

# **London's Waterfront 1666–1800**

## **Post-excavation finds assessments**

**31 March 2010**

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**CBM not yet finished**

**some non-ceramic artefacts from BIG82 to finish**

**BIG82=Billingsgate**

**SWA81=Swan Lane**

**SH74=Seal House**

**Please consult John Schofield, [john@jschd.co.uk](mailto:john@jschd.co.uk), before using information in these reports.**

# 1. Post-Roman pottery from BIG82

## Billingsgate Lorry Park

Post-Roman pottery assessment

Site code: BIG82

Author: Jacqui Pearce

Date: 24/03/20

## 1 Quantification and assessment

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

Category	Description	Weight
Medieval	199 sherds, 156 ENV, 1.97 EVE	2623 g
Post-medieval pottery	3038 sherds, 1987 ENV, 36.53 EVE	38379 g

*Table 1 Finds and environmental archive general summary*

### 1.2 The pottery

The pottery from BIG82 Period 17 was recorded in accordance with standard MOLA practice, using standard codes for fabric, form and decoration, with the data entered onto the Oracle database. Quantification was carried out by sherd count (SC), estimated number of vessels (ENV), estimated vessel equivalents (EVE) and weight in grams.

#### *Medieval pottery*

Medieval pottery was recorded in 45 contexts, all but one of them small, with fewer than 12 sherds, and mostly residual. The one exception is context [389], with 67 sherds (49 ENV, 0.68 EVE, 853 g). The pottery ranges in date from c 1080 through to c 1500, and the small size of most contexts makes close dating difficult. The main period of deposition, however, appears to lie between the mid 13th and mid 14th century, based on a range of fabrics and forms in widespread use across the City of London at this time.

Because of the high level of residuality, the medieval pottery is not considered in any detail here. The medium-sized context [389], however, is dated to c 1240–1350 and includes mainly small sherds from a variety of jugs in London-type ware (LOND), along with sherds of Kingston-type ware (KING), south Herts-type greyware (SHER) and shelly-sandy ware

(SSW) and a few sherds from wares imported from France, Germany and the Low Countries.

Overall, the medieval pottery is dominated by London-type wares (51.8% of all medieval sherds, 53.2% ENV, 50.8% EVE, 43.2% weight). This is a good indication of the main period of use of the medieval sherds recovered in Period 17 contexts. It fits well with the other more common fabrics (such as KING, SSW and SHER). The absence of any 15th-century introductions suggests that the medieval sherds were originally deposited before c 1400.

### *Post-medieval pottery*

The pottery from Period 17 contexts is generally very fragmentary, with seemingly larger contexts made up principally of very small sherds with a low overall weight. This is not universally the case, and there are some good key groups with more than 30 sherds, and these tend to be more closely datable. Small groups of small sherds with few diagnostic fabrics or forms identified can only be given a broad date range reflecting the average lifespan of the major fabrics present. Closer dating will be possible at analysis, when the pottery can be viewed alongside other finds according to landuse.

There are 55 contexts that have been broadly dated to c 1550–1700+, with a further six given a TPQ of c 1480 and TAQ ranging from c 1550 to 1900 (315 sherds altogether, 165 ENV, 4.02 EVE, 3513 g). Only one, [926], is of medium size (with between 30 and 99 sherds). The main fabrics present in contexts given this dating are Surrey-Hampshire border ware, both white and red wares (BORDG, BORDY, RBOR), and Frechen stoneware (FREC), imported from the Rhineland. The range of forms is quite limited, consisting mostly of sherds from bowls and dishes, tripod pipkins and chamber pots in border ware, with 30 sherds from a single chamber pot in context [926]. Other imported wares include Raeren and Langerwehe stonewares (RAER, LANG), also from the Rhineland, as well as Iberian red micaceous ware (SPAM) and Dutch red earthenware (DUTR).

A total of 64 contexts have been given a TPQ between c 1570 and c 1600 (528 sherds, 355 ENV, 9.39 EVE, 7502 g). Most have a TAQ of c 1700 or earlier, and most are small groups (with fewer than 29 sherds in any one). A broad date range is again suggested by the absence of distinctive diagnostic features and the presence of long-lived fabrics and forms. Dating is derived chiefly from sherds of London-area post-medieval redware (PMR), as well as post-medieval fine redwares (PMFR) and post-medieval black-glazed wares (PMBL), both of which were made at kilns in the Harlow area of Essex. There are also sherds of Westerwald stoneware (WEST), first found in London c 1590. Two contexts are of medium size ([389] and [913]), although in both cases the sherds are small and undistinguished. Contexts of this period are dominated by Surrey-Hampshire border wares, with bowls and dishes the most common forms by a long way. Other forms include tripod pipkins, chamber pots and porringers, but the number of dishes in particular is unusual, and when all dishes in the main fabrics (BORDG/Y, RBOR, PMR) are viewed together, across all Period 17 contexts, they account for 33.6% of sherds, 27.4% ENV, 34.4% EVE, 23.3% weight, while bowls of various shapes account for 32% by sherd count, 36.6% ENV, 13.4% EVE, 14/4% weight. These figures would bear comparison with other contemporaneous assemblages from London, especially along the waterfront. The emphasis on food preparation/serving vessels, and especially flared dishes, may well have implications for the function of properties on the site (such as victualling establishments).

Other forms present in contexts of this date include sugarloaf moulds and collecting jars used in sugar refining, made in PMR, probably indicating the presence of refineries nearby. Few other fabrics were recorded in these broadly 17th-century contexts. Apart from a small number of sherds of PMFR and PMBL, there is a slightly wider range of imported wares, including FREC, RAER, LANG and WEST, Portuguese faience (POTG) and Chinese blue and white porcelain (CHPO BW) of the late Ming period. Sherds from two vessels in tin-glazed earthenware with early decoration (TGW A) were recorded in [325] (x2 jars) and [366]

(a dish, possibly dating to the first quarter of the 17th century). All contexts given this broad 17th-century dating could have been deposited at any time within this period.

