ARCHAEOLOGICAL INVESTIGATIONS AT 103–106 SHOREDITCH HIGH STREET, HACKNEY

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SUMMARY

During 2008 and 2009 archaeological investigations were undertaken at 103-106 Shoreditch High Street. The earliest material discovered on site consisted of a scatter of residual Roman finds. However, the earliest datable activity was medieval and comprised the establishment of boundary ditches and the excavation of quarry pits along the eastern side of the High Street on the edge of the village of Shoreditch. During the 16th and 17th centuries the site was partly used as a rubbish dump; faunal material recovered from these deposits included evidence of both animal carcass processing and relatively high status dining, while the associated finds included a piece of carved stag-horn inlay. Over time the amount of activity on site steadily increased, reflecting the transformation of Shoreditch High Street into part of suburban London. Structural features constructed during the 17th century included a brick-lined culvert. One early 18th-century cesspit finds assemblage may be connected with the Jane Shore public house, which occupied the southern part of the site from the late 17th century.

INTRODUCTION

Between May 2008 and February 2009 archaeological investigations were carried out by Archaeology South-East (ASE) and Pre-Construct Archaeology Ltd (PCA) on land at 103–106 Shoreditch High Street in advance of redevelopment of the site for a hotel extension. The site was located on the

eastern side of Shoreditch High Street in the London Borough of Hackney (Fig 1). It was bounded to the south by the Crown Plaza Hotel and to the north and east by commercial and residential properties. The Ordnance Survey National Grid Reference for the centre of the site is TQ 3346 8253 and the surface elevation lay at approximately 16.5m OD.

An archaeological desk-based assessment produced in advance of redevelopment (Gailey 2007) indicated that the site, which lay within an Archaeology Priority Zone (APZ), had a potential for the survival of Roman and medieval remains, despite extensive basement truncation within the western portion of the site. In order to satisfy a planning condition placed on the proposed development, an archaeological evaluation was carried out by ASE between May and September 2008 (Site Code: SDQ08). The evaluation comprised the excavation of three trial trenches and the monitoring of other intrusive development works (Fig 2), the excavation for a crane base in a south-central location being particularly informative (Jamieson & Harwood 2008). This phase of work confirmed the presence of archaeological deposits and resulted in a requirement for further work across a larger area of the site. The latter work was carried out over three main phases by PCA (Fig 2) between November 2008 and February 2009 (Site Code: SDV08). This article includes





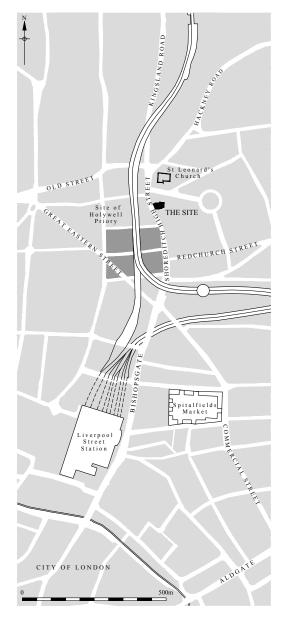


Fig 1. Site location plan

the results of both phases of fieldwork. The aim of this article is to place the fieldwork within a chronological framework, while also considering the relevant cartographic and documentary evidence, together with the results of other archaeological investigations in the Shoreditch area.

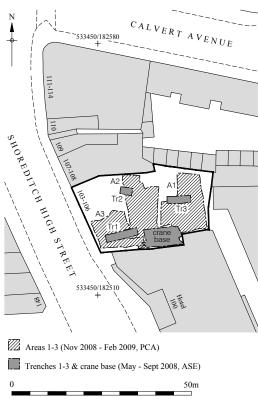


Fig 2. Area and trench location plan

BACKGROUND

Geology and topography

The underlying solid geology of the site consists of Eocene London Clay. The British Geological Survey Sheet 256 (North London) shows this to be overlain by drift geology of Pleistocene date comprising the Hackney Terrace gravels. During the archaeological interventions on the site natural deposits consisting of terrace gravel were observed throughout the areas investigated. A maximum elevation of 13.56m OD was recorded for the surface of natural deposits in the northern central area of the site and despite truncation of the western side of the site a surface elevation of 13.46m OD was recorded during the evaluation in this area. The surface of the natural sands and gravels appears to have sloped down towards the east as the maximum surface elevation recorded in the eastern part of the site was 13.24m





OD. It is likely that the terrace gravels were originally capped by natural brickearth deposits but although 'brickearth' was recorded in some areas during the evaluation and excavation phases, this material appears to have been redeposited, the natural brickearth having been entirely removed by extensive truncation. The current surface of the site lies at approximately 16.5m OD.

Archaeological and historical background

There is little evidence for prehistoric activity in the vicinity of the site, and the sparsely distributed prehistoric artefacts that have been recovered have invariably been residual finds in later contexts. A Mesolithic flint axe or adze is recorded from Great Eastern Street, some 250m south-west of the site, and occasional prehistoric artefacts were recovered during archaeological interventions prior to construction work on the East London Line Project (ELLP), which traversed an area across the Boroughs of Hackney and Tower Hamlets. Finds included a further Mesolithic flint adze and struck flints of Late Neolithic/Early Bronze Age and Late Bronze Age date (Bull et al 2011,

There is a little more evidence for activity in the vicinity of the site during the Roman period, particularly given its location close to a former Roman road and a junction with another: Shoreditch High Street and Kingsland Road to the north follow the approximate line of Ermine Street, the Roman road from London to Lincoln and York (Margary 1955, 170). Old Street, which forms a junction with Shoreditch High Street approximately 200m north of the site, followed the line of another east-west Roman road. A small assemblage of Roman building material and pottery was found during investigations at 183-185 Shoreditch High Street c.100m south-west of the site (Dawson 2008, 8) and possible evidence of Roman-period ground consolidation was identified at New Inn Yard approximately 200m south-west of the site (Mayo 2003; Bazley 2004), though any significant remains here had been compromised by extensive basementing across the site. Further to the south and closer to Roman Londinium, cemetery sites have been identified at a

number of locations either side of Ermine Street (Hall 1996; Thomas et al 1997; Barber & Hall 2000), and a small number of burials were also excavated during investigations as part of the ELLP (Bull et al 2011, 23–4). Other Roman deposits revealed during the ELLP work south of the study site were rather sparse but included quarries and drainage/boundary ditches, with finds assemblages suggesting some activity throughout much of the Roman period (ibid, 18–23). Other sites nearby including Spitalfields (Thomas et al 1997, 11–13) and 201 Bishopsgate (Swift 2003) have also recorded evidence of nonfunerary Roman activity.

Although the settlements of Haggerston and Hoxton, to the north of Shoreditch, are recorded in Domesday Book, Shoreditch is not, despite the name probably being of Saxon origin; neither is there evidence of activity during the Anglo-Saxon period in the vicinity of the study site, though two Saxon artefacts were recovered from later contexts during work on the ELLP (Bull et al 2011, 28). It is likely that Shoreditch was founded in the late 11th or early 12th century with development focused on the area that is now the junction of Shoreditch High Street, Kingsland Road and Old Street, close to the junction of the earlier Roman roads. St Leonard's church, located adjacent to the junction and less than 100m north of the study site, was apparently founded during the 12th century (Fig 1). Little archaeological work has taken place in the vicinity of the present church, which dates to 1738–40. The earliest known documentary record of Shoreditch is a manuscript dated 1148 that refers to 'Scoreditch', which probably means the ditch of Sceorf or Scorre (Weinreb et al 2008, 836).

Between 1152 and 1158 Holywell Priory was established some 300m south-west of the study site, the priory precinct eventually extending to within 60m of the site (Fig 1). A significant proportion of the medieval archaeological evidence in the vicinity of the site comes from within the former precinct (Bull *et al* 2011, 34–83). This includes evidence dating from the foundation of the priory up to and beyond its destruction following the Dissolution in 1539. Evidence of medieval activity east of the priory precinct was also recorded during the ELLP (*ibid*,





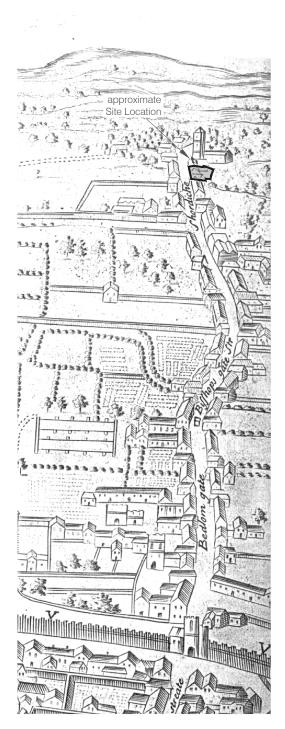


Fig 3. The area of the site and Shoreditch High Street on the Agas map of c.1562, view looking north (not to scale)

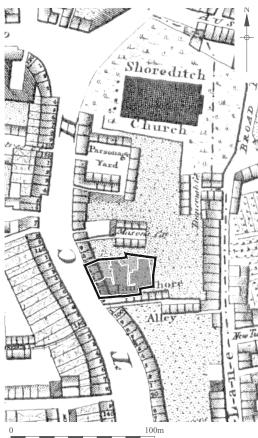


Fig 4. The area of the site on Horwood's 1799 map of London

44–8, 72–9), as well as at a small number of other sites such as 179 Shoreditch High Street, where medieval and later pits were recorded (Edwards 2005).

The High Street was apparently built up by c.1600 when Stow records that houses lined it and Old Street. It appears that north of the Hospital of St Mary Spital this 'ribbon' development consisted of 'a continual building of small and base tenements, for the most part lately erected' (Stow 1603, 378). The Agas map of c.1562 (Fig 3) shows that the eastern side of Shoreditch High Street and Bishopsgate was lined with buildings from St Leonard's church southwards to the walls of the City of London (Prockter & Taylor 1979, 11). The site appears to be occupied by a large, elongated building lying parallel to the road. From the late 17th century the population of the area along with that of





nearby Bethnal Green and Spitalfields was boosted by the immigration of Huguenots, fleeing from religious persecution in France. Many of these refugees had been employed in cloth-making industries such as silk weaving, which they established in the Shoreditch area (Page 1911, 132–7). A map entitled 'An Actual Survey of the Parish of St Leonard in Shoreditch, Middlesex 1745' by Peter Chassereau (not illus) again shows the Shoreditch High Street area as built-up and includes a yard or alley close to the study site entitled 'Jane Shore Alley'.

The population of Shoreditch parish has been estimated at approximately 10,000 in 1750 (Weinreb et al 2008, 836), but it more than trebled in the space of 51 years to 34,766 in 1801.¹ This huge increase in population is reflected in the density of development shown on Horwood's map of 1799 (Fig 4) (Laxton 1985), which indicates the scale of the development along the High Street within the vicinity of the site. By this date an alleyway immediately to the south of site was also lined with buildings. A street view of 1845 depicts the façades of the four buildings which occupied the site (Fig 5) The First Edition Ordnance Survey Map of 1872 (Fig 6) shows that a public house stood in the south-west corner of the site with other buildings to the north, though the northeast and south-east corners of the site appear to have been open yards. The public house



Fig 6. The area of the site as shown on the first edition Ordnance Survey Map of 1872

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103-106 Shoreditch High Street



Fig 5. The elevation of the properties within the vicinity of the site lining Shoreditch High Street in 1845





was named the Jane Shore and a drinking establishment appears to have been here since the late 17th century. Presumably this inn gave its name to the alleyway, which was situated directly to the south of the site (Fig 4). It is documented that this alleyway was already in existence by 1666. During the 17th century this public house issued trade tokens (Wheatley & Cunningham 1891, 244).

The Second Edition Ordnance Survey Map of 1896 (not illus) appears to show that the public house building had been extended to the east, as had the buildings to the north, leaving little open space on the site. This pattern is repeated on successive maps up to the later 20th century. The Jane Shore is thought to have remained as a public house until the Second World War, but had become a shoe shop by the 1980s.

THE ARCHAEOLOGICAL SEQUENCE

Introduction

Despite extensive truncation in the western half of the site, the evaluation and excavation at 103-106 Shoreditch High Street revealed archaeological features and finds associated with a number of phases of activity from the Roman to modern periods. The Roman (Phase 1) material all appears to be residual. Sustained activity on the site therefore seems to have begun in the medieval period, probably coinciding with the medieval founding of Shoreditch itself, and continued with various phases of development throughout the medieval and post-medieval periods. Although the datable evidence from a number of features has been somewhat sparse, it has been possible to build up a broad chronology of activity on the site.

Phase 1: Roman

The small amount of Roman material, although indicating a presence within the vicinity, appears to have all been recovered residually from later features. It is likely that some of this material was derived from the backfill of gravel quarry pits, similar to those observed 100m further south near Holywell Priory (Bull *et al* 2011). This material included a number of fragmentary pieces

of ceramic building material dating from *c*.AD 50–250, a fragment of a Purbeck marble mortar (see Hayward below), and two sherds of Alice Holt pottery, dated *c*.AD 250–400.

Phase 2: earlier medieval boundaries and quarrying (c.1170-c.1350) (Figs 7-8)

It is apparent that the earliest activity on the site took place during either the later 11th or early 12th century and related to the establishment of drainage or boundary features, which was followed by the excavation of further linear features and quarry pits. Almost certainly the earliest feature on site was an east-west-aligned ditch partly exposed as cut [95] (not illus) during the crane base excavation at the southern edge of the site. It was not exposed during the excavation phases, however, its alignment having presumably deviated to the south of the site. It was truncated to the north by a more extensive east-west-aligned feature initially recorded during the evaluation, when only a small assemblage of abraded Roman building material was recovered, and subsequently recorded as ditch [221] during the excavation. The pottery assemblage recovered from the upper fill consisted of 25 sherds dated 1170-1200. In excess of 20m of the feature was exposed and it most likely continued beyond the areas investigated to the east and west. It was between 1.80m and 2.10m wide with a maximum depth of 1.08m. The base varied in profile and appeared concave in places and flat-bottomed in others. This appears to have represented an early marking out of a property boundary on the site and at the time of the investigations the southern site boundary still conformed very closely to its location and alignment.

Ditch [221] was later recut as [216], which followed a similar alignment to the earlier feature, though it appeared to be a little more sinuous. It measured 1.50m wide and was 0.62m deep; a small assemblage of pottery dated 1340–1450 was recovered from the fill. The backfilled ditches were sealed by a compacted layer of gravel, though the dating of this was unclear as the only datable find was a residual sherd of 11th- to 12th-century pottery.

At a later date a wide, shallow ditch [326] was excavated towards the western side of





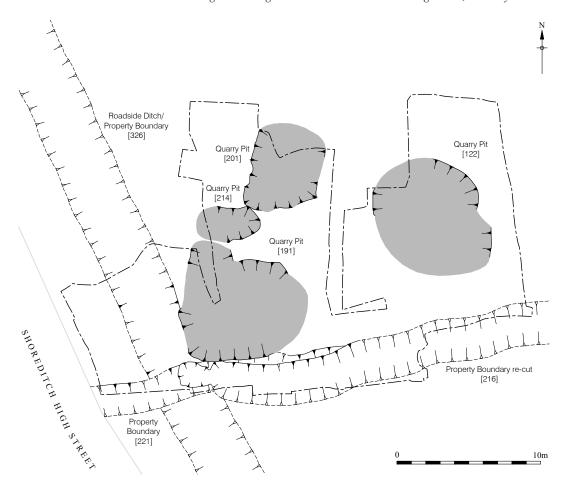


Fig 7. Earlier medieval ditches and quarry pits (Phase 2). Key: the dark tone shows the found and conjectured extent of the quarry pits

the site on an approximately perpendicular alignment to the ditches along the southern boundary. The ditch was 3.70m wide and 0.95m deep and extended beyond the site boundary to the north and south. Given the location of the feature and its orientation, it was suggested that it may have been a roadside ditch, possibly excavated when the former Roman road was re-established to the immediate west of the site during the medieval expansion of Shoreditch. Alternatively it may have marked the western boundary of a property fronting onto the road or a combination of the two. Unfortunately no clearly datable material was recovered from the ditch during either the evaluation or excavation, so the date of its cutting, or indeed infilling, is not known with any precision. It post-dated the 11th-to 14th-century features to the south and following backfilling, was sealed by deposit [313] containing late 16th-century pottery. Therefore, it is suggested that this ditch dates to the earlier medieval period.

Located to the north of the southern boundary features and east of the north-south ditch were a number of large, slightly irregular features interpreted as gravel quarry pits. Towards the south-west corner of the site and immediately east of the north-south ditch was a very large irregularly shaped feature [191], measuring approximately 7m in diameter. Very few finds were recovered from the pit but one







Fig 8. Unexcavated medieval quarry pits in Trench 2, view looking north, 1m scale

slot excavated through it produced a small assemblage of peg tile dating to the mid-13th to mid-15th century. A short distance to the north-east was another large irregular pit [201], measuring approximately 5m across and 0.62m deep, and between the two large pits was a smaller feature [214]. The only datable finds recovered from pits [201] and [214] were small quantities of Roman tile which are thought to be residual, but these features are believed to have been contemporary with the large pit to the southwest. A further large pit [122] was located to the east of pit [201]. This measured approximately 7m across and was at least 1m deep. Two sherds of mid-11th- to mid-12thcentury pottery were recovered from the backfill and a small quantity of late medieval peg tile was also present. This appears to have been another quarry pit and was probably broadly contemporary with the features to the east. Although few datable finds were recovered from these features preventing accurate dating, they all appear to have postdated the earliest medieval activity on the site, but were excavated and backfilled prior to Phase 3.

Phase 3: later medieval developments (c.1350–1500) (Fig 9)

The large pit to the east of the site [122] (Phase 2) was partially sealed by layers of redeposited brickearth, which contained a small assemblage of later medieval finds (Fig. 7). These layers in turn were truncated by one of the most extensive features on the site, Ditch [144]. It was aligned approximately parallel with the site's western boundary, continuing beyond the northern and southern limits of excavation. It was up to 4.90m wide and 1.85m deep. The pottery assemblages recovered from the fills of the ditch were very small, consisting of no more than four sherds for any one fill. The earliest dated fill contained two sherds dated 1140–1200 and ceramic building materials dated 1240-1450+. These finds were residual







Fig 9. Later medieval ditch and quarry pit (Phase 3). Key: the dark tone shows the found and conjectured extent of the quarry pit

however, as they pre-dated those in the layer through which the ditch was cut. The upper fills on the other hand produced small pottery and tile assemblages that could be dated to the late medieval period, suggesting the ditch had silted up by the 16th century.

