

**Excavations at the Science Gallery, Boland House, Guy's Hospital, Southwark**  
ALISTAIR DOUGLAS

**The Roman pottery, by Eniko Hudak**

Table 1 Distribution of the Roman pottery per site periods

Period	SC	SC (%)	Wt (g)	Wt (%)	EVEs	EVEs (%)
1	25	0.97	209	0.50	0.32	0.77
2-1	800	30.98	16273	38.64	16.57	39.79
2-2	60	2.3	1231	2.92	0.89	2.14
3-1	665	25.76	9764	23.19	9.78	23.49
3-2	840	32.53	11631	27.62	11.48	27.57
Residual	192	7.44	3002	7.13	2.6	6.24
TOTAL	2582	100.00	42110	100.00	41.64	100.00

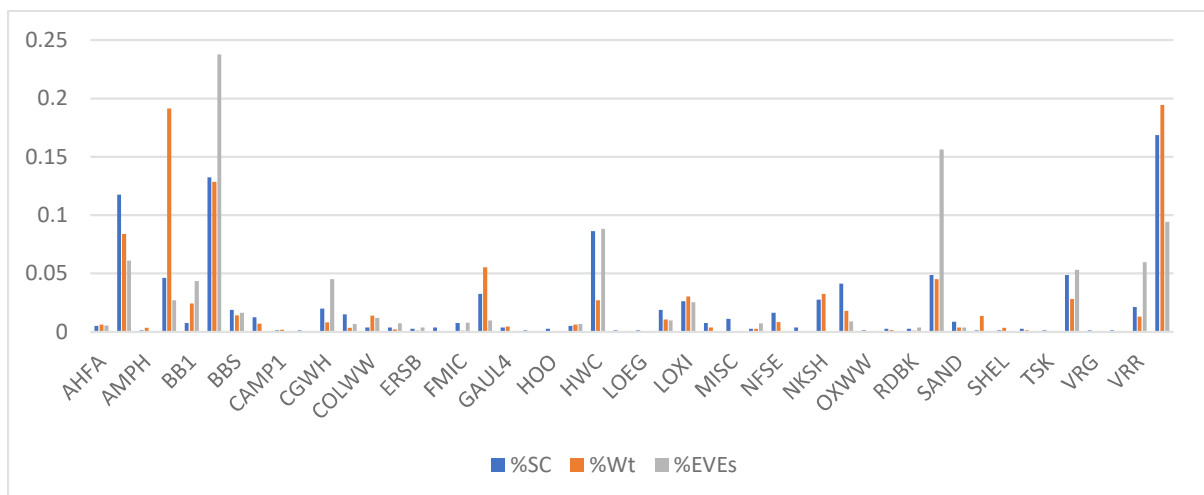


Fig 19 Quantification of the Period 3.1 assemblage

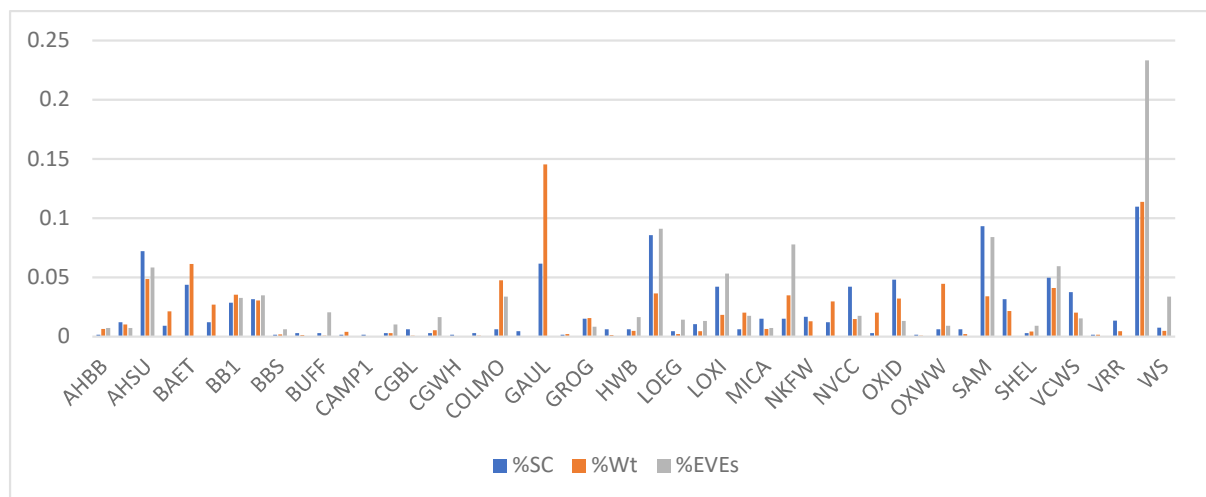


Fig 20 Quantification of the Period 3.1 assemblage

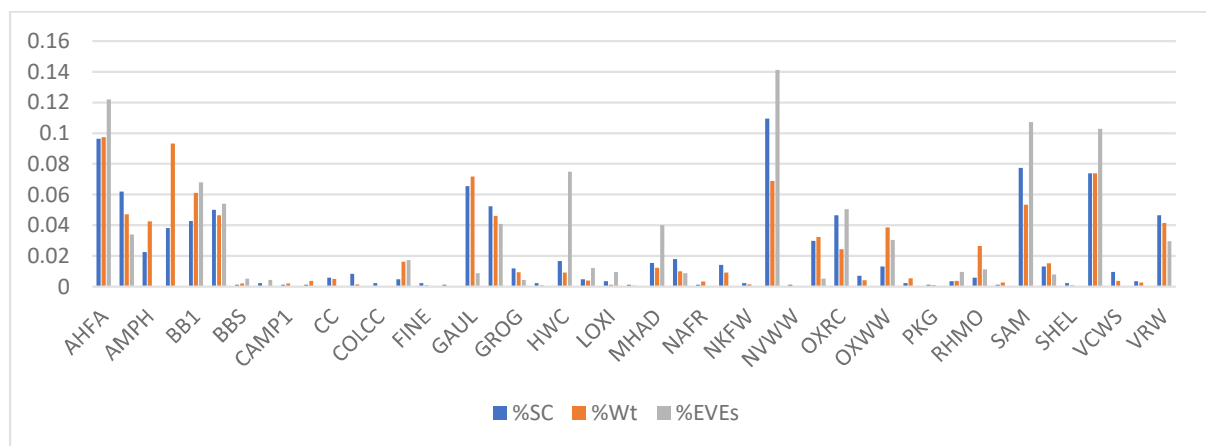


Fig 21 Quantification of the Period 3.2 assemblage

## SUMMARY OF THE SAMIAN, by J M Mills

Table 2 Quantification of samian from Periods 1, 2.1, 2.2 and 3.1 by production centre (fabric)

Fabric		Period 1	Period 2.1	Period 2.2	Period 3.1	Total
SAMLG	Count	2	10	3	27	42
	Weight (g)	16	88	42	98	244
	Rim EVEs	0.12	0.35	0	0.17	0.29
	Mean sherd wt	8g	8.8g	14g	3.6g	5.8g
SAMMT	Count		3			3
	Weight (g)		51			51
	Rim EVEs		0.51			0.51

<b>Fabric</b>		<b>Period 1</b>	<b>Period 2.1</b>	<b>Period 2.2</b>	<b>Period 3.1</b>	<b>Total</b>
	Mean sherd wt		17g			17g
SAMMV	Count		7		1	8
	Weight (g)		120		9	129
	Rim EVEs		0.45		0	0.45
	Mean sherd wt		17.1g		9g	16.1g
SAMCG	Count		16	3	23	42
	Weight (g)		395	47	143	585
	Rim EVEs		0.85	0.04	0.39	1.28
	Mean sherd wt		24.7g	15.7g	6.2g	13.9g
SAMBL?	Count		1			1
	Weight (g)		24			24
	Rim EVEs		0			0
	Mean sherd wt		24g			24g
SAMCF?	Count				1	1
	Weight (g)				3	3
	Rim EVEs				0	0
	Mean sherd wt				3g	3g
SAMLA	Count		1			1
	Weight (g)		10			10
	Rim EVEs		0.08			0.08
	Mean sherd wt		10g			10g
SAMRZ	Count			1	5	6
	Weight (g)			20	48	68
	Rim EVEs			0	0	0
	Mean sherd wt			20g	9.6g	11.3g
SAMTR	Count				1	1
	Weight (g)				7	7
	Rim EVEs				0	0
	Mean sherd wt				7g	7g

Fabric		Period 1	Period 2.1	Period 2.2	Period 3.1	Total
SAMCO ?	Count		1			1
	Weight (g)		30			30
	Rim EVEs		0			0
	Mean sherd wt		30g			30g
Phase Totals	Count	2	39	7	58	106
	Weight (g)	16	718	109	308	1151
	Rim EVEs	0.12	2.24	0.04	0.56	2.96
	Mean sherd wt	8g	16g	15.6g	5.3g	10.9g

Samian from Periods 1, 2.1, 2.2 and 3.1 was identified and recorded in detail; this amounted to 106 sherds weighing 1151g (2.96 rim EVEs). For a relatively small assemblage a wide variety of production centres (fabrics) were identified: La Graufesenque and Montans in South Gaul, Les Martres-de-Veyre and Lezoux in Central Gaul, and several centres in East Gaul as well as a single sherd of Colchester samian. The total quantity of samian from East Gaul is low with the majority from Rheinzabern; sherds from Chémery-Faulquemont, Argonne, Blickweiler were tentatively identified, along with a single Trier mortarium sherd.

*Period 1:* One rim sherd from a Dr 15/17 and a 1g scrap both from La Graufesenque were recovered from alluvial deposit [263]. Dated to the Neronian to mid-Flavian period these sherds are intrusive in this phase.

*Period 2.1:* A wide range of samian fabrics was identified in contexts assigned to this period, the majority dating from before AD 150/160. A couple of the vessels from La Graufesenque are of pre-Flavian date [880] [2005]; just ten of the 39 sherds from this period are of 1st century AD date. The only vessel (three sherds) from Montans (Stamp no SS2) is dated AD 115–150. Vessels from Central Gaul dominate the group (23 sherds) including two Hadrianic Dr 37 bowls, and a Dr18/31 dish and a stamped Dr 33 (SS 1) of late Hadrianic–early Antonine date from Les Martres-de-Veyre. The Lezoux vessels include forms Dr 27 (2), Dr 33 (1), Dr 18/31 (4), Dr 18/31R (4) and Dr 36 (2). The Dr 33 and Dr 36 are not closely datable, but the other vessels were current until *c* AD 160, and contemporary with the Dr 18/31R from ?Blickweiler (or possibly from Trier) and the Dr 18/31 from the Colchester kilns. The Dr 32 dish from [1101], probably from an Argonne kiln, is potentially the latest vessel assigned to this period (AD 150–80?), but as it is from the upper fill of the pit it could be intrusive.

*Period 2.2:* Very little samian came from contexts assigned to this period; the latest vessels are two rouletted bowls, one Dr 31R from Lezoux, the second form Lud Sb, from Rheinzabern. The rouletted bowl form was introduced *c* AD 165.

*Period 3.1:* Although more than 50% of the sherds examined came from this period the mean sherd weight is low (5.3g) suggestive of a high degree of residuality. Sherds derive from vessels made at La Graufesenque, Les Martres, Lezoux, Rheinzabern and Trier and perhaps Chémery -Faulquemont. The only mortarium sherds occur in these levels with more examples of late Antonine or later rouletted bowls (Dr 31r/Lud Sb). The range of forms is limited, no Walters 79/80 (introduced in the late 2nd century AD) were identified and none of any of the other forms exhibit particularly late or purely 3rd century characteristics.