There are 49 contexts with a TPQ between c 1630 and c 1650, and dating up to the end of the 17th century (1763 sherds, 1256 ENV, 14.1 EVE, 19931 g). This appears to be the main period of deposition in Period 17, although the dates assigned on the basis of the pottery do not preclude most of the contexts having been deposited after the Great Fire – they simply do not include any fabrics or forms introduced after c 1660 alongside long-lived types that were in use throughout the period. There are five large contexts (each with over 100 sherds) – [549], [602], [864], [535] and [441] – as well as five of medium size. All of these are more viable statistically and lend themselves to closer dating. The main fabrics are again Surrey-Hampshire border wares and London-area post-medieval redware, with bowls and dishes, cauldrons and pipkins the most common forms. The best dating evidence comes from more decorative wares, particularly tin-glazed ware with mid to late 17th-century styles of decoration (TGW D), plain white tin-glazed ware (TGW C) and Metropolitan slipware (METS), all of which were first used in London in the 1630s. The main forms in TGW are dishes and pharmaceutical jars, although the decoration is frequently obscured by post-deposition blackening of the glaze typical of waterfront finds. Imports consist mainly of Rhenish stonewares (FREC, WEST), as well as sherds from Spanish olive jars (OLIV), ‘Pen’ ware (PEN, from Iberia) and Ligurian maiolica (LIGU).

Thirteen contexts have been given a TPQ between c 1670 and c 1689, and were most likely deposited during the last quarter of the 17th century (167 sherds, 125 ENV, 1.25 EVE, 2992 g). Only one is of medium size ([721]). Surrey-Hampshire border wares and PMR once again are dominant, in a similar range of forms to those found in earlier contexts. The key diagnostic fabrics are Staffordshire-type slipware (STSL), London stoneware (LONS) and tin-glazed wares decorated in styles typical of the later 17th/18th century (TGW F, TGW H). Sherds from a cylindrical mug in Westerwald stoneware were found in contexts [429], [527] and [858] bearing part of an applied double portrait of William and Mary with a partial inscription: MARIA ...RIT. FRANCO ...G.MAG.... This gives a date of 1689–1702 for the contexts in question. Other finds include sherds of CHPO BW, POTG, SPAM, Beauvais sgraffito ware (BEAU) and Chinese Batavian porcelain (CHPO BATV).

There are 18 contexts that have been given an 18th-century date, mostly having a TPQ of c 1700, with one dating to c 1750–1900 ([377]). Five are of medium size, with context [310] a notable key group (72 sherds, 17 ENV, 4.53 EVE, 2524 g). It includes a high proportion of tin-glazed ware, and is also noteworthy for including several complete globular flasks in glass. The tin-glazed ware is decorated in a variety of styles current during the later 17th to early 18th century (TGW D, TGW C, TGW H), in the form of porringers, bowls, plates, chamber pots, ointment pots, a teabowl and a cup. There are also sherds from vessels in CHPO BATV and CHPO BW, in FREC and WEST, as well as in RBOR. These include many large and joining sherds in better condition than in most contexts in Period 17.

The dating for 18th century contexts comes mostly from TGW and CHPO, with Surrey-Hampshire border ware and PMR still common, which may have implications for the overall dating of some contexts since border whitewares were going out of production around the end of the 17th century. The absence of white salt-glazed stoneware (SWSG) and creamware (CREA) suggests that most contexts were deposited before c 1720/40.

Two contexts only are dated to the 19th century ([255] and [263]) by the presence of sherds of English brown salt-glazed stoneware (ENGS) and bone china (BONE), with sherds of English stoneware with Bristol glaze in [263] suggesting a date of c 1830–1900. The remaining pottery in the larger [263], however, is all typical of the 17th century, so the dating of these two contexts remains uncertain at this stage.

## 2 Potential of the data

### 2.1 General discussion of potential

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The pottery from BIG82 Period 17 has good potential for further work, based on the finds recorded and assessed here, and can make a strong contribution to the following research questions:

- *What can the artefactual evidence (both pottery and non-ceramic artefacts) tell us about consumers in post-Fire London; what they owned and treasured, what they accumulated, and why things were thrown away?*
- *How can the artefactual material from these sites, when compared with the documentary evidence for property ownership and occupation, elucidate the question of London's position in the development of a consumer culture at this period?*
- *How can archaeological study differentiate between buildings used for domestic and trade purposes? What were these buildings used for?*

The large number of small contexts and the generally small size of many of the sherds impose some limitations, although when viewed together as a whole, the finds will provide a much better picture of developments on the site in the period in question. There are some good, larger key groups (eg context [310]) and some noteworthy trends in the breakdown of fabrics and forms that could well throw valuable light on the function and usage of properties in the vicinity of the site (for example, the unusually large number of dishes in Surrey-Hampshire border ware and London-area post-medieval redware). It will therefore be important to try to use these patterns to help interpret the various landuse features excavated, especially in conjunction with documentary and other evidence.

## 3 Significance of the data

The pottery from BIG82 is certainly significant in relation to the history and development of the site, as well as to the wider London area. The excavations uncovered an important sequence from the medieval period onwards and the analysis of post-Fire deposits in Period 17 will provide a much-needed concluding chapter to the history of the site already in print. The pottery will best be viewed in conjunction with other finds from the same contexts, clarifying and refining the chronology, and throwing light on the occupation and use of excavated properties. It will be important to enhance the evidence gained from BIG82 by comparing it with contemporaneous features on other excavated waterfront sites.

## 4 Publication project: aims and objectives

## 4.1 Revised research aims

For the pottery, the following research aims are proposed:

1. How does the pottery elucidate the nature of occupation and activity on and close to the site, especially between the mid 17th and early 18th centuries?
2. How does pottery relate to other finds from the same periods in throwing light on the development and use of the site?
3. Is it possible to relate key groups of pottery to individual properties and/or occupants?
4. How does the ceramic assemblage relate to finds from other contemporaneous sites within the Greater London?

## 4.2 Pottery method statement

4.2.1 For publication of the pottery, the following tasks are proposed:

1. Harmonising pottery dating with the final phasing of the site sequence.  
Estimated specialist time: 0.5 pd
2. Analysis and research into the full ceramic assemblage, also looking at the pottery in relation to other finds from the site and from contemporaneous sites within Greater London. Estimated specialist time: 8 days
3. Writing text. Estimated specialist time: 5 days.
4. Preparation of joint texts with Lyn Blackmore for all waterfront sites included in the project (introduction and discussion): 3 days

