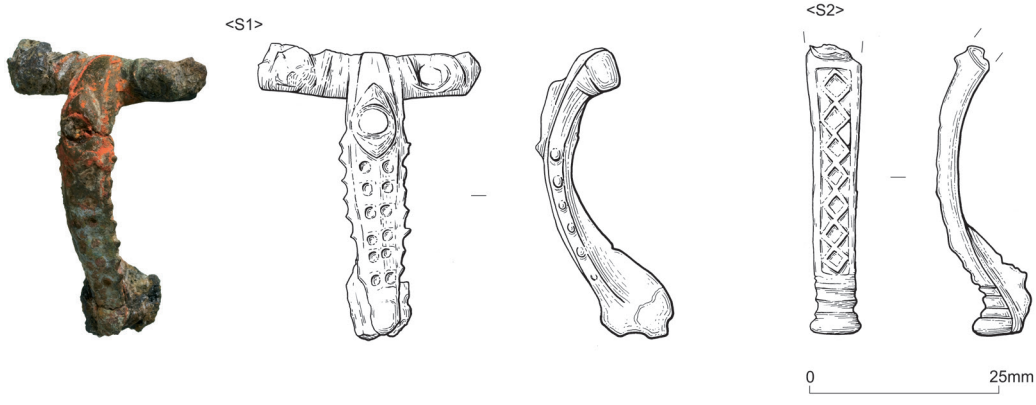

Fig 8. Late 1st-century AD copper-alloy headstud brooches <S1> and <S2> (<S1> was found as a residual item) (scale 1:1)

Fig 9. Building 1 during excavation, looking north-west

pottery recovered from Building 1 and these pits suggests that Building 1 was occupied for a short period of time during the early–mid 2nd century AD. A few fragments of wall plaster from one pit fill may have originated from Building 1. These are plain white, black, yellow and green in colour, suggesting a decorative scheme of at least limited sophistication. The fills of this pit contained organic refuse and a large assemblage of oyster shells. The majority of the pottery dated *c.*AD 120–160 from sherds of black-burnished-style ware (BBS) and Verulamium region white ware (VRW). A concentration of domestic refuse is evident, and a direct link was made with occupation debris from Building 1 from sherds of an Alice Holt/Surrey ware bead-rimmed jar with high shoulder (AHSU 2A12–13). Building 1 may represent a stall or shelter in the area adjacent to the arena.

Pits (Open Area 4) from the 2nd century AD (c.AD 120–170)

There was not a great deal of 2nd-century AD material on the site, probably because it lay within an open space around the amphitheatre used for access, crowd control and perhaps temporary stalls (Bateman *et al* 2008, 121). Two more pits were excavated through the backfilled Structure 2 channel dating to the middle and later 2nd century AD (Open Area 4, not illustrated). Both were large and circular in plan, with dark silty backfills, suggesting they had been used for refuse disposal. One had a decayed friable lining, possibly originally of timber. The fills of the two pits contained material of mixed date with residual Flavian material clearly present. However, rubbish disposal in these features continued through into the early to mid 2nd century AD. A medium-sized assemblage of 54 sherds dates to *c.*AD 120–140, based on the presence of central Gaulish samian (SAMCG) and a sherd of a London mica-dusted ware shallow simple dish (LOMI 5J). Also present was a small light brown tessera cut from a pot sherd. This was originally a Baetican amphora dated to AD 50–170. These pit fills were sampled for botanical evidence ({9}, {25}, {27}), with food remains present in all of the samples to

some degree. All samples contained charred cereal, oat grains being the most common grains noted. Barley (*Hordeum vulgare*) was also common in the samples, while free-threshing wheats (*Triticum aestivum/ turgidum/ durum*) were noted in very low numbers. Fruit remains were also noted in the assemblages from these samples in very low concentrations. Fig seeds were noted in one, while elder seeds were noted in all samples. However, as elder grows prolifically in many habitats and its seeds are very durable, its presence does not necessarily indicate its use by the inhabitants of the site. The charred assemblage from one pit fill contained many occurrences of arable weeds such as vetch (*Vicia* sp), stinking mayweed (*Anthemis cotula*) and plantain/ribwort (*Plantago/ P lanceolata*). This suggests that the charred material is the remains of a waste assemblage from a cereal crop, perhaps seeds picked out of an unclean crop before use.

Later Roman activity, *c.*AD 250–400 (period 3)

*Drainage ditches (Structure 3) (*c.*AD 250–400)*

There was no change in the character of Roman activity on the site after *c.*AD 250: there was a continued lack of evidence for buildings. Further attempts at drainage of the ground towards the Walbrook to the east were made, both on the site and on other sites in the immediate vicinity (Wroe-Brown in prep). A ditch was cut running north–south across the site (Structure 3; Fig 10). The curved line of this ditch presumably reflects the curve of the nearby amphitheatre which would have been a significant influence upon the local topography. The fills of this ditch consistently date to *c.*AD 250–400, primarily from sherds of Alice Holt/Farnham ware (AHFA) vessels. A direct link between one of the ditch fills and a context from Open Area 5 is present from sherds of a Much Hadham

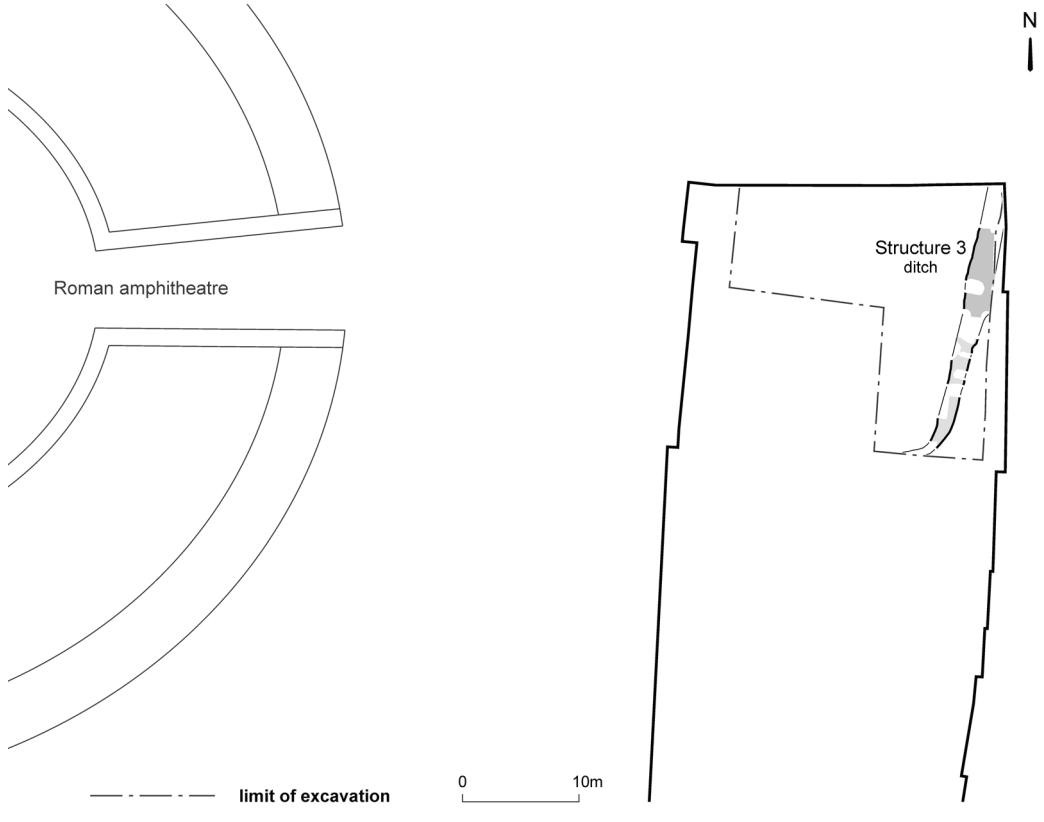

Fig 10. Structure 3, located in relation to the Roman amphitheatre to the west (scale 1:650)

oxidised ware jar with rouletted decoration (MHAD 2 ROD). A considerable amount of ceramic building material was also recovered from the ditch fill. Most is roofing tile and brick but three box-flue tiles are also present. Two flue tiles are combed whilst the other is scored with a blunt tool. The scored flue tile is of thin walled type (thickness 9–10mm) which Black (1996, 60–1) dates to the 1st century AD, whilst the combed tiles are probably 2nd century AD. At least one of the 1st- to mid 2nd-century AD *tegula* roofing tiles present was reused as paving as there are wear marks on the base. A few pieces of fine-grained laminated sandstone, possibly stone roofing, were also found. The ditch fill also produced small groups of cattle (*Bos taurus*) and horse (*Equus caballus*) bones. The cattle bones included single fragments of calf humerus and cattle radius and metacarpal (upper and lower fore-leg and fore-foot) with a single fragment of tibia (shin). The metacarpal showed exostoses (extra bony growth) and splaying at the distal ('wrist') articulation, pathological changes perhaps linked to use of the animal for draught work. The cattle remains included a substantial group of smashed long bone mid-shaft fragments. A horse femur showed evidence of canine gnawing.

Structure 3 was recut around AD 300. This last phase of recutting had very irregular sides and again there were no lining timbers. The fills of the recut of the ditch dated to AD 300–400 on the presence of sherds of Roman late 'calcite-tempered' ware jars (CALC 2). Both contexts also contained Oxfordshire wares, a common feature of 4th-century AD assemblages. In terms of other finds, this ditch contained only a little material, unidentifiable vessel glass fragments and the straight tapering shaft from a bone hairpin, <73> [317], which is likely to date before AD 200.

Late Roman pits (Open Area 5) (c.AD 250–400)

Also dating to the later Roman period was a series of pits (Open Area 5, not illustrated), one of which was cut through the backfilled Structure 3 drainage ditch, providing evidence for the disuse of this feature. A large assemblage of 107 sherds from this pit contains the latest material of this land-use phase. A sherd of Portchester ware D (PORD)

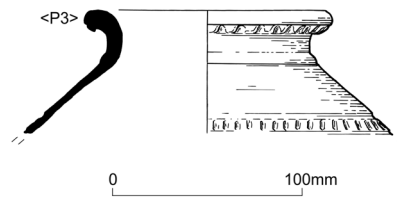

Fig 11. Much Hadham oxidised ware jar with rouletted decoration <P3> (scale 1:4)

gives an overall date of *c.*AD 350–400 for the group, alongside a range of other classic late Roman fabrics including Alice Holt/Farnham ware (AHFA), Nene valley colour-coated ware (NVCC) and several Oxfordshire variants. An unusual find is a large section of a Much Hadham oxidised ware jar with rouletted decoration (MHAD 2 ROD; <P3>; Fig 11). Products of this industry are a comparatively rare find in the City of London (probably due to the poor survival of late Roman assemblages), so the good preservation of this vessel makes it an important find.

The vast majority of the fills of the other Open Area 5 pits are dated to *c.*AD 250–400 or *c.*AD 270–400 on sherds from Alice Holt/Farnham ware (AHFA) or Oxfordshire red/brown colour-coated ware (OXRC) vessels respectively. A large quantity of building material was found dumped in the pits. Most was ceramic roofing tile and brick, but there was also a combed box-flue and part of what appears to be a tapered voussoir. A small amount of tesserae was also present. There was also a small quantity of what appears to be late Roman roofing tile cut from fine-gained laminated sandstone. This stone type was also used as paving.