Table 3 The maximum number of vessels identified to a specific vessel form by production centre (fabric). All are Dragendorff forms unless stated otherwise.

Functional class	Form	South Gaul		Central Gaul		East Gaul				British
		SAM LG	SAM MT	SAM MV	SAM CG	SAMB L?	SAML A?	SAM RZ	SAM TR	SAMC O
Dish	15/17	3								
	15/17 or 18	1								
	18	7								
	18R	1								
	18/31			1	6					1
	18/31 R				4	1				
	18/31 R or 31R				2					
	31R				2					
	Lud Sb							2		
	32						1			
	36	1			3					
Cup	27	3	1		4					
	27g	1								
	33			1	4					
	42									
Dec bowl	29	1								
	37	3		2	2			1		
Mortaria	45				1				1	

In summary, this is a small group and because of the small sample size the range of forms represented is limited; the incidence of observable features such as wear, post-depositional burning, alteration and repair is also low. There were no examples of vessel repair and just one Dr 27 [1074] exhibiting signs of prolonged use/wear. A very lightly scratched **XI** on the wall of a Dr 18/31 [988] may be an example of graffiti, but it is unusually lightly done and could be accidental.

Sherds from vessels dated from the late pre-Flavian period through until the late 2nd–early 3rd centuries AD were recorded from a great range of production centres. None of the sources are unexpected from a site in Roman Southwark although observing this range in a small group is unusual. The majority of the samian dates between AD 70 and the mid-2nd century AD, with little material demonstrably of late Antonine or early 3rd century date. A maximum of 59 vessels were identified of which nine were from mould-decorated vessels; this is about 15% of the total, fewer than might normally be expected from a major civil site, but probably a function of the sample size. The mean sherd weight is highest in Periods 2.1 and 2.2 at around 16g and is markedly smaller from contexts in Period 3.1 (<6g), which seems likely to be a result of redeposition/reworking of deposits where much of the samian is likely to be residual in nature.

#### *Decorated and stamped samian catalogues*

##### Abbreviations

Rogers Motifs in Rogers 1974

RF Motifs in Ricken Fischer 1963

O. Figure types in Oswald 1936–7

SAMLG, 4DR37. Base of decoration with tree trunk often used by Germanus i (Mees 1995, taf 72, 14) with repeated impressions of a shell-shaped leaf to act as grass. The design is closed with a neat row of fat beads. The beads and shell-shaped leaf, used as a pendant, are on a bowl with a Germanus i mould stamp (Mees 1995, taf 70, 1). AD 70–85 (Period 2.2, [1085])

SAMMV, 4DR37. Rim with ovolo Rogers B29 with a coarse wavy line below and forming a vertical divider with motif Rogers U62 on top. The combination of motifs suggests the mould-maker was Igocatus. *c* AD 100–125 (Period 2.1, [1101])

SAMMV, 4DR37. Rim from small bowl (150mm diameter) with ovolo Rogers B38 and a wavy border below. The ovolo was used by anonymous potters X-8, X-9 and X-10. AD 100–130 (Period 2.1, [2005])

SAMCG, 4DR37. Scrap with fragment of rear legs of bear O.1588 with leaf/feather Rogers J161 above, although both Docilis and Casurius used both the figure and the motif the decorative style is similar to that on some bowls attributed to Doccalus (Docilis) by Stanfield and Simpson (1990, pl 93, 17, 20, 24) featuring large animals and the feather in the field. AD 130–50 (Period 3.1, [885])

SAMCG, 4DR37. Ovolo Rogers B144 used by the Cinnamus ii workshop, Sacer ii and a few other potters. AD 135–170 (Period 3.1, [855])

SAMRZ, 4DR37. Body sherd with ovolo RF E26 (Ricken Fischer 1963, 303), no border below it and only the upper edge of a double bordered medallion RF K20 remaining of the decorative scheme. Many potters used both ovolo and medallion. Late Antonine–early 3rd century AD (Period 3.1, [837])

### *Potters' stamps*

Potters' names and die numbers for the stamps are taken from Volumes 1–9 *Names on Terra Sigillata* (Hartley & Dickinson 2008–2012).

Each entry gives: potters name (i, ii etc, where homonyms are involved), die, production centre (fabric codes), form (form codes). READING Comment. Date. [context numbers]

SS1. Cettus, 3a, SAMMV, 6DR33. **CETTVO\*F**. This is very similar to die 3a, and is perhaps an impression from the die when it was fairly new as many of the strokes are quite fine. The T's have sloping top strokes that are longer on the right-hand side. The F appears to be formed like a K with the < section attached to the top of the vertical. The break across the die is where the leaf is, but on the sherd SF 51 the top of it can just be seen. AD 130–160 [Period 3.1, [855], SF 50; Period 2.1, [981], SF 51]

SS2. Q.V—C—, 1e, SAMMT, 6DR27. **[Q·V]C** The top right-hand edge of the V is still extant but the lower edge of the C is lost in breakage; however, the fabric, lettering and spacing indicate this is one of the Q.V—C— dies. AD 115–50 [Period 2.1, [988], SF 52]

SS3. Reburus ii, 4a, SAMCG, 6DR33. **REBVRRIQOI** AD 140–170 [Period 3.2, [2003], SF 53]

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GRAFFITI, by Roger Tomlin

These marks were all made after firing, and thus relate to ownership and use.

### *Samian*

[988] (fig 23 no 1)

Rim sherd of a dish (Dr. 18/31). On the wall below the rim, a series of rather faint strokes, their direction and sequence deduced from the way they were made, especially the downward extension of the last stroke. From left to right, they consist of a short downstroke, very faint; a second short downstroke; then a long upward diagonal stroke, cut by a third, much longer, downstroke:

probably IIX

‘8’

The two intersecting lines resemble a ‘cross’ of the kind often found on samian as an illiterate owner’s mark of identification, but here may be taken with the two short downstrokes to form a numeral. IIX for EX, an abbreviated personal name, is most unlikely since there are few names in *Ex-* and the letters would have been more firmly made. But the purpose of this numeral IIX (‘8’) can only be guessed; perhaps to number the dish in a ‘set’ of vessels.

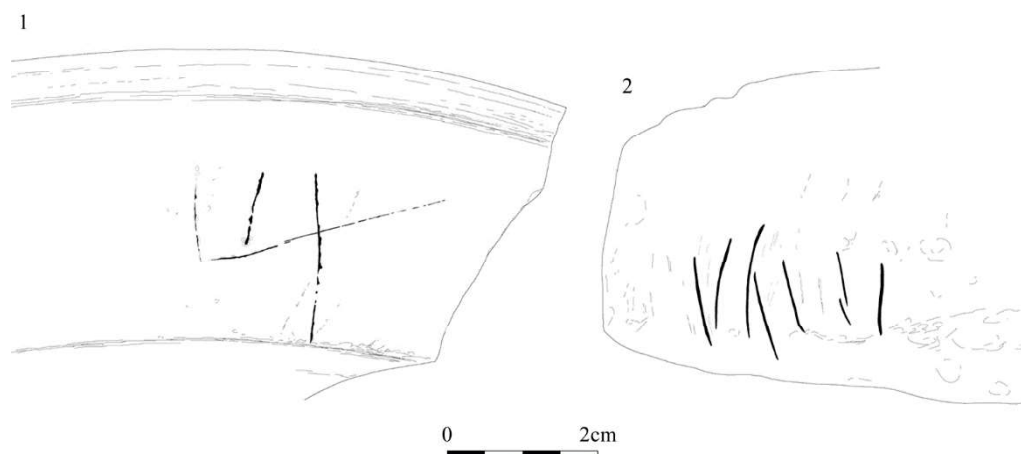


Fig 23 Roman graffiti: 1. Rim sherd of a samian dish (Dr. 18/31) with ‘IIX’ [988]; 2. Rim sherd of a white-slip (VRW) mortarium with ‘(librae) VI (unciae) IIII’ [260]

### *Mortarium*

[260] (fig 23 no 2)

Rim sherd of a white-slip (VRW) mortarium. On the outer edge, a series of cuts that look like deliberate downstrokes. From left to right, they are two meeting at an acute angle, and a third alone; then four shorter strokes at a slightly different angle. These are not letters (of an owner’s

name, for example), but since they are slightly different in style and alignment, they look like two separate numerals, VI ('6') and IIII ('4'), rather close together. Although they are not preceded by the letter P, for *p(ondo)* ('by weight'), they may also be a note of weight:

perhaps (*librae*) VI (*unciae*) IIII  
'6 (pounds), 4 (ounces)'

If so, this annotation would serve the same purpose as the notes of weight on storage jars (etc), which enabled an easy calculation of the weight of the contents when full. If the Roman pound (*libra*) of twelve ounces (*unciae*) is reckoned as 327.45g, 6 pounds, 4 ounces would be 2.07385kg.

### *Amphora*

[991]

Rim sherd of a south-Spanish oil amphora (Dressel 20). On its upper surface, shallowly incised, is a short transverse line, its upper portion curving to the left, now damaged. To its left (looking inwards), there is apparently another line, but now very faint and incomplete. These marks are so slight and ambiguous that they may well be casual damage, especially since there is just enough surface on either side to suggest that they stood alone. Numerals noting capacity are often found on the rim or handle of a Dressel 20, but they are usually more definite than this.

### **The Roman glass,** by John Shepherd

#### THE CATALOGUE

1 [1074] Period 2.1 (fig 24 no 10)

Fragment from the rim and neck of a trefoil mouthed-jug. Free-blown; green glass with multi-coloured marvered flecks. Rim slightly rolled inwards. Mid-1st century.

Glass blowing became commonplace from the second quarter of the 1st century AD and the technique spread into the provinces north of the Alps. Earlier traditions of glass use, namely casting and slumping in strong monochrome and polychrome colours, were slowly replaced and as the 1st century progressed glass vessels made in the natural colour of glass, greenish-blue, became more acceptable. By the middle of the century, at a time when Britain became part of the Empire, even blown vessels made in strong monochrome and polychrome glasses became less common. Although some monochrome colours continued into the end of the 1st century, such as blue and brown – see, for example, no 2 below – by the end of the century naturally coloured vessels were joined by colourless glasses in repertoires of the glassblowers.

This small jug, with a rolled-in, trefoil mouth, belongs to the period in the middle of the century when monochrome vessels were being blown and still decorated with polychrome elements such as the flashes of colour on this piece. However, this small vessel is unusual for this type of decoration. The most common are flasks or cups with single colours, normally on blue or amber brown base colours (Cool & Price 1995, 58–9 for numerous references to examples from Neronian to early Flavian contexts in Britain and abroad).

2 [2004] SF 44 Period 3.1

Fragment from the upper sticking part of the handle of a jug or flagon (Isings 1957, 69–71 form 52 or 72–74 form 55). Attached and drawn on a blown form; deep amber brown glass. Late 1st or 2nd century. Not illustrated.

Tall-necked jugs, with either conical or bulbous bodies, with a long handle are common table vessels in the late 1st century AD and continue into the 2nd century. They are distinctive products of the glasshouses to the north of the Alps at that time, and especially in the region between the Seine and Rhine (Price 1978, 74). This example, in a strong brown glass, is likely



to be a mid- to late 1st century product, such monochrome glass vessels becoming less common towards the end of the 1st century AD.