Illustration of 12 items (

5. Table 2).
6. Editing of specialist text: 1 day.

**Table 2 Pottery selected for illustration and conservation work**

Ctxt	ED	LD	Fabric	Form	Dec	SC	ENV	EVES	Wt	Dr	Ph	Comments
310	1700	1710	FREC	JUG RND BOWL	-	1	1	1	731	Y	Y	COMPLETE EXCEPT HANDLE
310	1700	1710	TGW H	RND	FLOR	8	1	0.32	120	Y	Y	PROFILE RIM - FLOWERS AND BUTTERFLY
310	1700	1710	TGW H	CUP	FLOR	1	1	0.35	15	Y	Y	PROFILE CHINESE RIVER SCENE
310	1700	1710	TGW H WEST	TBOWL	CHIN	2	1	0.26	33	Y	Y	RIM/HANDLE CHINESE TYPE SCENE/ POSS DUTCH/ITALIAN?
310	1700	1710	PURP	DJ	-	3	1	0.5	109	Y	Y	PROFILE, ONE FOOT
721	1680	1690	POTG	BOT	-	5	1	0	50	Y	Y	
961	1550	1700	BORDY	TPIP	-	14	1	0.54	201	Y	Y	

263	1830	1846	BORDY	TPIP2	-	17	1	0.83	460	Y	SAWN OFF
310	1700	1710	TGW C	PORR C	-	13	1	0.83	253	Y	PROFILE
570	1700	1800	RBORB	LID	-	4	1	0.14	97	Y	CPTC BASE/PROFILE
310	1700	1710	CHPO BW	TBOWL	FLOR	1	1	0.17	2	Y	PROFILE WITH LOOP
1081	1550	1700	FREC	JUG BART	FAMD	4	1	1	433	Y	HANDLE ON TOP
											FINELY PAINTED -
											KANGXI RIM
											SINGLE HOLE IN
											CENTRE OF BASE

Note by JS: this does not include the Westerwald mug found in three contexts, [429], [527] and [858]. This should be illustrated by a single photograph.

## 2. Post-medieval glass from BIG82

### Billingsgate Lorry Park

Post-excavation assessment of the post-medieval glass

Site code: BIG82

Author: Jacqui Pearce

Date: 23/03/20

## 5 Quantification and assessment

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

Category	Description	Weight
Post-medieval glass	1564 fragments, 864 ENV	14002 g

*Table 3 Finds and environmental archive general summary*

### 5.2 The glass

The post-medieval glass from BIG82 was recorded in accordance with current MOLA procedure, using established codes for colour, technology, vessel, rim and base form. The data were entered onto the Oracle database, along with quantification by fragment count (FC), estimated number of vessels/items (ENV) and weight in grams.

Much of the glass from Period 17 contexts is in a very fragmentary state, so the overall fragment count is not entirely representative. In all, 53 contexts have been dated broadly to c 1500–1800 because of the absence of any diagnostic features to allow closer dating (totalling 208 fragments, 201 ENV, 369 g). The contexts could have been deposited at any time within this period, although it may be possible to refine the dating at analysis by comparison with other finds present. The fragments consist mainly of window glass, almost all in natural green metal and many badly laminated, with a small number seemingly heat-altered and warped (by the Great Fire?). It is mostly impossible to determine whether the windows were made from crown spun or cylinder glass. Six small fragments from green glass wine bottles are unidentifiable as to form, and there are also fragments from 10 phials in natural green or colourless glass and 12 fragments from what were most likely drinking vessels of one kind or another, although their form is impossible to recognise. Fifteen contexts have been dated to c 1600–1700/1800, again mostly yielding only small fragments of window glass (crown spun) and pharmaceutical phials.

Closer dating is proposed for 76 contexts (825 fragments, 421 ENV, 7736 g), with a TPQ between c 1630 and c 1650, and TAQ ranging from c 1690 to c 1800. Most probably fall into the mid to late 17th century, and will need to be correlated with other finds to arrive at the most likely date of deposition. A dating after c 1640 is based largely on the presence of fragments from shaft and globe bottles in green glass (at least 41 examples), or shaft and globe/onion bottles (c 88 examples). There are also three near-complete globular flasks, small versions of the shaft and globe bottle in natural green glass (from contexts [278] and [301]). Further examples of this same form were recorded in contexts given a later date (see below). Fragments of at least 28 pharmaceutical phials were identified in contexts of this period, mostly of cylindrical form, but also with a few examples of globular phials. There are 155 fragments of window glass, both crown spun and cylinder, and 10 vessels small fragments from that cannot be identified. A more unusual find is part of pestle, in the form of a rod with enlarged rounded end (<561>). There is also part of a mirror (<1465>), badly degraded. Three goblets were recorded, one with rigaree trailing around the foot (<3971>), one with moulded ribs and a folded foot (<3899>) and one with thick-cut applied trails (<1621>). A few fragments of glassworking waste were recorded in contexts [494], [721] and [270], although not in sufficient quantities to suggest manufacturing nearby.

Seventeen contexts have been given a TPQ of c 1670/80, with a TAQ up to c 1740 (262 fragments, 99 ENV, 3052 g). The largest context is [310], which is a key group dating to c 1680–1740 (151 fragments, 29 ENV, 1819 g). It includes fragments from one shaft and globe/onion bottle in green glass and three onion bottles, a few fragments of window glass and three cylindrical phials, one of them complete, with a cork. The most notable feature of this group, however, is the presence of 14 globular flasks, seven of them almost complete. In form these resemble shaft and globe bottles, but are much smaller and made in natural green glass (see Willmott 2002, fig 114b; Noël Hume 1991, fig 17, which is dated to c 1710). It is possible, therefore, that the dating of the context could be revised to c 1710, although further research is needed to clarify the date range for this particular form. A variety of uses has been suggested, including condiments, but it seems more likely that they were used for pharmaceutical purposes, especially when discovered in quantity, as here. Examples of the same form were also found in other contexts on the site (see above), bringing the total recorded to 17, with the number of complete vessels especially noteworthy. This may well suggest the presence of a pharmacy nearby, with the discarding of so many glass containers that were still usable an intriguing feature.

Dating of contexts deposited at the turn of the 17th/18th century is based mostly on the presence of fragments from onion bottles, with at least 44 represented, alongside at least 50 shaft and globe bottles and 152 shaft and globe/onion bottles. The main period of use appears to be from the mid 17th to mid 18th century. Together with the usual scatter of window glass, phials and tiny fragments of unidentified vessels, there are fragments from three goblets, two of which most likely come from George Ravenscroft's glasshouse. The stem from a goblet with applied seal (design unclear) (<1004>) shows signs of the crizzling that dogged early production of lead crystal (between 1674 and 1676). An inverted baluster stem, without seal (which Ravenscroft stopped using c 1677), has no crizzling (<1011>). There is also part of a folded goblet foot (<4005>). An inverted cinquefoil baluster stem from a wine glass with the base of the bowl let into the top (<602>) can be dated to c 1670–80 (eg Thorpe 1969, pl xxxvi, no 5).