A second area of later medieval activity was associated with a quarry pit, [189]. This was only exposed in section towards the southern edge of the excavation and may have been an extension of earlier quarry [191]. However, it appears more likely that the fills associated with [189] actually represent later infilling of [191], possibly after the earlier fills had slumped, leaving a depression at the surface. Three small pottery assemblages were recovered from its

later fills. The earliest, from fill [188], dated to 1300–1350; the next to 1400–1500 [175]; and the latest to 1350–1500 [186]. Two of these contexts also contained ceramic building material of similar or slightly later date than the pottery. The ceramics suggest that this feature was silting up during the 14th and 15th centuries, but the building materials indicate a slightly later date for the final infilling of this feature, possibly the early 16th century.

Phase 4: the early post-medieval period (c.1500-1600) (Fig 10)

Activity at this time was concentrated mostly in the western half of the site. A dense





concentration of postholes was evident at the west of the site, adjacent to the Shoreditch High Street frontage and cutting through a late 16th-century deposit. Some of these postholes formed an east-west-aligned cluster, extending eastwards from the street frontage for a distance of approximately 3m. The extent of these postholes implies that there had been some encroachment into the area previously occupied by the roadside ditch along the earlier street frontage (Fig 7). The dimensions of some of the postholes show that they would have been sufficiently robust to have supported a substantial superstructure. The posts had been driven into the rather soft, and possibly waterlogged ground and the larger examples, represented by a series of cuts, measured up to 0.20m in diameter and had been driven c.0.50m below the level at which they were initially evident. Posts of this size might have formed part of a structure or, possibly more likely, the posts could have been used as driven piles below a masonry foundation or a timber baseplate. However, no alignment of posts forming a north-south return was evident and no trace of a rear wall for a structure fronting onto the High Street was found. Many smaller postholes were evident in the same area but it seemed unlikely that they formed part of a building. Given the dimensions of these two clusters of postholes it would seem more probable that they formed part of temporary structures erected along the roadside.

A second group of considerably smaller posts formed a north-south alignment some 7m to the east of the street frontage. This group comprised a series of postholes and still extant wooden posts, the features probably representing a fence line marking a property boundary or a wall line of a timber structure erected along the roadside (see above). This cluster of posts followed the eastern side of the earlier ditch [326] (Fig 7), showing that this earlier alignment still appeared to be respected as some type of boundary. A poorly defined linear cut [316] to the east of this posthole cluster followed a parallel north-south alignment. Its upper fill contained a small pottery assemblage dated 1480–1550.

To the east of feature [316] was a large pit [71] and three smaller features [64], [66] and [68] aligned approximately parallel with

the site southern boundary and therefore perpendicular to [316]. The largest feature is interpreted as a rubbish pit and the smaller pits could conceivably have been postholes, though no further related features in the area were identified so the possibility of a further structure here is unproven. Finds from the pits suggested that they dated to the 16th century, possibly extending into the early 17th century, with medieval pottery recovered from pit [66] apparently being residual. The pits were sealed by a layer of garden soil. The impression is that the clusters of postholes represent structural activity along the roadside and that these pits were probably dug in the associated backyards of these properties to dispose of faecal material and rubbish.

This period also appears to have witnessed the first masonry structure(s) on the site, albeit only recorded in a small area. In the crane base excavation during the evaluation a length of masonry wall [76] was recorded at the southern edge of the site, above the earlier east-west ditches and on a similar alignment. It was constructed from poorly coursed, roughly hewn Ragstone blocks bonded with a pale yellow, soft sandy mortar. Occasional orange-red bricks and fragments of chalk were also noted in the structure, though much of the northern face had been obscured by the later application of a hard lime render. The wall had been extensively modified by underpinning works associated with the hotel to the south, therefore obscuring a direct relationship with the earlier ditches, though a 2.2m length was still extant, which was 0.4m wide and up to 1.09m high. This wall was subsequently utilised as the foundation for later east-west-aligned brick wall [75] (not illus). A 6m length of this feature survived up to a height of 1.17m. It was constructed from hand-made orangered unfrogged bricks laid in an English bond and bonded with an off-yellow sandy lime mortar. The bricks utilised in both structures have been dated to c.1450-1700 on stylistic grounds (see Hayward below). A northsouth drain built integrally into wall [75] may originally have been constructed to take waste water into a successor to the earlier ditches located north of the wall. However, it was not possible to prove this hypothesis as a later east-west culvert was constructed here (see below). Given the paucity of the





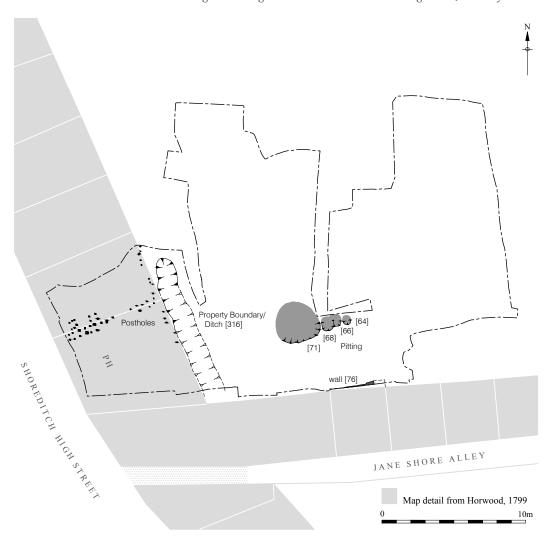


Fig 10. Early post-medieval activity (Phase 4).

surviving evidence, it is not clear whether [76] and [75] were boundary or party walls between two properties or the north walls of a building that lay at the northern edge of the property to the south of the study site.

The remaining evidence for this period consisted of material that was probably external levelling or rubbish dumps, which had slumped into the top of the earlier pits. A layer which effectively formed the upper fill of pit [201] contained two sherds of pottery dated 1580–1700 and residual tile fragments dated 1240–1450+. The largest pottery assemblage recovered from any deposit was

contained in a layer which sealed the upper fills of pit [205]. This deposit contained 129 sherds of pottery dated 1500–1550 and a large quantity of animal bone and other domestic waste such as oysters. The volume of dumped rubbish in these deposits was in complete contrast with the almost sterile fills of the medieval pits and ditches. Most of the faunal remains from this phase were recovered from the layer sealing pit [205] and a dump to the south-west. The faunal remains included notable proportions of veal and some large game such as fallow deer along with fish such as pike that also





suggest consumers of considerable means (see Armitage & Rielly below). The faunal remains from these deposits are indicative of a relatively high status diet and a similar trend is evident in the pottery recovered from these levels (see Jarrett below).

Phase 5: 17th- and 18th-century suburban development (Fig 11)

Following the initial construction of the brick and masonry structures during the 16th or possibly early 17th century, further structural development occurred in the 17th and 18th centuries. Most of this development was evidenced on the southern periphery of the site close to the property boundary. Cutting down the northern side of walls [75] and [76] and into earlier ditch deposits to the north, a trench was excavated as a construction cut for an east–west-aligned brick-lined culvert or drain. The southern wall of the culvert, [45], was built flush against walls [75] and [76]. The eastern portion of this culvert was heavily truncated by modern activity. The northern wall of the culvert, [44], lay on a parallel alignment c.0.8m north of [45]. The two walls had originally been joined by a

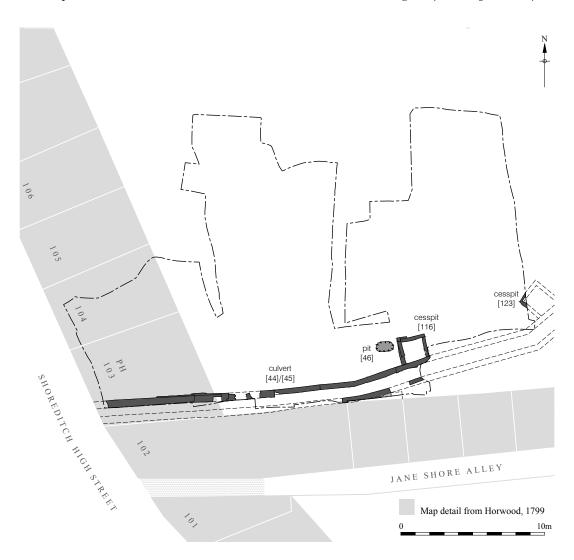


Fig 11. 17th- and 18th-century structural activity showing the found and conjectured extent of features (Phase 5).





brick arch, but lay directly on the base of the cut rather than on a brick or masonry base. Analysis of brick samples from the culvert shows that it was constructed from material dated to 1450–1700 and 1600–1700, though the date of 1664–1750 for one fragment suggests this may have been a slightly later addition. The construction cut of the culvert was backfilled with ceramics dating to c.1580–1650 (see Jarrett below). There appears to have been deliberate ground raising at this time, so that the culvert formed a sub-surface structure.

At a later date a brick-lined cesspit, [116], was constructed immediately to the north of the culvert. A square pit was dug through the ground-raising deposits and lined to the west, north and east with brick walls, while the existing culvert wall [44] formed the southern wall of the cesspit. The backfill of this cesspit produced a pottery assemblage dated to c.1700–1720, along with a large assemblage of clay tobacco pipes dated to c.1700–1710 (see Jarrett below). Analysis of the brick fabrics demonstrated that the eastern wall of the cesspit was constructed or partly rebuilt during either the late 17th or early 18th century as it contained bricks of post-Great Fire date (1664–1725+). A smaller unlined pit, [46], had also been dug immediately to the west of the cesspit. It contained pottery dated 1580-1700, and building materials dated to the 17th to 18th centuries, though its function was unclear. A fragment of another brick-lined cesspit, [123], was recorded on the eastern periphery of the site. The fill of this feature was not excavated and therefore its usage is not dated.

Phase 6: 19th-century and later development (Fig 12)

Further modifications were made to the structural features at the south of the site during the 19th century. A new wall, [74], was built over wall [75] along the southern site boundary (not illus). It was constructed in mostly English bond from purplish-orange red bricks, dated to the late 18th or 19th century, bonded with a hard grey lime mortar. Associated with the building of wall [74] a further culvert was added, cutting through [75], such that it could receive waste water from the property to the south, which then

drained into the existing culvert. The arch of the existing east-west-aligned culvert [44]/ [45] was also repaired or rebuilt at least three times during the 19th century; one of these rebuilds, [59], probably being contemporary with a subsequent rebuilding of wall [74].

The cesspit [116] to the north of the culvert only appears to have functioned as such for a limited period of time as a new north-southaligned culvert, [42], was subsequently built over this in order to drain material into the east-west culvert. The north-south-aligned culvert was smaller than the east-west culvert, being just 0.6m wide internally with an arched brick cover, but it did appear to have a brick base. A sub-circular, brick-lined soakaway, [34], was added to the south side of the eastwest culvert during either the late 18th or earlier 19th century. At some point during the 19th century the culverts and soakaway began to silt up and subsequently went out of use. Finds from the backfills of these features have been dated to between 1820 and 1900. The culverts were replaced with concrete drains during the 20th century.

Remnants of various late 18th- or 19th-century features were also extant in other areas of the site. These included a fragment of a brick-lined cesspit [103] located in the south-east corner of the excavation area. The form of the feature could not be established as it extended beyond the area of excavation to the south and east. The fill of the cesspit contained pottery dated 1820–1900. A small sub-rectangular pit [124] was recorded immediately to the west. It was most likely of 19th-century date, but as it was unexcavated no finds were recovered to verify this.

FINDS

Post-Roman pottery

Chris Jarrett

Introduction

The post-Roman pottery comprised 673 sherds representing 394 Minimum Number of Vessels (MNV) and additionally there were two sherds of residual Roman wares. The pottery types present are shown in Tables 1 and 2, together with their quantification for each phase in which they occur. The assemblage ranges in date from the early





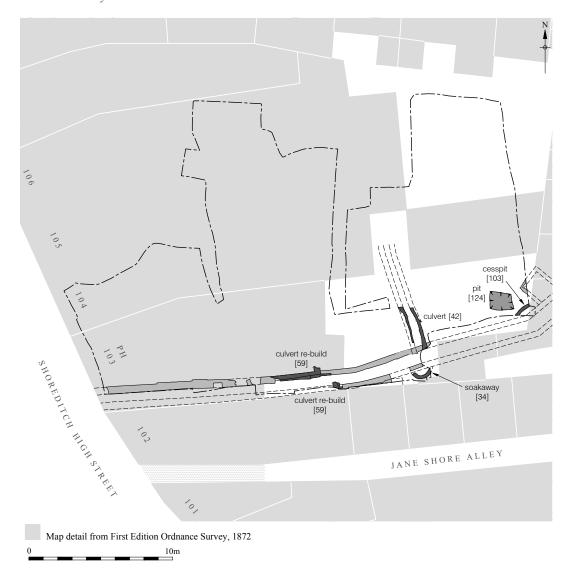


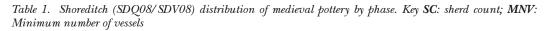
Fig 12. 19th-century structural activity showing the found and conjectured extent of features (Phase 6).

medieval period through to the 19th century. The early medieval pottery is mostly residual and it is the larger quantities of stratified late 12th- to early 13th-century material that indicate early activity, probably associated with the establishment of the settlement in this area of Shoreditch. The early 16th-century deposits include quite a diverse range of imported wares for the size of the assemblage and these allude to the social niceties of that time and the occupants of the site. The later post-medieval ceramics may be part of a public house group, although this

is far from conclusive. Complete lists of the post-Roman pottery codes cited, including details and date ranges, are available from the London Archaeological Archive and Research Centre (LAARC) and are also posted on: www.museumoflondon.org.uk/.../post92mol_post_roman_fab_form.pdf (accessed 2010).

Phase 2: earlier medieval

A total of 46 sherds of pottery representing a minimum number of 37 vessels (MNV) were recovered from this phase. The main



			Pha	ise 2	Pha	se 3	Pha	ise 4
Pottery code	Expansion	Date range	SC (%)	MNV (%)	SC (%)	MNV (%)	SC (%)	MNV (%)
CBW	Coarse Surrey- Hampshire border ware	1270-1500			6 (20)	5 (17.9)	7 (2.61)	7 (4.2)
CHEA	Cheam white- ware	1350-1500			4 (13.33)	4 (14.3)	2 (0.75)	2 (1.2)
DUTR	Dutch red earth- enware	1300-1650			1 (3.33)	1 (3.6)	16 (5.97)	6 (3.6)
EMCALC	Early medieval sandy ware with calcareous inclusions	1000-1150	1 (2.17)	1 (2.7)				
EMCH	Early medieval chalk-tempered ware	1050-1150	2 (4.35)	2 (5.4)				
EMGR	Early medieval grog-tempered ware	1050-1150					1 (0.37)	1 (0.6)
EMSS	Early medieval sand- and shell-tempered ware	1000-1150	1 (2.17)	1 (2.7)	2 (6.67)	2 (7.1)		
ESHER	Early South Hert- fordshire-type coarseware	1050-1200			1 (3.33)	1 (3.6)		
ITALS	Italian slip- coated ware (Pisa)	1480-1550					2 (0.75)	1 (0.6)
KING	Kingston-type ware	1240-1400	3 (6.52)	3 (8.1)			1 (0.37)	1 (0.6)
LANG	Langerwehe stoneware	1350-1550					1 (0.37)	1 (0.6)
LCOAR	Coarse London- type ware	1080-1200	19 (41.3)	13 (35.1)				
LLON	Late London- type ware	1400-1500			2 (6.67)	2 (7.1)	7 (2.61)	4 (2.4)
LMHG	Late medieval Hertfordshire glazed ware	1340-1450	2 (4.35)	1 (2.7)				
LOND	London-type ware	1080-1350	3 (6.52)	3 (8.1)	6 (20)	5 (17.9)	1 (0.37)	1 (0.6)
MCS	Coarse medieval sandy wares	1140-1300	2 (4.35)	2 (5.4	1 (3.33)	1 (3.6)		
MISC	Miscellaneous unsourced medieval pottery	900-1900	4 (8.7)	4 (10.8)	2 (6.67)	2 (7.1)		
RHGR	Rhenish Tiel- type greyware	900-1100					1 (0.37)	1 (0.6)
SAIN	Saintonge ware	1250-1650					2 (0.75)	2 (1.2)





Table 1 (cont.). Shoreditch (SDQ08/SDV08) distribution of medieval pottery by phase. Key SC: sherd count; MNV: Minimum number of vessels

			Pha	ase 2	Pha	ise 3	Pha	se 4
Pottery code	Expansion	Date range	SC (%)	MNV (%)	SC (%)	MNV (%)	SC (%)	MNV (%)
SHER	South Hert- fordshire-type greyware	1170-1350	1 (2.17)	1 (2.7)	1 (3.33)	1 (3.6)	1 (0.37)	1 (0.6)
SIEG	Siegburg stone- ware	1300-1630					1 (0.37)	1 (0.6)
SSW	Shelly-sandy ware	1140-1220	7 (15.22)	5 (13.5)	2 (6.67)	2 (7.1)		
TUDG	Tudor green ware	1350-1500					20 (7.46)	12 (7.1)
PMPOT	Post-medieval pottery	1480-1900	1 (2.17)	1 (2.7)	2 (6.7)	2 (7.1)	205 (76.1)	127 (75.6)
Total			46 (100)	37 (100)	30 (100)	28 (100)	268 (100)	168 (100)

pottery type is the London medieval glazed red earthenwares represented by 22 sherds (47.8%) or 16 MNVs (43.2%), followed by wheel-thrown coarse wares (sandy shelly ware (SSW), medieval coarse sandy ware (MCS), and to a lesser extent, South Hertfordshire greyware (SHER)), represented by 10 sherds (21.7%) or 8 MNVs (21.6%). There are small quantities of early medieval wares and Surrey whitewares.

Ditch [221] produced a total of 26 sherds representing 19 MNVs. The main fabrics are London-type wares and all, with one exception, are in coarse London-type ware (LCOAR), dated 1080-1200 (Pearce et al 1985). The exception is a single sherd of a jug with pellet decoration (LOND PELL), dated 1140–1220. The forms in the predominant pottery type are mostly jug sherds with external white slip and green glaze, although two sherds may come from jars. The jar forms are supplied by the wheel-thrown coarse wares and are in the sandy shelly ware (SSW) with expanded rims, and coarse medieval sandy wares (MCS), dated 1140-1300 (Figs 13.1 & 13.2). A small sherd of SHER is also present along with an intrusive sherd of a BORDG chamber pot. Residual sherds of early medieval calcareous ware (EMCALC), 1000–1150, and EMCH are also present. The latest pottery types indicate that the ditch was infilled between c.1170 and 1200. Ditch [216] produced a residual shoulder sherd of an SSW jar or closed form besides the

base sherd of a late medieval Hertfordshire glazed ware (LMHG: Jenner & Vince 1983) jug, dated 1340–1450. This feature was in turn sealed by layer [194], which produced a single sherd of a residual LCOAR glazed jug (Table 1).