### 3 [721] <126> Period 3.2 (fig 24 no 8)

Fragment from the side of a vessel, the form of which is not entirely certain. Free-blown; thick colourless glass. The fragment has a slightly curving profile with a sharper vertical rounded carination. The extant design consists of a male figure moving to the right, with his outstretched arm over foliage. Late 2nd or early 3rd century. Illustrated.

The shape of the vessel from which this fragment came is not immediately clear. It has an unusual profile that suggests it comes from an angular vessel, perhaps from a square-sectioned vessel such as the late 1st century handled bowl from Trier (Goethert-Polaschek 1977, 47, form 44, no 144). However, the fragment from this site is decorated on the exterior with facet-cut and incised decoration in a style that is entirely consistent with a group of similarly decorated cups and bowls dating to the late 2nd and early 3rd century (Harden 1987, 182). It is more likely to be from a wide and shallow bowl with the decoration on the underside.

The group of vessels to which this fragment belongs have all been decorated in a similar manner, namely deeply facet cut for portions of the bodies of the figures, each facet coinciding with the musculature of the body – the deltoids and biceps, for example – with detail and shading picked out in parallel incised lines. Foliage is also made with both facet and incisions, with long elongated cuts for the stalks and finer incised slashes for the leaves themselves.

The common features of this group of vessels were first noted by Fritz Fremersdorf who believed that they were the products of the Köln glass houses, even though the inscribed names identifying the characters in the scenes were in Greek (Fremersdorf 1951, 2). Donald Harden disputed this interpretation (Harden 1970, 46), drawing on the evidence from Karanis, Egypt. Harden had published the glass from Karanis in the 1930s (Harden 1936) and identified many fragments with this style of decoration. Although none of the Karanis fragments had any letters inscribed upon them, Harden believed that the large number of fragments he recorded there, following on from Clairmont's interpretation, led him to agree that this style of vessel, with cut and inscribed decoration, emanated from the eastern Mediterranean. Harden went further and postulated that Alexandria was their place of origin. This interpretation had been further strengthened by the acquisition by the collector Ray W Smith of three fragments with names in Greek in Egypt (Smith 1957, 178–81, nos 361, 363, 365. See also Harden 1970, pl V. a–c for illustrations of these three fragments). Christoph Clairmont, in his study on the glass from Dura-Europos, supported an eastern origin (Clairmont 1963, 59, note 133). Indeed, part of a legend on one Dura-Europos fragment identifies the scene as portraying Actaeon similar to the scene shown on the Leuna vessel. Fragments from bowls with Actaeon scenes were found in Castlesteads, England and Bowcombe Farm, Isle of Wight, England (*ibid*, 58, note 125).

As a product of an eastern Mediterranean workshop in the late 2nd or early 3rd century, this vessel from Southwark is likely to have belonged to a highly prized vessel. Exactly how it came to be in the province of *Britannia* is open to speculation. Harden posited a number of interpretations for another vessel from this group that appeared in a grave in what was 'Free Germany', found at Leuna, near Leipzig (Saxony) Germany (Harden 1987, 182). Booty was one idea, considering that the Leuna vessel was found outside the limits of empire. Another idea, more appropriate to the London vessel, is trade – but this is unlikely for such a valuable vessel. The most likely interpretation is that it was a prized possession. In the case of the Free Germany bowl, Harden suggested that it was a gift of some sort, a diplomatic offering. Indeed, it is possible that 'gift' is the possible answer here and that such a valuable vessel, in terms of its intrinsic worth and its emotional value, travelled with its owner (or it was sent to its owner) in *Britannia*. Unfortunately, the real explanation can never be determined. Two complete examples of this style of vessel, with its facet-cut and incised decoration, are:

- a Leuna, near Leipzig, Germany. A hemispherical cup found in 1834 and now in the British Museum (MLA 1868.5-1.320) (Harden 1987, 197). It depicts Actaeon looking on Artemis while she bathes. He is in the process of being transformed into a stag while a dog is preparing to pounce on him. While Artemis is framed by a curved arch, perhaps depicting a rocky place where she is bathing, Actaeon is partly concealed by the arch, thus emphasising that he has crept up on the goddess.
- b Köln, Germany (Fremersdorf 1967, 144–5, pls. 181–4). A hemispherical cup found in the early 19th century. Now in the Römische-Germanische Museum, Köln (RGM Glas 295). The decoration depicts an episode from the story of Hypermnestra and Lynceus. Hypermnestra was supposed to kill her new husband, on the orders of her father Danaus, but she fell in love with him and spared his life.

It is sadly not possible to identify the figure in the Southwark fragment. It is a male and he is advancing, with some vigour, towards the right (his left). He is evidently advancing upon someone – the axis of his head is not the same as the axis of his torso, which gives the impression of forward movement. This is reminiscent of the posture of Hypermnestra on the Köln bowl described above, who is advancing on Lyncaeus with her arm outstretched – again similar to the London fragment. Hypermnestra, however, has much more drapery than the London figure, who appears to be dressed in a tunic gathered around the waist.

#### 4 [853] Period 3.1

Fragment from the rod handle of a small jug. Applied to a free-blown form; natural green/blue glass. This is a simple form, a table vessel, the precise shape of which cannot be determined from the handle alone. Such handles are not frequent finds, but they were numerous among the early 2nd century large cullet dump from Guildhall Yard (Perez-Sala & Shepherd 2008, 203, table 8), to the immediate east of the amphitheatre, indicating that such vessels were in use in late 1st and early 2nd century glass assemblages in London. Late 1st or 2nd century. Not illustrated.

#### 5 [885] Period 3.1

Fragment from the base of a phial. Free-blown; natural green/blue glass. Bulbous body with a slightly pushed-in base. A simple form, common among 1st and 2nd century assemblages. Such vessels, with narrow necks and mouths that could easily be sealed, would have been used for storing cosmetics and pharmaceuticals. Late 1st or 2nd century. Not illustrated.

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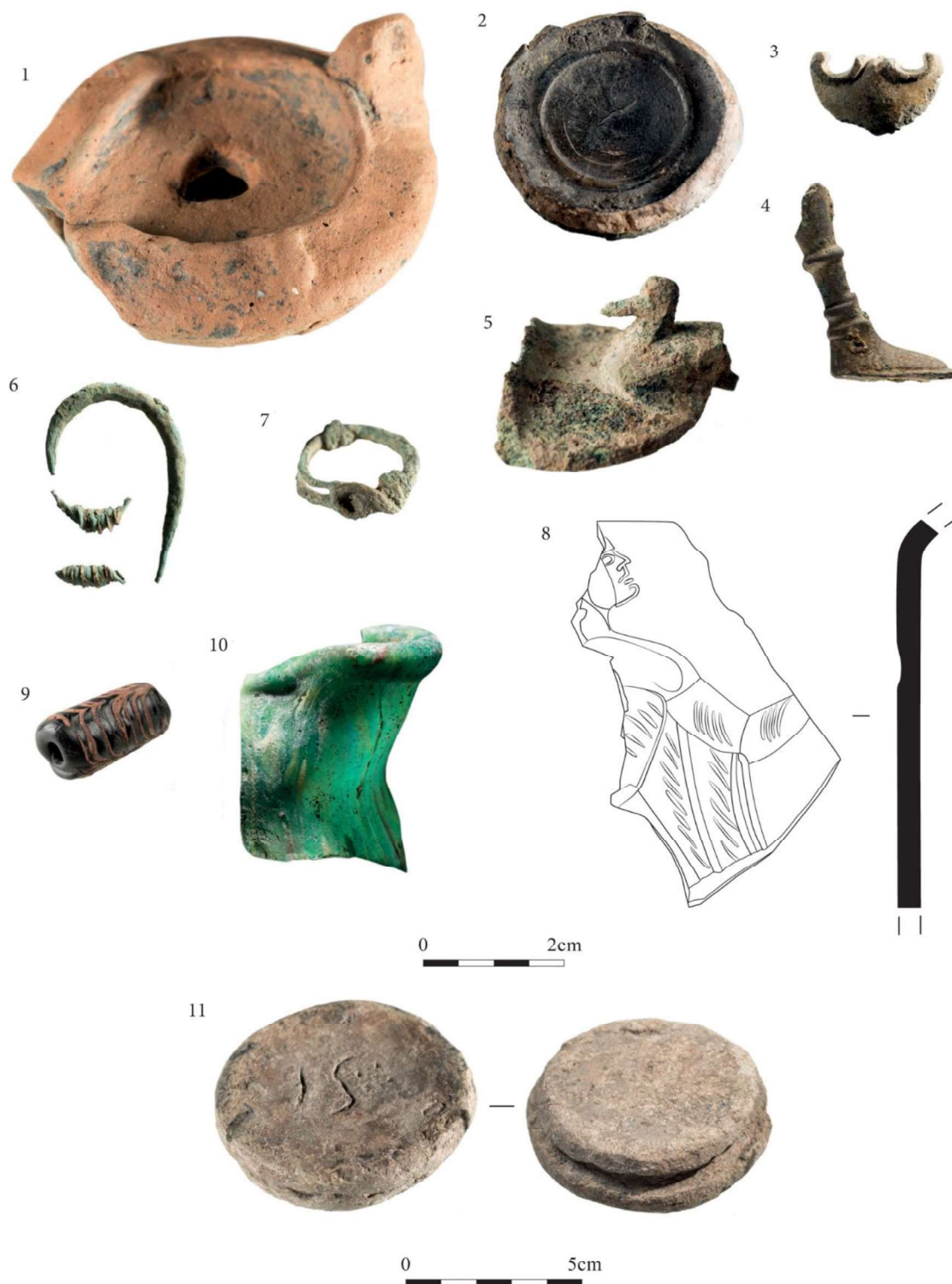


Fig 24 Roman small finds and glass: 1. Ceramic 'factory' lamp SF 33 [721] no 5; 2. Ceramic gaming piece fashioned from a pot base SF 46 [721] no 8; 3. Copper-alloy pelta-shaped mount SF 32 [721] no 17; 4. Copper-alloy foot from a small stand SF 36 [721] no 7; 5. Copper-alloy lid of a small lamp SF 37 [721] no 6; 6. Part of a penannular copper-alloy earring SF 42 [2004] no 3; 7. Copper-alloy finger-ring with spiral bezels SF 45 [2004] no 4; 8. Cut and incised figure decorated glass vessel SF126 [721] glass no 3; 9. Black and red cylindrical glass bead SF 29 [721]; 10. The trefoil rim of a small polychrome glass jug SF 127 [1074] glass no 1; 11. Lead weight with incised mark for 23 ounces SF 47 [1061] no 9.

**Roman small finds**, by John Shepherd

## SITE ASSEMBLAGE CATALOGUE – BY FUNCTION

*Category 1. Personal adornment*

Only four items were recorded. Two glass beads (nos 1–2), a copper-alloy earring (no 3) and a copper-alloy finger-ring (no 4)

## a Beads

## 1 [991] SF 66 Period 2.1

A very small, spherical colourless glass bead. Roman. D. 2mm.

This small spherical bead, no 1, is like an example found in a post-medieval context on this site. There is the possibility that the example described here is intrusive in this Period 2.1 context.

## 2 [721] SF 29 Period 3.2 (fig 24 no 9)

A cylindrical ‘black’ glass bead decorated with opaque white or yellow, now discoloured pink, spirally-wound and feathered decoration. Length: 20.5mm. Diameter: 9.83mm. 3rd or 4th century.