Eight contexts have been given a date in the 18th/early 19th century, that is, after c 1700 and up to c 1840 (220 fragments, 105 ENV, 2645 g). The latest contexts, [44] and [263], are dated by the presence of cylindrical wine bottles in green glass to c 1770–1840. These were found with fragments of earlier bottle forms, square bottles (for gin), phials and window glass. There are also fragments from seven wine glasses in contexts dated to the 18th century, mostly rims so impossible to identify as to form. There is one six-sided pedestal stem that may have come from a sweetmeat glass in [292] (<523>), dating to c 1720 (see

Bickerton 1971, no 197). The inverted baluster stem of a funnel wine glass from [570] (<915>) has part of the folded foot remaining.

## 6 Potential of the data

### 6.1 General discussion of potential

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The glass from BIG82 Period 17 has reasonable potential for further work, especially when viewed alongside other finds. When the glass assemblage is considered together in the context of the total finds assemblage it should make a valuable contribution towards building up a picture of the site's development in the 17th and 18th centuries in particular. The potential for functional analysis should help improve our understanding of occupation on the site in the post-Fire period. This is in spite of the generally fragmentary state of the glass recovered, with key groups such as context [310] offering good opportunities for further research into the function of nearby properties.

## 7 Significance of the data

The glass assemblage from BIG82 is significant in relation to the history and development of the site, and this can be extended to the role of the site in the immediate vicinity. The large collection of green glass wine bottles, as well as pharmaceutical phials and flasks, as well as table glass, provide valuable information on use of the site and its place in the local community during the 17th and 18th centuries. Comparison with large-scale assemblages from other contemporaneous sites in the London area and beyond will extend the significance of the find to a regional and national level.

Publication project: aims and objectives

### 7.1 Revised research aims

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The following research aims are proposed for the glass from BIG82:

1. How does the glass assemblage contribute to our understanding of the history and development of the site when viewed in conjunction with other finds?
2. Is there any evidence for the presence of a pharmacy or similar establishment on or close to the site, especially in view of the large number of near-complete globular flasks?
3. When viewed in their totality, how do the glass and other finds from the larger contexts compare with finds from other contemporaneous excavated assemblages from the London area and beyond?

## 7.2 Post-medieval glass method statement

In order to bring the glass to publication, the following tasks are proposed:

1. Research and analysis into the following: refining the dating; examining the relationship between the glass and other finds from large contexts in relation to use of the site; comparison of the glass assemblage with finds from other contemporaneous assemblages in London and elsewhere. Estimated specialist time: 3 pd.
2. Writing text. Estimated specialist time: 3 pd.
3. Illustration. A total of 13 items have been selected for illustration (see Table 2).

Table 2: glass selected for illustration

Ctxt	TPQ	TAQ	Acc	Col	Form	Dec	Rim	Base	FC	ENV	Wt	Illus	Comments
292	1720	1740	593	COL	WINE FLAS	-	-	-	1	1	37	Y	6-SIDED PEDESTAL STEM
301	1650	1700	1182	NG	GLOB	-	SS	LD	1	1	197	Y	SM SHGB FORM SHORT STEM WITH
309	1680	1740	1004	COL	GOB FLAS	SEAL	-	-	1	1	23	Y	APPLIED 'SEAL' WHOLE SMALL SHGB
310	1680	1740	4744	NG	GLOB	-	SS	LD	1	1	155	Y	FORM 5 CPTÉ SM FLASKS SHGB
310	1680	1740	0	NG	FLAS GLOB	-	SS	LD	5	5	849	Y	FORM/ PHOTO AS GROUP
310	1680	1740	0	NG	PHIAL-CYL	-	FT	HPK	1	1	83	Y	COMPLETE WITH CORK INVERTED CINQUEFOIL
337	1670	1700	602	COL	WINE	-	-	INVB	1	1	26	Y	BALUSTER BASE SHAPED ROD, ENLARGED
363	1640	1740	561	NG	PEST WINE	-	-	-	1	1	20	Y	ROUNDED END CPTÉ SHORT STEM,
570	1720	1740	915	COL	FUN	-	-	INVBQ	1	1	32	Y	FOLDED FOOT

## 8 Bibliography

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Thorpe, W A 1969, *A history of English and Irish glass*, London

Willmott, H. 2002, *Early post-medieval vessel glass in England c. 1500–1670*, CBA Res. Rep. 132

### 3. Clay tobacco pipes from BIG82

#### Billingsgate Lorry Park

Post-excavation assessment of the clay tobacco pipes

Site code: BIG82

Author: Jacqui Pearce

Date: 19/03/20

## 9 Quantification and assessment

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

Category	Description	Weight
Clay tobacco pipes	513 bowls, 2280 stem fragments, 61 mouthpieces	N/A

*Table 4 Finds and environmental archive general summary*

### 9.2 The clay tobacco pipes

The clay tobacco pipes from post-Fire contexts at BIG82 were recorded in accordance with current MOLA practice and entered onto the Oracle database. The pipe bowls have been classified and dated according to the Chronology of London Bowl Types (Atkinson and Oswald 1969), indicated by the prefix AO.

*Table 5 Clay tobacco pipe quantification*

Total no. of fragments	2854
No. of bowl fragments	513
No. of stem fragments	2280
No. of mouthpieces	61
Accessioned pipes	35
Marked pipes	25
Decorated pipes	9
Imported pipes	1
Complete pipes	
Wasters	
Kiln material fragments	
Boxes (bulk\accessioned)	boxes bulk, boxes accessioned items

The full collection of clay pipes from BIG82 was recorded and reported by David Higgins (1989). Only pipes recovered from post-Fire contexts are covered in this assessment. All pipes recorded appear to be of London manufacture. They are, for the most part, in a very fragmentary state, with 62 partial bowls difficult to identify with certainty. Several fragments are also encrusted with a crumbly off-white deposit that superficially resembles clay pipe manufacturing waste (muffle), although the deposit as a whole appears to include no direct evidence for production nearby.

The clay pipes were recovered from 228 contexts in post-Fire deposits (Period 17), the largest of which ([263]) includes 46 bowls, 153 stem fragments and one mouthpiece. There are 287 stem fragments in 94 contexts that include no datable pipe bowls, and can only be broadly dated to c 1580–1910.