Only a few non-ceramic finds came from Open Area 5 and many are obviously residual, disturbed from the earlier ditch fills through which the pits were cut. Individual pits contained very small quantities of glass, mostly one or two fragments and it all dates from the late 1st or 2nd century AD, with both colourless and naturally coloured glass present. The latter includes two bottle fragments, one, <S6> (Fig 12), the intact rim and neck from a cylindrical or square bottle with one handle. The glass would all have been for household use originally, but it might be connected with the nearby 2nd-

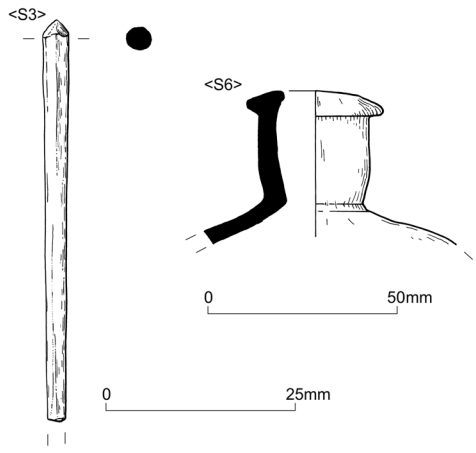

Fig 12. Finds from Open Area 5: bone hairpin <S3> (scale 1:1) and glass bottle <S6> (scale 1:2)

century AD cullet dumps found at Guildhall Yard (discussed later). Other finds, however, are securely personal: a broken hexagonal green glass bead, <50> [211], imitating the vastly more expensive emerald; and two broken bone hairpins, <S3> (Fig 12), with a simple conical head, is a very common form of the late 1st/2nd century AD; while the broken but swelling shaft of <74> [329] suggests that it post-dates AD 200. A coin, <25> [329], dates from the late 3rd century AD (Gallic Empire), but other metalwork, including a possible late 4th-century AD coin, <27>, is unidentifiable.

A significant late Roman artefact, found as a residual item in a Saxo-Norman context in Open Area 6 (see period 4 below), was a coin, <C1> (Fig 13), of Aelia Flaccilla, the Spanish-born first wife of Theodosius I,

Fig 13. Copper-alloy coin <C1> of Aelia Flaccilla (AD 379–385/386) (scale 2:1)

empress from Theodosius's accession in AD 379 until her death in AD 385/6 and mother of his sons Arcadius and Honorius. This is not just the first of its kind from London, but a great rarity for Britain (see Appendix 2).

This particular type, *Salus Reipublicae* Type 3 as defined in *LRBC* (1978, ii, 84), was only issued at eastern mints, Antioch, Constantinople, Cyzicus, Heraclea, Nicomedia (all in modern-day Turkey), Siscia (in modern-day Croatia) and Thessalonica (in Greece), in both large and small sizes (AE2: *c.*21–25mm; & AE4, up to *c.*15mm). There are no recorded letters or symbols in the field for the AE4 size, but traces of letters in the exergue appear to include an M which would indicate (SMHA) Heraclea, or (SMNA) Nicomedia.

All the botanical samples taken from these pits contained some evidence of food plant remains and significant wild seed assemblages. Free-threshing wheats (*Triticum aestivum/turgidum/durum*) were the most commonly identified cereal grains, and rye (*Secale cereale*), barley (*Hordeum vulgare*) and oats (*Avena* sp) were all also present, though in lower quantities. Also present in the charred assemblage from one sample were a variety of plant remains of grassy or arable environments such as fat hen (*Chenopodium album*), corn cockle (*Agrostemma githago*) and stinking mayweed (*Anthemis cotula*). High levels of hazelnut (*Corylus avellana*) shell in one sample and a single charred apple (*Malus* sp) pip from another were the other charred food plants recorded in the samples. Little evidence of food remains was noted, though one sample had quite high levels of blackberry (*Rubus fruticosus*) or raspberry (*R idaeus*) seeds as well as fig (*Ficus carica*) seeds. Two samples also contained very low numbers of fig seeds. One pit differed significantly in its wild species assemblage in that it contained higher concentrations and a greater range of wetland species, including water-plantain (*Alisma* sp), rush (*Juncus* sp) and spike-rush (*Eleocharis* sp). It also contained significant numbers of a wide variety of waterlogged arable/grassy-type taxa such as corn cockle, fat hen (*Chenopodium album)* and red/glaucous goosefoot (*C rubrum/glaucum*). This was not the pit that cut into the backfilled channel, however, although it is possible that this assemblage

reflects the wider environment in the area at this time. The charred assemblage from one sample is perhaps indicative of an unclean crop, with grasses and crop weeds outnumbering the cereal grains present. It is possible that this assemblage may represent thatch, or perhaps hay for fodder, that has been burned and then deposited in a rubbish pit.

Pit fills from Open Area 5 produced large animal bone groups distinctive in their faunal and skeletal composition and in the butchery techniques applied to the numerically dominant component, cattle long bones. Fragments of cattle radius and tibia (lower fore- & hind leg) showed evidence of butchery including disarticulation, midline splitting and transverse 'smashing' chops which effectively reduced the bone to fragments smaller than that required for joint preparation. Fragments of mandible, upper and lower fore- and hindlimb and fore- and hind foot from another pit fill showed similar evidence of butchery and subsequent smashing into fragments. This effect was particularly common on mandible, tibia (shin) and metacarpal and metatarsal (fore- & hind foot) and may be due to the removal of bone marrow for consumption.

Aspects of the Roman finds assemblage

Joanna Bird, Amy Thorp and Angela Wardle

The decorated samian

A key aim of research into the pottery from the site was to identify any links between the imagery on decorated samian vessels present. The Guildhall Yard excavations highlighted 17 decorated vessels (from a total of 324) showing gladiators and other scenes from the arena (Bird 2008, 135). Eight of these, including several near-complete vessels, were found in a cluster deposited over a short period in the mid–late Trajanic within levelling dumps outside and immediately south of the amphitheatre's eastern entranceway (Bateman *et al* 2008, 31). Explanations for the composition of this pottery group include the remains of feasting, other ceremonies associated with the amphitheatre, or alternatively a military influence from the nearby fort (Richardson 2008, 134). A similar assemblage was found at GSJ06 (immediately to the south of the site) and again a link to the amphitheatre has been suggested (Wroe-Brown in prep).

The decorated samian from the site comes from period 2 or as residual items in period 3. They comprise sherds from 16 bowls, with 11 originating from the potteries at La Graufesenque and five from Les Martres-de-Veyre, which range in date from the late Neronian period to the early Hadrianic and so, like the Guildhall Yard examples, are contemporary with use of the timber phase of the amphitheatre. Analysis has highlighted the presence of arena or hunting scenes on at least six of the bowls. Aside from the two bowls illustrated (Figs 14 & 15), the sherds are relatively small.

The first illustrated example is the near-complete Les-Martres-de-Veyre samian Dragendorff form 37 bowl (SAMMV 4DR37;

Fig 14. Les Martres-de-Veyre samian Dr37 bowl <P1> (scale 1:2)

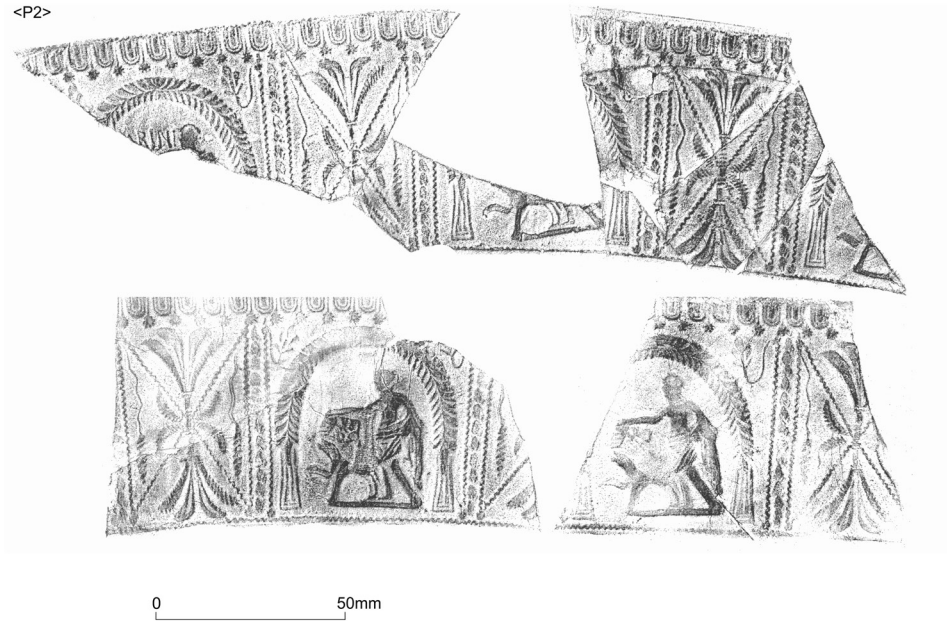

Fig 15. La Graufesenque samian Dr30 bowl <P2> (scale 1:2)

<P1>; Fig 14), which dates to *c.*AD 100–120. Hunting scenes on this vessel include the goddess Diana, who appears on African mosaics as patroness of the arena hunts (Dunbabin 1978, pls 22, 53, & 23, 56). The hero Hercules was also closely connected with the arena (Wiedemann 1996, 178–9) and he is shown in another panel of <P1>. The sherds of this vessel add up to at least three-quarters of the bowl, and it may still have been in one piece when deposited. The presence of a bowl with several apotropaic images (Hercules, Abundantia & the hunting scenes) may indicate a votive element in its deposition in the pit.

A second example is a well-preserved La Graufesenque samian Dragendorff 30 bowl (SAMLG 4DR30 <14>; <P2>; Fig 15). The hunting scene on this vessel is of particular interest, partly because it adds a new figure type to the maker's repertoire, but also because it joins sherds found on the amphitheatre site (Bird 2008, fig 129, RP171). The Guildhall Yard section of the vessel was found within the cluster of vessels noted above. The joining section of the Dragendorff form 30 from the site provides a further nine sherds, including one showing part of the mould signature of SABINUS III dating to *c.*AD 55–75.

The proximity of the amphitheatre may account for the occurrence of such imagery, though with such a small sample this should not be over-emphasised. Despite the differences in the assemblages the joining sections of the vessel are an unusual find. The decorated samian from 54–66 Gresham Street (GSJ06) consists of a total assemblage of 101 decorated bowls (predominantly La Graufesenque products), but only four show specific arena or hunting scenes (Featherby in prep).

The non-ceramic finds

The small non-ceramic Roman finds assemblage consists primarily of personal and domestic artefacts which date from the 1st and 2nd century AD, with a few later coins. Many of these are residual in later contexts and appear to have been disturbed during post-Roman activity. The range of material, as on several of the sites in the immediate vicinity, has been restricted due to the poor survival of metalwork, but it bears broad comparison with 54–66 Gresham Street to the south

(Wardle in prep) and to the far larger assemblage from the amphitheatre site to the west (Wardle 2008). The general pattern of dumping and the relative paucity of finds suggest that the sites lay on the fringes of a marginal area. There is a similarly small range of personal artefacts of this type from 54–66 Gresham Street and the amphitheatre, where although the overall assemblage was far larger, with 364 objects of Roman date, there were very few brooches. Casual loss of personal artefacts might be expected in the area of a public building where crowds would gather, but examination of the Guildhall assemblage in its entirety (*ibid*, 191–4) led to the conclusion that much was deposited as domestic rubbish. All the Roman glass fragments are of 1st- or 2nd-century AD date and are distributed throughout the sequence. Although the site is close to the area where a large dump of cullet and glass-working waste was discovered (Bateman *et al* 2008, 42; Perez-Sala & Shepherd 2008, 142), this appears to represent casual loss, the small quantities perhaps due to the presence of recycling facilities (cullet collectors) in the local area. The glass assemblage at 54–66 Gresham Street, although of similar size, contained far more identifiable forms, with a greater date range and some vessels of quality (Wardle in prep), the contrast with 93–95 Gresham Street perhaps emphasising the increasingly marginal character of the area as one approached the amphitheatre to the north.

Late Saxon and Saxo-Norman activity on the site, *c.*AD 950–1150 (period 4)

The Roman city was apparently abandoned by the early 5th century AD, but by *c.*AD 650 a new Saxon trading settlement (*Lundenwic*) was developing further west along the Strand. Soon after *c.*AD 880 *Lundenwic* was abandoned and the derelict Roman walled city, which already contained St Paul's Cathedral (established AD 604) was extensively reoccupied (Bowsher *et al* 2007, i, 11). However, evidence for activity within the vicinity of the Roman amphitheatre before *c.*AD 1050 is, apart from an isolated 10th-century, sunken-featured building at Guildhall Yard (GYE92), conspicuous by its absence: this contrasts with the dispersed pattern of early 11th-century buildings found south of Gresham Street (Bowsher *et al* 2007, ii, 300).