This black and red bead is very distinctive but there are no known British parallels. It is known in late Roman contexts on the Continent, especially in Hungary and Austria. It should not be confused with earlier dark coloured beads with off-white or yellow glass, such as an example from Augusta Emerita (Alonso & Maldonado 2018, 421, fig 1, 59). Although the size, shape and style of decoration of these 1st century AD beads are the same, the use of black glass specifically with red appears to be restricted to the late Roman examples from the Pannonian region, the late Roman provinces of Valeria and Pannonia Prima.

For example, an exact parallel, opaque black with dark red feathered spiral trail, comes from a late Roman grave in Haltburn, Burgenland, Austria (Doneus 2014, grab 125, abb. 104, 20). Two others are known from Sagva, Hungary. The first (Burger 1966, 113, grab 131, fig 85 and fig 102, 131) was found with a variety of amulets. The second bead came from a string with smaller, marvered decorated beads (*ibid*, 124, grab 247, fig 113, 247).

## b Earring

## 3 [2004] SF 42 Period 3.1 (fig 24 no 6)

A distorted, cast copper-alloy penannular earring. Circular in section, pointed at both terminal ends. This is Allason-Jones (1989) Type 1, common throughout the Roman period. Diameter: 20mm. Roman.

## a Finger-ring

## 4 [2004] SF 45 Period 3.1 (fig 24 no 7)

A copper-alloy finger-ring, circular section band made from a single strand. Each end overlaps with the hoop and has been twisted around the band, thus making it adjustable. The overlaps have been twisted into spirals, only one of which is extant. Diameter: 20.3mm. 1st or 2nd century.

A similar example comes from Colchester (Crummy 1983, 47, 1756). Crummy saw the spiral ends of the twisted element as showing Celtic influences, but it is a convenient and decorative way to finish off the trailing end of the hoop. The Colchester example is dated *c* AD 49–55. Another example, coming from the area of Nacton, Suffolk, was reported to the Portable Antiquities Scheme (PAS SF-88F701).

#### *Category 4. Household equipment*

##### a Lighting

###### 5 [721] SF 33 Period 3.2 (fig 24 no 1)

A ceramic factory lamp, most of the nozzle missing, with an open nozzle channel. Circular discus with raised rim. Two small lugs on the shoulder. Plain underside of base. The handle is without a loop. Made in a coarse light reddish-brown micaceous clay (London Mica-dusted ware – MOLI). Loeschke Type 10 lamp. W. 58.5mm. Probably 2nd century.

##### b Vessel

###### 6 [721] SF 37 Period 3.2 (fig 24 no 5)

Copper-alloy jug lid, decorated with a small cast duck finial located at the hinge end of the lid. The front of the lid terminates in a raised lip, making it semi-circular in plan. The underside of this edge is concave. Width 43mm. Roman.

This lid appears to come from a small lamp, the raised edge closing against a corresponding straight edge at the front of the lamp behind the spout. There is an exact parallel, unprovenanced, recorded in an online auction in January 2013 (site accessed December 2019) <https://www.antiquesnavigator.com/d-1333961/ancient-roman-bronze-lamp-lid-duck.html>. It is exact in most respects, although the duck has engraved feathers and the angle between its neck and body has a sharper angle.

###### 7 [721] SF 36 Period 3.2 (fig 24 no 4)

A copper-alloy left foot wearing a sandal or light boot from a small item of domestic furniture or small stand. Two raised bands around the ankle and a third around the calf. The calf of the item is socketed. Height: 27mm. 3rd or 4th century.

Virtually identical examples to this come from a late 3rd or early 4th century context at the bath house at Shadwell (Gerrard 2011b, 98, B<302>, fig 93), a 4th century context at Marlowe Car Park, Canterbury (Garrard 1995, 1035, fig 439, no 439) and an unstratified example from Alcester (Lloyd-Morgan 1994, 181 no 125, fig 89) and Lloyd-Morgan gives further references to other identical feet from Dover (Philp 1981, 149, fig 31, no 70). This came from a context dated *c* AD 210–70) and two unpublished examples, one from Chester (Grosvenor Museum acc no 558.R.1967) and the other from the Riding School Field site, Caerleon (SF.79/131/1226 1157).

#### *Category 5. Recreation and entertainment*

##### a Gaming piece

The only object that might relate to entertainment is the base of a potsherd that has been trimmed to make a round disk. It is possible that such an object could serve as a small lid for a jar or pot, but this cannot be demonstrated.

###### 8 [721] SF 46 Period 3.2 (fig 24 no 2)

A ceramic gaming piece fashioned from the base of a black-slipped vessel. Diameter: 35.5mm. Late 2nd or 3rd century.

#### *Category 6. Weights and measures*

##### a Weight

###### 9 [1061] SF 47 Period 2.2 (fig 24 no 11)

A lead weight, trapezoid in section, with rounded edges. There is a groove around its waist. Marked with I S and five pellets in quincunx, for 23 *unciae*. Examples for the use of such symbols are well known – for example, see Frere & Tomlin 1991, category 2412 *passim* for examples of the use of ‘I’ for a *libra*, Frere & Tomlin 1991, no 2412.20, no 2412.79 and no 2412.81 for the use of ‘S’ as an abbreviation of ‘*semis*’ or half a *libra* and no 2412.19 and no 2412.78 for the five pellets in a quincunx design, for five *unciae*.

The irregular sum for its weight is unusual, but it is possible that the groove around its waist meant that a cord could be attached there and that its weight was also to be included in any calculation. If that cord weighed one *uncia*, for example, then the total of this weight and its suspension cord would amount to a rounded two *librae*. The declaration of the specific weight of the object in inscribed form may mean that the use of an additional suspension loop was necessary, namely that the weight alone was not enough for a rounded sum.

It weighs just 606g, an average of 26.34g per *uncia*, a value that falls between the extremes found on a group of weights from the Thetford Treasure that cluster between 26.1 and 28.9g (see Frere & Tomlin 1991, 1–5 for a more detailed discussion of the Roman *libra* and its modern weight equivalent. They note there that any such calculation is complicated by variations from the standard, uncertainty about the original value of that standard and the potential for there being ‘Celtic’ standards in weight that might have been used alongside the Roman). Diameter: 66.46mm. Height: 19.5mm. Roman.

### *Category 9. Building services and materials*

#### a Painting materials

‘Egyptian’ blue is a calcium copper silicate pigment. This is a synthetic pigment, used alongside natural pigments such as ochres, green earths and chalks in wall painting. It is mentioned by both Pliny and Vitruvius, alongside the naturally-occurring copper carbonite mineral azurite and the plant-derived dye indigo.

10 [721] bulk Period 3.2

A small pellet of ‘Egyptian blue’ frit, a raw material used in wall painting decoration. Roman.

### *Category 11. Fittings and fixtures*

#### a Nails

Five nails and a large iron spike are the only objects relating to fixings that were recovered.

11–15 Five iron nails came from:

Period 2.1: [988]; [1094] (x2)

Period 2.2: [1070]

Period 3.2: [781]

#### b Spike

16 [847] bulk

A large iron nail or spike. Roman.

### *Category 13. Military*

#### a Belt fitting

17 [721] SF 32 Period 3.2 (fig 24 no 3)

A small, pelta-shaped copper-alloy belt mount. The central detail is missing. Raised ridges above the internal curved parts of the delta pattern. A single integrally cast rivet is on the reverse side. Probably a military item (Apples & Laycock 2007, 48, nos 27–8). Width 19.5mm. Probably 3rd or 4th century.

*Category 15. Metalworking debris*

Fragments of both copper- and leadworking waste were found. None of this material was in association with any stratigraphic evidence of industrial working.

a Copper alloy

18 [791] bulk Period 3.2

A small piece of fire-distorted copper alloy. Roman.

b Lead

19–29 [721] bulk Period 3.2

Eleven fragments of lead waste and scrap. Total weight 540g. Roman.

30 [721] bulk Period 3.2

A piece of rolled lead sheet. At first sight this had the appearance of being a ‘defixio’, a sheet of lead with a ‘curse’ inscribed on it but on unrolling the object it was devoid of any inscribed text. Roman.

*Category 18. Unidentifiable objects, functions not known*

There are five objects that cannot be assigned to any of the functional categories above, although no 31, a small box-like fragment, may be part of the pommel of the handle of a tool or blade.

a Copper alloy

31 [988] SF 41 Period 2.1

Small copper-alloy box, with a pin-hole along its shortest side. Probably a 'pommel' for a tool. L. 31mm. W. 23mm. B. 11.5mm. Roman.

32 [721] SF 35 Period 3.2

Small fragment of unidentifiable copper alloy. Roman.

b Lead

33 [2004] SF 43 Period 3.1

A square-sectioned lead rod, bent along its shaft. Length: 44.5mm. Roman.

34 [721] SF 28

Small fragment of lead sheet, square. Roman.

c Iron

35 [2004] SF 43 Period 2.1

Small fragment of iron wire. Roman.

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**Coin catalogue**

CONTEXT [0]: UNSTRATIFIED; POT DATE N/A

SF 48: Copper-alloy Roman *as*, AD 43–260; obverse: illegible, indeterminate; reverse: illegible, indeterminate; die axis uncertain; weight 8.9g; heavy wear; heavy corrosion.

CONTEXT [721]: PERIOD 3.2, SILTY CLAY LAYER, POSSIBLE HORTICULTURAL SOIL; POT DATE AD 350–400

SF 25: Copper-alloy *nummus* of Constantius II, AD 353–360; as LRBC II 455–459; obverse: [DN CONS]TA[N TIVS PF AVG], pearl-diademed and draped bust right; reverse: [FEL TEMP REPARATIO], soldier spearing falling horseman; indeterminate mintmark; die axis 180°; weight 1.9g; moderate wear; moderate corrosion.

SF 26: Copper-alloy *nummus* of the House of Valentinian, AD 364–378; as LRBC II 479–541; obverse: illegible, pearl-diademed and draped bust right; reverse: GLORIA R[OMANORVM], Emperor advancing right holding labarum and captive slave; mintmark OF/II/[...]; die axis 180°; weight 1.7g; moderate wear; moderate corrosion.

SF 27: Copper-alloy *nummus* of the House of Valentinian, AD 364–378; as LRBC II 479–541; obverse: illegible, pearl-diademed and draped bust right; reverse: [GLORIA RO]MAN[ORVM], Emperor advancing right holding labarum and captive slave; indeterminate mintmark; die axis 0°; weight 1.2g; moderate wear; moderate corrosion.

SF 30: Copper-alloy *nummus* of the House of Constantine, AD 330–335; as LRBC I 48–50; obverse: illegible, bust right; reverse: [GLOR IA EXERC ITVS], two soldiers holding two



standards; indeterminate mintmark; die axis 180°; weight 1.2g; moderate wear; heavy corrosion.

SF 31: Copper-alloy *nummus* of the House of Valentinian, AD 367–378; as LRBC II 525–531; obverse: illegible, pearl-diademed and draped bust right; reverse: [GLORIA ROMANORVM], Emperor advancing right holding labarum and captive slave; mintmark TCON; mint of Arles; die axis 180°; weight 1.4g; moderate wear; moderate corrosion.

SF 34: Copper-alloy *nummus* of the House of Valentinian, AD 364–378; as LRBC II 276–368; obverse: illegible, pearl-diademed and draped bust right; reverse: [SECVRITAS REIPVBLICAE], Victory advancing left holding wreath and palm; indeterminate mintmark; die axis 0°; weight 1.1g; moderate wear; moderate corrosion.