Quarry pit [122] produced eight sherds of pottery; three small sherds are in Surrey whiteware from Kingston (KING), dated 1240-1400 (Pearce & Vince 1988), and all probably from jug forms. A single sherd of a LOND jug is noted along with two residual sherds of early medieval sand- and shelltempered ware (EMSS) and early medieval chalk-tempered ware (EMCH). There are also two sherds of unidentified pottery (MISC). The first is in a pale pink, high-fired fabric with sparse fine quartz and glaze drips. This may be Spanish and similar to the fabric of a sherd from a different vessel found in Phase 3 ditch [144]. The second sherd, from a jug, is in a high-fired, orange-pink fabric with a fine feel and inclusions of clear quartz and fine to large red iron ore pellets and has an external olive glaze. It may be a product of the Low Countries or the South Midlands. The pottery types indicate deposition during the period c.1240-1350. The fills of quarry pit [122] were sealed by layer [104], which produced two sherds from different LCOAR jugs; one example has a thumbed base and is slightly abraded, while the other vessel is decorated with a white slip wash and applied white slip vertical lines, possibly in the North





Table 2. Shoreditch (SDQ08/SDV08) distribution of post-medieval pottery by phase. Key SC: sherd count; MNV: Minimum number of vessels

			Pha	Phase 4		Phase 5		ise 6
Pottery code	Expansion	Date range	SC (%)	MNV (%)	SC (%)	MNV (%)	SC (%)	MNV (%)
BEAY	Beauvais yellow- glazed ware	1500-1600	1 (0.4)	1 (0.6)				
BLUE	Blue refined earthenware	1800-1900					1 (1.2)	1 (1.3)
BONE	Bone china	1794-1900					3 (3.5)	3 (3.9)
BORD	Surrey-Hampshire border whiteware	1550-1700	3 (1.1)	1 (0.6)	30 (14.6)	10 (19.2)	2 (2.4)	1 (1.3)
CHEA	Cheam whiteware	1350-1500	1 (0.4)	1 (0.6)				
CHPO	Chinese porcelain	1580-1900					1 (1.2)	1 (1.3)
CITG	Central Italian tin- glazed ware	1450-1550	6 (2.2)	3 (1.8)				
COLGE	Coloured glazed refined whiteware	1800-1900					1 (1.2)	1 (1.3)
CREA DEV	Creamware with developed pale glaze	1760-1830	1 (0.4)	1 (0.6)			9 (10.6)	9 (11.8)
CSTN	Cistercian ware	1480-1600			1 (0.5)	1 (1.9)		
DUTSG	Dutch slipped red earthenware with sgraffito decoration	1450-1550	1 (0.4)	1 (0.6)				
EBORD	Early Surrey- Hampshire border whiteware	1480-1550	7 (2.6)	5 (3.0)				
ENPO	English porcelain	1745-1900					1 (1.2)	1 (1.3)
FREC	Frechen stoneware	1550-1700	1 (0.4)	1 (0.6)	1 (0.5)	1 (1.9)		
LONS	London stoneware	1670-1926			8 (3.9)	1 (1.9)	2 (2.4)	1 (2.6)
MART2	Martincamp-type ware type II flask (dark brown stone- ware)	1500-1600			2 (1.0)	1 (1.9)		
MISC	Miscellaneous unsourced pottery	1480-1900	4 (1.5)	4 (2.4)				
NISG	North Italian (Pisa) sgraffitto redware	1550-1700			1 (0.5)	1 (1.9)		
PEAR	Pearlware	1770-1840					10 (11.8)	10 (13.2)
PMBL	Post-medieval Essex black-glazed redware	1580-1700			2 (1.0)	1 (1.9)		
PMBR	London-area post- medieval bichrome redware	1480-1600	1 (0.4)	1 (0.6)				
PMFR	Post-medieval fine redware	1580-1700	1 (0.4)	1 (0.6)	6 (2.9)	6 (11.5)		
PMR	London-area post- medieval redware	1580-1900	1 (0.4)	1 (0.6)	61 (29.8)	8 (15.4)	5 (5.9)	5 (6.6)





Table 2 (cont.). Shoreditch (SDQ08/SDV08) distribution of post-medieval pottery by phase. Key SC: sherd count; MNV: Minimum number of vessels

			Phase 4		Phase 5		Phase 6	
Pottery code	Expansion	Date range	SC (%)	MNV (%)	SC (%)	MNV (%)	SC (%)	MNV (%)
PMRE	London-area early post-medieval redware	1480-1600	144 (53.9)	84 (50.3)	4 (2.0)	4 (7.7)		
PMREC	London-area early post-medieval calcareous redware	1480-1600	6 (2.2)	4 (2.4)				
PMRO	London-area early post-medieval redware with organic temper	1480-1700	1 (0.4)	1 (0.6)				
PMSL	London-area post-medieval slip- decorated redware	1480-1600	1 (0.4)	1 (0.6)				
PMSR	London-area post- medieval slipped redware	1480-1650	5 (1.9)	2 (1.2)	3 (1.5)	3 (5.8)		
RAER	Raeren stoneware	1480-1610	16 (6.0)	10 (6.0)			1 (1.2)	1 (1.3)
RBOR	Surrey-Hampshire border redware	1550-1900			4 (2.0)	3 (5.8)	5 (5.9)	4 (5.3)
REFW	Plain refined white earthenware	1805-1900			1 (0.5)	1 (1.9)	4 (4.7)	4 (5.3)
SIEG	Siegburg stoneware	1300-1630	2 (0.7)	2 (1.2)				
STSL	Combed slipware	1660-1870			1 (0.5)	1 (1.9)	1 (1.2)	1 (1.3)
SUND	Sunderland-type coarseware	1800-1900					1 (1.2)	1 (1.3)
SWSG	White salt-glazed stoneware	1720-1780					1 (1.2)	1 (1.3)
TGW	English tin-glazed ware	1570-1846			80 (39.0)	10 (19.2)	1 (1.2)	1 (1.3)
TPW	Transfer-printed refined whiteware	1780-1900					24 (28.2)	20 (26.3)
VERW	Verwood ware	1600-1900	1 (0.4)	1 (0.6)				
YELL	Yellow ware	1820-1900					12 (14.1)	9 (11.8)
MPOT	Medieval pottery	900-1500	63 (23.6)	41 (24.6)				
Total			267 (100)	167 100	205 (100)	52 (100)	85 (100)	76 (100)

French style and dated on this ware to the end of the 12th century (Pearce et al 1985, 29).

Phase 3: later medieval

This period of activity produced a total of 30 sherds of pottery representing 28 MNVs. Ten sherds (33.3%) or 10 MNVs

(32.1%) are of Surrey whitewares, whilst London red earthenwares (LLON, LOND, PMRE/M) account for a further nine sherds representing nine MNVs. There are also smaller quantities of residual wheel-thrown coarse wares, an import and early postmedieval redwares.

Pit [189] contained a total of 14 sherds of





pottery, from some 13 fragmentary MNVs. The earliest fill [188] produced sherds of CHEA, DUTR and residual LOND and SHER, while a later fill [186] yielded EMSS and CHEA, as well as an unidentified sherd of glazed pottery with a red slip and applied rib in a fine sandy, hard orange fabric. The latest fill [175] produced only late medieval pottery types: an identifiable bifid rim cooking pot/jar in coarse Surrey-Hampshire border ware (CBW), dated 1380–1500, two sherds of CHEA and the base of a 15th-century LLON vessel.

Two slots excavated through an extensive north-south-aligned ditch, [144], produced pottery dating to this phase. A number of fills within the northern slot contained pottery; the earliest, [138], contained single sherds of SSW and early South Hertfordshire-type coarseware (ESHER), 1050-1200, the latter as a body sherd from a jug with a mortised rod handle. The next fill, [127], produced two sherds of LOND jugs, and a sherd of a probable Spanish ware with an internal discoloured glaze. The latest pottery type was the rim of a 15th-century late London ware (LLON) dripping dish. The latest fill of the ditch to contain pottery was [118], which included single sherds of residual EMSS and SSW besides contemporary sherds of a green-glazed CBW jug with a combed vertical line and a sherd of Cheam whiteware with a vertical line of red slip decoration. Together these wares indicate deposition in the period 1350-1500. The southern slot produced three sherds of pottery. Two of these were from a CBW barrel-shaped jug with a mortised, large loop strap handle, decorated with incised lines and point stabbing. The third sherd was from the base of a bowl in a particularly coarse fabric version of a London-area early post-medieval redware with metallic glaze (PMREM), dated 1480–1600. Together, these two pottery types indicate that this ditch was being infilled during the late 15th century.

Phase 4: early post-medieval

This phase saw another change in the ceramic profile of the site as the London area post-medieval redwares became more frequent (159 sherds/59.3% or 94 MNVs/56%) than the Surrey whitewares, which had been

dominant in the previous phase and now consisted of 31 sherds (11.6%) or 23 MNVs (13.7%). However during this time the postmedieval Surrey-Hampshire Border wares began to replace the medieval whiteware tradition of that region. More readily identifiable imported wares also became a major source of pottery in this phase with 52 sherds or 32 MNVs (19.4% and 19% respectively) and were notable as German stonewares, Dutch redware and to a lesser extent Italian tin-glazed wares.

Pit [71] produced 56 sherds of pottery representing some 41 MNVs, of which 36 sherds or 23 MNVs are PMRE. This pottery type occurs in the forms of a cauldron or pipkin, a tripod pipkin and two unglazed jars. German stonewares are well represented in the form of five Raeren stoneware (RAER) drinking jugs and a Siegburg stoneware drinking bowl with a small lug and an iron wash. Medieval Surrey whitewares are also present as CBW, CBW BIF, and as jug sherds in KING and TUDG. The base of a thick walled vessel in a coarse Verwood fabric (VERW) with an internal olive glaze, may represent a 16thcentury item (Draper & Copland-Griffiths 2002, 31), though it was more frequently marketed to London after c.1600. A sherd of a green-glazed Dutch sgraffito ware (DUTSG) jug with a white slip panel and sgraffitto decoration (as a line and a series of knife point stabbings) also occurs (Table 2). The pottery from this feature indicates a date of deposition between c.1480 and 1550

Ditch [316] was dated to between c.1480 and 1500 by the presence of an early Surrey-Hampshire border whiteware (EBORD) drinking jug, found together with the type fossil for this period: Raeren stoneware (RAER) drinking jugs, which were represented by sherds from two vessels, besides an unglazed London-area early post-medieval redware (PMRE) deep rounded bowl. The earliest fill [315] of this ditch produced of note a sherd from a Saintonge polychrome ware jug, decorated with a broad horizontal green band, sandwiched between two purple/ brown lines. This ware was made for a relatively short period and its occurrence in London is dated to 1280–1350. There has been some debate regarding the high-status of Saintonge polychrome ware used in wine drinking; current consensus suggests that





the presence of this ware, perhaps slightly more expensive than other pottery types, is related more to its availability at the market (the port of London in this case), rather than its being a socio-economic indicator (see Courtney 1997, 102).

Layer [197] (a deposit that lay below sealing layer [177]) produced the rim of a Langerwehe stoneware (LANG) jug and the base sherd of a non-local late medieval transitional fine sandy redware vessel containing an internal white deposit. The pottery types suggest a late 15th- to early 16th-century deposition date. Layer [177] which sealed pit [205] produced 129 sherds of pottery representing 78 MNVs, with the main pottery type present, as 82 sherds or 49 MNVs, being PMRE, in the form of bowls or dishes, cauldrons or pipkins, jars, rounded jugs, tripod pipkins and the base of a watering pot. Some of these forms have pinched feet, a mid-16th-century trait on this ware. Variants of the PMRE fabric occurred in the calcareous fabric (PMREC) as a rounded jar and a rare bichrome glazed (PMBR) rounded jug. Also unusual is the organic tempered redware (PMRO: Sudds 2006, 92) in the form of a fragment of a possible mould with a reduced, heated surface. White slip decorated redware (PMSL) is noted, as is the slipped redware (PMSR), and includes a sherd with an applied, thumb decorated, coarsely quartz tempered white slip strip.

Small quantities of medieval Surrey whiteware are recorded as CBW and CHEA, although the comparatively rare Tudor green ware is represented by thirteen sherds from eight vessels: a lobed cup, a small dish and jugs, including a conical example. EBORD, which displaced TUDG, is noted as a drink-

German stonewares were noted as a sherd of salt-glazed Siegburg stoneware (SIEGS), dated 1500-1630, and two RAER drinking jugs. There is also a sherd of Dutch redware with a corrugated surface. Italian wares were noted as two sherds of Italian slipware (ITALS) and six sherds of blue on white decorated Central Italian tin-glazed ware (CITG: Blake 1999) in the form of possible jugs or ring vases, surviving as a splayed base with a dark blue band, a body sherd with a washed out blue ladder and frond design (possibly of a South Netherlands source), and sherds of a definite ring vase, decorated with foliage and vertical lines in two shades of blue. Despite intrusive ceramics, such as a sherd of Developed Creamware and a modern wall tile, being present, the majority of the pottery present in the layer appears to date to the early 16th century.

Layer [198], which had slumped into the top of earlier pit [201], produced single sherds of CBW and of an Essex-sourced, post-medieval fine redware (PMFR), this dating the layer to 1580–1700. Layer [313] produced three sherds of Surrey-Hampshire border whiteware with green glaze (BORDG), dated 1550-1700, although the main type of pottery found in the layer was PMRE (3 sherds, 3 MNVs) with the identified forms consisting of rounded jars, some with rilled surfaces, while a base sherd was sooted and contained an internal limescale deposit. Of note was a small rounded bowl in DUTR with an internal lid-seated rim (Fig 13.3). A sherd of London-area post-medieval redware (PMR), a technological development of PMRE, is present and this dates the deposit to the end of the 16th century. The layer was truncated by the group of postholes on the western side of the site, and whilst none of these contained any finds, they were sealed by layer [257], which produced three 16thcentury sherds of pottery as DUTR, including a pipkin, and PMRE, besides a residual sherd of LLON.

Phase 5: 17th-18th century

In Phase 5 (206 sherds/53 MNVs) the main sources of pottery are in similar proportions: London area delftware as 80 sherds (38.8%) or 10 MNVs (18.9%) and local post-medieval redwares as 68 sherds (33%) or 15 MNVs (28.3%), followed by Surrey-Hampshire red and whitewares as 34 sherds (16.5%) or 13 MNVs (24.5%). There are small quantities of Essex fine red wares (PMFR) and British stonewares, both as 8 sherds each (3.9%) and as 7 (13.2%) and 1 MNVs (1.9%) respectively, while imported wares are less frequent (4) sherds (1.9%), 3 MNVs (5.7%)) than in the previous phase. Non-local (Midlands) wares are also minimal occurrences.

The backfilling [55] of the construction cut of culvert [45]/[44] produced a wide range of 16th- and 17th-century pottery





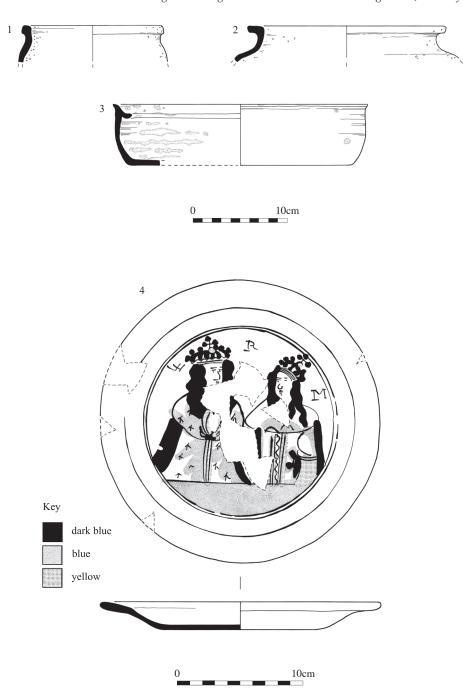


Fig 13. Medieval and later ceramics from Shoreditch. Key: 1. Jar with rounded rim in Medieval coarse sandy ware (MCS) from fill [219] from ditch [221] (Phase 2); 2. Jar with rounded rim in Medieval coarse sandy ware from fill [219] of ditch [221] (Phase 2); 3. Small rounded bowl in Dutch redware (DUTR) from layer [313] (Phase 4); 4. Tin-glazed earthenware plate (TGW) depicting William and Mary (initials 'WRM') from fill [115] of cesspit [116] (Phase 5)





types amongst the 36 sherds representing 32 MNVs. Pottery types are BORDG (bowl or dish), BORDY (jar and porringer), Cistercian ware, Post-medieval black glazed ware (PMBL: rounded mug), PMFR as a handled rounded bowl, PMR as a bowl, PMRE as a bowl and pitcher, PMSRY as a cauldron or pipkin, and Red border ware. The tin-glazed wares are decorated in blue and white: two vessels, one with a chequer design and the other as a charger with a cable design. Imports are Frechen stoneware (FREC: jug), a French Martincamp buff earthenware (MART1) globular flask, and North Italian sgraffito ware (NISG: rounded bowl). On balance, the latest pottery types suggest deposition between c.1580 and 1650 (Table 2).

A significant proportion of the pottery from this phase came from brick-lined cesspit [116]. The ceramics came from two fills, [114] and [115], with conjoining sherds from the same vessel found in both fills; the two fills are therefore quantified as a whole. Many of the vessels had complete profiles, although the contents of the pit cannot be regarded as a closed group as defined by Pearce (2000) since intact vessels are absent. The group may represent material discarded piece-meal rather than thrown away *en masse*.