The great majority of the contexts that yielded clay tobacco pipe fragments can be dated to the later 17th to early 18th century, from the time of the Restoration to Queen Anne (including 79.7% of all pipe bowls). A total of 71 contexts are dated to c 1660–80. Overall, 215 pipe bowls, 671 stems and 10 mouthpieces were recorded in contexts given this date. All contexts are relatively small, none yielding more than 13 bowls ([601]). The main forms present are types AO15 and AO18, the most common types recorded in Period 17 (30% and 23% of all pipe bowls in post-Fire contexts). There are also a smaller number of bowls of type AO13, made at the same period (3.9%), as well as single examples (both in [389]) of the earlier types AO10 and AO12 (c 1640–60). Only two pipes are marked. One, identified by David Higgins as Dutch, has the pipe maker's initials AI stamped incuse on the heel (<1265>). The second has the distinctive SV mark stamped incuse on the top of the stem behind the bowl, possibly standing for 'Smoke Virginia' (not accessioned). There are also three stem fragments with simple rouletted decoration (<1268>, <935> and not accessioned). Most pipes have milling to some extent around the top of the bowl, although the extent is not always clear, given the fragmentary nature of the collection.

Forty-one contexts have been dated between c 1680 and c 1710 (including those with a TPQ of c 1700), yielding 194 pipe bowls, 837 stems and 26 mouthpieces. The largest context ([263]) has 46 pipe bowls. Dating is derived from the presence of pipes of types AO19, AO20, AO21 and AO22 (all c 1680–1710), together with examples of AO25 (c 1700–70) and OS10 (c 1700–40). There are also some examples of earlier forms present (AO15 and AO18). Taken together, pipe bowls made c 1680–1710 account for 13.6% of all bowls from Period 17, with the 18th-century type AO25 accounting for 7% of bowls. Four marked pipes were recorded in contexts of this date. Three of these have their maker's initials moulded in relief on the sides of the heel, with only one example clearly legible (<790>, marked MW). The most notable example is a type AO18 pipe from context [263] (<571>), which has the initials FA handwritten in red ink under the heel and in part on the stem. The mark on the stem is not clear, formed from slightly disconnected strokes, possibly representing an E. It is most likely an attempt by the smoker to personalise his pipe. Other examples are known from London, and are summarised by Higgins (1989). Four rouletted stem fragments were also recorded in contexts of this period (<574>, <575>, <1267> and not accessioned).

Nineteen pipe bowls, 482 stem fragments and 16 mouthpieces were recorded in 19 contexts dated to the 18th century, none of them including more than 18 bowls. The main forms are common 18th-century types, with AO25 and OS10 dating 12 contexts between c 1700 and c 1740/70. These include some earlier types as well, while seven contexts are dated after c 1730 by the presence of types OS11 (c 1730–60) and OS12 (c 1730–80). The absence of distinctive type AO26 pipes (c 1740–1800) favours deposition for the majority during the early to mid 18th century. Twenty pipes have been marked by their makers, all with moulded initials or symbols in relief on the sides of the heel (see Table 3). There is one rouletted stem fragment (<599>) but no other decorated pipes.

A single 19th-century context was recorded ([192]), dated to c 1820–40 by a single type AO28 pipe. It was found with a type AO27 pipe bowl with the maker's initials HH moulded in relief on the sides of the heel (<946>).

*Table 3 Marked and decorated clay pipes (B = bowl; S = stem; M/S = moulded/stamped; I/R = incuse/relief; Pos = position, SH = sides of heel, H = heel*

Ctxt	Acc	TPQ	TAQ	B	S	Form	ED	LD	Dec	Mark	M/S	I/R	Pos
284	922	1700	1710	1		AO21	1680	1710		?BC	M	R	SH
310	941	1730	1760	1		OS10	1700	1740		?IH CROWNED	M	R	SH
421	934	1700	1740	1		AO25	1700	1770		?S?	M	R	SH
570	1043	1730	1740	1		OS11	1730	1760		AA	M	R	SH
570	1253	1730	1740	1		OS11	1730	1760		AA	M	R	SH
570	1254	1730	1740	1		OS11	1730	1760		AA	M	R	SH
840	1265	1660	1680	1		AO13	1660	1680		AI	S	I	H
										CROWNED			
421	781	1700	1740	1		OS10	1700	1740		HARPS	M	R	SH
338	947	1730	1760	1		OS11	1730	1760		DOT (LEFT)	M	R	SH
263	571	1680	1710	1		AO18	1660	1680		FA	HW		H
346	788	1700	1710	1		AO22	1680	1710		-H	M	R	SH
										HARPS			
308	948	1730	1760	1		OS11	1730	1760		CROWNED	M	R	SH
282	786	1730	1760	1		AO25	1700	1770		HC	M	R	SH
192	946	1820	1840	1		AO27	1780	1820	LB	HH	M	R	SH
310	945	1730	1760	1		OS12	1730	1780		IB	M	R	SH
476	774	1730	1760	1		OS11	1730	1760		ID	M	R	SH
294	1041	1700	1730	1		OS11	1730	1760		IL	M	R	SH
292	1771	1730	1760	1		AO25	1700	1770		IL	M	R	SH
504	790	1690	1710	1		UNK	1580	1910		MW	M	R	SH
310	944	1730	1760	1	1	OS10	1700	1740		RM	M	R	SH
282	572	1730	1760	1		OS11	1730	1760		TB	M	R	SH
292	1774	1730	1760	1		AO25	1700	1770		WL	M	R	SH
570	1252	1730	1740	1		OS11	1730	1760		WM	M	R	SH
310	943	1730	1760	1		OS12	1730	1780		WM CROWNED	M	R	SH
252	769	1700	1770	1		AO25	1700	1770		WM?	M	R	SH
615	524	1580	1910		1	UNK	1580	1910	ROUL				
263	574	1680	1710		1	UNK	1580	1910	ROUL				
263	575	1680	1710	1		AO18A	1660	1690	ROUL				
363	599	1700	1770		3	UNK	1580	1910	ROUL				
640	921	1580	1700		1	UNK	1580	1910	ROUL				
494	935	1660	1680		1	UNK	1580	1910	ROUL				
721	1267	1700	1710		1	UNK	1580	1910	ROUL				
840	1268	1660	1680		1	UNK	1580	1910	ROUL				

## 10 Potential of the data

### 10.1 General discussion of potential

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The post-Fire clay pipes from BIG82 have very good potential for further work as part of the wider waterfront project. The assemblage is a large one, and important in refining the dating of the Period 17 sequence, especially when viewed in conjunction with other, less closely datable finds. The marked pipes provide good opportunities for comparison with other similarly marked examples from contemporaneous excavated assemblages in London, and the possible identification of those makers' workshops whose products are represented in the assemblage.