From the mid 11th century, however, the area around Guildhall and Cheapside developed rapidly as a commercial and retail district. It became the home of London's Jewish community, who first arrived soon after the Norman Conquest and resided locally until their expulsion from England in 1290 (Blair *et al* 2001, 127–9). In the 1120s, the Guildhall was built (on the north side of the Roman amphitheatre) (Bowsher *et al* 2007, ii, 301); it was reconstructed in essentially its present form in 1411–30.

The present road system was in existence by the early 12th century. It skirted around the upstanding remains of the amphitheatre, with Basinghall to the east, Cat (Gresham) Street to the south and Aldermanbury to the west, reflecting the curve of the Roman banks (Bowsher *et al* 2007, ii, 297).

*Pitting (Open Area 6) (*c.*AD 950–1150)*

The excavated evidence from adjacent sites suggests that the line of modern Gresham Street represents the approximate northern boundary of late Saxon London and that occupation to its north was extremely sparse until after *c.*1050 (Bowsher *et al* 2007, ii, 300–1). After this date, occupation both became denser to the south of Gresham Street and began to encroach further north.

Three sunken-floored buildings and a hearth, possibly industrial, dating to the second half of the 11th century were excavated nearby at 52–66 Gresham Street (GSJ06; immediately opposite 93–95 Gresham Street, on the south side of the road: Wroe-Brown in prep). However, at 93–95 Gresham Street later truncation meant that the only features that survived from Period 4 were the basal portion of four possibly five pits (Figs 16 & 17). Several pits possessed decayed wattle linings and some of their fills were very high in organic content. Their original function was presumably the disposal of cess and/or refuse; their linings enabled them to be emptied and reused repeatedly.

There was some residual Roman material within these pit fills. An almost complete, late 1st-century AD headstud brooch, <S1> (Fig 8), came from pit [325]. Coins dating

Fig 16. Pit [207] in Open Area 6 showing stake-holes retaining original wattle lining

to the 1st century AD (<20>, from a posthole in the base of pit [172]), the late 3rd century (<21> pit [213]; <23> pit [277]) and, most noteworthy, the coin of Aelia Flaccilla, noted in period 3 above (<C1>; Fig 13), from pit [246] (Appendix 2). Miscellaneous fragments of Roman vessel glass and the shaft of Roman hairpin <71> were also present.

Late Saxon pits (*c.*AD 970–1050)

The criterion used to define pre-Conquest activity on the site was the presence in contexts of Late Saxon shelly ware (LSS: 34 sherds from ten vessels) either alone or together with early medieval sandy wares (EMS: 31 sherds from 21 vessels) and/or early medieval sand- and shell-tempered ware (EMSS: 60 sherds from 27 vessels). From the late 9th century AD, Late Saxon shelly ware (LSS) – a well-made, wheel-finished, shell-tempered fabric thought to be produced at sites outside London – held a virtual monopoly over everyday pottery used in the City for about a hundred years, and it is not until between AD 970 and 1000 that other handmade pottery begins to appear in excavated contexts (specifically EMS: see Vince 1985, 30–1). Ceramic products were limited, as wood was preferred for most other tablewares, and only jar forms were present on the site.

On this basis, four pits ([207], [296], [349], [387]) in Open Area 6 are likely to pre-date AD 1050 (Fig 17). The pits generally contained domestic refuse including pottery and animal bones. Pit [207] contained the near-profile of a Late Saxon shelly ware (LSS) jar (<P4>; Fig 18), with the joining sherds from a dish (<P5>; Fig 18), providing one of the few variations to the versatile jar otherwise found in the period 4 deposits.

The distribution of these cess and rubbish pits suggests that there was not a great deal of roadside development along this section of Basinghall Street during this period as several of them were located relatively close to the street frontage (Fig 17).

Saxo-Norman pits (*c.*1050–1150)

Activity consisted of a number of truncated cess and rubbish pits, which were mainly oval or rectangular in shape (Fig 19). There was a marked increase in pottery dated *c.*1050/80–1150, with the Saxo-Norman wares from Open Area 6 dominated by locally and regionally produced handmade coarse wares, predominantly early Surrey ware (ESUR: 75 sherds from 37 vessels) and London-area grey ware (LOGR: 114 sherds from 41 vessels) made at the same time in the same range of forms. London-area grey ware (LOGR) and ESUR gained an important foothold in London just prior to the Norman Conquest. Their popularity during this period was also noted at the nearby Guildhall Yard excavations (Pearce 2007, 438) and elsewhere on Gresham Street (L Blackmore in Wroe-Brown in prep). Whilst LOGR and ESUR are principally identified as utilitarian and multi-functional jars, the small quantities of Continental imports, notably wheel-thrown Andenne-type ware (ANDE) spouted pitchers (just three vessels) from northern France and Rhenish red-painted ware beakers (REDP: five vessels), represent technically superior pottery made

Fig 17. Pits in Open Area 6 dating to c.*AD 1000–1050 (scale 1:250)*

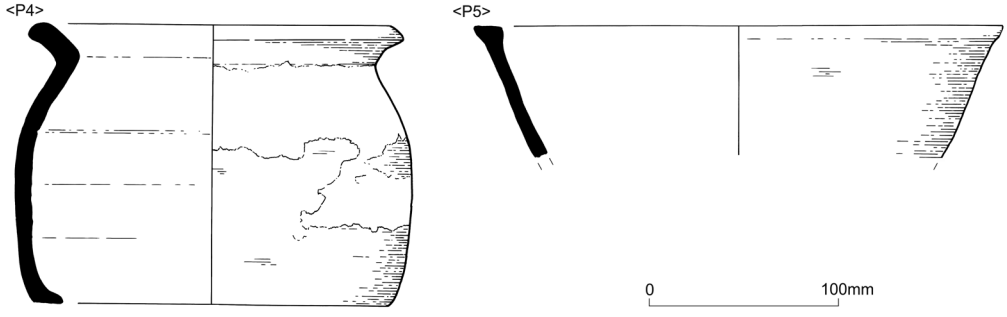

Fig 18. Late Saxon shelly ware jar <P4> and dish <P5> from pit fill [206] (scale 1:4)

in drinking forms infrequent to local pottery production. Nevertheless, the paucity of imported pottery here is mirrored elsewhere in Saxo-Norman dated contexts from sites in 81–87 Gresham Street (GHT00: Watson in prep) and (with the exception of ANDE from a number of ditches) Guildhall Yard (Bowsher *et al* 2007, i, 24–5, 28–9).

Fig 19. Pits in Open Area 6 dating to c.*1050–1150 (scale 1:250)*

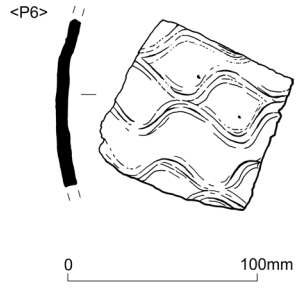

Fig 20. London-area grey ware spouted pitcher with incised wavy decoration applied to the body <P6>, from pit fill [1102] (pit [1101]) (scale 1:4)

The absence of wheel-thrown jugs made by the London-type ware (LOND) industry among the pottery within seven pits could indicate that these features ([172], [181], [266], [304], [359], [370], [1101]) were filled in the decades either side of the Norman Conquest. The small quantities of fragmented pottery that were present were dominated, like most pottery groups from this period, by locally and regionally made fabrics such as ESUR, EMSS and LOGR (the last including <P6>; Fig 20). Pit [304] also contained a pig (*Sus scrofa*) metatarsal (hind foot) which showed fine knife cuts on the mid-shaft, probable evidence for skinning. Pit [266] may have been used as a quarry: it had a sterile gravelly fill within which the pottery was poorly preserved. It was cut by [172] which contained part of a horseshoe, <77>.

However, whilst the pottery from the fill of pit [246], which also included fragments of REDP beakers or pitchers, would also suggest a date close to the Norman Conquest, the presence of fragments from the instep area of a turn-shoe, with edge/flesh margin stitch holes for attachment to the upper, means that this material must have been deposited in the 12th century.

The introduction of the potter's wheel and glazing brought something of a ceramic revolution in London at the end of the 11th century, which is reflected in the presence of London-type ware (LOND) in a number of features. This industry, now known to have been located around Thameside Woolwich, was one of the major suppliers of different shaped and sized jugs to the capital for nearly three hundred years. However, the remaining post-Conquest land use in period 4 is principally characterised by the occurrence of both its fine (LOND) and earlier-dated (post *c.*1080), coarser variant (LCOAR), together with the usual range of handmade coarse wares (ESUR, LOGR), with jugs and jars now present in about equal quantities.

The rapid popularisation of jugs in the late 11th century also suggests that London's market for ceramics was changing. For example, pit [1120] contained a London-type ware 'early style' (Pearce *et al* 1985, 27–8) jug decorated with vertical white-slipped strips and arcs together with four ESUR jars. The sooted and burnt nature of the jars demonstrates their frequent use for heating liquids and other food stuffs. In the case of further pits, [213], [325] and [350], also in period 4, the dating of their latest fills (*c.*1170–1200; *c.*1140–1200; *c.*1140–1200 respectively) suggests continued use into period 5.

Two cloth production items belonging to this period were found as residual objects in later pits. A complete lathe-turned spindle whorl, <S8> (Fig 21; see Appendix 3), made of calcitic fine-grained mudstone, from pit [213], is very similar to those found on other London sites including *Lundenwic* and further afield, especially York (Pritchard 1991, 165; Walton Rogers 1997, 1736–41; Goffin 2003a, 203). Pritchard (1991, 165) notes that while the diameter of the central hole, which held the spindle, is quite consistent, the size and weight of the whorls vary considerably, allowing the spinning of different grades of yarn. Despite widespread distribution of these objects the source of the stone has not been identified, but is likely to be in south-west Britain (Goffin 2003a, 204). As Goffin notes (2003a, 203), spindle whorls were essentially personal possessions, while loom weights as were used in multiples on large warp-weighted looms to tension the warp threads were probably not. A single, broken annular Saxon loom weight, <S9> (Fig 21), was recovered from pit [325] (Goffin 2003b).

Pit [213] also produced a contemporary find, a fragment of well-worn medieval hone made from grey mica schist, <S10> (Fig 21), a material used frequently for such objects at this time (Pritchard 1991, 155). Whilst there were more fragments of iron in the Open Area 6 pits than in any other features on the site, the only recognisable object was a pierced strap, <81>, from pit [350].

One concentration of jars was found in the fills of pit [277], a feature apparently used for the disposal of household waste and whose upper fills, [217], post-date *c.*1140. The better-preserved condition of the 19 vessels (by Estimated Number of Vessels (ENV); 97 sherds; 2343g) indicates that the fills were derived from a series of closely related domestic waste disposal episodes. A large proportion of the assemblage was supplied by one smashed early medieval sand- and shell-tempered ware (EMSS) jar with the large joining sherds of up to six LOGR jars also thrown away. Two LCOAR early rounded jugs were employed for the fetching and carrying of various beverages, notably wine, milk and water. This pit also produced a moderately sized group of animal bone composed mainly of cattle with a much smaller component of sheep/goat (*Ovis aries/Capra hircus*) and occasional recovery of chicken (*Gallus gallus*), pig, horse and dog (*Canis familiaris*). The cattle bones were derived largely from adult and juvenile mandibles and to a lesser extent, fore- and hind feet with occasional examples of upper and lower fore- and hind foot. A femur (thigh bone) showed eburnation (bone erosion and polishing) of the caput (hip joint) possibly due to the use of the animal for traction. An innominate (pelvis) showed severe canine gnawing.