In total there are 165 sherds representing 17 MNVs and the main pottery type is the local tin-glazed wares represented by 77 sherds (46.7% of the pottery in the cesspit) or 8 MNVs (47.1%). Plain white earthenwares (TGW C), dated 1630-1846, occur as five sherds from two vessels: an albarello and a porringer with a rounded body and simple everted rim, dated to c.1680–1710 (Orton 1988, 311–12, figs 1285–6: type C). In TGW D there is an albarello decorated with blue bands and a cable on white, and two chargers; TGW D is usually defined as polychrome designs with lead glazed exteriors and dated to the mid-17th century (Orton 1988, 327). The first charger is decorated with purple lines and pyramids with green leaves and circles, comparable designs are dated c.1650-75 (Archer 1997, 97, A47), while the second charger has a design of simple yellow fruits or flowers, green leaves, purple shading and a narrow flat rim with blue dashes. This design may be late 17th- to early 18th-century in date. The rest of the tin-glazed wares are mostly in blue on white with Chinoserie designs and in the form of a small rounded bowl with a panel design and a possible central landscape and a rounded dish with flowers. Similar decoration is noted on a plate dated 1715-25 (Archer 1997, 171: B 108). Most notable is a simple plate shape (Britton 1987, 194: type I) depicting William and Mary, their initials 'W R M' being present. The colour scheme is blue on light blue (similar to TGW H), but with the addition of yellow (Fig 13.4). William and Mary are very popular royal depictions on delftware and they presumably date the vessel to the period of their joint reign, 1689–1694, although it is possible that the plate was made after William's death in 1702 (Archer 1982).³

Post-medieval redware (PMR) accounts for the second largest pottery type in the cesspit as 57 sherds (34.5%) or 5 MNVs. This ware, made in a number of locations in London, such as Deptford, Greenwich and Woolwich, occurs here in the form of a single flared and three rounded bowls, all two handled types, while some of the vessels have incised line decoration. These forms are known from wasters at Deptford (Jarrett 2004, 95, 100, fig 69.2). There is also the rounded rim of a bowl or dish present. The Surrey-Hampshire border whitewares had largely stopped being produced by the start of the 18th century, except for one or two forms, such as the flat rimmed chamber pot (type 2) which was in production between 1650 and 1750; one example is present here in BORDG. There is also a yellow glazed (BORDY) carinated porringer with an external corrugated finish. The vessel was externally sooted and so was used to cook with. A London stoneware jug is also present and resembles a German stoneware Bartmann shape. The rim of a combed slipware (STSL) rounded porringer, decorated with brown slip dots on the exterior, was also present.

The pottery from cesspit [116] occurred with a large group of clay tobacco pipes dated to c.1680–1710 and believed to be indicative of a drinking establishment (see Jarrett below), probably the Jane Shore public house (discussed later). However, the functions of the ceramic vessels recovered from the cesspit are not indicative of the presence of an inn or public house (see Pearce 2000, 174) as few alcohol/drinking





forms are noted. Only four glass English wine bottles were recovered from this cesspit (Shepherd 2011), a relatively low number if it served an inn. The dating of the ceramics, based upon the types present and the absence of 18th-century white salt glazed stoneware, suggests final deposition in the period c.1700-20.

Phase 6: 19th century

The ceramic profile of the site changes in this phase and factory made refined earthenwares, mostly made outside London, are the main pottery type, present as 51 sherds (60%) or 47 MNVs (61.8%). These are followed in abundance by non-local wares represented by 14 sherds (16.5%) or 11 MNVs (14.5%), while Surrey-Hampshire border wares, coarse London red wares and British stonewares are all present as 7 sherds (8.2%) or 5 MNVs (6.6%) or less.

Much of the pottery in this phase was recovered from backfills [89] and [139] associated with repairs to the earlier culvert. The pottery types from these deposits were on the whole late 18th- or 19th-century innovations, such as bone china, Creamware, Pearl ware, refined whiteware and transferprinted versions of those fabrics (PEAR TR, TPW), and are often present in the forms of table wares, plates or tea wares, cups and saucers; yellow ware, often slip decorated, was also recorded in the form of bowls and jugs. Deposits [150] and [151] were associated with the culvert and contained a saucer in colour glazed refined earthenware, besides a tea cup in PEAR TR, plates in TPW, a dish in STSL, possibly made at Isleworth, a rounded bowl in PMR, and a chamber pot in RBOR. A mocha decorated YELL cylindrical mug base was also present. Solely from [151] was a London stoneware cylindrical bottle stamped 'BLACKING BOTTLE'. Brick-lined cesspit [103] produced only seven sherds of pottery and much of it was as residual 16thand 17th-century wares, except for a YELL SLIP mocha decorated carinated bowl.

The deposits containing this pottery were located within the area of the Jane Shore public house, which was also referred to as an inn (Wheatley & Cunningham 1891, 244), although there are few obvious drinking forms *etc* to infer that the pottery was

derived from this source. However, the yellow ware worm-slip decorated jugs (rarely encountered in other London domestic contexts) and the mug may have been tap room paraphernalia. Certainly mocha slip decorated whiteware and yellow ware tankards and mugs were used in 19th-century public houses (Rock 2006, 25–34). The latest pottery types in these layers indicate deposition between c.1840 and 1900.

Discussion

The medieval pottery suggests activity from a settlement probably associated with the crossings of the Shoreditch High Street, Kingsland Road and Old Street, perhaps focused around St Leonard's church, established in the 12th century or earlier. Groups of mid- to late 12th-century pottery containing Sandy shelly ware and Coarse London-type ware certainly support the origins of Shoreditch at this time, while smaller quantities of early medieval pottery may provide evidence for an 11th- or early 12th-century, earlier settlement. The small quantities of medieval coarse wheel-thrown pottery (MCS) and miscellaneous wares, essentially unidentified pottery types that are not the typical types marketed to London, may represent items, perhaps as containers important for their contents, transported along the local medieval road system and originating from sources in counties to the north and west of London. This may also be the source for the unidentified wares recovered from the late medieval and early post-medieval periods of activity on the site.

The functions of the pottery recovered from the medieval and late medieval periods of the site are typically for drink serving, as jugs, or for storage and cooking, as jars, and only indicate the typical domestic activities for pottery expected at this time. Few medieval pottery groups have been recovered from the Shoreditch area, with the notable exception being the large assemblages from the ELLP excavations associated with Holywell Priory, to the south of the site (Blackmore & Pearce 2011, 155-60), where, not unexpectedly for an ecclesiastical site, a more diverse range of pottery types was noted that included jugs in Mill Green ware, from Essex, and Earlswood ware, from Surrey.





The range of pottery types recovered from the early post-medieval deposits is fairly typical of London assemblages of this period. The range of forms and functions of the pottery in this period is much more diverse (as a wider range of bowls, dishes, cups, jugs and kitchen wares: cauldrons and tripod pipkins) than in the medieval phases, although this is to be expected with the changes in European material culture and society in the late 15th and early 16th century. However, apart from the norm in the ceramic profile of the site at this time, there are some notable occurrences of less common exotica, such as Central Italian tinglazed ware and a small sherd of Beauvais yellow glazed ware. The latter, together with the German stonewares from Langerwehe, Raeren and Siegburg and the high quality Low Countries redwares (all imported into London in large quantities), besides the fine whitewares from Surrey-Hampshire, the local slipwares and a sherd from Italy (ITALS), are types of pottery associated with Renaissance consumerism in North-West Europe (Gaimster 1999). This, together with the fragment of the contemporary piece of carved stag-horn inlay (see Gaimster below) all suggests that the inhabitants of the site were affluent and enjoying the trappings of a middle or higher socio-economic group. The contemporary pottery assemblage from the Holywell Priory excavations has the same sorts of pottery types as at SDV08, although there are greater quantities of the same and different imported wares (Blackmore & Pearce 2011, 159-60). Central Italian tinglazed ware, believed to be a prestigious luxury import, although found on secular sites in London, is not specifically reported from the priory excavations (Italian tinglazed ware (ITGW) is recorded, as are the similar South and North Netherlands wares: SNTG and NNTG; Blackmore & Pearce 2011, 160), although it is being increasingly recognised on the excavations of many of London's religious houses (Blackmore 2011, 140).

Part of the assemblage was probably recovered from the premises of the Jane Shore public house (discussed earlier), and the group of pottery from cesspit [116] is almost certainly associated with it, as indicated by the large group of clay tobacco pipe fragments. However, the associated ceramics and glassware are not indicative of a public house. More indicative of the presence of this public house are the small quantities of 19th-century mocha slip decorated mugs (and also possibly the jugs) recovered from the masonry culvert. It may be that some of the ceramics associated with the public house appear purely domestic in nature and that the expected larger quantities of alcoholic drinking vessels, in both pottery and glass, were disposed of elsewhere. Excavations at the ELLP project were also in the areas of documented drinking establishments and their finds groups were not conclusively identified, although associations with such premises may have been inferred from some of the finds, such as a large group of chamber pots (Pearce et al in prep).

Clay tobacco pipes

Chris Jarrett

Introduction

The excavation produced a total of 652 clay tobacco pipe fragments that can be broken down into 222 bowls, 8 nibs and 422 stems. The bowls range in date between 1640 and 1880 and their types have been classified according to Atkinson and Oswald's (1969) classification (AO) and 18th-century examples by Oswald's (1975) typology (OS). The quantification of the bowl types and their distribution by phase is shown in Table 3. The condition of the clay tobacco pipes is on the whole good and indicates that they were deposited soon after their final use. The clay tobacco pipes are found in Phases 2 and 5-6 and are discussed accordingly. Of note was a very large group of clay tobacco pipes dated to the start of the 18th century.

Fig 14 (opposite). Clay tobacco pipes from Shoreditch. Key:1. AO21 bowl with AG stamp from fill [114] of cesspit [116] (Phase 5); 2. AO21 bowl with PCW stamp from fill [114] of cesspit [116]; 3. AO 22 bowl with ID stamp from fill [114] of cesspit [116]; 4. AO22 bowl with HI stamp from fill [115] of cesspit [116]; 5. AO28 bowl with FORD MILE END LONDON stamp from infill [151] of culvert [44/45] (Phase 6); 6. AO28 bowl with [W]ALKER stamp from infill [89] of culvert [44]/[45] (Phase 6)





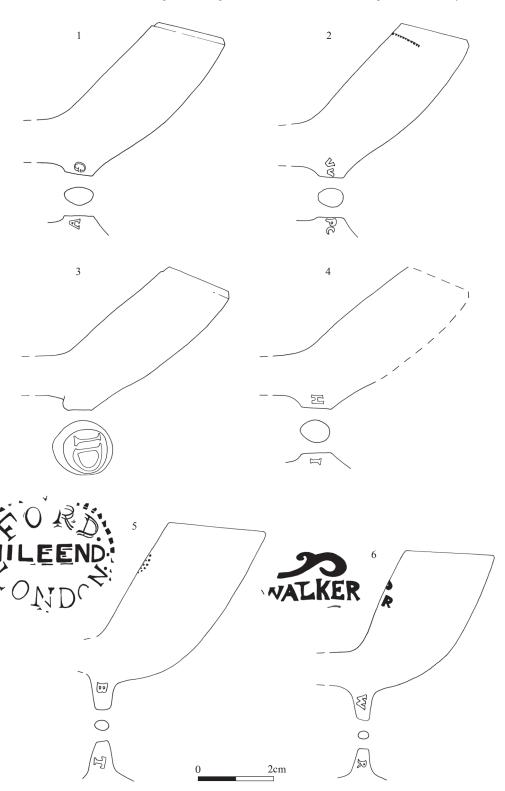






Table 3. Distribution of clay tobacco pipe bowl types by the number of bowls/fragments from SDQ08 and SDV08

			Phase	:	
Bowl type	Date range	2	5	6	Total
AO10	1640-1660		1		1
AO15	1660-1680		2		2
AO20	1680-1710		11		11
AO20/22	1680-1710		1		1
AO21	1680-1710		83		83
AO22	1680-1710		98		98
OS10	1700-1740		3		3
AO27	1770-1845			1	1
AO28	1820-1860	1		9	10
AO29	1840-2840			2	2
Unidentified			8	2	10
Nib			7	1	8
Stem			379	43	422
Total		1	593	58	652

Phase 2: earlier medieval

A single AO28 bowl, with a leaf border, was recorded in the linear cut [216] and is presumed to be intrusive.

Phase 5: 17th-18th century

Of particular note was the large group of clay tobacco pipes recovered from the brick-lined cesspit [116], which produced from its two fills [114] and [115] a total of 566 fragments of clay tobacco pipes. These pipes can be broken down as 207 bowls, 7 nibs and 352 stems. Residual bowls are present as a single heeled AO10, broader than the norm, and two spurred AO15s, one being taller, while the rest are late 17th- and early 18th-century types, together indicating deposition in the period c.1700-10. The range of bowl types and the makers' marks are shown in Table 4. The moulding of the initials on the bowls is rather poor and often difficult to read. It is rather disappointing that despite multiple occurrences of the same maker's mark, so few of the initials can be assigned to actual makers. Bowls with three initials, such as the PCW examples (the W appears as two Vs), are difficult to assign to specific makers, as they may represent a middle name, a married couple or a partnership. The frequency of certain makers' initials on the bowls, such as AG (Fig 14,1) and PCW (Fig 14, 2), must mean that certain pipe makers were local to the site or marketing their product in the area. Additionally, as a number of different moulds are represented for each of the marked bowl types, this gives an insight into each of the pipe maker's workshops, for example PCW had at least two moulds to make the AO21 bowl. From the evidence of the cesspit, it would appear that the local industry did not maker mark AO20 bowls. The fact that the local pipe makers did go to the effort of marking their pipes is interesting as in some areas of London, 1680-1710 dated bowl types are never or rarely initialled. Another characteristic of the local clay tobacco pipe industry is that the spurred AO19 bowl was probably not made there, being absent in the masonry cesspit and on the site. However, the late 17th and early 18th century was a period when clay tobacco pipes in London were slowly becoming more uniform and AO22 bowls are on the whole more frequently recorded, while the distribution of AO19 bowls show that it still had a stronghold in certain parts of Southwark, where there was something of a preference for spurred bowls from the mid-17th century until c.1710 (Jarrett in prep a). The single AO22 bowl with an I D stamp (Fig 14, 3) and the initials in relief is an unusual occurrence as the practice of makers stamping pipes in London, or marking them at all, mostly went out of fashion by c.1640 and therefore this bowl may represent a non-local item from somewhere else in South-East England.

Phase 6: 19th century and later

The clay tobacco pipes from this phase were recovered solely from the interior fills of the culvert [44]/[45]. The earliest bowl in this feature was the definitive heel of an AO27 type with possible castle turrets on each side and surviving evidence that the bowl was fluted and had oak leaf borders. It may possibly be a Masonic type from the evidence of the turrets. There are nine





Table 4. SDV08, quantification of clay tobacco pipes from the masonry cesspit [116]

Bowl type	Initials	[114]	[115]	Total	Comments
AO10			1	1	
AO15			2	2	
AO20		6	5	11	None are maker marked. Two moulds.
AO20/22		1		1	The bowl has been distorted with the rim oval in profile.
AO21		5	6	11	Two moulds.
AO21	5 5		5	5	The initials are illegible. Three moulds.
AO21	A G	5	10	15	Two of these bowls have an illegible first initial.
					Unknown pipe maker. Two moulds. (Fig 14.1)
AO21	PCW	29	23	69	Three bowls occur where the first name is illegible. Unknown maker. Two moulds. (Fig 14.2)
Sub-total (AO21)		56	44	100	
AO22		34	45	79	15 moulds.
AO22	ΙD	1		1	Possible makers are John Doughton, 1696; James Dimmocks, 1672-98, recorded at St Giles in the Field and Bishopsgate; John Da- vies (1), 1690-96; John Davis (2), 1696; John Dimmocks (2), 1705; and James Dixon, 1710. (Fig 14.3)
AO22	ΗΙ		1	1	Heel stamp with the initials in relief. Possibly Henry Jacob, known in 1672 at Wapping, Stepney and Henry Icum in 1689. (Fig 14.4)
Sub-total (AO22)		35	46	81	
OS10		1	1	2	
OS10	5 D	1		1	First initial illegible
Sub-total (OS10)		2	1	3	
Indeterminate bowls	,	1	7	8	
Nib		4	3	7	
Stem		181	171	352	
Total		286	280	566	

examples of spurred AO28 bowls and three have damaged spurs with the makers' names missing, although two have leaf borders and the third is of the 'fox and grape' type (see Atkinson & Oswald 1969, 189, 191, fig 7.45) and probably associated with a public house. The five maker marked AO28 bowls all occur as individual pipe makers. An oversized bowl has T B on the spur and a circular incuse stamp with 'FORD MILE END LONDON' (Fig 14, 5) and this probably represents a

member of the Ford family of clay pipe makers in East London (either John, 1805–65; Jesse, 1836–77; or Thomas (2), 1846–59; (3) 1850–90, reusing a mould of Thomas Balme, 1805–45, also of Mile End Road). Another bowl is marked on the heel S C and has oak leaf borders; it could have been made by a number of possible London pipe makers, those being more local are Samuel Carter, 1823–56, Smithfield, Samuel Clark, 1848, Bishopsgate, or Spencer Chick, 1856–76, Goswell Road.





Another bowl with leaf borders is marked I T, the forename initial possibly remoulded over an earlier one. Possible makers are James (Joseph) Tester, 1805–28, and John Taylor 1844-8, Cromer Street in the area of Kings Cross. The fourth bowl is plain except for the initials R W on the spur and the incuse name of '[W]ALKER' with a scroll above the name (Fig 14, 6). This is possibly a pipe made by Robert Walker, Great Amwell, Hertfordshire, who made a will in 1833 (Hammond 2004, 22). The fifth bowl is small and has oak and grass leaf borders and is initialled TW on the spur; it could have been made by a number of London pipe makers, Thomas Woodward of Bethnal Green, 1848–73, being a more local candidate.

There are also two AO29 bowls, characterised by a heel and sloping rim. The first is a plain bowl with two identifiable vertical lines on each side of the heel and this may be a local product as similar markings have been noted at Ironmonger Row Baths, Islington (Jarrett 2012). The second AO29 bowl was made in a worn mould and has leaf borders and a waisted profile on the back. On the heel are two Us, possibly horseshoes. A fragment of a bowl appears to be late 19thor 20th-century in date and has a cordon below the rim. It is similar to a design called 'Bulldog' (no. 220) illustrated in Pollock's 1915 catalogue (Jung 2003, 334). One other fragment of a bowl has a leaf border and dates to the 19th century.

Discussion

Large groups of clay tobacco pipes from discrete features or deposits have been recovered from a number of sites across London that have been deemed to be associated with a drinking establishment, such as a public house or inn, eg a drain associated with a tap room in the Fleet prison (Jarrett forthcoming), and on Borough High Street (Jarrett in prep b; Jarrett 2006). Therefore it seems reasonable to suggest that the large group of pipes recovered from the cesspit [116] is associated with a drinking establishment, perhaps the Jane Shore (discussed earlier) (Fig 11). However, the finds group from this feature is problematic in that the associated pottery and glass is small in quantity and does not strongly support the criteria for a group of finds from a tavern, public house or inn (which the Jane Shore was described as in 1891: Wheatley & Cunningham 1891, 244), as defined by Pearce (2000, 174). However, Pearce stated that large quantities of clay tobacco pipes are not always found in drinking establishment assemblages, so conversely it may be the quantity of clay tobacco pipes that confirm the presence of a public house, rather than the pottery and glass in some instances.