## 11 Significance of the data

The clay pipes from BIG82 are significant in relation to the site within its general neighbourhood, and as part of the wider examination of the post-Fire waterfront sites, bearing close comparison with excavated assemblages from nearby sites. The potential for identification of individual pipe makers who have marked their products gives the assemblage a broader regional importance through linking them in with comparable examples in the MOLA database.

## 12 Publication project: aims and objectives

### 12.1 Revised research aims

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The following research aims are proposed for the clay pipes:

1. Identify as far as possible the makers of the marked clay pipes, and locate parallels within the MOLA database of marked pipes.
2. How does the clay pipe evidence from BIG82 compare with finds from other excavated waterfront sites of the same date?

### 12.2 Clay pipe method statement

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The clay tobacco pipes should be published as part of the post-Fire waterfront project, with the following tasks proposed:

1. *Analysis and research – comparing the BIG82 clay pipes with contemporaneous examples from other neighbouring waterfront deposits, and identifying makers as far as possible.*
2. *Writing publication report.*

3. *Illustration of 4 pipes has been highlighted during the present recording exercise (Table 4). This should be supplemented by existing photographs of 8 examples taken by the Museum of London.*

Total estimated specialist time: 4 days.

*Table 4 Clay pipes selected for illustration (items listed as P under 'Dr' have already been photographed; those listed as Y remain to be illustrated)*

Ctxt	Acc	TPQ	TAQ	Size	B	Form	ED	LD	Dec	Mark	M/S	I/R	Pos	Dr
										HARPS				
308	948	1730	1760	S	1	OS11	1730	1760		CROWNED	M	R	SH	P
338	947	1730	1760	S	1	OS11	1730	1760		DOT (LEFT)	M	R	SH	P
570	1043	1730	1740	S	1	OS11	1730	1760		AA	M	R	SH	P
570	1253	1730	1740	S	1	OS11	1730	1760		AA	M	R	SH	P
399	0	1660	1680	S	1	AO18	1660	1680						P
540	0	1680	1710	S	1	AO22	1680	1710						P
698	0	1680	1710	S	1	AO17	1580	1910						P
866	0	1660	1680	S	2	AO15	1660	1680						P
263	571	1680	1710	M	1	AO18	1660	1680		FA	HW		H	Y
310	944	1730	1760	S	1	OS10	1700	1740		RM	M	R	SH	Y
840	1265	1660	1680	S	1	AO13	1660	1680		AI	S	I	H	Y
310	945	1730	1760	S	1	OS12	1730	1780		IB	M	R	SH	Y

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CLAY TOBACCO PIPES FROM EXCAVATIONS AT BILLINGSGATE LORRY PARK, LONDON

D A Higgins

Excavations at Billingsgate Lorry Park in Lower Thames Street were carried out by the Department of Urban Archaeology at the Museum of London during 1982 (BIG 82). The pipes were examined by the author in April / May 1989. At this date a number of the bulk contexts on the computerised catalogue of finds were missing. These were contexts 187, 192, 194, 197, 234, 252, 255, 263, 268, 269, 326, 349, 613, 764, 816, 925 and 1018. In addition there were pipes from context 49, which was not on the original catalogue. The 273 contexts examined contained a total of 3,179 fragments of pipe (646 bowl, 2,454 stem and 79 mouthpiece fragments).

The majority of the fragments recovered date from c1660-1740 and particularly from the period c1660-1700. There are smaller numbers from the first half of the C17 and second half of the C18 but virtually no examples of C19 pipes. The pipes are predominantly of London origin and there are very few marked or decorated examples.

Marked Pipes. There are five seventeenth century stamped marks amongst the excavated material. In addition there are five pipes with stamped decoration (see below). Where it is possible to attribute die numbers from the national catalogue of pipe stamps being compiled by the author at the University of Liverpool these are given, prefixed by 'Cat No'.

Two of the stamped marks are symbol marks. There is a six armed 'wheel' mark of c1610-40 (1389 <2082>, Cat No 1210) and a 'star' pattern with dots of c1620-60 (1622, Cat No 1125). There is an as yet unidentified London mark of c1640-60 reading -T from 770 <1915> and one of the common SV marks from 864 (Cat No 1213 or 1214, c1660-80). Finally there is a Dutch mark reading AI from 840 <1265> (Cat No 1212, c1660-80).

There is one most unusual pipe which has had a hand written inscription in red ink applied after it has been fired (263 <571>, c11660-80). On the left hand side of the stem, just back from the bowl, are five short strokes, possibly intended to form the letter E. On the base of the heel are the initials FA. These are more carefully formed, serifs having been added to the letters. The bowl is damaged, but would have been a London type 18. There is also a stem fragment of c1660-1710 in context 583 which appears to have traces of red ink on it.

There are several other examples from London of pipes with red ink inscriptions applied to them. There are two bowls in the Elkins Collection which appear to have been inscribed by the same person. On the sides of each bowl is a distinctive symbol with two lines below and between which is a date. One of the pipes is dated 1704 and the other 1719 (Le Cheminant, 1981, p167, figs 35 & 36). The 1719 pipe has the inscription upside down on the bowl. There is also a pipe in the Tatman Collection with the initials RG or RS on the left hand side of the stem. The bowl of this pipe is a London spur type dating to c1680-1710 (Tatman 1985, 366, fig 21). All three of these inscribed pipes were collected from the Thames foreshore in London. Some similar examples have also been excavated by the Department of Greater London Archaeology at the Tower of London (THW 85 6). These occur on similar bowl forms of c1660-80 to the Billingsgate example and again are marked in red ink. These examples, however, are marked on the bowl facing the smoker with the single letter B (upside down). The letters are reasonably well formed in a more flowing script than the Billingsgate example.

These marks have clearly been added after the pipes have been fired. It seems most unlikely that a pipemaker would employ this method of marking when marks could be quickly and neatly impressed in the traditional manner. Also, the Billingsgate example has the 'E' mark on the stem which seems more like doodling than any serious attempt to mark the pipe. It seems probable that these initials were inscribed by the owners of the pipes. The fact that a number of pipes at the Tower of London were identically marked with a B and that they were all heel pipes, rather than the spur pipes which occurred with them, suggests that someone marked this batch of pipes all at once. It is interesting that all the known examples are in red ink. It is not known whether this reflects a particular tradition in marking pipes or simply the differential survival of red ink in the ground.

The majority of marked pipes from the excavations had moulded initials placed one on either side of the spur. Most of these date from the later seventeenth or first half of the eighteenth centuries. There is only one nineteenth century mark, reflecting the almost total absence of later material from this site. In all 26 moulded marks were recovered;

Type 22 pipes, c1680-1710.