The largely fragmented character of the

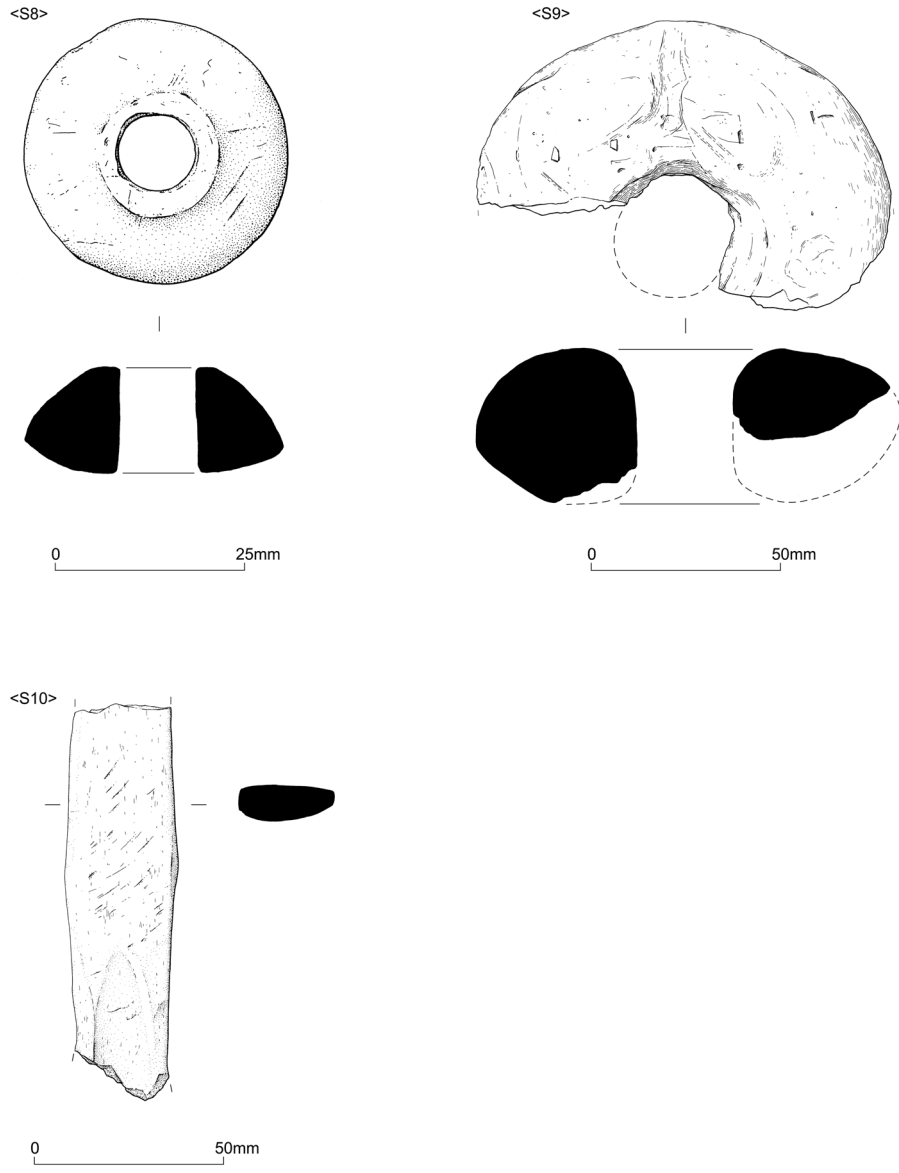

Fig 21. Finds from Open Area 6: lathe-turned spindle whorl <S8> (scale 1:1); circular loom weight <S9> (scale 1:2); and mica schist hone <S10> (scale 1:2)

Open Area 6 pottery suggests that the later pit fills represent the accumulated debris from the routine cleaning of yard and floor surfaces. Their distribution suggests that they were located in the backyards of properties fronting on to Basinghall Street (Fig 19). This distribution contrasts with that of the earlier Open Area 6 pits (Fig 17). In general terms, these contexts produced a large animal bone group derived mainly from cattle and sheep/goat with a much smaller group of pig and occasional recovery of horse and poultry. A fragment of cattle innominate (pelvis) from pit [1131], dated to *c.*1080–1140, showed eburnation (bone erosion and polishing) of the acetabulum (hip socket) possibly due to use of the animal for traction. A tibia (shin) showed evidence of butchery and

subsequent smashing into fragments. Two sheep skulls showed tool marks on the horn cores associated with removal of the horn sheath; one had been chopped transversely at the base, another at mid-length.

Dump [1117], in the extreme north-east of the site (over pit [266]), contained a goat skull and two detached horn cores showed transverse chops at the horn core base, probably preliminary preparation for removal of the horn sheath for use as raw material for further manufacture. A cattle humerus (upper fore-leg) calcaneum (heel) showed moderate and severe canine gnawing. Wild species were represented only by a fragment of bird metacarpal (wing), probably of a gull (Laridae), perhaps chance recovery of a local scavenger.

Environmental samples were taken from pits [213] ({16}, {23}), [277] ({31}), [296] ({63}), [325] ({58}) and [1131] ({6}). All were found to contain high concentrations of wood charcoal and all but one also contained charred cereal grains. Barley (*Hordeum vulgare*) and oat (*Avena* sp) were the most common species of cereal grains present, though some free-threshing wheats (*Triticum aestivum/turgidum/durum*) were also present. Charred crop weeds were also present in the assemblage with corn cockle (*Agrostemma githago*), goosefoots (*Chenopodium* spp) and bedstraws (*Galium* sp) generally associated with arable farming.

Food plants noted in the assemblages included blackberry/raspberry (*Rubus fruticosus/idaeus*) seeds, grape (*Vitis vinifera*) pips and cherry or plum (*Prunus* sp) stones. Apple or pear (*Malus/Pyrus* sp) pips were also noted, along with apple or crab apple (*Malus sylvestris*) endocarp (that is, tissues from the core of the fruit). Abundant seeds of fig (*Ficus carica*) were noted and another sample also contained low quantities of mulberry (*Morus nigra*) seeds. Charred walnut (*Juglans regia*) shell was also recovered, as well as sloe (*Prunus spinosa*) stones. Shells of hazelnuts (*Corylus avellana*) were also noted. The wild species assemblage from these samples was dominated by grassy and wetland-type plants. Of the wetland types, crowfoots were particularly common. Non-food plant remains were dominated by sedge (*Carex* sp) and rush (*Juncus* sp) propagules; both species are typical of wet environments.

Medieval activity, *c.*1150–1300 (period 5)

The medieval features excavated on the site were mainly truncated pits, although deep, masonry foundations, complemented by the fairly large assemblage of early ceramic roofing tiles, provide evidence for building activity on or near the site, confirming that the area was becoming increasingly built-up. By this period the prime street frontages of the City of London like Basinghall Street were lined with timber-framed buildings several storeys high, which were founded on substantial masonry foundations and often stone-lined cellars. From the late 12th century onward ceramic roof tiles were widely used (Schofield *et al* 1990, 161–71). The areas to the rear of these buildings were often yards or open spaces where waste pits and wells were dug. The site was situated in the parish of St Michael Bassishaw. It is believed that St Michael's church was established during the early 12th century (Bowsher *et al* 2007, i, 122).

Pitting (Open Area 7) (c.1150–1300)

Open Area 7 (Fig 22) was characterised by cess and rubbish pits. Few of these pits were intercut implying that they were carefully sited. Many of these pits were wattle-lined to facilitate their scouring out and reuse. The contents of the pits were generally similar to the earlier examples, but their organic primary fills were best preserved where the features had been excavated through the Roman channels and drains. Several had interleaving fills and, in some cases, alternate layers of waste and straw, presumably added to prevent smells rising from the waste and/or cess. The fragmented and often chronologically mixed nature of the small quantities of medieval pottery from these fills suggests, once again, that, with the exception of those in two pits discussed in detail below, they accumulated slowly and incrementally and consisted of material, including kitchen waste, derived from periodic household/yard cleaning episodes. For example, botanical analysis of samples (which were taken from [195]: {10}, {11}; [210]: {29}; [261]: {40}; [280]: {61}; [353]: {70}, {72}) found a mix of food waste and waterlogged seeds of other plants, such as

Fig 22. Open Area 7 pits, including barrel well [312] and late 13th-century clearance pit [197] (scale 1:250)

fat hen (*Chenopodium album*), opium poppy (*Papaver somniferum*), dead-nettle (*Lamium*) and white horehound (*Marrubium vulgare*). These latter, taxa that prefer arable or grassy/meadow-type habitats, may represent weeds growing nearby. Alternatively, some of the wild species may also have been included in the deposits as waste from animal fodder, thatch or thresh being used locally.

The richer samples all contained a variety of food plants with blackberry/raspberry (*Rubus fruticosus/idaeus*) being the most numerous. Charred cereal grains occurred in all of the samples, although the grains were generally very badly abraded and thus most could not be identified to type or species and so have been recorded as 'indeterminate cereal'. The most numerous of the identifiable species were oat (*Avena* sp) grains, with rye (*Secale cereale*), barley (*Hordeum vulgare*) and free-threshing wheat (*Triticum aestivum/turgidum/durum)* all present in small quantities. Further evidence of cereal consumption was present in one sample where fragments of wheat or rye bran were noted. All four of these cereals were grown in the London region in the medieval period with wheat being the most important and widely grown crop (Campbell *et al* 1993, 24, 38). In the medieval period around London, wheat and rye were both grown separately and sometimes together as *maslin* while barley and oat were cultivated both as separate crops and together as *dredge*. Other than blackberry/raspberry, other fruit remains such as plums and cherry (*Prunus* sp) stones and apple (*Malus* sp) pips were also relatively common. Fig (*Ficus* sp) seeds were noted in several of the samples.

These remains are characteristic of wet food waste or cess rather than more general domestic refuse. The associated animal bones were largely derived from cattle, with single examples of goose (*Anser anser*) tibia (drumstick) and sheep/goat rib and calcaneum (heel). The cattle bone included smashed fragments of unidentifiable long bone mid-shafts with two fragments of tibia

(shin) and single examples of cervical (neck) and caudal (tail) vertebra, humerus (upper fore-leg) and metatarsal (hind foot).

Residual Roman artefacts – such as a mid 4th-century AD coin, <26> – and Saxo-Norman pottery (the handmade coarse ware fabrics such as LOGR, ESUR *etc* that dominate period 4) were frequently present. Only a small amount of the pottery was contemporary with the use of these pits. For example, pit [353] was dated to *c.*1150–1200 by a sherd of developed Stamford-type ware (DEVS); the remaining pottery was residual. Similarly, in pit [210], of the 23 vessels (by Estimated Vessel Equivalent or EVE) discarded here, just four fragmented coarse London-type ware (LCOAR) rounded jugs and two shelly-sandy ware jars (SSW) can be dated to the 12th century.

One pit, [269], however, did not contain significant quantities of residual pottery. This pit contained ten pottery vessels (by EVE) dated to the late 12th century and consisting of London-type ware (LOND) jugs and wheel-thrown jars made by the south Hertfordshire grey ware and shelly-sandy ware (SSW) industries. These last two sources dominated the supply of jars into London for over a century until they were supplanted by the products of the Surrey white ware industry. The two LOND baluster jugs are decorated in the north French and Rouen styles (LOND NFR & LOND ROU respectively) and so mimic better-made contemporary French pottery.