SF 38: Contemporary copy of a copper-alloy *nummus* of the House of Constantine, AD 335–341; copy as LRBC I 87–253; obverse: illegible, indeterminate; reverse: [GLORIA EXERCITVS], Two soldiers holding one standard; die axis uncertain; weight 0.4g; heavy wear; moderate corrosion.

CONTEXT [741]: PERIOD 4, FILL OF DITCH [761]; POT DATE 1350–1500

SF 20: Contemporary copy of a copper-alloy *nummus* of the House of Constantine, AD 346–350; copy as LRBC II 30–30a; obverse: illegible, pearl-diademed and draped bust right; reverse: [FEL TEMP REPARATIO], Virtus holding spear and leading barbarian to right from hut beneath tree; die axis 330°; weight 0.9g; heavy wear; heavy corrosion.

CONTEXT [854]: PERIOD 4, FILL OF DITCH [854]; POT DATE 1270–1350

SF 39: Copper-alloy *antoninianus* of an indeterminate Roman issuer, AD 260–296; obverse: illegible, indeterminate; reverse: illegible, indeterminate; die axis uncertain; weight 1.0g; uncertain wear; heavy corrosion.

### The post-Roman pottery, by Berni Sudds

Table 4 The assemblage by pot period. SC = Sherd count. ENV = Estimated number of vessels. Weight in grams. P = present.

Period	SC	%	ENV	%	Weight	%
Early medieval	9	1	7	1	181	P
High medieval	33	2	25	3	768	2
Late medieval	292	20	210	27	6155	14
Post-medieval	1118	77	537	69	37451	84

Table 5 Quantification of the assemblage by ware type. SC = Sherd count. ENV = Estimated number of vessels. Weight in grams.

Fabric	Expansion	Date range	SC	ENV	Weight
LCOAR	Coarse London-type ware	1080–1200	9	7	181
LOND	London-type ware	1080–1350	18	10	466
LIMP	Limpsfield-type ware	1150–1300	2	2	82
LOND ROU	London-type ware with Rouen-style decoration	1180–1270	1	1	6
EARL	Earlwood-type ware	1200–1400	2	2	12
HARM	Harlow sandy ware	1200–1500	1	1	33

<b>Fabric</b>	<b>Expansion</b>	<b>Date range</b>		<b>SC</b>	<b>ENV</b>	<b>Weight</b>
SOWX	Essex unsourced sandy orange ware	1200	1550	2	2	59
KING	Kingston-type ware	1240	1400	2	2	50
KING HD	Kingston-type ware in the highly decorated style	1240	1300	1	1	17
CBW	Coarse Surrey-Hampshire Border ware	1270	1500	178	126	3131
CBW HD	Coarse Surrey-Hampshire Border ware in the highly decorated style	1270	1350	2	1	61
LOND TUL	London-type ware tulip-necked baluster jug	1270	1350	1	1	11
MG	Mill Green ware	1270	1350	2	2	21
MG COAR	Mill Green coarseware	1270	1400	1	1	11
SPAM	Merida-type micaceous ware	1270	1650	3	1	127
DUTR	Dutch red earthenware	1300	1650	28	22	1004
DUTSD/ DUTSL	Dutch slipped red earthenware	1300	1650	23	5	1363
SIEG	Siegburg stoneware	1300	1630	5	4	115
CBW BUNG	Coarse Surrey-Hampshire Border ware bunghole jug	1340	1500	15	8	284
CBW FT	Coarse Surrey-Hampshire Border ware cooking pot with flat-topped rim	1340	1500	3	2	81
CBW LGR	Coarse Surrey-Hampshire Border ware large rounded jug	1340	1500	7	4	254
LMHG	Late medieval Hertfordshire glazed ware	1340	1450	6	3	165
CHEA	Cheam whiteware	1350	1500	43	35	1039
CHEA BIC	Cheam whiteware biconical jug	1350	1440	3	2	166
CHEA FT	Cheam whiteware cooking pot with flat-topped rim	1350	1440	1	1	21
TUDG	Tudor Green ware	1350	1600	3	3	13
LMTX	Essex late medieval/transitional	1350	1600	1	1	32
CBW BIF	Coarse Surrey-Hampshire Border ware cooking pot with bifid rim	1380	1500	7	6	271
LLON	Late London-type ware	1400	1500	4	4	70
LLSL	Late London-type slip-coated ware	1400	1500	1	1	10
MPUR	Midlands purple ware	1400	1750	16	3	625
CHEA BIF	Cheam whiteware cooking pot with bifid rim	1440	1500	3	2	73
MISC	Miscellaneous unsourced medieval pottery	900	1500	1	1	11
LARA	Langerwehe/Raeren stoneware	1450	1500	1	1	2
SIEB	Siegburg stoneware with iron wash	1450	1550	2	2	50
TGWIMP	Miscellaneous imported tin-glazed ware	1450	1900	2	2	7
EBORD	Early Surrey-Hampshire Border whiteware	1480	1550	12	6	143
EBORDY	Early Surrey-Hampshire Border whiteware with clear (yellow) glaze	1480	1550	8	3	521
PMCR	Post-medieval crucible fabric	1480	1900	1	1	68

<b>Fabric</b>	<b>Expansion</b>	<b>Date range</b>		<b>SC</b>	<b>ENV</b>	<b>Weight</b>
PMRE	London-area early post-medieval redware	1480	1600	100	63	3395
PMREM	London-area early post-medieval redware with metallic glaze	1480	1600	24	3	695
PMSRG	London-area post-medieval slipped redware with green glaze	1480	1650	10	7	325
PMSRY	London-area post-medieval slipped redware with clear (yellow) glaze	1480	1650	21	11	1151
RAER	Raeren stoneware	1480	1610	21	14	505
ISAB	Isabela polychrome maiolica	1500	1550	1	1	26
SIEGS	Siegburg salt-glazed stoneware	1500	1630	1	1	5
BORD	Surrey-Hampshire Border whiteware	1550	1700	2	2	85
BORDG	Surrey-Hampshire Border whiteware with green glaze	1550	1700	32	20	926
BORDO	Surrey-Hampshire Border whiteware with olive glaze	1550	1700	16	6	363
BORDY	Surrey-Hampshire Border whiteware with clear (yellow) glaze	1550	1700	180	48	5224
FREC	Frechen stoneware	1550	1700	15	10	977
FRECW	Frechen whiteware	1550	1700	2	2	76
OLIV	Spanish olive jar	1550	1750	3	1	256
RBOR	Surrey-Hampshire Border redware	1550	1900	37	30	1561
TGW	English tin-glazed ware	1570	1846	40	29	441
TGW A	London tin-glazed ware with blue- or polychrome-painted decoration and external lead glaze (Orton style A)	1570	1650	30	8	950
TGW BISC	London biscuit-fired tin-glazed ware	1570	1846	31	14	612
PMBL	Essex-type post-medieval black-glazed redware	1580	1700	7	5	115
PMFR	Essex-type post-medieval fine redware	1580	1700	26	20	842
PMFRB	Essex-type post-medieval fine redware with brown glaze	1580	1700	4	2	147
PMR	London-area post-medieval redware	1580	1900	86	51	4697
RBOR SLTR	Surrey-Hampshire border redware with slip-trailed decoration	1580	1800	2	2	29
RBORB	Surrey-Hampshire Border redware with brown glaze	1580	1800	10	9	348
RBORG	Surrey-Hampshire Border redware with green glaze	1580	1800	4	2	188
WESE	Weser slipware	1580	1630	1	1	8
CHPO BW	Chinese blue and white porcelain	1590	1900	3	3	95
WEST	Westerwald stoneware	1590	1900	3	3	51
TGW D	London tin-glazed ware with blue- or polychrome-painted decoration and external lead glaze (Orton style D)	1630	1680	104	41	2208
METS	Metropolitan slipware	1630	1700	4	2	210

<b>Fabric</b>	<b>Expansion</b>	<b>Date range</b>		<b>SC</b>	<b>ENV</b>	<b>Weight</b>
TGW BLUE	London tin-glazed ware with plain pale blue glaze	1630	1846	10	3	68
TGW C	London tin-glazed ware with plain white glaze (Orton style C)	1630	1846	110	27	1338
BORDG CHP2	Surrey-Hampshire Border green-glazed whiteware flat-rimmed chamber-pot	1650	1750	31	8	703
STMO	Staffordshire-type mottled brown-glazed ware	1650	1800	1	1	10
STSL	Staffordshire-type combed slipware	1660	1870	7	6	148
TGW F	London tin-glazed ware with 'Chinaman among grasses' decoration (Orton style F)	1670	1690	1	1	51
LONS	London stoneware	1670	1926	12	10	919
CHPO IMARI	Chinese Imari porcelain	1680	1900	2	2	107
STMB	Staffordshire-type marbled slipware	1680	1800	1	1	12
TGW G	London tin-glazed ware with 'Lambeth polychrome' decoration (Orton and Pearce style G)	1701	1711	1	1	3
SWSL	Dipped white salt-glazed stoneware	1710	1760	1	1	8
CHPO ROSE	Chinese porcelain with famille rose decoration	1720	1800	1	1	25
STGR	Staffordshire-type glazed redware (Astbury-type)	1720	1750	1	1	3
SWSG	White salt-glazed stoneware	1720	1780	1	1	2
CREA	Creamware	1740	1830	7	4	303
STBL	Staffordshire-type black-glazed ware	1740	1780	1	1	9
STRSB	Staffordshire-type red-slipped black-glazed ware	1750	1800	1	1	69
PEAR	Pearlware	1770	1840	1	1	12
PEAR SLIP	Pearlware with slip decoration	1775	1840	1	1	3
TPW	Refined whiteware with under-glaze transfer-printed decoration	1780	1900	6	2	132
SUND	Sunderland-type coarseware	1800	1900	1	1	22
REFW	Refined white earthenware	1805	1900	1	1	61
PEAR TR3	Pearlware with under-glaze brown or black transfer-printed decoration	1810	1840	1	1	6
PEAR TR6	Pearlware with under-glaze transfer-printed and over-glaze painted decoration	1810	1840	2	1	37
TPW4	Refined whiteware with under-glaze colour transfer-printed decoration (green, mulberry, grey etc)	1825	1900	2	2	28
TPW FLOW	Refined whiteware with under-glaze transfer-printed 'flow blue' decoration	1830	1900	1	1	10
MISC	Miscellaneous unsourced post-medieval pottery	1480	1900	6	5	3299

## Clay tobacco pipes, by Chris Jarrett

### THE ASSEMBLAGE

The clay tobacco pipes were contemporaneous with Periods 6–8 dated activity. In Period 6, 144 fragments/52 bowls were recovered and these came mostly from features, of which drain [322] produced the largest quantity (133 fragments/40 bowls in total) and found in fills [309], [311] and [317] with the largest quantity coming from fill [316] (101 fragments/36 bowls). The latest bowls recorded in these fills dated to *c* 1660–80. A small quantity of clay tobacco pipes was recovered from a subsequent recut [305] of the drain [322] and the fill [304] contained 21 fragments, including nine bowls, the latest of which dated to *c* 1700–40. Most of the clay tobacco pipes found in Periods 7 (70 fragments/51 bowls) and 8 (64 fragments/43 bowls) were recovered from made-ground layers and the latest bowls dated to the 18th century.