IH 346 <788>  
MW 504 <790>

Type 25 pipes, c1700-1770.

AA 3 examples; 570 <1043, 1253, 1254>  
IB 310 <945>  
TB 282 <572>  
BC 284 <922>  
HGorC 282 <786>  
-D? 476 <774>  
IH 49 <605>  
IH (crowned) 310 <941>  
IL 292 <1771>, 294 <1041>  
WL? 292 <1774>  
TM 49 <606>, 401  
RM 310 <944>  
WM 570 <1252>  
WM (crowned) 310 <943>  
GR?? 421 <934>  
WW + <1715>  
?? 252 <769>, odd marks on heel sides, ?deleted initials.  
Crowned harps, 308 <948>, 421 <781>  
Single dot on RHS of heel, 338 <947>

Type 28 pipe, c1830-1880.

HH 192 <946>, with leaf decorated seams.

Decorated Pipes. There are only 13 examples of decorated pipes amongst the material recovered (this represents only about 0.4% of the pipes). This small percentage is largely due to the absence of later pipes but underlines the plain nature of the majority of C17 & C18 London pipes. The most common type of decoration consists of a band or bands of stem milling (7 examples; 263 <574>, 494 <935>, 523, 606, 640 <921>, 913 and 961). These all fall within the period c1650-1700 and several are likely to date to c1660-80. In only one case was the associated bowl form recovered (913), a plain heel form of c1660-80. The stem milling is usually poorly applied. Complete examples of the intended design are rarely found but the usual design seems to have been either a single band or a short section of closely spaced multiple bands around the stem. The example in 913 has a single band placed 9cm from the bowl. Occasionally a more complex design appears to have been attempted. The example in 961 appears to have had three roughly spiral bands of milling around the stem with one finishing band at right angles to it. There is one other decorated pipe with an associated form of decoration. This is a type 18 pipe of c1660-80 with at least five plain grooves impressed around the stem behind the bowl (263 <575>).

There are four examples of pipes with roll stamp decorated stems. There is one very fragmentary example in 310, dating to c1700-40, with a dotted border and ?part of a tendril design surviving. This is almost certainly an import to London but its origin cannot be determined from such a

fragmentary example. There are also three examples which are probably Dutch. These all consist of bands of toothed decoration two of which also have different geometric borders. The examples are 363 <599> c1660-1720, 721 <1267> c1660-80 (Cat No 1272) and 840 <1268> c1660-80.

Finally there is one bowl of c1830-80 (marked HH) which has moulded leaf decoration along the bowl seams (192 <946>).

Imported Pipes. One or two of the bowls may be imports into London from surrounding areas but there are no examples with marked regional characteristics. Five of the marked pieces are, however, imports to London. There is one roll stamped border of uncertain origin from context 310 which dates from c1700-40. This could possibly be a Chester import. The other pieces are all Dutch. There are three roll stamped stems (363 <599>, 721 <1267> and 840 <1268>) and one Dutch bowl marked AI (840 <1265>). These Dutch pipes could all date to c1660-80. Even allowing for the fact that one Dutch stem is in 3 fragments the total of 7 imported pipes represents only 0.2% of the total recovered.

Complete Pipes. No complete pipes were recovered from the excavations. One almost complete pipe was found in context 310, a deposit of c1700-40 which contained a good number of large, fitting pieces.

Significant Groups. There are a number of groups from this site with good consistent dates, frequently in the 1660-80 range. Some of the deposits contain a higher than average number of stem fragments and the pieces are battered and broken, for example, contexts 363 and 401. These are consistent with the deposit having been used as a hard surface on which the pieces have become broken and abraded and the bowls crushed.

Context 1389 is noted as a Great Fire deposit of 1666. Although many of the pipes are burnt or discoloured the forms are not typical of a 1666 deposit. There is a very wide range of forms present with a roughly equal range present for all periods from c1610-80 (although the terminal date for the group could well be in the 1660's). Very few joins could be found within this group so the material appears to be both disturbed and to contain a high proportion of residual material.

In contrast with the rest of the material one series of deposits dates predominantly to the first half of the C17, and particularly to the period c1610-40. These deposits have not been compared with the site matrix but this would clearly be a worthwhile exercise. The deposits are; 1523, 1621, 1622, 1624, 1625, 1626, 1627, 1628 and 1691. Context 1627 contains a bowl of c1660-80 but this appears later than the rest of the pipes and may be intrusive.

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D A Higgins,  
23 May 1989.

## 4. Cowrie shells from BIG82

### ASSESSMENT OF COWRIE SHELLS FROM BILLINGSGATE LORRY PARK, LOWER THAMES STREET, LONDON EC3, CITY OF LONDON (BIG82)

Alan Pipe

OSTEOLOGY  
MUSEUM OF LONDON ARCHAEOLOGY

INV/REP/04/2020

## 14 Quantification and assessment

### 14.1 Post-excavation review

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

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Category	Description	Weight (kg)
Cowrie shells	estimated 549 shells	0.750 kg/in 1 small archive box

*Table 1 Finds and environmental archive general summary*

### 14.3 The faunal remains

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#### 14.3.1 Introduction and methodology

*Table 2 Wet-sieved cowrie shells from BIG82/summary*

This report assesses all wet-sieved cowrie shells from BIG82 available for study at time of writing. No mollusc shell was available for assessment from [194]; Building 9 Period 17.7; AD1680-1720.

Wet-sieved cowrie shells from 31 context groups ranging between [269] – [972] were described and recorded onto the MOLA ORACLE assessment database in terms of species and shell count with reference to stratigraphy available at time of recording. The data are summarised on an Excel sheet as Table 2.

#### 14.3.2 The assemblage

A total of 549 cowrie shells were recovered from 31 context groups. Shell count ranged between 1-228 for each context, with the largest shell counts recovered from contexts **[644]/20 shells**; Final alterations to Building 13; Period 17.11 ?1700-1750; **[363]/85 shells**; Final alterations to Building 12; Period 17.24 ?1700-1750; **[897]/estimated 150 shells**; Building 13; Period 17.6 1680-1700; **[602]/228 shells**; Modifications to Building 13; Period 17.10; ?1700-1750. Visual inspection of each shell indicated that the assemblage was effectively composed of two main species; money cowrie *Monetaria moneta* (estimated 246 shells) and gold ring cowrie, also known as ring cowrie or ringtop cowrie *Monetaria annulus* (estimated 297 shells). In addition, there were six shells of a darker, as yet unidentified, cowrie species of similar size from contexts [602]; Modifications to Building 13; Period 17.10; ?1700-1750; and [427]. No evidence of tool marks or burning was noted on cowrie shells from any context group.