Medieval brown- and green-glazed ceramic roof tile, including examples of flanged, shouldered peg and curved tile (fabric 2273), were also present in the pit fills. The flanged and curved roofing tile system was probably first used in London in the 1120s with shouldered peg tiles following a decade or so later (Betts 2007, 430). A number of peg tiles of late 12th- to 13th-century date were also present (fabric 2271, 2273, 2586, 2587). Peg tiles gradually replaced the earlier roofing tile types in the early 13th century. All these roofing tile types were probably made at tileries situated in or near to London. One shouldered peg tile has a surviving upper breadth of 152mm and there are the remains of a corroded iron nail in the central 9mm

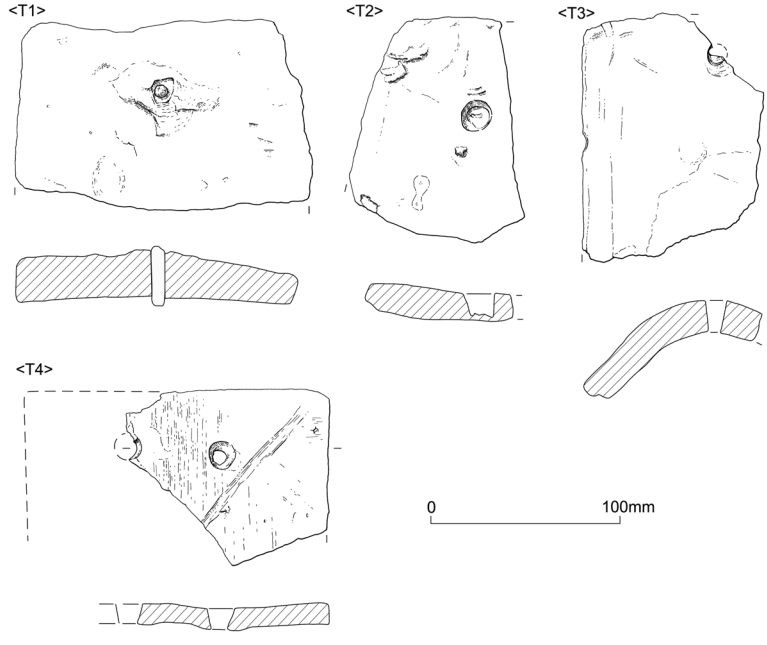

Fig 23. Ceramic building material from Open Area 7: shouldered peg tile with in situ *iron nail in the nail hole <T1>; top of a tapered peg tile <T2>; the upper end of curved tile <T3>; and peg tile with probable batch marks <T4> (scale 1:4)*

diameter round nail hole (Fig 23, <T1>). There was also an example of a tapered roof peg tile (Fig 23, <T2>), from the fill of pit [210]. Tapered tiles are known from Swan Lane (Pritchard 1983) and a few other London sites, but they are always rare. It is possible they were used in conical or curved roofs. An early medieval curved tile with a round 8mm diameter nail hole situated 16mm from the top edge (Fig 23, <T3>) was present in a fill of pit [195]. This tile is 16–17mm thick and would have originally measured *c.*166mm in breadth along the top end.

As noted above, two pits were of particular note.

Barrel well [312] (*c.*1150–1200)

A barrel, which survived partially complete, was set within an oval feature in Open Area 7. It was backfilled during the second half of the 12th century. These backfills were clean – they contained very little evidence of food waste – the only charred remains within them were very low quantities of wood charcoal and a single waterlogged fig (*Ficus carica*) seed was the only food plant present. They did, however, contain up to 80 pottery vessels (by ENV). There was a marked concentration of pottery within one particular fill, [255], which contained at least 16 jugs in London-type ware (LOND). With the exception of the Kingston-type ware (KING) jug discussed below, the pottery from the other fills is characterised mostly by single sherds. Although, no obvious vessel links were identified between the smashed pots in these deposits, the similarities in appearance, decoration and firing between some suggest that the well was backfilled in a relatively short time period.

At least 15 early rounded jugs (Pearce *et al* 1985, 22–3, 27, figs 10–18, 52–60) were present in the backfills, some surviving as larger-sized joining sherds. All are products of the London-type ware industry (in LOND, LCOAR & LCALC) and datable by form and decorative style to the second half of the 12th century. The best-preserved examples are the two smashed London-type ware early rounded jugs with rilled shoulders, collared rims and copper-stained glazes applied to their upper portions, which would have been still useable when they entered the well. Part of an unusual LOND pipkin or skillet was also found in the upper fill. It has a rounded profile, with a pinched pouring lip and a short hollow handle or socket at the rim (Fig 24, <P8>).

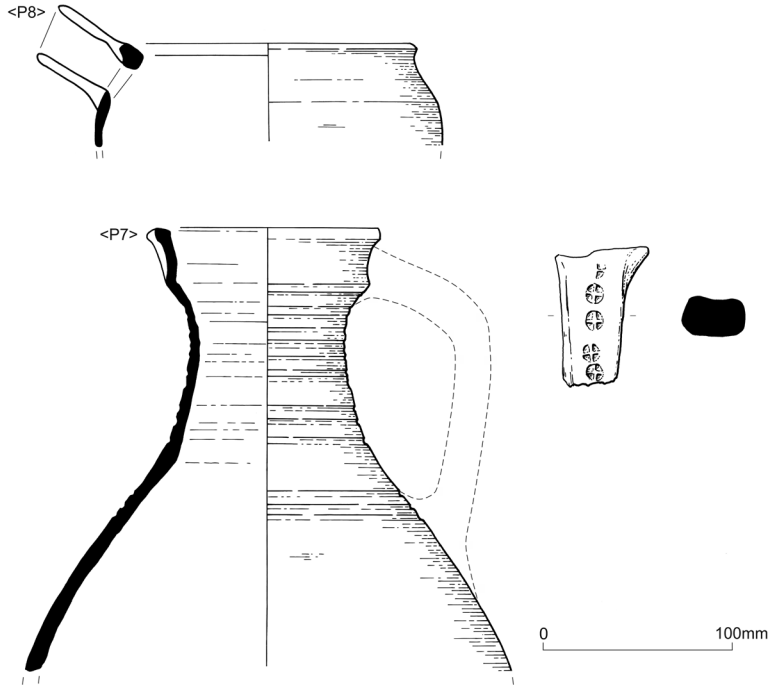

Fig 24. Pottery from well backfills: Kingston-type ware early rounded jug <P7> from [311]; and London-type ware pipkin or skillet <P8> from [255] (scale 1:4)

Other pottery that would have been in use by *c.*1150 includes the small selection of wheel-thrown shelly-sandy ware (SSW) jars or cooking pots. Jars or cooking pots are otherwise uncommon and restricted to a small selection of poorly preserved handmade coarse ware fabrics (ESUR & LOGR) that are likely to be residual by the time this feature was infilled. All the pottery is locally sourced apart from the spouted pitchers in Stamford-type ware (STAM) and red-painted ware (REDP).

The substantial remains of the Kingston-type ware (KING) jug (<P7>; Fig 24) from fill [311] may challenge the accepted chronology for Surrey white wares in London. The remainder of the pottery from this context, LOND jug forms, is typical of the period *c.*1140–1200, but based on excavated evidence from sites on the Thames waterfront the introduction of KING into London is placed at *c.*1230–40 (Pearce & Vince 1988, 82). Too much of the KING jug survives for it to be intrusive. Its form, however, is one that is not otherwise found in KING and closely mirrors that of the late 12th-century LOND early rounded jug, with collar rim, rilled neck, rounded profile and convex base. The rod handle is decorated with a series of cruciform stamps in roundels, which is also very unusual for KING. Occurrences of KING in City of London contexts with date ranges of *c.*1050–1200 are confined to a dozen or so contexts, and limited to one sherd each with a weight (when provided) of less than 7g. These finds can therefore be discounted as intrusive. As there is so little evidence to suggest that the Kingston industry developed before *c.*1230, it may be the case that this KING jug came from another source.

Another find from the barrel well backfill was a thin fragment of bone inlay, <S11> (Fig 25), cut from a split cattle-sized rib and decorated with six repeating ring and dot motifs, each consisting of three rings encircling a dot. This is similar to other mounts from this part of the medieval City described by Pritchard (1991, 267, nos 264–266) and, like the examples quoted there, the motifs are stamped with a lack of precision, one overlapping the edge of another. The fragment is likely to have decorated a casket, and in the absence of rivet holes, may have been glued into position (Pritchard 1991, 210). It is snapped at one end, but the other three sides are well finished, suggesting that it is not bone waste.

Fig 25. Bone inlay or mount <S11> from the barrel well in Open Area 7 (scale 1:1)

Pit [197] (*c.*1270–1300)

The fill of pit [197] contained 94 vessels (by ENV), and this group, including numerous reconstructable vessel profiles, constitutes the outstanding feature of the medieval pottery assemblage from the site. The main fabrics represent the three principal industries supplying London in the late 13th century: London-type ware (LOND: Pearce *et al* 1985), Mill Green ware (MG: Pearce *et al* 1982) from Essex and Kingston-type ware (KING: Pearce & Vince 1988). The relative absence of 14th-century fabrics and forms indicates a date of deposition of 1270–1300. It is likely that this pottery was discarded either in one go or over a short period of time. This was supported by environmental analysis of fill [22] which demonstrated that it contained very little preserved plant material and no food plant remains at all – it certainly did not represent an accumulation of kitchen waste. What did survive in it, however, were species typical of nitrogenous, damp urban deposits such as stinging nettle (*Urtica*) and white horehound.

A minimum of 80 jugs can be identified: this is a very high number to come from a single deposit and accounts for the majority of the assemblage. A wide range of forms was recorded within each fabric. Most frequent are the sherds from at least ten tall, tulip-

necked baluster jugs in LOND (Pearce *et al* 1985, 24, pl VIII, fig 37, 79), most covered with an overall thin, white slip and patchy clear glaze. Jugs of this kind (in stoneware) were used for bulk serving of wine, as illustrated in contemporary manuscripts depicting feasts and banquets where they are grouped together on the floor and used to fill smaller jugs of various materials for use at the table (Ruempol & Van Dongen 1991, 270, 276). Sherds from at least five flared baluster jugs (Pearce *et al* 1985, 24, figs 35–6, 77–8), similar in form apart from the neck and rim, were also found. All these baluster jugs are plain and practical, designed to hold large volumes of wine. They were accompanied by several more fragmented LOND jugs of a more decorative kind, intended for use at the table. Amongst these are two highly decorated vessels (LOND HD: *ibid*, 29–30), with polychrome red- and green-tinted applied strips and stamps, part of a baluster jug decorated in the north French style (LOND NFR: *ibid*, figs 33–4, 75–6) with vertical applied strips and two rounded jugs with white slip decoration in simple vertical schemes. Overall, sherds from at least 27 jugs in London-type ware were recorded.

Mill Green ware (MG), made near Ingatestone in Essex and found in London *c.*1270–1350, specialised in high-quality tablewares, thinly potted jugs covered in a white slip and green glaze, which were popular in London. Sherds from at least 15 Mill Green ware jugs were recorded, mostly of tall, conical form (Pearce *et al* 1982, 274, fig 4), simply decorated with vertical combing or *sgraffito*. Alike in size and appearance, these could well have been purchased as a single batch for use in serving on a large scale.

There were the remains of at least 31 jugs in Kingston-type ware (KING). These include a number of conical (*eg* Fig 26, <P9>) and baluster jugs with cordoned neck/body; rounded jugs with thumbed bases; a highly decorated, polychrome jug comparable to the LOND examples; part of a metal copy baluster jug (Pearce & Vince 1988, 20, 56, fig 12, 23, pl 12); and four baluster jugs with stamped boss decoration. These last jugs carry the distinctive decoration that was exclusive at this date to KING, the stamps taking the form of *fleur-de-lys* (Fig 26, <P10> & <P11>), shells, and shields bearing the Clare arms (*ibid*, 42–4). Part of a miniature KING baluster jug (*ibid*, 83, fig 17) with anthropomorphic decoration including applied arms and hands is a relatively unusual find (Fig 26, <P12>). There were also sherds from two jugs in south Hertfordshire-type grey ware (SHER). Only a few other forms are otherwise represented, mostly fragmented LOND and KING cooking pots, bowl and dish sherds.

The presence around Gresham Street of 11 late 13th-century ceramic 'clearance groups' (as defined by Pearce 2000, 144) has been recently recognised (Jeffries 2012, 128, table 1). It has been suggested that, as these discoveries are all within the area where there was a high density of Jewish occupancy, they could be connected with the abrupt departure of the Jewish community during the late 13th century (*ibid*). From the mid 13th century onwards the Jewish community in London and the rest of England endured a period of intense persecution which culminated in 1290 with their expulsion. In fact the vast majority of the London Jews had already departed some years before their expulsion (Blair *et al* 2001, 127).