Only two bowls are recorded dated *c* 1610–40 and both are of the same short AO5 heeled, rounded profile type and both were residual in the contexts from which they were recovered. Both bowls have an average burnish and impressed circular relief stamps on the underside of the heels. The first bowl, with three-quarters milling of the rim, has a smudged wheel-stamp that cannot be further defined (SF 64, fill [317], drain [322], Period 6). The second bowl has full milling of the rim and the stamp is of a wheel-type with eight spokes (fig 26 no 1: SF 113, made-ground layer [2159], Period 7). The stamp cannot be equated to a Museum of London Archaeology (MOLA) die number.

([https://webarchive.nationalarchives.gov.uk/20090419005649/http://www.museumoflondon.org.uk/claypipes/pages/mark.asp?mark\\_name=Wheel,%208-spoked](https://webarchive.nationalarchives.gov.uk/20090419005649/http://www.museumoflondon.org.uk/claypipes/pages/mark.asp?mark_name=Wheel,%208-spoked) ; accessed 28 December 2021)

Four bowls are dated *c* 1640–60, all of which are of the heeled AO10 rounded profile types and all have an average burnish. All the bowls were residual and three came from Period 7 dated deposits. None of these bowls has makers' marks, while two examples have damaged rims showing evidence of milling (fill [317], drain [322], Period 6 and layer [2231]); another bowl with a chinned profile and similar to types made in Bristol, has full rim milling (layer [2159]), while a fourth bowl has no milling (made-ground layer [2124]).

There are two bowls dated *c* 1640–70, each with 'heart-shaped' heels in plan and both examples have an average burnish. The small type AO11 shape has half milling of the rim (made-ground layer [2100], Period 8, while the taller AO12 type has full milling of the rim (fill [316], drain [322], Period 6).

A total of 57 bowls date to the period *c* 1660–80, the majority of which are the rounded profile, spurred AO15 shape and noted as 46 examples, the majority of which have an average burnish and three-quarters milling of the rim. Three-quarters of the AO15 bowls (35 examples) were in contemporaneous use in Period 6 dated deposits and occurred in multiple numbers: 29 bowls in total found in fills [309], [316] and [317] of the drain [322], besides three bowls from fill [304] of the recut [305] for this feature, while another three bowls came from the levelling layer [302]. The other incidences of this bowl shape were residual in Period 7 and 8 dated made-ground layers. The other *c* 1660–80 dated bowl types occurred in small numbers and consist of a single heeled, rounded profile AO13 bowl (residual in made-ground layer [2158], Period 8) and two examples of the heeled, barrel-shaped AO18 shape (fill [322], drain [322], Period 6 and made-ground layer [2179], Period 8). Five examples, however, are recorded as the AO20S type, a shorter version of the heeled, rounded profile later AO20 bowl type (Higgins 2016), all of which were noted in fill [322], drain [322]. The AO20S bowls were in various states of completeness, but all have an average quality of finish and three bowls were milled, one of which has three-quarters rim milling, while two items were not milled.

Only six bowls are recorded as types dated *c* 1680–1710 and these mostly have an average burnish/finish and where it could be recorded a quarter or half milling of the rim, except for three examples with no evidence of milling: this method of rim finish seems to have been in

decline or was more cursory towards the end of the 17th century. The spurred AO19 and the heeled elongated and rounded profile AO20 bowls occur in equal numbers: three examples each, while a single example of the splayed heeled, straight-back, rounded front AO21 shape is noted. The most frequent bowl type recorded for this period is the heeled, straight-sided AO22 bowl shape and found as five examples, which possibly mirrors that found in many areas of London where this bowl type tends to be more frequent than the other contemporaneous shapes. The distribution of the *c* 1680–1710 dated bowl shapes was often recorded as one or two bowls found in individual dump deposits and assigned to Periods 7 or 8.

A single bowl is recorded as the export shape AO24/OS27, dated *c* 1700–80 and is typically without a heel or a spur. This type of bowl was mostly destined for the market of the American colonies where it was a popular shape evolved from the original indigenous American types. The bowl is a tall, narrower variant and has part of a linear stamp on the top of the stem reading across it, which is illegible (fig 26 no 2: SF 119, dump layer [2230], Period 7). A similar bowl was excavated at 56 Southwark Bridge Road, Southwark and has an irregular oval-shaped stamp with the letters ‘A + A X’ and was possibly made by Anthony (Arthur) Andrews, working in the parish of St Saviour’s, *c* 1683–1725 (Jarrett 2006; Hammond & Jarrett 2020; Higgins in prep).

A development of the AO21 shape is the more upright, OS10 bowl type with a thick stem and dated *c* 1700–1740, which occurs in the assemblage as 47 examples, of which just over a quarter (thirteen bowls) show evidence for having makers’ initials on the sides of the heels, five of which additionally have a crown above the initial. Where both the initials are legible, then each of the makers are represented by a single bowl. Most of the initial marks can be correlated with a documented Southwark pipe-maker (see table 6; Hammond & Jarrett 2020) working locally in the study area, although it is possible that the bowls were made by a pipe-maker with the same initials working in the City or elsewhere in London outside of Southwark (see Oswald 1975). The OS10 bowls were mostly recovered from Period 7 or 8 dated made-ground layers and individual deposits usually produced one or two bowls, although larger concentrations occurred in layers [2232] (Period 7) and found as ten bowls, while seven examples came from [2158], Period 8.

Only five examples of the OS12 bowl, with thinner stems than the OS10 type, are recorded, one of which has initials on the sides of the heel (see table 6). This bowl type solely occurred in made-ground layers and was slightly more frequent in Period 8 deposits, each of which produced a single bowl, than that of Period 7 where two bowls were recorded in [2205].

Spurred 18th century bowls are present as fourteen examples of the OS22 type dated *c* 1730–80 and six of these bowls have makers’ initials on the sides of the spur and at least three different master pipe-makers are represented (see table 6). Three of the bowls have moulded armorial designs as either the Hanoverian Coat of Arms, made by **N A** (fig 26 no 3), while two bowls have the Prince of Wales’s feathers design and were possibly made by the same **I B** pipe-maker (see table 6 for the possible makers of the OS 12 bowls). Pipes bearing the Hanoverian Coat of Arms and initialled **I B** are well attested to in London (Atkinson & Oswald 1969, 197; Le Cheminant 1981), while those marked **N A** are rarely reported on in London (Atkinson & Oswald 1980). The OS22 bowls were mostly found in Periods 7 and 8 made-ground layers: each deposit producing mostly a single bowl, except for four examples noted in the demolition rubble layer [2164], Period 8. A single later OS23 bowl, dated *c* 1760–1800 is noted, but is missing the spur and any maker’s marks (fig 26 no 4, SF123, made-ground layer [2231], Period 7). However, the bowl is decorated with the Hanoverian Coat of Arms (distinguished by the presence of a lion *Passant Regardant* above the crown) on the front and a single plume of the Prince of Wales’s feathers occurs on the back of the bowl (facing the smoker).

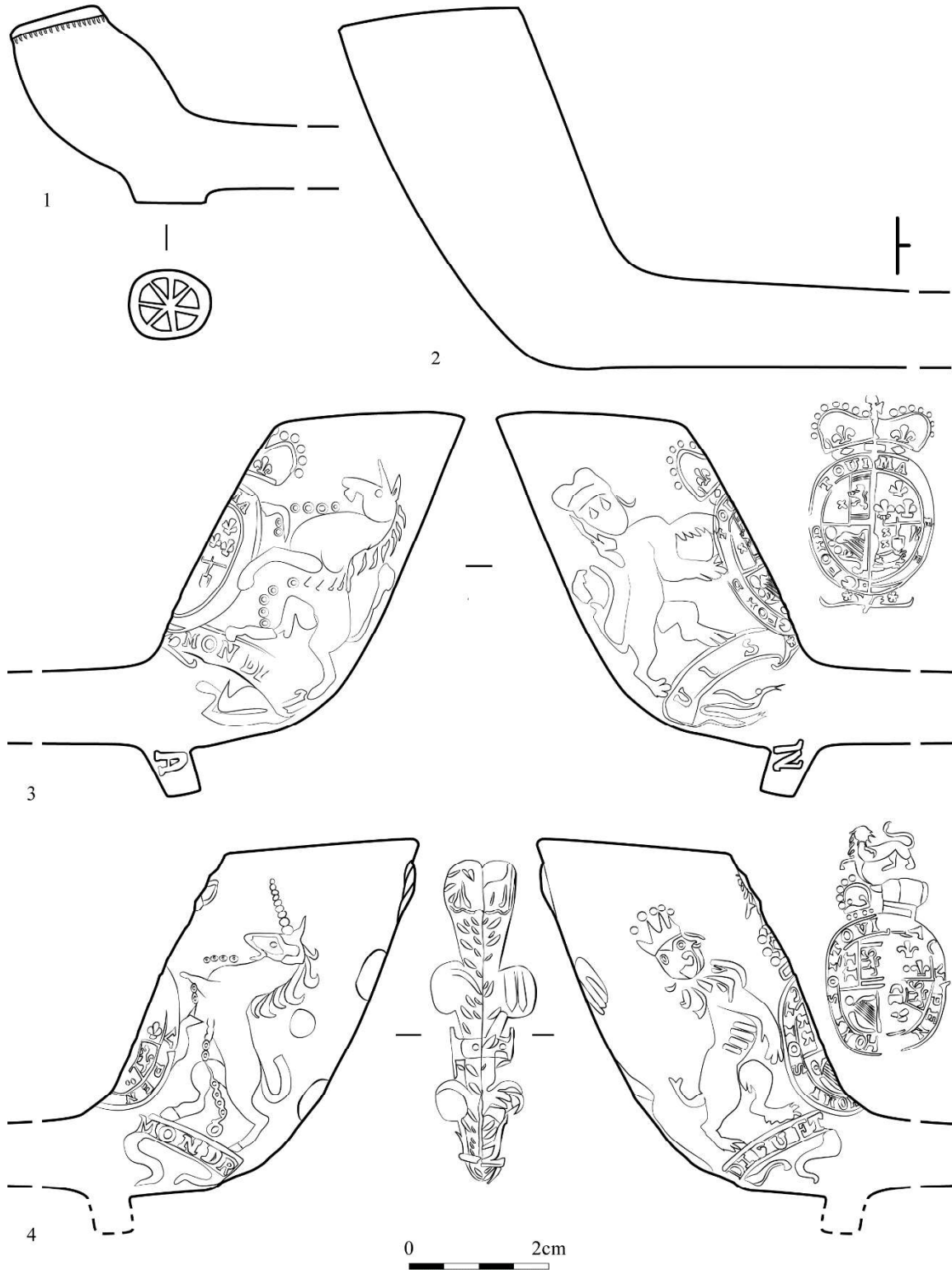


Fig 26 Clay tobacco pipes: 1. AO5 bowl with eight spoke relief stamp, layer [2159]; 2. AO24/OS27 America export type bowl with part of a stamp, layer [2230]; 3. OS22 armorial bowl with Hanoverian Coat of Arms initialled N A, layer [2164]; 4. OS22 armorial bowl with the Hanoverian Coat of Arms and the Prince of Wales's feathers, layer [2231]. Scale 1:1, stamp 2:1