Ceramic and stone building materials

Kevin Hayward

Introduction

A diverse group of Roman, medieval and post-medieval ceramic building materials (130kg) was retained from the evaluation and excavation. These were recovered from a series of Phase 2 medieval quarry pits and ditches and the Phase 3 pits. A number of whole bricks and ashlar blocks were recovered from a Phase 3/4 structure, the Phase 5 bricklined culverts, cesspits and soakaways, and a Phase 6 culvert.

Of interest was the origin of the medieval component, specifically some late medieval floor tiles and glazed roofing tiles. It was thought that the medieval material may relate to dumped material from the nearby Holywell Priory (Bull *et al* 2011) or another structure. The fabric codes refer to the Museum of London classification of ceramic building materials.⁴

Roman tile and stone

Small quantities (2kg) of abraded often reused, highly fragmentary Roman ceramic building material and worked stone were found either in isolation or intermixed with later building materials in medieval and post-medieval ditches, pits and consolidation layers.

Roman tile and brick fabrics

Early London sandy fabric group 2815 (2452; 2459a; 3006) (AD 50–160)

Late London sandy fabric group 2459c (AD 140–250)

Wealden Silty Group Fabric 3238 (AD 71–100) Hartfield (Hampshire) Fabric 3009 (AD 100–120) Early Radlett (Hertfordshire) group 3060 (AD 50– 120)





With the exception of an abraded tegula fragment from a Phase 4 dump, [177], in the 2nd-3rd-century chaff rich sandy, mica fabric 2459c, the assemblage is dominated (1.6kg) by early sandy, iron oxide and silty fabric groups. Five fragments of a large brick (33mm thick) in the very common coarse sandy fabric 3006 from a Phase 3 quarry pit fill, [188], are typical of Roman tile and brick throughout London (eg Betts 2011). Perhaps more surprising are bricks made from the very silty banded fabric 3238 manufactured in the Weald and the distinctive lumpy silt fabric produced at Hartfield from Phase 2 quarry pit fills [199] [342] on this northerly, peripheral location of the Roman city. Perhaps their presence should be viewed in terms of the site's proximity to Ermine Street, which would also have facilitated the southwards transport of iron oxide manufactured tile 3060 (found in Phase 3 quarry pit fill [188]) from the kilns at Radlett, Hertfordshire.

The Purbeck marble mortar

Part of the gently convex side of a Purbeck marble mortar from Phase 4 dump [177] is of a form and fabric typical of a Roman receptacle for food preparation. Purbeck marble (a light grey condensed shelly rich limestone packed with complete, small 5mm freshwater gastropods (*Vivaparus carniferous*) unique to the lowermost beds of the Cretaceous of the Isle of Purbeck) was the material of choice for this purpose in Roman London. Examples from the Upper Walbrook such as those from Drapers Gardens (Hayward in prep) attest to this use.

Medieval floor tiles, roof tiles and bricks

A feature of the assemblage is a large group (275 examples weighing 20kg) of glazed and unglazed medieval peg and bat tile and to a lesser extent (5 examples weighing 1.5kg) of glazed decorated and undecorated medieval floor tile. These not only appear in the Phase 2 fills [26] [159] [160] [204] and fills [107] [127] [138] [175] [186] of Phase 3 pit [189] and ditch [144], but are also an important background component of later Phase 4 levelling dumps [20] [177] [257] [313]. Their origin is discussed in light of recent excavations around Shoreditch (Bull *et al* 2011; Pearce *et al* in prep).

Floor tiles

Penn fabrics 1811; 2324

A small group of abraded or broken decorated, compact (125 by 125 by 20mm) Penn floor tiles, manufactured in Buckinghamshire between 1330 and 1390, was found mainly in the upper fills [175] and [186] of quarry pit [189] (Phase 3). They were made either in the very silty 2324 fabric or the much coarser 1811 clay. One rosette design from [186] is compatible with the example (2870) from Eames' catalogue (Eames 1980), with an abraded example [175] with the colour removed without a parallel (Fig 15). A third very worn example was found reused in a Phase 4 posthole [253].

Flemish calcareous fabrics 1678; 2323

Supplementing the Penn tiles were two much thicker (32mm) plain-glazed calcareous-rich floor tiles manufactured in the Low Countries between 1300 and 1550. The examples, one in a bright yellow glaze the other a worn black glaze, both came from Phase 4 dump layers [177] and [313].

It is likely that both types of medieval floor tile originated from Holywell Priory, where a quantity of patterned Penn tiles was recovered from a floor bedding deposit, whilst plain glazed Flemish tile flooring was recovered from a number of contexts (Bull et al 2011, 61–4). Alternatively some of this material might have been derived from St Mary Spital, where Penn and Low Country floor tile assemblages have also been discovered (Crowley 1997, 198–9).

Medieval roof tiles

Medieval shouldered bat tiles and peg tiles

Fabrics: 2271; 2272; 2273; 2276 corky variant; 2587; 3205

The glazed medieval roofing tiles were represented by the occasional thick (18mm) curved bat tile (also called shouldered peg tile) and both the thin (8–10mm) and thick (18–22mm) peg tile is represented by a number of common London fabric groupings. Most have splash glaze with a very coarse moulding sand. A small quantity (3 examples weighing 270g) of the very coarse sandy fabrics 2272 and 2273 form the earliest group. These were manufactured between





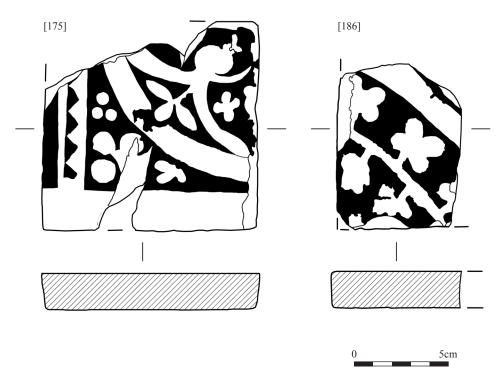


Fig 15. 14th-century Penn floor tile with rosette decoration, from quarry pit fill [175] (Phase 3)

1135 and 1220 and were succeeded in much larger quantity by the thinner, finer 2271 (1180–1800), the more robust coarse red iron oxide fabric 2587 (1240–1450), and a void rich glazed variant of the very common sandy post-medieval sandy fabric 2276.

Providing an explanation for the origin of these fragments of roof tiles is not so straightforward as for the floor tiles since there are a number of possible sources. Large quantities of medieval glazed peg tiles have been discovered locally at Holywell Priory, and from excavations close to Great House, Stone House, Stratton House and Shoreditch Village (Pearce *et al* in prep). Other possibilities include late medieval properties fronting Holywell Street, where a pitched peg tile hearth was discovered within a possible industrial building (Bull *et al* 2011, 73).

The Phase 4 stone and brick structure

The bricks from walls [75] and [76] consisted of poorly-made crinkly red unfrogged brick. These brick fabrics, fine sandy red 3033 and

pebble rich red 3065 both date stylistically to 1450–1700; while the more earthy brown bricks 3030 (1400-1660) and a rare white Flemish brick 3031 (1350-1450) are both likely to be reused material. What is more, both the stone and the brick are bonded using the same fine sandy-brown mortar suggesting both features were broadly contemporary. Finally, the red fabrics are all shallow (47–52mm), and relative to depth, wide (105mm), crinkly and handmade — also typical of an early post-medieval date. The possibility that these structures represent recycled material from the nearby Holywell Priory seems unlikely given that the brick sizes (238-247mm length by 113-122mm breadth by 54–65mm in thickness) from Holywell greatly exceed those seen from this site (Betts 2011, 151).

The Phase 5 brick culvert

The initial Phase 5 build of the linear brick culvert [44] [45] [155] along the southern property boundary used poorly made red unfrogged post-medieval bricks. The com-





bination of fabric types used, 3033; 3046; 3039 (1450–1700), typifies a construction date of between 1650 and 1700. Repairs to the culvert, [37] [156], using post-Great Fire bricks, 3032 (1664–1900), indicate its continued use into the 18th and 19th centuries.

Metalwork and small finds

Märit Gaimster

Introduction

Altogether more than 40 individual small finds were recovered, all dating from the medieval and post-medieval periods (Raemen 2008; Gaimster 2011). This report focuses on the more significant finds, which included an unusual piece of carved staghorn inlay.

The medieval finds (Phases 2–3)

Among the handful of finds attributable to the medieval period was a complete iron horseshoe with a characteristic wavy edge (Fig 16,1); this type was predominately used during the 12th and 13th centuries. The rectangular countersunk nail-holes, replacing the earlier round shape, identify this horseshoe as a Type 2b specimen; in London these first appear during the period 1150-1200 (Clark 1995, 95-6). An equally early find is represented by the shaft of a copper-alloy nail (sf 9); more commonly associated with post-medieval shipbuilding from the 18th century onwards, smaller copper-alloy nails, pins and tacks would have been used for the fixing of copper-alloy mounts to leather and small caskets during the medieval period (cf Egan 1998, 69-75;

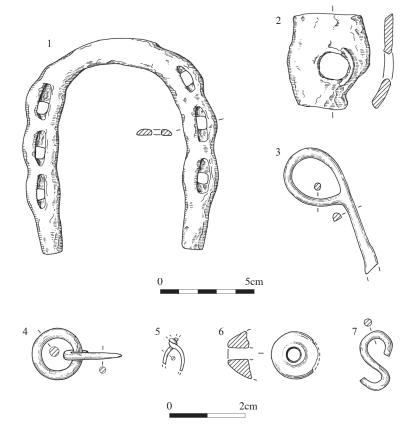


Fig 16. Small finds from Shoreditch, for details see finds catalogues, objects 1 and 2 are from Phases 2 and 3, the rest are from Phase 4: 1. Iron horseshoe <4>; 2. Iron rove <14>; 3. Part of arm of copper-alloy scissors <5>; 4. Iron shoe buckle <11>; 5. Fragment of copperalloy wire <12>; 6. Part of jet bead <15>; 7. Complete small iron link <13>.





Fairbrother 1990, 436). The rectangular rove of a substantial clench bolt was also recovered from a late medieval context (Fig 16, 2). Designed for joining overlapped timbers, clench bolts were employed in ship and boat building, but were also used for a range of other purposes, particularly in the construction of doors and hatches (cf Ottaway 1992, 618).

Phases 2 and 3 finds catalogue

Context [186]; associated pottery: 1350–1500 sf <14>: iron rove; substantial rectangular shape; 35 by 50mm; central hole 15mm diam (Fig 16, 2)

Context [213] no associated pottery

sf <4>: complete Type 2b iron horseshoe with three rectangular and countersunk nailholes to each branch; no caulkins and signs of heavy wear on the toe; W 100mm; date: $\varepsilon.1150$ –1200 (Fig 16, 1)

Context [219]; associated pottery: 1170–1200 sf <9>: copper-alloy nail; incomplete; square-section bar with slightly bent tip; W 3.5mm; I 37mm+

The early post-medieval finds (Phase 4)

The majority of finds from this phase came from contexts associated with activity close to the western and southern boundaries of the site. This assemblage includes the upper part of the arm of copper-alloy scissors (Fig 16, 3) and two iron knife blades (sf 6 and 8). Dress accessories are represented by a handful of finds, all from the same context and include a small annular iron shoe buckle (Fig 16, 4; cf Egan 2005, fig 16, no. 75), and the fragment of a fine twisted copper-alloy loop (Fig 16, 5). A characteristic find of late 15th- and early 16th-century contexts, the function of these little rings, frequently found stitched onto textile fragments, may have varied. One suggested use is as 'purse rings'; known from documentary sources, such rings would have acted as reinforcement against 'cutpurses' or thieves (Egan 2005, 62). A more unusual find is an incomplete biconical or barrel-shaped jet bead (Fig 16, 6; cf Egan 2005, fig 42, no. 245). Finally, there is also the S-shaped wire link of a fine iron chain (Fig 16, 7). Similar chain links of copper alloy had a variety of functions, including the suspension of seal matrices, censers and scale pans (cf Ottaway & Rogers 2002, 2853 and fig 1429 no.

13327). Another use was as dress fasteners, connecting hooks, clasps and strap ends (*cf* Egan 2005, fig 23, no. 148 and fig 124b).

In addition to the assemblage above, other finds were retrieved from what appears to have been a rubbish dump at the back of the property. These included a fragment of delicately carved stag-horn, featuring part of a naked standing figure covering himself with two large leaves with prominent stalks and serrated edges held in the left hand. This scene may be part of a representation of Adam and Eve (Fig 17).⁵ The fragment



Fig 17. Piece of carved stag-horn inlay < 7>. It depicts part of a naked figure holding two leaves. For details see Phase 4 finds catalogue





retains part of one original side with an intact corner, the angle of which shows that the shape of the original piece was not rectangular; it was probably trapezoidal. During the 15th and 16th centuries high-status hunting crossbow stocks could be entirely overlaid with inlays of ivory or staghorn, depicting biblical stories, hunting scenes, courtly lovers and mythical beasts (Duffy 2006, 69). Both the probable shape of the piece and its motif suggest that it may have been derived from the inlay of a crossbow stock or tiller.

Phase 4 finds catalogue

Context [177]; associated pottery: 1500–1550 sf <7>: carved stag-horn inlay; incomplete but retaining one side and a corner suggesting a trapezoidal shape; carved with a naked figure holding two leaves, possibly part of a depiction of Adam and Eve, L 55mm + (Fig 17)

Context [257]; associated pottery: 1480–1500

sf <5>: copper-alloy scissors; part of one arm with tear-shaped loop only; plain body with D-shaped section; L 75mm+ (Fig 16, 3)

sf <8>: tanged iron knife blade with straight back; two conjoining pieces; W 18mm; L 80mm+

sf <11>: annular iron shoe buckle; complete; diam 13mm (Fig 16, 4)

sf <12>: copper-alloy ?purse loop of twisted wire; fragment only (Fig 16, 5)

sf <13>: small iron S-link; complete; L 16mm; W 8mm (Fig 16, 7)

sf <15>: end part of ?biconical jet bead; diam 11mm (Fig 16, 6)

Context [259]; no associated pottery

sf <6>: tanged iron knife blade with straight back and slightly tapering; incomplete and heavily corroded; W 20mm; L 110mm+

Animal bones

Kevin Rielly

Introduction

This report combines the faunal assemblage recovered from the evaluation and the various phases of excavation, incorporating the SDQ08 (Sibun 2008; Driver 2008) and SDV08 data (Rielly 2011), with a revision of the former in order to comply with the method of recording and analysis of the SDV08 assemblage.

Methodology

The bone was recorded to species/taxonomic category where possible and to size class in the case of unidentifiable bones such as ribs, fragments of longbone shaft and the majority of vertebra fragments. Recording follows the established techniques whereby details of the element, species, bone portion, state of fusion, wear of the dentition, anatomical measurements and taphonomy including natural and anthropogenic modifications to the bone are registered. Age determination is based on the dental eruption and epiphyses fusion sequences described in Schmid (1972, 75 and 77) with expansion of the tooth age sequence to include wear in Grant (1982). The calculation of shoulder heights was based on multiplication factors given in Driesch & Boessneck (1974).

Certain age categories are employed to facilitate the interpretation of these data. The time of fusion of the limb bone articular ends allows the formation of three broad groups, as follows: Early – proximal (P) scapula, distal (D) humerus, P radius, pelvis acetabulum and P phalanges; Intermediate D metapodials and tibia; Late – P ulna, D radius, P and D femur, P tibia and P calcaneus. These groups approximately coincide with the 1st, 2nd and 3rd (and later) years respectively. Broader age categories are also employed, as follows: infant, based on bone size and porosity (see Amorosi 1989); juvenile, as infant plus unfused early epiphyses and unworn 1st adult molar; subadult, unfused Intermediate epiphyses and unworn 3rd adult molar; and adult, fused Intermediate and Late epiphyses, plus worn 3rd adult molar. It should be noted that there will be an overlap between the juvenile and sub-adult age groups.

Description of faunal assemblage by phase

The faunal material here is discussed within the broader medieval and post-medieval periods. The combined animal bone assemblage from the evaluation and excavation phases amounted to 926 bones recovered by hand collection and a further 540 from sieving (derived from 15 samples). A large proportion of the sieved bones were identified as fish, and these are discussed by Armitage below, leaving a total number of





Site:		SDV08			SDQ08	
Phase:	EM	LM	EPM	LPM	EPM	LPM
Species						
Cattle	7	25	185[4]	2	43	1
Equid	4	4	5		12	
Cattle-size	3	6[21]	169[45]	1	45	
Sheep/Goat	4	14	102[12]	4	29	1
Pig	3	2	42[6]	1	2	1
Sheep-size	2[1]	3	118[218]	2	12	
Red deer					1	
Fallow deer			2			
Dog		1	4			
Cat		2	1			
Hare			1[6]			
Rabbit			1[3]			[4]
Small mammal			[2]			
Small rodent					[2]	
Chicken			55[6]		2	
Goose			2[2]			
Small passer (cf thrush)			[1]			[1]
Unidentified bird					[1]	[3]
Common frog					[2]	
Amphibian		[2]				
Indeterminate						[7]
Total	23[1]	57[23]	687[305]	10	146[5]	3[15]
N samples	1	2	2		2	3

349 bones from 10 samples (Table 5). All of the bones were well preserved and only minimally fragmented.

Medieval (Phases 2 and 3)

Each phase produced a small amount of bones. The earlier medieval assemblage was recovered from the large quarry pit [122], pit [161] and ditch [347]. Deposit [101], the fill of [122], could actually represent a slumped deposit rather than a true pit fill; however, it is the only one of the three contexts which can be accurately dated, between 1240 and 1350. The later medieval hand collected bones were mainly derived

from ditch [144], containing 42 bones, and pit [189], containing 13 bones, while all the sieved bones were recovered from two of the ditch [144] fills. One of these fills, [127], provided an interesting hand collected assemblage consisting of the remains of at least three cattle skulls. Each of these skulls had been extensively butchered with both horncores removed as well as chop marks or cuts along both sides from the anterior part of the orbit to the temporal condyle (the mandibular joint). This butchery practice has been observed at a number of late medieval and early post-medieval sites in East London and Southwark, those in the general vicinity of Shoreditch including 27-9

Whitechapel High Street and 41–63 Prescot Street (Rielly 2003; 2010). In all cases, there tend to be multiple skulls, undoubtedly representing butchers' waste. The cuts along the sides of the skulls are perhaps indicative of the method used by professional butchers during this time and are placed to remove the cheek meat.