The building material from this pit contained a large number of peg roofing tiles (fabrics 2271, 2586, 2587). These are of standard London two round nail hole type with a splash or more uniform glaze covering. Two tiles have batch marks in the top corner (Fig 23, <T4>). It is not entirely certain what these finger marks represent, although a possible explanation is that they represent a day's production; perhaps each tile-maker was allocated his own particular mark.

Also present was a plain yellow-glazed 'Westminster' floor tile (fabric 2199). Most of these tiles are believed to have been made in London during *c.*1250–1310, which conforms with the *c.*1270–1300 date of the associated pottery.

Masonry foundations (Building 2) (c.1250–1400)

Part of an east–west aligned truncated foundation survived as two areas of degraded chalk masonry ([194], [360]) (Fig 27). The masonry also included pieces of flint, ragstone and very occasional blocks of sandstone. Traces of greyish mortar adhering to some of these sandstone blocks indicated

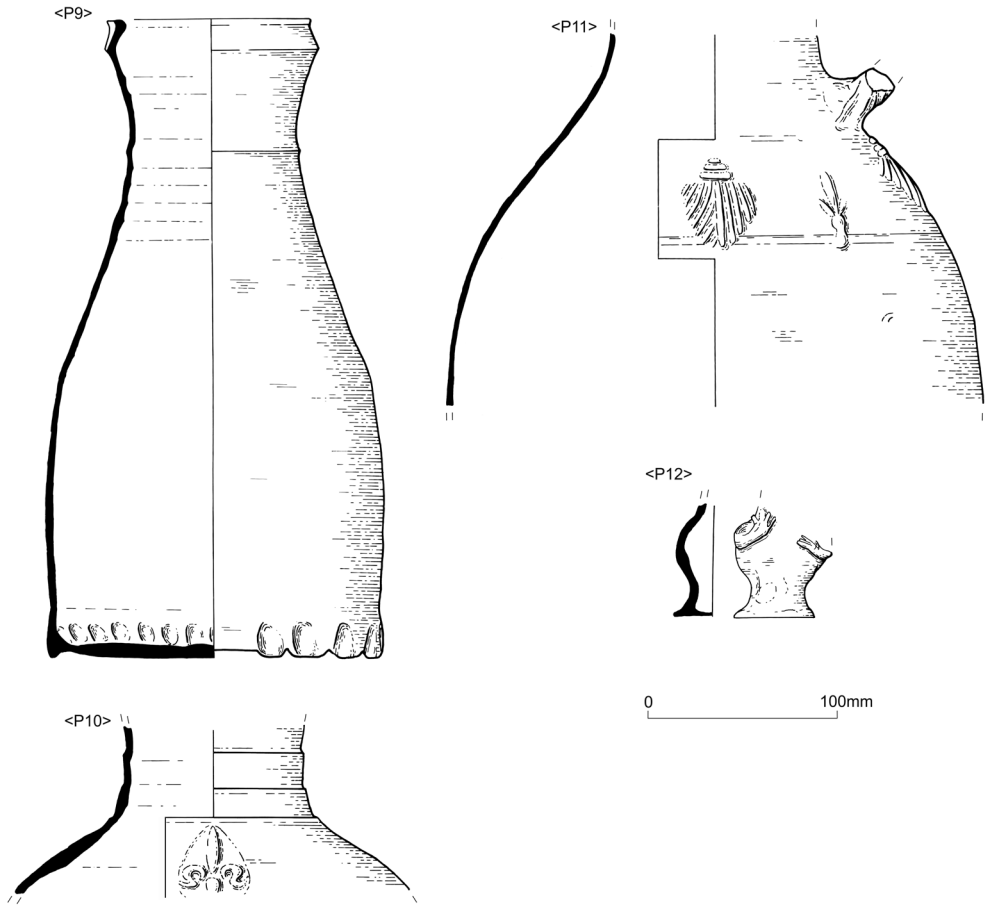

Fig 26. Kingston-type ware jugs from pit fill [196] in Open Area 7: conical jug <P9>; two baluster jugs with fleur-de-lys stamped boss decoration <P10> and <P11>; and miniature baluster jug with anthropomorphic decoration <P12> (scale 1:4)

that they were reused, possibly from a robbed out Roman building. The foundation post-dated pit [312] and so is of late 13th-century or later date.

By the 14th century many of the buildings along Basinghall Street housed artisans who engaged in both manufacturing and retailing (Bowsher *et al* 2007, i, 177). It is probable that Building 2 represents part of the east–west structural foundations of one of these dwellings.

Wall along eastern edge of site boundary (Building 3) (c.1675)

A *c.*10m length of north–south aligned, regularly coursed wall, constructed of dressed blocks of ragstone, chalk, flint, Reigate and occasional ceramic building material fragments, was discovered along the eastern boundary of the site (Fig 27). It had been subsequently underpinned with brickwork in some areas. It is likely that this was the west boundary wall of the churchyard of St Stephen Coleman Street.

A Stamford-type ware cresset lamp

A complete spike or cresset lamp in Stamford-type ware (<S12>; Fig 28), although from an unstratified context, is an unusual find and sufficiently rare in London to merit comment. Made in the fine white ware fabric characteristic of the Stamford industry, the

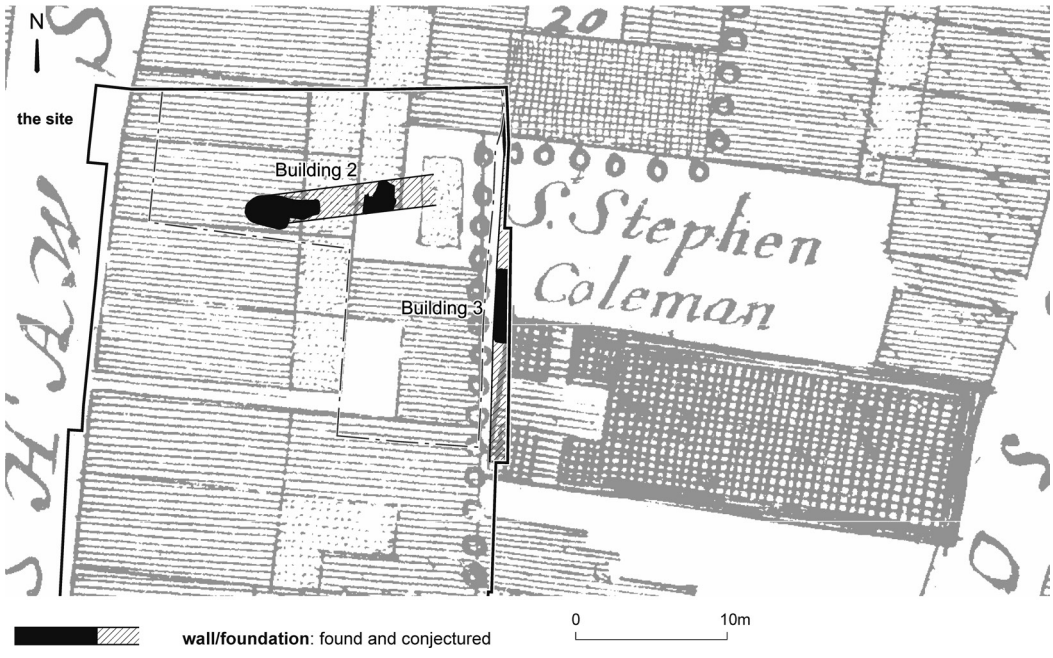

Fig 27. Buildings 2 and 3 superimposed on Ogilby and Morgan's map of 1676 (scale 1:500)

lamp takes the form of a small, shallow bowl, the base of which is formed into a solid spike. It is hand-formed, with fingernail nicks, dents and smoothing marks clearly visible externally. The rim diameter is 62mm and the maximum height of 65mm. There is a partial cover of thin clear glaze over the outside of the lamp, with some areas stained green by the addition of copper, probably resulting from accidental contact with other

Fig 28. Stamford-type ware lamp <S12> (scale 1:1)

vessels during firing. The inside of the bowl is blackened and sooted from use, extending just over the top of the simple, rounded rim.

Spike lamps, also known as pricket, cresset or hanging lamps (MPRG 1998, 8.2.6), could be held in a bracket or suspended from a hook by an arrangement of metal chains, as shown in medieval manuscript illustrations (Egan 1998, 130–3, fig 101). A small quantity of oil would be held in the bowl in which there was a floating wick. This was by no means the only form of indoor portable lighting available in the Middle Ages, although ceramic lamps (of various types) are one of the few that have survived archaeologically. The form of the spike lamp is found in London in contexts dating mostly to the 11th to 12th centuries and it appears not to have been made much beyond the early 13th century (Pearce 1998, 127). For the most part, examples recovered from excavated contexts in London were made in early medieval handmade wares from various regional sources, although the form continued to be made in some of the wheel-thrown industries that developed during the course of the 12th century, notably London-type ware and south Hertfordshire-type grey ware (Blackmore & Pearce 2010, 192, fig 128, nos 1311–1315).

Stamford-type ware was produced at several kiln sites in the area of Stamford, Lincolnshire, and is known from London mainly as high-quality, wheel-thrown and glazed spouted pitchers present in contexts dating to the mid 11th to mid 12th centuries. Other forms are also known, including jars, costrels, bottles and sprinkler watering pots (Vince & Jenner 1991, 96–8, figs 2.101–2.102). Spike lamps are recorded in excavated material from kilns in Stamford (Kilmurry 1980, 18, fig 5, no. 20), but are extremely rare in London. The presence of green glaze, although accidental, places production later in the life of the Stamford industry since this is a feature associated with developed Stamford ware, its first appearance in London dated to *c.*1150 (*ibid*, 134; Vince & Jenner 1991, 96). By the mid 13th century the industry was in decline, its products increasingly rare in London after *c.*1200 (Kilmurry 1980, 203; Vince 1985, 47). This find can therefore be closely dated to the second half of the 12th century.

CONCLUSIONS

Natural geology and topography

Truncated terrace gravels were observed at *c.*10.00–10.20m OD, and a small area of surviving natural brickearth was seen at 10.40m OD. The natural topography would have sloped down gently eastwards. A natural stream, a continuation of the channel identified as tributary 3 at the Guildhall Yard (GYE92) excavations to the west, crossed the site. The location of this channel modifies the previously conjectured route of this Walbrook tributary (Fig 4).

Early Roman (*c.*AD 43–200)

The site was undeveloped until *c.*AD 75, when the first amphitheatre was built immediately to its west and its subsequent development during the Roman period was very much determined by the presence of the amphitheatre (Fig 3). As part of the works associated with the construction of the arena, the Walbrook tributary was redug as a steep-sided ditch (Structure 1; Fig 4) to improve drainage, as part of a frequently altered system of water management.

There was an absence of clay and timber buildings of 1st- and early 2nd-century AD date on the site. This was also the case to the south of Gresham Street, and here the land use was characterised instead by clearance, levelling and dumping prior to the construction of 2nd-century AD masonry buildings and a later 3rd-century AD temple (Wroe-Brown in prep). This area was not occupied by the tightly packed development of properties seen on many central portions of the 2nd-century AD Roman settlement. Only one Roman building (Building 1), a relatively short-lived mid 2nd-century AD structure within the 2nd-century AD amphitheatre yard, was present on the site. It was both preceded and post-dated by pits and may have been a temporary shelter or stall.

Two archaeological finds specifically connect the site to the amphitheatre. Firstly, sherds of La Graufesenque decorated samian vessel <P2> come from a vessel the remainder of which was found buried in dumps outside the eastern entrance to the arena (Fig 15). Secondly, a timber drain (Structure 2) on the site may be a continuation of the late 1st-cen-

tury AD timber drain (GYE92, S10) emerging from the same eastern amphitheatre entrance (Fig 5). Structure 2 may have fallen out of use when the amphitheatre was reconstructed (with masonry elements) in *c.*AD 125. As part of the rebuild, the amphitheatre drains were reconfigured and rerouted further north (Bateman *et al* 2008, 61, 66). The alignment of these later drains means they henceforth ran beyond the northern boundary of the site. That being said, the evidence from the site suggests a slightly earlier date for the disuse of Structure 2. To the north of Structure 2, the site was occupied by rubbish pits (Open Area 2), perhaps partially utilised to dispose of waste from the area surrounding the amphitheatre.