Table 6 Initialed 18th century bowls

<b>Bowl type</b>	<b>Date range</b>	<b>First initial</b>	<b>Last initial</b>	<b>No of bowls</b>	<b>Comments</b>
OS10	1700–1740	S		1	No family initial. SF 112, made-ground [2158], Period 8
OS10		?	?	1	Initials deliberately obscured, possibly ?I ?M or W, SF 110, made-ground [2158], Period 8
OS10		I	?	1	Second initial is possibly an I M or R. SF 111, made-ground [2158], Period 8
OS10		?	B	1	First initial is completely illegible. Crowns above the initials. SF 107, made-ground [2155], Period 7
OS10		I	B	1	At least five north Southwark clay tobacco pipe manufacturers share these initials and could have made this bowl (Oswald 1975, 131; Hammond & Jarrett 2020). SF 65, fill [445], posthole [446], Period 7
OS10		I	D	1	I possibly a truncated H. Crowns above the initials. Possibly made by James Dixon, 1712, St Mary Magdalene, Bermondsey, John Dell, 1726–81, St Saviour's, John Dunford, 1748, St John, Horsley Down (Hammond & Jarrett 2020). SF 108, made-ground [2155], Period 7
OS10		?	H	1	Possibly an I or a T for the first initial. SF 106, made-ground [2138], Period 8
OS10		G	H?	1	The H appears as two lines and a central dot, possibly another letter. SF 118, made-ground [2229], Period 7
OS10		E	M	1	Crowns above the initials. A possible pipe-maker was Edward Morris, 1702, Southwark, St Olave's (Walker 1981, 178) SF 62, layer [3], evaluation, not phased
OS10		H	M	1	Possible Southwark pipe-makers for this bowl are Henry Mason, 1718 (Hammond & Jarrett 2020) or Hampstead Mules, 1712, Fivefoot Lane, parish of St Mary Magdalen, Bermondsey (Hammond & Jarrett 2020). SF 63, layer [3], evaluation, not phased
OS10		I	M	1	Crowns above the initials. a possible local manufacturer was John Mattress, 1720, Smiths Alley, St Mary Magdalen (Hammond & Jarrett 2020). SF 120, made-ground [2230], Period 7
OS10		W	M	1	Crowns above the initials. Possibly made by William Mitchell, 1700, Salisbury Street, Bermondsey (Oswald 1975, 142). SF 125, made-ground [2232], Period 7
OS10		I	W	1	Possibly made by Southwark pipe-makers John Ward, 1708, Smith Alley, or John Whitehead, 1721, St Olave's (Oswald 1975, 149; Walker



Bowl type	Date range	First initial	Last initial	No of bowls	Comments
					1981, 179, Hammond & Jarrett 2020). SF 124, made-ground [2232], Period 7
OS12	1730–1780	T	W	1	A possible local pipe-maker was Thomas Woollard, 1757, Southwark (Oswald 1975, 149), SF 116, made-ground [2205], Period 7
OS22		*	*	1	Stars or flowers on the sides of the heel. SF 105, made-ground [2102], Period 8
OS22		I	?	1	The initials are faint. Prince of Wales's feathers armorial design. SF 114, made-ground [2163], Period 7
OS22		N	A	1	(fig 26 no 3) Fairly well moulded Hanoverian Coat of Arms with a plain front. The possible maker of the bowl is not known, although single examples of contemporaneous plain OS12 bowls have been found on nearby excavations on the London Bridge Station area (Thameslink projects, sites BVM12 and LBZ10) (Pearce 2011; Jarrett 2020) while two examples were noted in the City at Whitefriars (WFT09) (Jarrett 2002). A possible Sussex pipe-maker, perhaps Nic Artwell, Chichester, <i>c</i> 1730–60, has also been suggested based on the frequency of pipes with those initials in that county (Atkinson & Oswald 1980, 364). SF 115, made-ground [2164], Period 8
OS22		I	B	1	Numerous Southwark and London contemporaneous pipe-makers are documented with these initials (see Oswald 1975, 131; Hammond & Jarrett 2020) . SF 117, made-ground [2205], Period 7
OS22		I	B	1	Prince of Wales's feathers, plain front, good moulding. See above for the makers. SF 122, made-ground [2231], Period 7
OS22		C	S?	1	Forward-pointed spur with very small letters. Possible Southwark pipe-makers who could have made this bowl are Charles Steward/Stuart 1, 1753/1759, Long Lane, or Charles Steward 2, 1772–76, Bermondsey Street (Hammond & Jarrett 2020). SF 121 made-ground [2230], Period 7

#### DISCUSSION

From the evidence of the pipe bowls, smoking tobacco on the study area was probably occurring more from the mid-17th century and at a low level, but it is from *c* 1660–80 that a seven-fold increase in this habit is indicated. The dramatic increase in the number of clay tobacco pipe bowls during this period is seen on other Southwark (eg Jarrett 2020, 488, table 12.1) and London sites, for example at Caroone House (Jarrett 2007), Fenchurch Street (Hudak & Jarrett 2018), The Guildhall (Heard 2007), Lloyds Register, Fenchurch Street

(Heard 2006, 99–100), the Salvation Army International Headquarters (Jarrett 2008, 98) and Narrow Street, Limehouse (Jarrett 2005, 61, table 1). The 1660–80 dated pipes show that the spurred AO15 type is more common and presumably preferred by smokers and this pattern is shown on many Southwark sites (eg Jarrett 2020, 488, table 12.1) and City sites, for example Rood Land (Jeffries *et al* 2014), Lloyds Register, Fenchurch Street (Heard 2006, 99–100) and the Salvation Army International Headquarters (Jarrett 2008, 98). The AO18 bowl appears to have been more popular in the eastern area of London and Tower Hamlets, for example Narrow Street (Jarrett 2005). The sample of 1680–1710 dated bowls is rather small, although it does indicate to some extent the evidence that the AO22 shape was the preferred bowl type manufactured and smoked in London during this time. The mid- and late 17th century dated bowls are devoid of makers' marks and follow the trend for anonymity noted elsewhere in the London clay tobacco pipe industry. Generally, the 17th century pipes have an average burnish and mostly three-quarters milling of the rims, which might infer that the bowls were used by a middling socio-economic community (ie the more milling the more care that has been taken over the pipe and the better the quality).

The occurrence of the American export AO24/OS27 bowl is a rare find. The bowl was almost certainly made in London and probably Southwark but not intended for sale to the local domestic market. It may, therefore, have belonged to a pipe-maker or employee in a workshop making this type of product or even possibly a traveller from the New World colonies. The 18th century marked bowls indicate the supply of pipes from mostly local production and by pipe-makers known to be working in north Southwark parishes (St Mary Magdalene, Bermondsey, St Olave's and St Saviour's); however, it is not impossible that some of the bowls were made north of the Thames and elsewhere.

Finally, as the assemblage was recovered from the location of a hospital, it is possible that the pipes were not used only for imbibing tobacco but were also to smoke other medicinal dried herbs dispensed by the hospital pharmacy. Culpeper's *Complete Herbal*, published in 1653, recommends, for example, colt's-foot, Coronaria and rosemary to be smoked in the 'manner of tobacco' or with a pipe in order to cure certain illnesses, including coughing and lung diseases!

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### Animal bones, by Karen Deighton

Table 8 Mandibular tooth eruption and wear (after Grant (1982) and Payne (1973)) for major domesticates

Taxa	Period	Context	Age category	Age estimate
Cattle	5	520	D+	Over 30 months
Sheep/goat	4	471	H	6–8 years
Sheep/goat	5	520	G	4–6 years
Sheep/goat	6	528	G	4–6 years
Pig	5	520	G	Young adult
Pig	5	520	A	6 weeks

Table 9 Fragment counts of taxa from pit [632]

Cattle	16
Cattle size	4
Sheep/goat	22
Sheep size	9
Pig	14
Rabbit	1
Chicken	9
Goose	2
<b>Total</b>	<b>77</b>

Table 10 Animal bone (by fragment count) from drain [322]

<b>Drain fills</b>	<b>309</b>	<b>316</b>	<b>317</b>	<b>323</b>	<b>325</b>	<b>2005</b>	<b>Total</b>
Cattle	2	4	5	1		14	26
Cattle size	2	4	1				7
Sheep/goat	2	5	5	1	1	2	16
Sheep size		2	1	3			6
Pig	1	3	1	4		2	11
Dog	1				1		2
Rabbit			1				1
Chicken		1					1
Indeterminate bird	1						1
<b>Total</b>	<b>9</b>	<b>19</b>	<b>14</b>	<b>9</b>	<b>2</b>	<b>18</b>	<b>71</b>

**Environmental archaeological analysis report**, by Rob Batchelor, Lucy Allott and Tom Hill

Table 12 Results of the pollen and spore analysis of samples from ditch [2008] and cesspit/garderobe [469]

	<b>Feature</b>	<b>Ditch [2008]</b>		<b>Cesspit/ garderobe [469]</b>	
		<b>Context</b>	<b>2003/ 2004</b>	<b>2007</b>	<b>607</b>
	<b>Depth</b>	<b>0.10</b>	<b>0.40</b>		
	<b>Phase</b>	<b>3.2/3.3</b>	<b>3.4</b>	<b>5</b>	<b>6</b>
<b>Latin name</b>	<b>Common name</b>				
<b>Trees</b>					
<i>Alnus</i>	alder	1	10		
<i>Quercus</i>	oak	1	1		
<i>Pinus</i>	pine	2	2		
<b>Shrubs</b>					
<i>Calluna vulgaris</i>	heather		1		
<i>Corylus type</i>	eg hazel	2	1	3	
<i>Lonicera periclymenum</i>	honeysuckle			1	
<b>Herbs</b>					
Cyperaceae	sedge family		2		
Poaceae	grass family	3	13	12	3
cf Cereale type	eg barley			33	
Asteraceae	daisy family	1	2	12	
<i>Cirsium type</i>	thistle		1		
Lactuceae	dandelion family	21	30	12	1
Apiaceae	carrot family	3	3	4	1
<i>Ranunculus type</i>	eg buttercup		2	1	
<i>Chenopodium type</i>	goosefoot family	2	11	15	

	Feature	Ditch [2008]		Cesspit/ garderobe [469]	
		2003/ 2004	2007	607	657
	<b>Context</b>				
	<b>Depth</b>	<b>0.10</b>	<b>0.40</b>		
	<b>Phase</b>	<b>3.2/3.3</b>	<b>3.4</b>	<b>5</b>	<b>6</b>
<b>Latin name</b>	<b>Common name</b>				
Caryophyllaceae	pink family	1	6		
<i>Plantago</i> type	plantain	2	2		
<i>Plantago lanceolata</i>	ribwort plantain			1	
<i>Rumex acetosa/acetosella</i>	sorrel		1		
<i>Centaurea cyanus</i>	cornflower			1	
<i>Centaurea nigra</i>	black knapweed		5	2	
<i>Sinapis</i> type	eg charlock	6	6		
<i>Filipendula</i> type	meadowsweet		3	1	
<i>Trifolium</i> type	clover		1		
<b>Spores</b>					
<i>Pteridium aquilinum</i>	bracken		4		
<i>Sphagnum</i>	moss		1		
<i>Dryopteris</i>	buckler fern		4		
<i>Polypodium vulgare</i>	polypody	1			
<b>Parasite eggs</b>					
<b>Total land pollen (grains counted)</b>		45	102	101	5
<b>Concentration*</b>		5	5	5	1
<b>Preservation**</b>		2	2	4	2
<b>Microcharcoal concentration***</b>		5	4	4	1

Key: \*Concentration: 0 = 0 grains; 1 = 1–75 grains, 2 = 76–150 grains, 3 = 151–225 grains, 4 = 226–300, 5 = 300+ grains per slide; \*\*Preservation: 0 = absent; 1 = very poor; 2 = poor; 3 = moderate; 4 = good; 5 = excellent; \*\*\*Microcharcoal concentration: 0 = none, 1 = negligible, 2 = occasional, 3 = moderate, 4 = frequent, 5 = abundant