Apart from the aforementioned assemblage with skull parts, the cattle bones generally comprised a general mix of skeletal parts. In contrast, the sheep bones are largely comprised of head and foot bones (12 out of 18, including 8 horncores), perhaps indicative of waste derived from a sheep butcher. The other components of the assemblage consist of a few pig, equine, dog and cat bones. All the horse bones appear to be quite aged and one rib (from Phase 3 pit [189]) had suffered a major trauma and was clearly showing an ongoing infection at the time of death. This animal may well have been sent to the yard as it would clearly have been underperforming. It can be supposed that these equine remains may well represent waste derived from a knackers' yard.

Post-medieval (Phase 4)

The early post-medieval deposits produced a substantial bone assemblage (Table 5). Most of the SDV08 collection was recovered from dump levels (696 of the hand collected bones), the majority from [177] and [257] with 489 and 141 hand collected bones respectively, the latter deposit also providing most of the sieved bones (see fish bone report below). The SDQ08 bones from this phase were almost entirely derived from pit fill [72], containing 119 fragments, plus four out of the five sieved bones. Cattle formed the major component of these collections accompanied by reasonable proportions of sheep/goat, pig and chicken (Table 5). There were also some supplementary food species including fallow deer, hare, rabbit and goose. The inclusion of game, especially larger game, can be interpreted as evidence of a high status diet. Other choice meats include a good representation of juvenile cattle, probably veal cuts, these accounting for 34.2% of the cattle bones which could be aged (Table 6). An approximate age for these calves is demonstrated by the small number of juvenile mandibles, each of which show the 1st adult molar just erupting, indicating an age of about six months. In addition, a small number of relatively large chicken bones were found in dump [177]; these could well be capons. The process of caponisation, has been in operation in this country for centuries and appears to have become particularly widespread from the late medieval period (Stone 2006, 154).

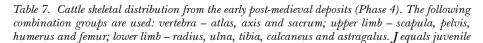
There is a clear bias towards consumer waste amongst the cattle collections from this phase, with the exception of dump [197], as shown by the relative abundance of upper and lower limb bones (Table 7). The better quality meats are found atached to the upper limb bones and it is perhaps significant that this type of waste is particularly well represented amongst the SDQ08 material, perhaps indicating refuse from a higher status household and/or the detritus from feasting activity. In contrast, dump [197] was mainly composed of skull pieces, probably dumped by a local butcher, comprising the remains of a minimum of five skulls, all from adult individuals. These skulls, as well as those from other early postmedieval collections (including the three skulls represented amongst the [177] cattle assemblage), do not show the lateral butchery present in the previous phase. However, the cattle bones in general show an extensive array of butchery cuts, demonstrating each stage of the butchery process, from skinning to marrow extraction. It is noticeable that the aforementioned veal cuts appear to show a greater proportion of head and foot parts, perhaps indicative of different consumer requirements in relation to the age of the

Table 6. Distribution of cattle, sheep/goat and pig bones from the early post-medieval deposits (Phase 4). The age groups are: Infant (up to a few weeks old); Juvenile (1st year); Subadult (1st/2nd year); and Adult (3rd year and older). N is the total number of aged bones and % equals age group total/N x 100. See text for definition of age groups

Age group:	I	J	SA	A	All
Species	%	%	%	%	N
Cattle	0.6	34.2	0.6	64.6	161
Sheep/Goat	7.7	20.0	3.1	69.2	65
Pig	6.7	23.3	46.7	23.3	30







Site:	SDV08	SDV08	SDV08	SDV08	SDV08	SDQ08	SDQ08
Feature(Age):	All	All(J)	[177]	[197]	[257]	All	All(J)
Skeletal group							
skull	26	5	12	12		1	1
mandible	7	4	3	1	2	7	5
vertebra	1		1			3	
upper limb	50	11	46	3	18	17	5
lower limb	60	12	46	1	12	6	2
metapodials	16	6	13	2	1	2	
phalanges	4				4		

Table 8. Epiphysis fusion data for cattle and sheep/goat from the early post-medieval deposits (Phase 4). Where **F** is fused; **N** is the number of articular ends; and %**F** equals F/N*100. See text for definitions of age groups

Age Groups:	Early		In	t	Late	
Species	% F	N	% F	N	% F	N
Cattle	67.6	37	77.8	18	59.2	54
Sheep/Goat	89.8	49	73.3	15	60.0	30

beast consumed (see Conclusion). The majority of the cattle and indeed the sheep are adult (3rd year or older) with a large proportion surviving well beyond this age (as shown by the proportion of fused late epiphyses in Table 8). Most of the pigs were culled by their 2nd year (Table 6), although a minority were older, representing either adult baconers (fattened pigs which may have been reared/kept locally) or spent breeding stock. Both the pig and sheep/goat collections provided a notable proportion of very young individuals (infants), which could suggest that some animals were being bred in the vicinity of the site. Alternatively, they may be the remains of suckling pigs and lambs, again perhaps indicative of higher quality food waste. Finally, regarding the domestic food component, the great majority of the chicken bones were from adult individuals (in SDV08 there are 41 fused out of 43 limb bone fragments), suggesting the usage of birds for their meat following a period of egg production.

There is a small proportion of non-food waste, mainly comprising relatively complete equine limb bones. Head parts are limited to just one mandible and two loose teeth, all from SDV08 fills, while a large proportion of the SDQ08 collection was taken from the fill of the brick culvert [61] (6 bones). There is no clear articulation of the various equine bones discovered and the presence of a deep grazing cut to the proximal end of an equine tibia (from SDQ08 pit fill [72]) strongly suggests these bones represent deliberately dismembered carcasses.

The few bones from the later phases were recovered from various features, including the 18th-century cesspit [116] in SDV08 and fills of the main east—west brick culvert [4] and [45] in SDQ08. The identifiable portion of these collections consisted of cattle, sheep/goat, pig and rabbit (the last possibly part of one skull retrieved from the culvert).

Conclusion

The rather small medieval assemblage provided little information concerning the diet of the local residents; however, the presence of dumps of butchers' and knackers' waste is clearly of some interest. Similar dumps of material have been recovered locally from 14th-century deposits at Bishopsgate Goods Yard, Bethnal Green Road. As well as producing a generally high proportion of cattle head and foot parts, a single pit at Bishopsgate provided the remains of at least five cattle skulls plus a few horse





bones. The latter included a humerus with cut marks to the shaft, probably the result of marrow extraction (Bull *et al* 2011, 46–7). The knackers' waste from both these sites is identifiable from the level of disarticulation, which, in conjunction with the noted butchery marks, obviously denotes some usage of various equine post-mortem products. It can be supposed that the waste from each of these specialist activities was derived from some local outlet(s), perhaps situated within the nearby village of Shoreditch.

There is a higher proportion of waste from the 16th-century deposits, no doubt connected with the development of this part of Shoreditch High Street. The bone assemblage from this phase is very largely composed of food refuse, although there is a continued usage of this area for the dumping of both butchers' and knackers' waste. The large quantities of horse bones found at some local sites, such as 27-29 Whitechapel High Street (Sygrave 2005), were absent from Shoreditch. However, most of the 16thcentury assemblage from Shoreditch appears to represents local household food. The evidence from numerous other contemporary London sites tends to show a preponderance of cattle and sheep/goat bones, with a majority of adult/old adult individuals as well as a good proportion of young calves (see West 1995; Rielly in prep). Meat tastes clearly favoured older stock, in part related to the slower maturation of these unimproved cattle and sheep, where beef was generally not thought fit for consumption until 4 to 5 years of age and mutton at least 2 to 2.5 years (Lisle 1757, 259, 262 in Davis 2002). A demonstration of the culinary importance of these particular meats can be gauged by the estimated quantities of animals imported to the London meat markets in 1725, amounting to 98,000 beeves, 60,000 calves and 70,000 sheep and lambs (after Besant 1906 in Rixson 2000, 170 and see Thirsk 1967 in Albarella 1997, 22).

It was noticed that there is generally a good representation of cattle limb bones amongst the early post-medieval assemblage, the absence of head and feet elements clearly indicative of household waste. However, the veal bones within the same deposits tended towards a greater mix of parts, in particular

with a greater proportion of skulls. This difference may well relate to the culinary use of veal, with contemporary recipe books providing variations on a theme. As for example the recipe explaining how to bake a calves head (to be eaten cold) by H Woolley in 1675:

You must half-boyl a fair Calves-head, then take out all the Bones on both sides, and season it with the afore-said seasoning, and lard it with Bacon, and a little Limon-peel: then having a Coffin [a pastry container] large enough, not very high, nor very thick, but make it four-square, lay on some sheets of Lard on the top, and butter; when it is bak'd, and cold, fill it with Clarified Butter.

A proportion of these cattle limb bones showed a majority of upper limbs, which can be equated with higher status, as these parts include some of the better quality cuts of meat. The relative status of the household providing the 16th-century food waste may also be suggested by the presence, albeit in small quantities, of 'luxury' foods such as venison. Comparable evidence was recovered from the aforementioned Bethnal Green Road site, where the fills of a 16thcentury pit provided an unusual assemblage comprising a series of dog skeletons alongside the partial remains of peregrine falcons, buzzards, sparrowhawks and a goshawk (Bull et al 2011, 99 & 104). These have been interpreted as animals and birds used for hunting purposes, clearly derived from a high status and wealthy household.

The faunal evidence from the site demonstrates a continuing trend from the medieval into the early post-medieval period of the dumping of household waste, alongside the detritus from various specialist activities, in this case butchers and knackerers. In addition a case can be made for the presence of a broad swathe of social strata in the general vicinity. There is a notable absence of craft waste in the 16th-century levels, in particular regarding the extensive collections of cattle horncores recovered from numerous sites traversing the area between Spitalfields and the Royal Mint (Yeomans 2008, 139). It can perhaps be surmised that this industry did not extend into the Shoreditch area.





Sieved fish bones

Philip L Armitage

Introduction

Examination of fish bones from sieved samples from Shoreditch High Street (sites SDQ08 and SDV08 combined) has resulted in the identification of 189 bone elements representing the remains of 16 species (11 marine/estuarine and 5 freshwater). A further freshwater species (perch) was recognised from a scale. Table 9 provides a summary of the numbers of identified bones/scale present (nisp) for each species. Identifications were made using the author's modern comparative osteological collections. Reference was also made to Libois et al (1987), Libois & Hallet-Libois (1988), Radu (2005) and Wouters et al (2007). Excel spreadsheets showing the complete datasets of recorded anatomies for each species represented in the sieved samples from each phase/period and context for each site are held in the Shoreditch High Street archaeological archive. This report provides a summarised account of the analysis of this material.

Descriptions of the fish bone assemblages by period

Site SDQ08

Medieval

Fill [91] <sample 11> yielded a single bone, a freshwater eel vertebra.

Post-medieval

Apart from highly fragmented spines, indeterminate vertebrae centra fragments and other unidentified fish bone fragments, fill [65] <sample 3> produced a single identifiable specimen, a freshwater eel vertebra.

Early post-medieval (16th–18th century)

The samples from five fills [55] <2> (Phase 5), [67] < 4>, [69] <5>, [72] <6> and [85] <7> yielded the largest combined assemblage of fish bones from SDQ08. However, out of the 191 specimens present, 120 (62.8%) comprised indeterminate/unidentified fragmented spines/rays/ribs/vertebrae centra. Of the identified material, herring bones, including those from the head region (as well as body

and tail) predominated; followed by (in descending order of abundance/frequency): cod/gadids, flatfish (plaice/flounder), freshwater eel, plus a single pharyngeal bone/tooth fragment of a large cyprinid cf. rudd.

Post-medieval culvert (Phase 5)

The silty primary fill [90] < sample 10> of the main east-west brick-built culvert [44] and [45] yielded nine herring and two freshwater eel bones, together with single bones of cod and plaice, and an isolated scale of perch. Of special interest is the presence of a pelvis from a ten-spined stickleback (species determined on the criteria of Libois et al (1987, fig 4a, 7)), a fish found inhabiting shallow ditches with muddy bottoms (Newdick 1979, 84) and able to tolerate water with less dissolved oxygen than other related species (Wheeler 1979, 155; 1992, 112). Based on these observations, it seems likely that this stickleback (and others?) had been living in the culvert. Measurement 'D' (1.6mm) taken on a freshwater eel cleithrum revealed it derived from a fish of total length 36.2cm (calculated after the method of Libois et al 1987), a value falling within the size range of adult males (Newdick 1979, 88).

19th-century deposits (Phase 6)

Context [89] <sample 9>, a later fill of the brick-built culvert (see above), produced a single premaxilla from a large plaice plus 26 unidentifiable, much fragmented spines/rays/ribs/vertebrae centra, whilst the garden soil layer [51] <sample 1> yielded a flounder premaxilla, vertebrae of mackerel, herring and a small gadid, plus highly fragmented spines/rays/ribs/ vertebrae centra.

Site SDV08

Later medieval (Phase 3)

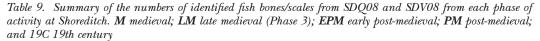
Fill [127] <sample 2> of ditch [144] produced a single fish bone, a herring precaudal vertebra.

Early post-medieval (Phase 4)

Occupation layer [177] <sample 6> yielded 4 herring vertebrae, 3 cod caudal vertebrae, 5 whiting vertebrae, 1 plaice first caudal vertebra, 10 plaice/flounder vertebrae. There were also 5 small gadid vertebrae (species







Site	SDQ08	SDQ08	SDQ08	SDQ08	SDQ08	SDV08	SDV08
Period	M	PM	EPM	LPM	19C	LM	EPM
Marine/estuarine:							
herring Clupea harengus			10	9	4	1	10
cf.twaite shad Alosa fallax			1				
cod Gadus morhua			2	1			10
large gadid			3				2
small gadid			4		1		33
whiting Merlangius merlangus							21
hake Merluccius merluccius							1
plaice Pleuronectes platessa			1	1	1		9
flounder Platichthys flesus					1		
plaice/flounder			6	1			21
sole Solea solea							4
small flatfish (sp.indet.)			1				
gurnards <i>Triglidae</i>							5
thornback ray (or roker) Raja clavata							3
mackerel Scomber scombrus					1		
Freshwater:							
freshwater eel Anguilla anguilla	1	1	3	2			5
roach Rutilus rutilus							1
cf.rudd Scardinius erythrophthalmus			1				
cyprinid							3
pike Esox lucius							2
ten-spined stickleback Pungitius pungitius				1			
perch Perca fluviatilis				1			
Inderterminate/unidentified frags		16	120	41	58		61
Totals	1	17	152	57	66	1	191

indeterminate) and 4 unidentified vertebrae centra fragments.

Dump layer [257] <sample 8> produced a wide range of fish species, the majority were marine/estuarine (Table 10). In addition to the ubiquitous freshwater eel, the freshwater species represented included pike and roach. Measurements taken on the roach pharyngeal bone/teeth revealed it derived from a fish

of total length 17.9cm (calculated after the method of Libois & Hallet-Libois 1988), a value falling within the average size range 15–25cm of adult roach (Newdick 1979, 70).

Discussion

With the exception of the stickleback in the brick-built culvert, all of the fish bones





Table 10. Fish bones from co Key to bone element abbrevia: **opbn** opercular bones; **prv**t f

Iable 10. Fish bones from context [221] <sample &=""> (Phase 4) with anatomical assrbutions from each species. Key to bone element abbreviations (after Wheeler & Jones 1989 with additions): ar articular; mx maxilla; pmx premaxilla; qu quadrate; hyo hyomandibular: op opercular; opbn opercular bones; prvt precaudal vertebra; cdvt caudal vertebra; vt vertebra (indet); pst post-temperal; cl cleithrum; scl supracleithrum; dentcl dermal denticle; spine; phar pharyngeal teeth/bone</sample>	es fron abbrev es; prv eth/bo	ı contex nations t frecau ne	t (257) (after W ıdal veri	sampı heeler ć tebra; a	ke 8> (Pl S Jones . dvt caud	ıase 4) ı 1989 wii Ial vertel	oth anat th additic ra; vt ve	omical c ons): ar : rtebra (i	ıstrıbutı articula: ndet); p s	sons fror r; mx mc st post-te	n each st ıxilla; p r mperal;	necres. mx prem cl cleith	rum; sa	ju quadr supracle	ate; h yo ithrum;	hyoman dentcl a	dibular: op Iermal dent	opercular; icle; spine ;
Species/element	ar	mx	xmd	nb	hyo	do	uqdo	prvt	cdvt	vt	pst	cl	scl	dentcl	spine	phar	rib	Totals
Marine/estuarine:																		
herring		1				1				4								9
poo								П	П	60			1				1	7
whiting	1		П					9	8		1	1						18
hake								П										1
large gadid										2								2
small gadid								14		12								56
plaice								П	7									8
plaice/flounder				1	1	1		4	4									111
sole									4									4
gurnard							П	П	2						1			ъс
thornback ray														60				60
Freshwater:																		0
freshwater eel										ъ								ъ
roach																1		-
cyprinid								61	1									80
pike								23										2
Totals	1		-	П	1	5		32	27	56	1	_	1	3	1	-	1	102



represent discarded domestic food waste. Analysis of this material has revealed the wide variety of fish consumed by the inhabitants, something that is very apparent in the assemblage from the early post-medieval dump [257], including pike and roach, which are indicative of a high status diet (Table 10).

As noted by Rielly (2009) calculations of the percentage abundance of the major fish groups from post-medieval deposits at London sites have generally revealed evidence for a decline in the consumption of herring with a corresponding increase in consumption of gadids (cod and whiting). This was also highlighted by the values calculated for the post-medieval deposits at Shoreditch (sites SDQ08 and SDV08 combined. N = 147): clupeids 14.3%; gadidae 51.7%; flatfish (plaice, flounder and sole) 28.6%; freshwater eel 5.4%. Furthermore, as observed by Rielly (ibid) in other London post-medieval fish bone assemblages, the majority of the cod from Shoreditch were of a small size and therefore probably came from the Thames estuary rather than offshore/deep water fisheries. Similarly, the small size of the majority of the Shoreditch High Street whiting and several of the plaice indicates these were immature fish caught in the Thames estuary.