Later Roman (*c.*AD 200–400)

Later phases of the main amphitheatre drain are known to have been rerouted northwards and they do not, therefore, cross the site, though a north–south ditch (Structure 3) on the site reflects similar activity on the Guildhall Yard site and demonstrates that attention was still being paid to the drainage of the amphitheatre yard until the disuse of the area in the mid to late 4th century AD (Fig 10). The date for the cutting of Structure 3 fits well with the period during which the latest maintenance was carried out on the amphitheatre, and it seems likely that the two are related, with Structure 3 providing drainage from the drains to the north, towards the Walbrook tributaries to the south-east. The main focus for 3rd-century AD redevelopment of the amphitheatre was on its eastern side, and drainage was a major part of this with several drains recut, albeit in a simpler style often without timber linings (Bateman *et al* 2008, 72). These drains ran to the north-east, skirting features around the eastern entranceway, and may have linked up with Structure 3 to drain to the south-east. It seems likely that the study area fell within the area that was incorporated into the amphitheatre management schemes.

It seems, therefore, that the site lay within, or on the eastern fringe of, a large open area on the eastern side of the amphitheatre, and the archaeological evidence from it, drains and waste pits, relates to the management and use of that space.

Dating to the later Roman period were the pits of Open Area 5, one of which was cut through the backfilled Structure 3 drainage ditch and dated the disuse of Structure 3 to AD 350–400, around the time of the abandonment of the Roman settlement.

Late Saxon to Saxo-Norman (*c.*AD 970–1150)

Post-Roman activity on the site was extremely sparse until *c.*1050 and was represented by only four, possibly five, cess and rubbish pits, of which only one could pre-date *c.*AD 970 (Fig 17). In this respect, the site is similar to the Guildhall Yard excavations and contrasts with the greater evidence for early 10th-century buildings found on sites to the south of Gresham Street. The distribution of these pits suggests that the Basinghall Street frontage was not densely occupied during this period. From *c.*1050, however, there was a marked increase in the density and frequency of pitting.

Medieval (*c.*1150–1500)

Activity from this period consisted of a series of pits used for the disposal of cess and refuse, located in backyards of the properties lining Basinghall Street. Many of these pits were wattle-lined to permit their scouring out and reuse, which could imply the space available for pit digging was now more restricted than before, with increasing density of buildings (Fig 19).

The spike or cresset lamp is a significant discovery, as lamps are an infrequent find in London (Bowsher *et al* 2007, ii, 316), and the presence of lighting suggests a relatively high-status household. This would fit with the general assumption that this part of the medieval City of London was occupied by merchants and shopkeepers.

A barrel-lined well was quickly backfilled during the late 12th century and this action has important implications for the dating chronology of Kingston-type ware (KING) (Fig 24). A substantial number of sherds survived from a jug suggesting that the date of the introduction of KING could be earlier than previously thought, commencing *c.*1140–1200 as opposed to *c.*1230–40.

Another cut feature from this period, pit [197], was closely dated to 1270–1300.

Containing a large assemblage of jugs, this pit could represent material abruptly discarded by the departing Jewish community during the period of persecution that preceded their expulsion in 1290 (Jeffries 2012).

There was no evidence for buildings on the site until at least the late 13th century, when a masonry foundation (Building 2) was constructed (Fig 27). The Agas woodcut map of *c.*1562–3, shows that by this date both Basinghall and Gresham (then Catteaton) Streets were completely lined with buildings and the area to the rear of these properties within the vicinity of the site was also built-up (Prockter & Taylor 1979, pl 10).

A wall (Building 3) along the eastern site boundary may reflect a boundary of 12th-century date, the west wall of the churchyard of St Stephen Coleman Street, but its fabric had been much modified. First documented during 1181–1204 (Schofield 1994, 130), this parish church was situated within the principal area occupied by London's medieval Jewish population (Blair *et al* 2001, 128). Although John Stow stated that St Stephen's church had originally been a synagogue, this is apparently a case of confusion with the two nearby synagogues (Stow 1603, 255).[4] The church was gutted during the Great Fire of 1666 and was rebuilt by Wren in *c.*1674–7, only to be finally destroyed during World War II (Jeffrey 1996, 334). Wren's church is illustrated on Fig 27, which shows the wall of Building 3 following the line of the western edge of the 17th-century churchyard. Excavations on the site of the former church in 1955–6 revealed evidence of medieval chalk foundations (Schofield 1994, 132, fig 91).

Due to the extensive truncation caused by the previous development no post-medieval features or structures survived on site.

APPENDIX 1: NOTE ON RADIOCARBON DATE

Mary Ruddy

The conventional radiocarbon age, quoted with a plus or minus sign, reflects the number of radiocarbon years before 1950 ('the present' or BP) based on an assumed constant level of ^{14}C in the atmosphere (Table 1).[5] The conventional radiocarbon age is sometimes called the radiocarbon determination or raw radiocarbon age to avoid confusion with a true calendar date.

The basal organic sediment from the sequence of monolith samples {49} and {50}, considered to be *in situ*, was analysed by Beta Analytic by accelerator mass spectrometry (AMS).

The error (± 30) represents the statistical uncertainty or 'precision' of the method (a range of 2 relative standard deviations from the mean or 2σ). As radiocarbon has fluctuated markedly over time, radiocarbon determinations require calibration. Calibration curves compare the radiocarbon determination with measured fluctuations in radiocarbon (tree ring series, varved lake deposits, speleothems, coral and deep ocean records) to obtain calendar ages. Calibrations were made using Oxcal 3.1 (Bronk Ramsey 1995; 2001) with the IntCal04 calibration curve (Reimer *et al* 2004).

Table 1. Radiocarbon result

Context	MOLA ref	Lab no.	Material	$\delta^{13}C$	Radiocarbon determination	Calibrated date (cal years BC/AD) (95% probability)
294	GHB06_294	SUERC-28518 (GU-21223)	Plant macrofossil: *Stelleria*, *Rumex* and *Leontodon*	-25‰	1850 ± 30	cal AD 80–240

APPENDIX 2: NOTE ON COIN OF AELIA FLACCILLA <C1>

Julian Bowsher

Copper-alloy coin <22>, [244], Period 4, OA6

Aelia Flaccilla, AD 383–386, *nummus*; Diam 15mm, Wt 0.91g, Ax 5, wear B\C.

Obv AELFL[ACCILLA] diademned and draped bust r. Rev [S]A[LVSREI PVBLIC] AE, Victory seated r inscribing christogram on shield on column.]M[. cf Heraclea in *LRBC* ii, 84, no. 1965. No AE4 versions are recorded in *RIC* IX.

APPENDIX 3: ILLUSTRATED FINDS

Table 2. Concordance for illustrated pottery and other finds from the site

Cat no.	Context	Accession	Land use	Fabric or material	Vessel form or object type	Fig no.
Pottery						
<P1>	[417]	-	OA2	SAMMV 4DR37	bowl	14
<P2>	[388]	<14>	OA2	SAMLG 4DR30	bowl	15
<P3>	[372]	-	OA5	MHAD 2 ROD	jar	11
<P4>	[206]	-	OA6	LSS CP	jar	18
<P5>	[206]	-	OA6	LSS DISH FLAR	dish	18
<P6>	[1102]	-	OA6	LOGR SPP COMW	spouted pitcher	20
<P7>	[311]	-	OA7 well	KING JUG RND STMP	jug	24
<P8>	[255]	-	OA7 well	LOND	pipkin	24
<P9>	[196]	-	OA7	KING JUG CON	jug	26
<P10>	[196]	-	OA7	KING JUG BAL	baluster jug	26
<P11>	[196]	-	OA7	KING JUG BAL	baluster jug	26
<P12>	[196]	-	OA7	KING JUG ANTH	miniature jug	26
Small finds						
<S1>	[283]	<33>	OA6 (residual)	copper-alloy	brooch	8
<S2>	[1113]	<37>	OA4	copper-alloy	brooch	8
<S3>	[215]	<70>	OA5	bone	pin	12
<S4>	[417]	<75>	OA2	bone	needle	7
<S5>	[417]	<76>	OA2	bone	needle	7
<S6>	[323]	<57>	OA5	glass	bottle	12

Table 2 (cont.). Concordance for illustrated pottery and other finds from the site

Cat no.	Context	Accession	Land use	Fabric or material	Vessel form or object type	Fig no.
<S7>	[417]	<87>	OA2	iron	key	7
<S8>	[198]	<90>	OA6	calcitic mud-stone	spindle whorl	21
<S9>	[283]	<10>	OA6	fired clay	circular loom weight	21
<S10>	[182]	<42>	OA6	mica schist	hone	21
<S11>	[265]	<72>	OA7 well	cattle bone	mount or inlay	25
<S12>	unstratified	<7>	-	STAM	cresset lamp	28
Tile						
<T1>	[255]	-	OA7	2273	ceramic roof tile	23
<T2>	[208]	-	OA7	2273	ceramic roof tile	23
<T3>	[1116]	-	OA7	2273	ceramic roof tile	23
<T4>	[196]	-	OA7	2199	roof tile with batch mark	23

Roman

Angela Wardle

<S1> Copper-alloy brooch <33>, Fig 8: Almost complete; L 36.8mm; W (head) 25mm. Headstud brooch, very encrusted, but probably of Hull Type 145B, now missing the loop (Bayley & Butcher 2004, 164, fig 135). The T-shaped brooch has badly corroded enamelled lattice on the bow, which has toothed or serrated edges, a circular headstud set within a raised lozenge on the upper bow and settings for studs on the wings; red ?corrosion products on surface. The type is normally hinged (*ibid*, 165), but the pin mechanism here is lost. Late 1st century AD; residual in context.

<S2> Copper-alloy brooch <37>, Fig 8: Incomplete; L 38.5. Bow and foot from a headstud brooch; trace of stud at broken upper edge, over a lattice panel for enamelling, now lost; out-turned moulded foot, as typically found on Hull Type 149B (Bayley & Butcher 2004, 164, fig 136), although insufficient remains to gauge whether this example was hinged or sprung. Small fragments of the head and loop of the same brooch were accessioned as <38>. Late 1st century AD.

<S3> Bone pin <70>, Fig 12: Incomplete; L 52mm. Upper part of a hairpin with tapering shaft and conical head, Crummy type 1, quite crudely fashioned; point missing.

<S4> Bone needle <75>, Fig 7: Incomplete; L 70mm, Diam of shaft 3.4mm. Broken at base of circular eye; point broken.

<S5> Bone needle <76>, Fig 7: Incomplete; L 80mm; Diam of shaft 5.3mm. Broken at base of eye, which may have been circular and above the point; thick circular-sectioned shaft.

<S6> Glass bottle <57>, Fig 12: NGB. Rim neck and part of the shoulder from a bottle of Isings form 50 or 51; single handle missing. Rim Diam 35mm. Mid 1st to late 2nd century AD.

<S7> Iron key <87>, Fig 7: Almost complete; encrusted; L 138mm. L-shaped tumbler-lock lift key, with at least two teeth on the bit; stout rectangular handle with suspension loop.

Saxo-Norman/medieval

Beth Richardson

<S8> Stone spindle whorl <90>, Fig 21: Complete; external Diam 35.5mm; Diam of central hole 10.6mm; Wt 19.6g. Conical spindle whorl with sharply bevelled edge, lathe-turned from a hard fine-grained calcitic mudstone, undecorated. The size and weight of this spindle whorl is in proportion to those found elsewhere in the city, where Pritchard (1991, 165) notes that while the diameter of the central hole, which held the spindle, is quite consistent, the size and weight of the whorls vary considerably, allowing the spinning of different grades of yarn.

<S9> Ceramic loom weight <10>, Fig 21: Incomplete; Diam 110mm (approx). Fragment of circular loom weight made from fired clay.