Table 13 Charcoal analysis: medieval pit [835] deposit [577], sample &lt;12&gt;

<b>Sample no</b>		12		
<b>Context</b>		577		
<b>Parent context</b>		835		
<b>Context/deposit Type</b>		Pit		
<b>Group</b>		44		
<b>Sample volume (L)</b>		27		
<b>Taxonomic identifications</b>		<b>Count</b>	<b>Weight (g)</b>	<b>Notes regarding ring curvature and growth rings</b>
<i>Fagus sylvatica</i> L.	Beech	3	2.8	
	rw	6	0.65	medium and large rw none complete
<i>Quercus</i> sp. L.	Oak	54	16.65	
	rw	11	5.4	1 x <1cm in diameter with 5 gr. Remainder not complete but a range of sm, med and lg rw
<i>Betula</i> sp. L.	Birch	3	0.93	
<i>Alnus</i> sp. Mill.	Alder rw	4	2.2	1 x ~9gr, 1 x >15gr, 1 x ~5gr all <2cm diameter
<i>Corylus/Alnus</i>	Hazel/Alder	1	0.05	
<i>Corylus avellana</i> L.	Hazel	1	0.1	
	rw	2	0.3	1 x ~9gr <2cm diameter
Maloideae	Apple sub-family	1	0.13	
	rw	4	4.9	1 x ~20gr, 1 x ~30gr both <3cm diameter
<i>Ilex aquifolium</i> L.	Holly	3	0.44	
<i>Acer campestre</i> L.	Field maple rw	4	2.6	1 x 35gr <3cm diameter
<i>Ulmus</i> sp.	Elm	1	0.14	
Indet.	Bark fragments	2	0.25	
<b>Total</b>		<b>100</b>	<b>37.54</b>	

Key: rw = round wood, gr = growth ring

**Evidence for multi-period settlement at West End, Woking**  
SAM WILSON

Table 1 Pottery quantification by fabric codes\* (after Jones 2012)

Period	Fabric description	Fabric code	Surrey fabric code*	Count	Wt (g)
<i>Bronze Age</i>	Glauconitic sandy ware with fine flint inclusions	Gf1	CALC3	123	2258
<i>Iron Age</i>	A moderate amount (10%) of poorly-sorted, sub-angular calcined flint in a sparsely medium-grained sandy matrix	F1	CALC2	2	20
	A moderate amount (10%) of well-sorted, rounded ironstone and sparse (3–5%), sub-rounded grog in a dark grey clay matrix	I1	N/A	1	6
	A quartz-rich red/brown clay matrix containing a moderate amount (10%) of fine, well-rounded sand	Q1	SAND1	79	1615
	A quartz-rich red/brown clay matrix with common (15–20%) rounded fine–medium sand with sparse (c 7%) well-rounded glauconite	Q2	GLAUC3	86	916
	A quartz-rich mid-grey clay fabric with sparse (5–10%) rounded ironstone and quartz	Q3	IRON3	2	50
	A slightly micaceous (rare, 1–2%) grey clay matrix with sparse (5–10%) rounded fine sand quartz. Little (1–3%) flint	Q4	SAND2A	2	12
	A red/brown clay matrix with sparse (3–5%) sub-angular, moderately-sorted calcined flint (2–3mm) and sparse rounded glauconite or iron pellets and quartz	U1	IRON5	41	443
	Pale grey fabric, vesicular with 2–4mm elongated voids occurring in a sparse–moderate (7–10%) medium sand matrix	V1	ORG2	1	4
<i>IA/Roman</i>	Fine micaceous sandy ware	Qm1		22	61
<i>Roman</i>	Greyware	Gw1		4	72
<i>Medieval</i>	Cheam whiteware	Chm Wh		1	155
	Coarse Border ware	CBW		1	36
	Hard-fired, sandy fabric	Med		6	175
<i>Post-medieval</i>	Glazed earthenware	GEW		13	292
<i>Modern</i>	Yellow ware	YEL		1	2
	Refined white ware	RWW		3	11
<i>Undated</i>	Vesicular fabric	VES		1	3

Table 2 Metalworking debris: summary of material examined (weight in g)

Context	Feature group, Feature/intervention and period	Furnace slag (dense)	Furnace slag (charcoal impressions)	Flow slag	Non-diagnostic ironworking slag	Total
3009	Ditch 3215 3007 Iron Age				54	<b>54</b>
3043	Ditch 3216 3042 Post-medieval		334			<b>334</b>
3055	Pit 3058 Iron Age				312	<b>312</b>
3075	Ditch 3215 3074 Iron Age		125			<b>125</b>
3082	Ditch 3081 Iron Age			224		<b>224</b>
3095	Ditch 3215 3093 Iron Age			169	147	<b>316</b>
3125	Ditch 3216 3213 Post-medieval		39			<b>39</b>
3163	Structure 3003 Iron Age	1595				<b>1595</b>
<b>Total</b>		<b>1595</b>	<b>498</b>	<b>373</b>	<b>516</b>	<b>2999</b>

Table 3 Metalworking debris: chemical composition (bulk area analyses) of iron slags

	1	2	3	4	5	6	mean	sd
	dense	dense	charcoal	charcoal	flow	flow		
Na <sub>2</sub> O	0.10	0.08	<0.05	0.10	<0.05	0.08	0.07	0.03
MgO	0.26	0.11	0.14	0.17	0.10	0.18	0.16	0.06
Al <sub>2</sub> O <sub>3</sub>	1.69	1.62	0.97	1.53	1.95	1.96	1.62	0.36
SiO <sub>2</sub>	10.81	18.97	9.27	21.95	21.56	21.76	17.42	5.81
P <sub>2</sub> O <sub>5</sub>	4.27	3.83	2.76	3.92	2.75	4.67	3.70	0.79
SO <sub>3</sub>	0.17	<0.1	<0.1	0.11	<0.1	0.1	<0.1	
K <sub>2</sub> O	0.33	0.38	0.16	0.55	0.38	0.65	0.41	0.17
CaO	0.93	0.72	0.52	1.13	0.73	1.17	0.87	0.25
TiO <sub>2</sub>	0.09	0.18	0.07	<0.05	<0.05	0.06	0.08	0.05
MnO	0.45	0.32	0.34	0.64	0.19	0.30	0.38	0.15
FeO	80.81	73.62	85.55	69.79	72.13	68.99	73.05	4.23



Table 4 Wood charcoal identifications

<b>Feature group</b>		<b>Round house 3003</b>	<b>Round house 3003</b>	<b>Round house 3006</b>	<b>Four-post structure 3213</b>	
<b>Feature</b>		<b>Gully 3164</b>	<b>Gully 3164</b>	<b>Gully 3036</b>	<b>Posthole 3114</b>	<b>Pit 3171</b>
<b>Context no</b>		<b>3165</b>	<b>3168</b>	<b>3037</b>	<b>3115</b>	<b>3172</b>
<b>Sample no</b>		<b>35</b>	<b>39</b>	<b>11</b>	<b>25</b>	<b>38</b>
<b>Period</b>		<b>Iron Age</b>	<b>Iron Age</b>	<b>Iron Age</b>	<b>Iron Age</b>	<b>Iron Age</b>
<b>Volume (litres)</b>		<b>20</b>	<b>17</b>	<b>17</b>	<b>17</b>	<b>8</b>
<b>Rosaceae</b>						
<i>Prunus</i>	Blackthorn/ Cherry	–	–	–	3r	–
<b>Fagaceae</b>						
<i>Quercus</i>	Oak	49shr	57hs	58hsr	33h	50hs
<b>Betulaceae</b>						
<i>Betula</i>	Birch	47r	42	34	–	–
<i>Alnus glutinosa</i> (L.) Gaertn.	Alder	5	2	4	11r	–
<i>Corylus avellana</i> L.	Hazel	–	–	1r	–	–
<i>Alnus/Corylus</i>	Alder/Hazel	–	–	–	18r	–
<b>Salicaceae</b>						
<i>Salix/Populus</i>	Willow/ Poplar	–	–	–	3r	–
cf. <i>Salix/Populus</i>	cf. Willow/ Poplar	–	–	–	1	–
<b>Sapindaceae</b>						
<i>Acer campestre</i> L.	Field Maple	–	–	–	1	–
<b>Oleaceae</b>						
<i>Fraxinus excelsior</i> L.	Ash	–	–	4	–	–
<b>Indeterminate charcoal</b>		<b>8b</b>	<b>7b</b>	<b>20b</b>	<b>5r</b>	<b>–</b>
<b>Fragments analysed</b>		<b>109</b>	<b>108</b>	<b>121</b>	<b>75</b>	<b>50</b>
Counts include: h - heartwood; s - sapwood; r - roundwood; b- bark.						

Table 5 Charred plant remains identifications

<b>Feature group</b>		<b>Four-post structure 3213</b>	<b>Four-post structure 3214</b>
<b>Feature</b>		<b>Posthole 3114</b>	<b>Posthole 3152</b>
<b>Context no</b>		<b>3115</b>	<b>3153</b>
<b>Sample no</b>		<b>25</b>	<b>29</b>
<b>Period</b>		<b>Iron Age</b>	<b>Iron Age</b>
<b>Volume (litres)</b>		<b>17</b>	<b>17</b>
<b>Cereal grain</b>			
<i>Hordeum vulgare</i> L.	barley, hulled	6	25
cf. <i>Hordeum</i> sp.	cf. barley	2	–
<i>Avena</i> sp.	oats	12	7
cf. <i>Avena</i> sp.	cf. oats	2	4
<i>Avena</i> sp./ <i>Bromus</i> sp.	oat/brome grass	3	5
<i>Triticum</i> cf. <i>dicoccum</i>	cf. emmer wheat	68	38
<i>T.</i> cf. <i>spelta</i>	cf. spelt wheat	2	–
<i>T. dicoccum/spelta</i>	emmer/spelt wheat	29	19
<i>Triticum</i> sp.	wheat	5	7
Cerealialia	indeterminate cereal	38	70
Cerealialia/Poaceae	cereal/large grass	–	1
<b>Chaff and straw</b>			
<i>T. dicoccum</i> Schubl.	emmer, spikelet fork	2	–
<i>T. dicoccum</i> Schubl.	emmer, glume base	4	–
<i>T.</i> cf. <i>dicoccum</i>	cf. emmer, glume base	1	1
<i>T. dicoccum/spelta</i>	emmer/spelt, spikelet fork	2	1
<i>T. dicoccum/spelta</i>	emmer/spelt, glume base	4	2
<i>T. dicoccum/spelta</i>	emmer/spelt, rachis internode	1	–
Cerealialia/Poaceae	cereal/grass, culm node	1	–
<b>Large-seeded legumes</b>			
<i>Vicia faba</i> L.	celtic bean	1	–
cf. <i>Vicia</i> sp./ <i>Pisum</i> sp./ <i>Lathyrus</i> sp.	cf. vetch/pea/wild pea	–	1F

<b>Wild species</b>			
<i>Vicia</i> sp./ <i>Lathyrus</i> sp.	vetch/wild pea	1	1
Fabaceae	pea family	1F	1F
<i>Polygonum aviculare</i> L.	knotgrass	1	1
<i>Fallopia convolvulus</i> (L.) A. Love	black bindweed	2	–
<i>Chenopodium album</i> L.	fat hen	–	1
<i>Bromus</i> sp.	brome grass	1	4
Poaceae	grass family	–	1
Poaceae	culm node	3	–
Indeterminate	seed/fruit	1	2
Indeterminate	root/tuber	2+Fs	–
F = fragment(s)			