Macrobotanical analysis

Lucy Allott Quaternary Scientific (University of Reading)

Introduction

This report summarises the findings arising out of the macrobotanical analysis undertaken in connection with the archaeological investigations at 103-106 Shoreditch High Street. A total of 24 samples from the various phases of fieldwork revealed several moderate to large assemblages consisting predominantly of uncharred macrobotanical remains. The majority of these derive from naturally occurring plants with several that could have been exploited for food and/or cultivated as well as small assemblages of cultivated crop remains. Analysis therefore aimed to characterise the natural vegetation in the site vicinity and to document potential food resources and other economic plants. Five samples were selected for detailed analysis, although the main characteristics of the remaining samples are also presented below.

Methods

Flots were measured, weighed and separated into different size fractions prior to sorting under a stereozoom microscope at magnifications of x7–45. Taxonomic identifications are recorded in Table 11 by period and feature and have been recorded as absolute numbers of individual plant parts identified. Taxa have been identified through comparison with modern reference material held at University College London and reference texts (Anderberg 1994; Berggren 1969; 1981; Cappers et al 2006; Jacomet 2006; NIAB 2004). Habitat information and nomenclature used follows Stace (1997) for native species and Zohary and Hopf (2000) for cultivated taxa. Evaluation samples are denoted as <Ev#> and excavation samples as <#>.

Results and interpretation of the macrobotanical analysis

Characteristics of the assemblages

The majority of plant remains were represented by uncharred specimens preserved by water-logging in anoxic conditions. The uncharred remains assemblage consisted primarily of wild/weed taxa with occasional remains from plants that may have been cultivated or imported. Small quantities of charred remains were also present. Cereal grains were prominent while the remains of wild/weed taxa were infrequent. Small wood charcoal fragments were also noted in many of the deposits; however larger charcoal deposits were only evident in occupation debris deposit [177], and in the fill [259], of posthole [260], both of which are dated to Phase 4, as well as in humic silt deposit (51), <Ev1>, pit fill context (85), <Ev7>, and pit fill (72), <Ev6>.

Phase 2: medieval – ditch [221], <sample 7>

This feature contained the broadest range of charred macrobotanical remains of any of the features, although the absolute quantities preserved are low (Table 11). Cereal caryopses of bread type wheat (Triticum cf. aestivum sl), wheat (Triticum sp.) and barley (Hordeum sp.) were identified as





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Table 11. Charred and uncharred/waterlogged macrobotanical remains.

Key: habitat characteristics: A weeds of arable land; C cultivated plants; D ruderals, weeds of waste and disturbed land; E heath; G grassland; H hedgerows; M marsh; R rivers, ditches and ponds; S scrub; W woodland; Y waysides and hedgerows; * plants of economic value. Soils/ground conditions: a acidic; c calcareous, d dry, b base rich; n nutrient rich; o open ground; s shaded; w wet/damp soils; h heavy soils. Quantifications: wh whole; fragments; * = 1-10; ** = 11-50; *** = 51-250; **** = >250

		Period	Medieval	Late Med	Late Med	Early Post-Med	Early Post-Med
		Sample Number	7	2	3	9	10
		Feature Number	221	144	144	316	316
		Context Fill Number	219	127	138	314	315
		Feature Type	Ditch	Ditch	Ditch	Ditch	Ditch
		Flot volume (ml)	15	10	8	37	70
		Flot weight (g)	14	8	6	16	20
Taxonomic Identification	English Name	Habitat Codes					
CHARRED PLANT REMAINS							
Cerealia	indeterminate cereal caryopses		4			1	4
Triticum cf. aestivum sl	bread wheat caryopses	С	1				1
Triticum sp.	wheat caryopses	С	2			1	1
Hordeum sp.	barley caryopses	C	1			1	2
Pisum/Vicia sp.	pea/bean	C	1			•	-
Vicia/Lathyrus sp.	vetch/tare/wild pea	ADCG	2				
Polygonum/ Rumex sp.	knotgrass/dock		1				
Anthemis cotula	stinking chamomile	ADh	1				
Charred plant remains indeterminate UNCHARRED PLANT REMAINS			2			3	
Ficus carica	fig	C introd		2			
Vitis vinifera	grape	C introd		4		27 (wh), 19 (f)	54 (wh), 16 (f)
cf. Sorbus sp.	whitebeam/ rowan	HSW				(-)	1
Rubus idaeus/ fructicosus agg.	raspberry/bram- ble	HSW*		38		4	1
Prunus sp.	plum/cherry fruit stone fragment	CHSW*	1				1
Sambucus nigra	elder	DHSW	1	8	4	102	14
cf. Fruit stone (Indeterminate)					2		4
cf. Lamium sp.	dead-nettle	ADHSW	2	3	13	45	34
cf. Galeopsis sp.	hemp-nettles	ADWow	27				9
Lemna sp.	duckweed	Rw	35		3	254	15
Chenopodium cf. album	fat-hen	AD	4	22	1	2	3





 ${\it Table~11~(cont.)}. \ {\it Charred~and~uncharred/waterlogged~macrobotanical~remains}.$

		Period	Medieval	Late Med	Late Med	Early Post-Med	Early Post-Med
		Sample Number	7	2	3	9	10
		Feature Number	221	144	144	316	316
		Context Fill Number	219	127	138	314	315
			Ditch	Ditch	Ditch	Ditch	Ditch
		Feature Type Flot volume (ml)	15	10	8	37	70
		Flot weight (g)	13	8	6	16	20
Taxonomic	English Name	Habitat Codes	17	- 0		10	
Identification	English Name	Habitat Coucs					
UNCHARRED							
PLANT REMAINS (cont.)						
Chenopodium sp.	goosefoots					2	
Chenopodium cf.	nettle-leaved	AD				1	
murale	goosefoot						
Atriplex sp.	oraches					9	
Fumaria officinalis	common fumitory	AD			1		3
Ranunculus	bulbous/creep-					9	9
bulbosus/repens/acris	ing/meadow buttercup						
Ranunculus sceleratus	celery-leaved buttercup	MRw	10		14	41	64
Polygonum/ Rumex sp.	knotgrass/dock					3	
Polygonum cf. aviculare L.	knotgrass	AD				4	
Rumex cf. maritimus	golden-dock	wpm			1		
Rumex sp.	sorrel/dock	ADHSWow				3	
Solanum dulcamara	bittersweet	DHWMR			1	_	
cf. Potentilla sp.	cinquefoils					60	51
Urtica dioica	stinging nettle	AND	93	29	53	291	88
Lapsana communis	nipplewort	DHSW					2
Silene sp.	campions	ADHSW					2
Cerastium sp.	mouse-ears						1
cf. Stellaria sp.	chickweed/ stitchwort	ADHSWo	1				
cf. Aethusa cynapium	fool's parsley	AD		1		16 (wh), 15 (f)	4 (w), 4 (f)
cf. Conopodium majus	pignut	GHW	1		4		3
cf. Crepis sp.	hawk's-beards						2
Sonchus asper (L.) Hill	prickly sow- thistle	ADY				1	
Cirsium/Carduus sp.	thistles	ADGY				3	1
Uncharred Indeterminate						4	1
NON-BOTANICAL REMAINS							
Daphnia sp. resting eggs			**	*	***	***	**





well as non-cereal crops pea/bean (Pisum/ Vicia sp.). Preservation is highly variable and several of the grains have abraded, damaged seed coats (testa). Smaller vetch/tare/wild peas (Vicia/Lathyrus sp.) may represent wild/ naturally occurring plants and are common in several vegetation environments, such as disturbed ground, arable land or grassland. A relatively restricted range of taxa is evident in the uncharred macrobotanical assemblage. These are primarily from disturbed ground and include dead-nettle (Lamium sp.), hempnettle (Galeopsis sp.), fat-hen (Chenopodium album), and stinging nettle (Urtica dioica). Wetland habitats are also indicated by duckweed (Lemna sp.), celery-leaved crowfoot (Ranunculus sceleratus), and hemp-nettle. Chickweed/stitchwort (Stellaria sp.) may be representative of arable land. A single elder (Sambucus nigra) seed and a plum/cherry (Prunus sp.) stone fragment were the only remains of edible fruit producing plants.

Phase 3: late medieval – ditch [144], <samples 2 and 3>

Charred remains were absent in samples taken from ditch feature [144] (Table 11). The uncharred assemblage was moderately diverse, although broadly similar in composition to that of the medieval ditch feature [221]. Dead-nettle, fat-hen, bittersweet (Solanum dulcamara), common fumitory (Fumaria officinalis), stinging nettle and fools parsley (Aethusa cynapium) occur in a range of habitats, although all are common to disturbed ground often associated with settlements. Wet ground conditions are indicated by celery-leaved buttercup and possible brackish conditions by goldendock (Rumex cf. maritimus), while duckweed provides continued evidence for standing or slow running water. Seeds of elder and bramble/raspberry (Rubus sp.) suggest native fruit producing plants were either growing in the vicinity or the fruits were brought to the settlement. Fig (Ficus carica) seeds provide the only evidence for non-native, imported food resources.

Phase 4: early post-medieval – ditch [316], <samples 9 and 10>

The richest and most diverse macrobotanical assemblages were present in samples <9>

and <10> from the early post-medieval ditch [316] (Table 11). Small quantities of charred cereal caryopses, including breadtype wheat, wheat and barley were recorded. Dead-nettle, hemp-nettle, fat-hen, nettleleaved goosefoot, cinquefoils (Potentilla sp.), oraches (Atriplex sp.), bulbous/creeping/ meadow buttercup (Ranunculus bulbosus/ repens/acris), stinging nettle, fumitory, knotgrasses (Polygonum sp.), docks/ sorrel (Rumex sp.), nipplewort (Lapsana communis), campion (Silene sp.), mouseear (Cerastium sp.), fool's parsley, thistles (Cirsium/Carduus sp.), hawk's beard (Crepis sp.), and prickly sow-thistle (Sonchus asper) are common components of arable, waste or disturbed ground associated with settlements or cultivated land. There is strong evidence for the continued presence of water bodies as indicated by duckweed and resting eggs of water flea (cf. Daphnia sp.). Hemp nettle and celery-leaved buttercup also provide evidence for damp ground conditions. Whitebeam/rowan (Sorbus sp.), bramble/ raspberry, elder and cherry/plum provide evidence for possible food remains while the grape (Vitis vinifera) pips provide unequivocal evidence for non-native foods that may have been imported.

Discussion and conclusions

Local vegetation environment

There are broad similarities in the range of plant taxa represented across the five analysed samples. This is particularly notable in the wild/weed plants assemblage with stinging nettle, dead-nettle and goosefoots present in each of the ditch fill deposits. The range of taxa represented provides strong evidence for waste or disturbed ground associated with settlement activities in the site vicinity through the medieval and early post-medieval periods with a slightly broader range of taxa in the early post-medieval deposits. Several of these are also common on arable land and although the evidence for crops is sparse, it is possible that several were brought to the settlement with the crops. Taxa such as celery-leaved buttercup, duckweed and hemp-nettle indicate the presence of wet ground conditions and, in the case of duckweed, standing or slow running water. Damp ground conditions





could have been supported within and/ or around the ditches once out of use or neglected or in streams and ponds nearby. Resting eggs of water fleas were also present in each sample and provide further support for the presence of aquatic environments. There is little evidence to suggest that the vegetation environment surrounding the site changed significantly between the medieval and post-medieval phases and while this may be a product of the types of deposits represented (*ie* from damp ditch fills) such conditions are also evident to the west around the Walbrook Stream.

Food and agriculture

In addition to the evidence for disturbed/ waste and wet ground conditions there is some evidence for possible food remains from wild plants such as elder and bramble/ raspberry (in each of the ditches) and rowan/whitebeam in the early post-medieval ditch [316]. Fragments of plum/cherry stones were recorded in two of the analysed features, medieval ditch [221] and early postmedieval ditch [316], as well as in evaluation sample <Ev10>, [90] from the basal fill of a 16th-17th-century brick-lined culvert. This culvert also provides evidence for hazel (Corylus avellana) nut shell fragments and walnut (Juglans regia) shell fragments which may have been grown locally and may represent remnants derived from the 16th-17thcentury garden soils. Fig seeds were recorded in one of the late medieval ditch deposits [127], <2> and grape pips were relatively frequent in both deposits from early postmedieval ditch [316]. Fig and grape are relatively common in London from the Roman period onwards and are therefore not unusual here. Although grapes may have been cultivated locally, the majority of fig and grape remains probably derive from imported dried fruits. The absence of other spices, herbs or imported fruits is interesting and may suggest that such food items were not common in the immediate environment.

The largest assemblage of charred macrobotanical remains was recovered from medieval ditch [221] in which grains of bread-type wheat and barley were identified together with fragments of peal bean. Charred remains of knotgrass/dock and stinking chamomile are potential arable

weeds that may have been introduced as contaminants with the crops, although the deposits provide no direct evidence for crop processing during the medieval occupation. Early post-medieval ditch [316] also produced a small assemblage of cereal caryopses providing continued evidence for wheat and barley, although no indication of non-cereal crops. Evidence for cereal crops and other non-cereal staples such as Legumes is sparse in these ditch deposits. This is probably a result of preservation bias towards waterlogged plant remains from the immediate environment in the ditches rather than indicating an absence of crops in the area. Their relative absence does, however, suggest that spoiled grain and other burnt cooking waste were not systematically disposed of in the ditch features.

DISCUSSION

Medieval boundaries and the early development of Shoreditch High Street

A substantial east-west ditch was dug, possibly as early as the late 11th to early 12th century, at right-angles to the alignment of Shoreditch High Street. This ditch appears to mark the southern boundary of a property fronting onto the eastern side of the street (Fig 7). The site was subsequently quarried on a small scale for sand and gravel. The digging of this ditch shows that this stretch of the street frontage was being developed, but not actually settled by this date as quarrying is normally undertaken on the periphery of settlements (Fig 7). Recutting of the ditch, perhaps as late as the 14th century indicates that this feature was still being maintained at this time both as a boundary and probably as a drainage channel, which presumably flowed westwards into a roadside drain. Later during the medieval period an extensive ditch running parallel with the street was excavated across the site; this ditch may represent a realignment of the street on a more easterly course.

There are few parallels for this sequence in the immediate vicinity of the site though interventions further to the south along Shoreditch High Street during the ELLP may revise this situation. A roadside ditch was also identified here but it was much





narrower than the one identified on site and apparently went out of use much earlier, c.1170-1220 (Bull et al 2011, 29). This ditch also appears to have been located further to the west so the ditch on the site may have been a replacement for this associated with a phase of street widening or realignment. The ELLP investigations also revealed a number of pits, interpreted as brickearth quarries, mostly quite close to the street frontage and again apparently earlier than the northsouth ditch on the study site (ibid). This appears to add weight to the suggestion that roadside activity associated with the earliest activity on the site was located to the west, beyond the areas investigated, and only later in the medieval period did the street shift eastwards.

It appears that at the end of the medieval period another extensive north–south ditch was excavated further to the east, possibly signalling a subdivision of the site. However, the exact function of this ditch is unclear; it was probably excavated in the 15th century but went out of use during the 16th century. It appears to have been contemporary with the recutting of a quarry pit to the west, but no activity was detected to the east, possibly suggesting that it marked the rear extent of properties fronting Shoreditch High Street at this time.

Neither features nor finds suggest that there was occupation on the site until the post-medieval period. The evidence suggests the site remained an open area adjacent to the High Street during the medieval period; apart from quarrying there was some activity possibly associated with agriculture and drainage; the area was relatively low-lying and generally damp.

Post-medieval affluence and animal processing

The Agas map of c.1562 shows that by this date both sides of Shoreditch High Street, south of St Leonard's church including the site were lined with buildings (Fig 3). Unfortunately the surviving evidence for substantial structural remains was limited to a few wall fragments along the southern edge of the site, of 16th-century or possibly earlier date. The various clusters of postholes suggest the existence of several successive

phases of structures fronting onto the street (Fig 10). While the surviving structural evidence is limited by modern truncation, it is apparent that the amount of activity on the site intensified during the 16th century. However, it is not until the later 17th century that this more intensive activity is reflected by the contemporary finds assemblage, aspects of which are indicative of a quite high level of affluence. As this material was recovered from external dumps, it cannot be linked with any particular property and probably represents the systematic disposal of waste materials collected in the locality then discarded here en masse to raise the ground level of a potentially damp area. This high level of affluence was demonstrated by the presence of exotic ceramics and the choice cuts of meat present in the food waste (see above reports). The fragment of carved stag-horn inlay may have been derived from the inlay of a high-status hunting crossbow (Fig 17). Conversely, both animal slaughter and butchery waste were also evinced in the same deposits. The evidence certainly seems to suggest the close juxtaposition of those enjoying an affluent social standing and those employed in more mundane animal carcass processing industries.

A sale document dated 1655 suggests that a strip of land extending from St Leonard's church, southwards as far as Jane Shore Alley, and therefore including the site, was formerly the property of the Archdeacon of London. This property included a large number of tenements, a great barn (possibly the large structure illustrated on the Agas Map), a smith's forge and three portions of a large garden (Bird 1922, 14).

By 1666 the southern part of the site was apparently occupied by the Jane Shore public house and the later finds assemblages hint at the existence of such an establishment (discussed below). The drains and culverts exposed at the southern edge of the site indicate that there were continued attempts to drain the properties on the site and probably also those to the south. Purpose built brick-lined cesspits show that formalised methods of waste disposal had been established (Fig 11).

The lack of structural evidence may indicate that the land beyond the public house and away from the street frontage





still lay open and therefore susceptible to the deposition of waste from surrounding areas. It is possible that butchers' and knackerers' waste derived from properties further to the east, fronting onto Cock Lane (now Boundary Street), which is named on the map of 1745 and documented as early as 1587 (Bird 1922, 5–14), though some properties did extend all the way between the High Street and Cock Lane (*ibid*).

Activity at the Jane Shore and beyond

It seems highly likely that much activity on the site from the late 17th century onwards was associated with the Jane Shore public house. Jane Shore (c.1445-c.1557) was a mistress of King Edward IV, who hailed from the Shoreditch area, and gave her name to a number of features in the vicinity. The Jane Shore Alley is recorded in Hearth Tax returns of 1666 and shown on subsequent maps a short distance to the south of the site.⁸ A public house of the same name is recorded at least as early as the mid-18th century and it seems more than a possibility that this was the structure that occupied the south-west corner of the site, perhaps originating at approximately the same time as Jane Shore Alley. The quantity of clay tobacco pipes (c.1700–1710) recovered from the cesspit in the southern part of the site is considered to be indicative of an inn or tavern assemblage (Fig 11). However, the associated ceramics appear to be domestic in character (see above reports). The First Edition Ordnance Survey Map suggests that this cesspit was located in an external area behind an earlier public house building; subsequent maps suggesting that building had extended eastwards. Ceramics of 19thcentury date recovered from the culvert to the south are indicative of a drinking establishment assemblage. Due to modern truncation unfortunately the ground plan of the public house could not be determined.