<S10> Stone hone <42>, Fig 21: Incomplete; L 105mm; W 27.1mm; Th 12mm. Fragment of hone, rectangular in section, which is now irregular through use; grey mica schist, with a white vein of ?calcite.

<S11> Bone inlay or mount <72>, Fig 25: Indeterminate; L 39mm; W 25mm; Th 1.2mm. Thin fragment, cut from a split cattle-sized rib; decorated with six repeating ring and dot motifs each consisting of three rings encircling a dot. Similar to mounts from the same general area described by Pritchard (1991, 267, nos 264–266). Like the examples quoted there the motifs are stamped with a lack of precision, one overlapping the edge of another. The fragment is likely to have decorated a casket, and in the absence of rivet holes may have been glued into position. It is snapped at one end, but the other three sides are well finished, suggesting that it is not bone waste.

<S12> Ceramic lamp <7>, Fig 28: Complete; L 65mm. Circular lamp; Stamford-type ware; 1150–1200. Made in the fine white ware fabric characteristic of the Stamford pottery industry, the lamp takes the form of a small, shallow bowl, the base of which is formed into a solid spike. The vessel is hand-formed, with fingernail nicks, dents and smoothing marks clearly visible externally.

ACKNOWLEDGEMENTS

MOLA would like to thank Standard Life Investments and their archaeological consultants Mills Whipp Ltd for commissioning the archaeological works on the project. All archaeological works were monitored by Kathryn Stubbs, Assistant Director Historic Environment, of the Corporation of London's Department of the Built Environment, who provided valuable guidance throughout the project. Site contractors Mace Plus Ltd and Keltbray Ltd assisted with logistics during the excavations. Particular thanks also go to Gareth Lord of Buro Four for his help during the fieldwork.

The evaluation was conducted by Simon Gannon and the first phase of excavation by Simon Pennington. The excavation team during the main phase of work, which was supervised by Sadie Watson, consisted of Charlotte Baron, Pete Cardiff, Richard Hewett, Antonietta Lerz, Tony Mackinder, Kate McLaughlan, Biljana Milevska, Anthony Morrin, Tina Swingler, Ruth Taylor, Michael Tetreau, Elena Valtorta, Mark Wiggins and Nigel Wilson. The author thanks her colleagues Heather Knight, Tony Mackinder and Mark Wiggins for supervising the site in her absence. A number of MOLA specialists contributed to the success of the fieldwork: Mike Morley (geoarchaeology) visited the site and sampled the stream environment, Ian Betts (ceramic building material) and John Giorgi (palaeobotany) provided advice on worked stone and botanical sampling respectively, and Maggie Cox and Andy Chopping took the photographs. The site was surveyed and GIS located by Mark Burch, Neville Constantine, Catherine Drew and Sarah Jones of MOLA Geomatics. The illustrations for this article were produced by Hannah Faux and Judit Peresztegi of MOLA. Specialist reports were compiled by Ian Betts (ceramic building material), Joanna Bird (samian pottery), Julian Bowsher (coins), Nigel Cameron (diatoms), Michael Henderson (human osteology), Nigel Jeffries (post-Roman pottery), Alan Pipe (faunal osteology), Mary Ruddy (geoarchaeology), Beth Richardson (post-Roman registered finds), Rob Scaife (pollen), Karen Stewart (archaeobotany), Amy Thorp (Roman pottery), Angela Wardle (Roman registered finds), John E Whittaker (ostracods) and Virgil Yendell (geoarchaeology). In addition to the listed con-

tributors to this article, Jacqui Pearce provided the information on the unstratified ceramic lamp. Robin Nielsen and Julian Hill project managed the site works and post-excavation respectively. The latter also acted as editor for this article.

jhill:mola.org.uk

NOTES

1 MOLA Resource Library, www.mola.org.uk/resource-library (accessed 9 April 2015).
2 Samples {53} [288], {56} [288], {52} [289] and {57} [294].
3 Sample {93}.
4 A private synagogue or *scola* (school) on the western side of Basinghall Street was seized by Henry III in the 1230s and converted into the chapel of St Mary. There was another synagogue on the eastern side of Colman Street, which in 1272 was also seized by Henry III and given to Friars of the Sack, who had already possessed an adjoining property (Hillaby 1993, 190, 197).
5 Data from Scottish Universities Environmental Research Centre.

BIBLIOGRAPHY

Bateman, N, Cowan, C, & Wroe-Brown, R, 2008 *London's Roman Amphitheatre: Guildhall Yard, City of London* MoLAS Monograph 35, London

Bayley, J, & Butcher, S, 2004 *Roman Brooches in Britain: A Technological and Typological Study Based on the Richborough Collection* Reports of the Research Committee of the Society of Antiquaries 68, London

Betts, I M, 2007 'Ceramic building material (and slate)' in Bowsher *et al* 2007, ii, 430–7

Bird, J, 2008, 'The decorated samian' in Bateman *et al* 2008, 135–42

Black, E W, 1996 'Box-flue tiles in Britannia: the spread of Roman bathing in the first and second centuries' *Archaeol J* 153, 60–78

Blackmore, L, & Pearce, J, 2010 *A Dated Type Series of London Medieval Pottery Part 5: Shelly-Sandy Ware and the Greyware Industries* MOLA Monograph 49, London

Blair, I, Hillaby, J, Howell, I, Sermon, R, & Watson, B, 2001 'Two medieval Jewish ritual baths – *mikva'ot* – found at Gresham Street and Milk Street in London' *London Middlesex Archaeol Soc* 52, 127–37

Bowsher, D, Dyson, T, Holder, N, & Howell, I, 2007 *The London Guildhall: An Archaeological History of a Neighbourhood from Early Medieval to Modern Times (Parts 1 and 2)* MoLAS Monograph 36, London

Bronk Ramsey, C, 1995 'Radiocarbon calibration and analysis of stratigraphy: the OxCal program' *Radiocarbon* 37(2), 425–30

Bronk Ramsey, C, 2001 'Development of the radiocarbon calibration program OxCal' *Radiocarbon* 43(2A), 355–63

Campbell, B, Galloway, J, Keene, D, & Murphy, M, 1993 *A Medieval Capital and its Grain Supply. Agrarian Production and Distribution in the London Region c.1300* Historical Geography Research Series 30, London

Dunbabin, K, 1978 *The Mosaics of Roman North Africa: Studies in Iconography and Patronage*, Oxford

Egan, G, 1998 *Medieval Finds from Excavations in London 6: The Medieval Household Daily Living c.1150–c.1450*, London

Featherby, R, in prep 'The Roman pottery' in Wroe-Brown in prep

Goffin, R, 2003a 'The stone objects' in Malcolm & Bowsher 2003, 197–204

Goffin, R, 2003b 'The loom weights' in Malcolm & Bowsher 2003, 216–22

Hillaby, J, 1993 'Beth Miqdash Me'at: the synagogues of Medieval England' *J Eccles Hist* 44(2), 182–98

Jeffrey, P, 1996 *The City Churches of Sir Christopher Wren*, London

Jeffries, N, 2012 'Late 13th-century household "clearance groups" on Gresham Street and the London Jewry' *London Archaeol* 13(5), 127–31

Kilmurry, K, 1980 *The Pottery Industry of Stamford, Lincolnshire,* c.*AD 850–1250* British Archaeological Reports (British Series) 84, Oxford

LRBC, 1978 Carson, R A G, Hill, P V, & Kent, J P C, *Late Roman Bronze Coinage, AD 324–498* (two parts in one volume) reprint, London

Malcolm, G, & Bowsher, D, with Cowie, R, 2003 *Middle Saxon London. Excavations at the Royal Opera House, 1989–99* MoLAS Monograph 15, London

Mills Whipp Partnership, 2005 *Archaeological Desktop Assessment of Bartlett House and Princes House* unpub client report

MOLA, 2009 *Princes and Bartlett Houses, Post-Excavation Assessment (GHB06)* unpub client report

MOLA, 2011 *Londinium: A New Map and Guide to Roman London*, London

MoLAS, 2006 *Princes and Bartlett Houses, an Archaeological Evaluation Report (GHB06)* unpub client report

MoLAS, 2007a *Princes and Bartlett Houses, a Watching Brief on Geotechnical Pit and Boreholes Report (GHB06)* unpub client report

MoLAS, 2007b *Princes and Bartlett Houses, an Archaeological Interim Report (GHB06)* unpub client report

MPRG, 1998 *A Guide to the Classification of Medieval Ceramic Forms* Medieval Pottery Research Group Occasional Paper 1, London

Pearce, J, 1998 'Hanging lamps: ceramic' in Egan 1998, 127–9

Pearce, J, 2007 'Pottery' in Bowsher *et al* 2007, ii, 438–46

Pearce, J, & Vince, A, 1988 *A Dated Type-Series of London Medieval Pottery Part 4: Surrey Whitewares* London and Middlesex Archaeological Society Special Paper 10, London

Pearce, J, Vince, A, & Jenner, M A, 1985 *A Dated Type-Series of London Medieval Pottery Part 2: London-Type Ware* London and Middlesex Archaeological Society Special Paper 6, London

Pearce, J E, 2000 'A late 18th-century inn clearance assemblage from Uxbridge, Middlesex' *Post-Medieval Archaeol* 34, 144–86

Pearce, J E, Vince, A, White, R, & Cunningham, C M, 1982 'A dated type series of London medieval pottery part one: Mill Green ware' *Trans London Middlesex Archaeol Soc* 33, 266–98

Perez-Sala, M, & Shepherd, J, 2008 'The cullet dump and evidence of glass working' in Bateman *et al* 2008, 142–6

Pritchard, F, 1983 *Swan Lane (SWA81) Medieval Building Material* unpub MoL rep

Pritchard, F, 1991 'Small finds' in Vince (ed) 1991, 120–78 and *passim*

Prockter, A, & Taylor, R (eds), 1979 *The A to Z of Elizabethan London* London Topographical Society Publication No. 122, London

Reimer, P J, *et al* 2004 'IntCal04 terrestrial radiocarbon age calibration, 0–26 cal kyr BP' *Radiocarbon* 46(3), 1029–58

RIC, 1951 Pearce, J W E, *Roman Imperial Coinage: Volume IX, Valentinian I – Theodosius I,* London

Richardson, B, 2008 'Non-samian and undecorated samian pottery' in Bateman *et al* 2008, 169–84, *passim*

Ruempol, A, & Van Dongen, A G A, 1991 *Pre-Industriele Gebruiksvoorwerpen, 1150–1800*, Rotterdam

Schofield, J (ed), 1987 *Museum of London: Department of Urban Archaeology: Archive Catalogue*, London

Schofield, J, 1994 'Saxon and medieval parish churches in the City of London' *Trans London Middlesex Archaeol Soc* 45, 23–145

Schofield, J, Allen, P, & Taylor, C, 1990 'Medieval buildings and property development in the area of Cheapside' *Trans London Middlesex Archaeol Soc* 41, 39–238

Seeley, F, & Drummond-Murray, J, 2005 *Roman Pottery Production in the Walbrook Valley* MoLAS Monograph 25, London

Stow, J, 1603 *The Survey of London* (1956) H B Wheatley (ed), London

Vince, A (ed), 1991 *Aspects of Saxon and Norman London 2: Finds and Environmental Evidence* London and Middlesex Archaeological Society Special Paper 12, London

Vince, A, & Jenner, M, 1991 'The Saxon and early medieval pottery of London' in Vince (ed) 1991, 19–119

Vince, A G, 1985 'Saxon and medieval pottery in London: a review' *Medieval Archaeol* 29, 25–93

Walton Rogers, P, 1997 *Textile Production at 16–22 Coppergate* The Archaeology of York 17/11, York

Wardle, A, 2008 'The accessioned finds' in Bateman *et al* 2008, 191–202

Wardle, A, in prep 'The accessioned finds' in Wroe-Brown in prep

Watson, B, in prep *Excavations at Blossoms Inn, City of London* MOLA Monograph

Wiedemann, T, 1996 *Emperors and Gladiators*, London

Wroe-Brown, R, with Pennington, S, in prep *A Roman Temple on Gresham Street: Excavations at 52–66 Gresham Street, London EC3*