Unfortunately, no trace of the other buildings on the site (104–106 Shoreditch High Street) survived. A sketch elevation of properties along either side of Shoreditch High Street dated 1845 indicates that a number of the properties a short distance to the north of the site were drapers and haberdashers and it is not unreasonable

to assume that those on the site may have been similarly utilised (Fig 5). However, the elevation drawing is just a mid-19thcentury snapshot and it is possible that these buildings went through a number of phases of development and served a number of purposes over time.

CONCLUSION

The degree of modern truncation resulted in a bias in the survival of archaeological evidence towards deep intrusive features such as ditches and culverts, while the postmedieval buildings which occupied the site were largely absent. The impression is that during the medieval period the site was open land adjoining the eastern side of Shoreditch High Street close to the southern edge of the suburban village of Shoreditch and was intermittently used for small scale gravel quarrying. By the late 16th century according to cartographic evidence the site was occupied by 'ribbon development' extending along the High Street northwards from Bishopsgate. Presumably as the site was damp and low lying it was partly utilised as a rubbish dump during the 16th and 17th centuries. Interestingly, this rubbish was apparently derived from a diverse local populace, indicating that the area was occupied by animal carcass producing industries, ordinary folk and relatively wealthy people, suggesting a cosmopolitan community reminiscent of contemporary Shoreditch.

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NOTES

- $^{1}\,$ Shoreditch parish in 'Table of Population 1801–1901' p 1911.
- ² This alley was recorded in the '1666 Hearth Tax returns for St Leonard Shoreditch: Church End Liberty' see London Hearth Tax: City of London and Middlesex, http://www.british-history.ac.uk/report.aspx?compid=119011&strquery=janeshore accessed 2010.
- ³ After Mary's death in 1694, William III reigned until 1702.
- ⁴ Post 1992 Museum of London Code Expansion Building Material, LAARC 2007 source: www. museumoflondon.org.uk./NR/rdonlyres/DBB-COD2D-C459-43 (accessed Dec. 2012)
- ⁵ Genesis 3: 7, also known as 'the fall of man', depictions of Adam and Eve holding fig leaves to cover themselves were a common theme in medieval and early post-medieval art (Murray & Murray 1998, 298).
- ⁶ Capons are castrated domestic cockerels, fattened for eating.
- ⁷ Stow (1603, 157) recorded that Bishopsgate Ward had seven 'scavengers' or civic garbage collectors.
- 8 See note 2.

BIBLIOGRAPHY

- Albarella, U, 1997 'Size, power, wool and veal: zooarchaeological evidence for late medieval innovations' in G De Boe & F Verhaeghe (eds) Environment and Subsistence in Medieval Europe, Papers of the 'Medieval Europe Brugge 1997' Conference, Volume 9, 19–30
- Amorosi, T, 1989 A Post-Cranial Guide to Domestic Neo-natal and Juvenile Mammals BAR (Int Ser) 533, Oxford

- Anderberg, A-L, 1994 Atlas of Seeds: Part 4, Swedish Museum of Natural History, Risbergs Trycheri AB, Uddevalla
- Archer, M, 1982 'Dating of Delftware chargers' Trans English Ceramic Circle 2:2, 112–21
- Archer, M, 1997 Delftware: The Tin-glazed Earthenware of the British Isles. A Catalogue of the Collection in the Victoria and Albert Museum, London
- Atkinson, D R, & Oswald, A, 1969 'London clay tobacco pipes' *Journal Brit Archaeol Assoc* 32, 171–227
- Barber, B, & Hall, J, 2000 'Digging up the people of Roman London: interpreting evidence from Roman London's cemeteries' in I Haynes, H Sheldon & L Hannigan (eds) London Under Ground: The Archaeology of a City, Oxford, 102–20
- Bazley, K, 2004 14–20 New Inn Broadway and 17– 25 New Inn Yard, Shoreditch, London Borough of Hackney: Archaeological Excavation unpub PCA report
- Berggren, G, 1969 Atlas of Seeds: Part 2, Swedish Museum of Natural History, Berlings, Arlöv, Sweden
- Berggren, G, 1981 Atlas of Seeds: Part 3, Swedish Museum of Natural History, Berlings, Arlöv, Sweden
- Besant, W, 1906 Medieval London Vols 1 & 2, London
- Betts, I, 2011 'Ceramic and other building materials, sites A and B' in Bull *et al* 2011, 149–54
- Bird, J, (ed) 1922 Survey of London: Volume 8: Shoreditch, London
- Blackmore, L, 2011 'Imported pottery' in I Grainger & C Phillpotts The Cistercian Abbey of St Mary Graces, East Smithfield, London MOLA Monograph 44, London, 138–42
- Blackmore, L, & Pearce, J, 2011 'Medieval and later ceramics, sites A and B' in Bull *et al* 2011, 155–60
- Blake, H, 1999 'De Nomone Jhesu: an Italian export ware and the origin of Renaissance maiolica pottery-making in the Low Countries' in D Gaimster *Maiolica in the North, the Archaeology of Tin-glazed Earthenware in North-West Europe c.1500–1600* British Museum occ pap 12, London, 23–56
- Britton, F, 1987 London Delftware, London
- Brown, P, (ed) 2001 British Cutlery: an Illustrated History of Design, Evolution and Use York Civic Trust
- Bull, R, Davis, S, Lewis, H, & Phillpotts, C, with Birchenough, A, 2011 Holywell Priory and the Development of Shoreditch to c.1600. Archaeology from the London Overground East London Line MoLA Monograph 53, London
- Cappers, R T L, Bekker, R M, & Jans, J E A, 2006 Digital Seed Atlas of the Netherlands Groningen Archaeological Series 4, Barkhuis





- Clark, J, (ed) 1995 The Medieval Horse and its Equipment Medieval Finds from Excavations in London 5, London
- Courtney, P, 1997 'Ceramics and the history of consumption: pitfalls and prospects' *Medieval Ceramics* 21, 95–108
- Crowley, N, 1997 'Ceramic building material' in Thomas et~al~1997,~195-201
- Davis, SJ M, 2002 'British agriculture: texts for the zoo-archaeologist. Environmental archaeology' The Journal of Human Palaeoecology 7, 47–60
- Dawson, H, 2008 Shakespeare's Theatre? Archaeology at 4–6 New Inn Broadway, Hackney MoLA Booklet, London
- Draper, J, & Copland-Griffiths, P, 2002 Dorset Country Pottery, the Kilns of the Verwood District, Marlborough
- Driesch, A von den, & Boessneck, J, 1974 'Kritische Anmerkungen zue Widerristhohenberechnung aus Langenmassen vor-und fruhgeschlicher Tierknochen' Saugetierkundliche Mitteilungen 22, 325–48
- Driver, G, 2008 'Residue bone' in Jamieson & Harward 2008, xx
- Duffy, S, 2006 The Wallace Collection, London
- Eames, E S, 1980 Catalogue of Medieval Lead-glazed Earthenware Tiles, in the Department of Medieval and Later Antiquities, British Museum (2 vols), London
- Edwards, C, 2005 An Archaeological Evaluation at 179 Shoreditch High Street, London Borough of Hackney unpub RPS/AOC Archaeology report
- Egan, G, 1998 The Medieval Household c.1150 c.1450 Medieval finds from excavations in London 6, London
- Egan, G, 2005 Material Culture in London in an Age of Transition: Tudor and Stuart Period Finds c.1450-c.1700 from Excavations at Riverside Sites in Southwark MoLAS Monograph 19, London
- Fairbrother, J R, 1990 Faccombe Netherton: Excavations of a Saxon and Medieval Manorial Complex British Museum Occasional Paper 74, London
- Gailey, S, 2007 Archaeological Desk Based Assessment: 103–106 Shoreditch High Street, Shoreditch, London Borough of Hackney unpub CgMs report
- Gaimster, D, 1999 'The post medieval ceramic revolution in Southern Britain c.1450–1650' in G Egan & R L Michael (eds) Old and New Worlds, Oxford, 214–25
- Gaimster, M, 2011 'Metal and small finds assessment' in D Killock 103–106 Shoreditch High Street, London E1, London Borough of Hackney, Assessment of an Archaeological Excavation unpub PCA report, 77–9
- Grant, A, 1982 'The use of toothwear as a guide to the age of domestic ungulates' in B Wilson, C Grigson & S Payne (eds) Ageing and Sexing Animal Bones from Archaeological Sites BAR Brit Ser 109, Oxford, 91–108

- Hall, J, 1996 'The cemeteries of Roman London' in J Bird, M W C Hassall & H Sheldon (eds) Interpreting Roman London: Papers in Memory of Hugh Chapman Oxbow Monograph 58, Oxford, 57–84
- Hammond, P, 2004 'Tobacco pipe makers in the PCC Wills indexes' *Society for Clay Pipe Research Newsletter* 66, 15–23
- Hayward, K M J, in prep 'The worked stone' in N Hawkins *Excavations at Drapers Gardens* PCA Monograph
- Jacomet, S, 2006 Identification of Cereal Remains from Archaeological Sites (2nd edn) Archaeobotany laboratory, IPAS, Basel University, unpub manuscript
- Jamieson, D, & Harward, C, 2008 An Archaeological Evaluation at 103–106 Shoreditch High Street (SDQ08) unpub ASE report 21
- Jarrett, C, 2004 'The post-medieval red earthenware and Peninsular House earthenware pottery' in D Divers 'Excavations at Deptford on the site of the East India Company dock-yards and the Trinity House almshouses' *Post-Medieval Archaeology* 38(1), 89–120
- Jarrett, C, 2006 'Assessment of the clay tobacco pipes' in B Sudds & R Mattinson An Assessment of an Archaeological Investigation at 56 Southwark Bridge Road, London Borough of Southwark (SBK03) unpub PCA report
- Jarrett, C, 2012 'Clay tobacco pipe assessment' in R Humphreys An Assessment of an Archaeological Investigation at Ironmonger Row Baths, I–11 Ironmonger Row, London Borough of Islington (IRB09), unpub PCA report
- Jarrett, C, forthcoming 'The clay tobacco pipes' in A Haslam 'Excavations on the site of the Fleet Prison (FAS02)' *Trans London Middlesex Archaeol Soc*
- Jarrett, C, in prep a 'The distribution of 17thcentury clay tobacco pipe types in London' Society for Clay Tobacco Pipe Research Newsletter
- Jarrett, Č, in prep b 'The clay tobacco pipes' in G Brown & C Pickard Wolfson Wing, Borough High Street (BHB00), PCA Monograph
- Jenner, A, & Vince, A G, 1983 'A dated typeseries of London medieval pottery: part 3 a late medieval Hertfordshire glazed ware' Trans London Middlesex Archaeol Soc 34, 151–69
- Jung, S P, 2003 Pollocks of Manchester: Three Generations of Clay Tobacco Pipemakers The Archaeology of the Clay Tobacco Pipe XVII, BAR Brit Ser 352, Oxford
- Laxton, P, (ed) 1985 The A to Z of Regency London, London Topographical Soc Pub No. 131
- Libois, R M, & Hallet-Libois, C, 1988 'Eléments pour l'identification des restes crâniens des poissons DulÇaquicoles de Belgiquie et du Nord de la France 2 Cypriniformes' Fiches d'Ostéologie Animale pour l'Archaéologie No.



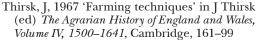


- 4 Centre de Recherches Archéologiques -CNRS (France)
- Libois, R M, Hallet-Libois, C, & Rosoux, R, 1987 'Éléments pour l'identification des restes crâniens des poissons DulÇaquicoles de Belgiquie et du Nord de la France 1 – Anguilliformes, Gastéiformes, Cyprinodontiformes et Perciformes' Fiches d'Ostéologie Animale pour l'Archaéologie No. 3 Centre de Recherches Archéologiques – CNRS (France)
- Lisle, E, 1757 Observations in Husbandry, London Margary, I D, 1955 Roman Roads in Britain Volume 1, London
- Mayo, C, 2003 An Archaeological Watching Brief of 14-20 New Inn Roadway and 17-25 New Inn Yard, Shoreditch, London Borough of Hackney unpub PCA report
- Murray, P, & Murray, L, 1998 The Oxford Companion to Christian Art and Architecture, Oxford
- Newdick, J, 1979 The Complete Freshwater Fishes of the British Isles, London
- NIAB, 2004 Seed Identification Handbook: Agriculture, Horticulture and Weeds (2nd edn), Cambridge
- Orton, C, 1988 'Post-Roman pottery from Mark Browns Wharf' in P Hinton (ed) Excavations in Southwark, 1973-76, Lambeth 1973-79 Joint publication 3. London Middlesex Archaeol Soc and Surrey Archaeol Soc, London, 307–48
- Oswald, A, 1975 Clay Pipes for the Archaeologist BAR Brit Ser 14, Oxford
- Ottaway, P, 1992 Anglo-Scandinavian Ironwork from 16–22 Coppergate The Archaeology of York 17/6, London
- Ottaway, P, & Rogers, N, 2002 Craft, Industry and Everyday Life: Finds from Medieval York The Archaeology of York, The Small Finds 17/15, London
- Page, W, (ed) 1911 'Industries: silk weaving' in A History of the County of Middlesex: Volume 2 Victoria County Histories, London
- Pearce, J, 2000 'A late 18th-century inn clearance assemblage from Uxbridge, Middlesex' Post-Medieval Archaeology 34, 144–86
- Pearce, J E, & Vince, A, 1988 A Dated Type-Series of Medieval London Pottery Part 4: Surrey Whitewares, London Middlesex Archaeol Soc Special Paper 10, London
- Pearce, J E, Vince, A, & Jenner, A, 1985 A Dated Type-Series of London Medieval Pottery Part 2: London-type Ware, London Middlesex Archaeol Soc Special Paper 6, London
- Pearce, J, Birchenough, A, Bull, R, & Davis, S, in prep 'Industrial development and suburban growth in London during the 17th and 18th
- Prockter, A, & Taylor, R, (eds) 1979 The A to Z of Elizabethan London, London Topographical Soc Pub No. 122

- Radu, V, 2005 'Atlas for the identification of bony fish bones from archaeological sites' Asociația Română de Arheologie Studii de Preistorie Supplementum 1/2005
- Raemen, E, 2008 'The metalwork' in Jamieson & Harward 2008, 21
- Rielly, K, 2003 The Animal Bones from Aldgate Union Phase 1, 27-29 Whitechapel High Street and 2–4 Colchester Street, London E1 unpub MoLA archive report
- Rielly, K., 2009 The Animal Bones from 8-14 Coopers Row, City of London EC3 unpub PCA archive report
- Rielly, K, 2010 Assessment of Animal Bone Recovered from 41-63 Prescot Street, London Borough of Tower Hamlets (PCO06) unpub PCA report
- Rielly, K, 2011 'Animal bone assessment' in D Killock 103-106 Shoreditch High Street, London E1, London Borough of Hackney, Assessment of an Archaeological Excavation unpub PCA report
- Rielly, K, in prep 'The animal bones from Tabard Square: the post-Roman periods' in D Killock & J Shepherd Excavations at Tabard Square PCA Monograph
- Rixson, D, 2000 The History of Meat Trading, Nottingham
- Rock, H, 2006 Pub Beer Mugs and Glasses Shire Album 458, Princes Risborough
- Schmid, E, 1972 Atlas of Animal Bones for Prehistorians, Archaeologists and Quaternary Geologists, Amsterdam, London & New York
- Shepherd, J, 2011 'Glass assessment' in D Killock 103–106 Shoreditch High Street, London E1, London Borough of Hackney, Assessment of an Archaeological Excavation unpub PCA report
- Sibun, L, 2008 'Animal bone' in Jamieson & Harward 2008, 22-3
- Stace, C, 1997 New Flora of the British Isles, Cambridge
- Stone, D J, 2006 'The consumption and supply of birds in late medieval England' in C M Woolgar, D Serjeantson & T Waldron (eds) Food in Medieval England - Diet and Nutrition, Oxford, 148–61
- Stow, J, 1603 The Survey of London H B Wheatley (ed) (reprinted 1987), London
- Sudds, S, 2006 'Post-medieval redware production' in J Butler Reclaiming the Marsh: Archaeological Excavations at Moor House, City of London, PCA Monograph 6, London, 83–100
- Swift, D, 2003 Roman Burials, Medieval Tenements and Suburban Growth: 201 Bishopsgate, MoLAS Archaeol Stud Ser 10, London
- Sygrave, J, 2005 'Development and industry in Whitechapel, excavations at 27–29 Whitechapel High Street and 2–4 Colchester Street, London E1' Trans London Middlesex Archaeol Soc 56, 77–96







Thomas, C, Sloane, B, & Phillpotts, C, 1997 Excavations at the Priory and Hospital of St Mary Spital, London MoLAS Monograph 1, London

Weinreb, B, Hibbert, C & Keay, J, 2008 The London Encyclopaedia (3rd edn), London

West, B, 1995 'The case of the missing victuals' Historical Archaeology 29(2), 20–42

Wheatley, H B, & Cunningham, P, 1891 London Past and Present: Its History, Associations, and Traditions, London

Wheeler, A, 1979 The Tidal Thames the History of a River and its Fishes, London

Wheeler, A, 1992 The Pocket Guide to Freshwater Fishes of Britain and Europe, London Wheeler, A, & Jones, A K G, 1989 Fishes, Cambridge

Woolley, H, 1675 The Accomplish'd Lady's Delight In Preserving, Physick, Beautifying, and Cookery

Wouters, W, Muylaert, L, & van Neer, W, 2007 'The distinction of isolated bones from plaice (*Pleuronectes platessa*), flounder (*Platichthys flesus*) and dab (*Limanda limanda*): a description of the diagnostic characters' *Archaeofauna* 16, 33–72

Yeomans, L, 2008 'Historical and zoo-archaeological evidence of horn-working in post-medieval London' *Post-Medieval Archaeology* 42(1), 130–43

Zohary, D, & Hopf, M, 2000 Domestication of Plants in the Old World: the Origin and Spread of Cultivated Plants in West Asia, Europe, and the Nile Valley (3rd edn), Oxford









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