## 15 Potential of the data

### 15.1 General discussion of potential

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Money cowrie is the most abundant and widely-distributed of all cowrie species. It has an Indo-Pacific distribution occurring from east Africa to the central Pacific, including the Red Sea, Indian Ocean, India, Maldives, Pacific islands and Panama. It is an algal grazer found in intertidal and shallow subtidal waters on rocks near coral reefs. Although the shell is small, ranging from 10-44 mm, it has a long and well-documented history of use as currency by indigenous cultures along the eastern coast of Africa and in the Pacific (Harasewuch & Moretzsohn, 2010, 327) until at least the late 19<sup>th</sup> century. The Maldives provided a main source of the shells, from there they were traded in huge quantities into Africa for use in the slave trade, but also into Asia and North America. They are still used in Hindu astrology, divination in some African cultures and as jewellery and decoration. It includes several subspecies and occurs in a range of colour variations. The shells have a modest commercial value to mollusc shell collectors (Wagner & Abbott 1967, 65-66).

Gold ring cowrie is also an abundant and widely-distributed Indo-Pacific species occurring from east Africa to the Red Sea, India and the tropical Pacific as far as Hawaii and the Galapagos Islands in similar habitats to money cowrie. This species also has a long and well-documented history of currency use. It was recovered in large numbers from the Sir Austen Henry Layard excavations at Nimrud in 1845-51 and was used extensively in the North American fur trade. As with the money cowrie, it includes several subspecies, and occurs in a range of colour variations; the shells have a modest commercial value to mollusc shell collectors (Wagner & Abbott 1967, 65-66). Occasionally the distinctive ring marking on the dorsum is found hammered away making it almost indistinguishable from the money cowrie *M moneta*.

These small, well-preserved and distinctive mollusc groups have some definite potential for further investigation with respect to their history of commercial importance; their known occurrence over a very wide geographical range and their wide variation in subspecies and colour forms may allow some interpretation of the source(s) from which they were originally harvested.

## 16 Significance of the data

### 16.1 Mollusc shell

- 16.1.1 Although preliminary work on mollusc shell from Billingsgate Lorry Park (BIG82) indicated the presence of a few shells of tropical cowrie species; money cowrie and gold ring cowrie (Pipe 1992, 189), this much more complete assemblage is of definite local and regional significance as quantitative and qualitative evidence of a currency system in use for some centuries during European contact with Africa Asia and North America. Further study will allow identification of any subspecies or colour variations present, and may indicate source areas for each species present. As the assemblage has been recorded onto the MOLA ORACLE assessment database, it is therefore available for consultation and integration into a post-assessment report as required.

## 17 Publication project: aims and objectives

### 17.1 Revised research aims

- 17.1.1 *Does the recovery of cowrie species, subspecies and colour varieties provide information on geographical location of the source 'fisheries'?*

### 17.2 Mollusc shell method statement

- 17.2.1 The assemblage should be accurately checked and quantified to ensure that all species, subspecies and colour varieties have been identified. Final interpretation of this assemblage should then be incorporated into the integrated project report in the light of possible implications for trade and cultural contact.

Resource requirements are:-

<i>Task 1 Identification of six unidentified cowrie shells</i>	<i>0.50 day</i>
<i>Task 2 Identification/quantification of money and gold-ring cowrie subspecies</i>	<i>2.00 days</i>
<i>Task 3 Preparation of report (maximum)</i>	<i>2.00 days</i>
<b>TOTAL (maximum)</b>	<b>4.50 days</b>

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## 5. Post-medieval coins from BIG82

### 19 The post-medieval coins from Billingsgate (big 82)

Julian Bowsher (MOLA)  
January 2020

The corpus of 17 post-medieval coins from BIG82 is largely composed of contemporary 17th-century pieces. Nevertheless the earliest and last dated coins are outside the basic range. A corroded coin <3680> that appears to be Roman 'radiate' rather than post-medieval. Another corroded and halved coin with a brassy patina <799> may also be Roman. The Billingsgate excavations revealed extensive Roman remains with xxx coins and it is highly probable that Roman coins were found residually in 17th-century strata.

At the other end of the range is a silver coin of 1816 <501> which is very distinct from the rest of the coins and must be intrusive into earlier layers.

Eleven copper-alloy coins all appear to be the 17th century beginning with a farthing <509> of James I. A new series of semi-official small copper-alloy farthings that went some way to alleviate the absence of 'small change' – since Elizabeth hardly minted anything other than gold and silver.

Regular small change production was resumed by Charles II between 1672 to 1679 with three farthings; three with unclear dates <544>, <863>, <559> and <520> which is dated 1675. <548> has a laurelled head right which looks like James II – dating between 1684-7. There are a further three coins that are the size and fabric of contemporary farthings but remain corroded that precludes exact dates <763>, <846> and <543>. It is probably safe to suggest that these three are coins of Charles II, or even up to William III.

There are two halfpennies of William and Mary; <457> came from an early phase (17.17) but dates to the end of the century. <1082> comes from the latest phase 17.11 but the date is obscured.

The remaining pieces are contemporary 'private' productions; token[s] and two jetons. The London 'trade tokens' were introduced in 1648 when state coin was scarce until Charles II reintroduced regnal coinage in 1672. The tokens were usually tariffed as halfpennies but they were often used as currency. <452> was minted by George Shelton from his premises

at St Mary Overy stairs small change on the south bank. Continental jetons, mostly made in Nuremberg from the late 15th century, are very common in London. They were described as rechenpfenning, 'counting penny', but again found their way into monetary circulation particularly in the 16th century because Elizabeth I only minted gold and silver leaving basic transactions to imported cheap copper jetons. Our example <539>, was made by Hans Krauwinckel II, one of most prolific rechenmeister dynasties, who was made a rechenmeister in 1585 to 1636. The Nuremberg rechenmeisters made imitation 'coins' of European currency presumably to supplement small change or for use as counters. <540> is a copy of a small coin of Louis XIII of France –made by a member of the Lauffer dynasty of rechenmeisters. However, it could have been minted any time during Louis's reign spanning 1643–1715.

Apart from the residual Roman and intrusive Georgian pieces, the assemblage reveals basic small change divided into the first half of the 17th century – which only consisted of the James I farthing and the London trade token – both of which were obsolete after the Restoration. The new copper currency which began with Charles II and it is here that the bulk of the coin found at Billingsgate. The ten farthings and halfpennies covered the last 30 odd years of the century. Moreover, they may well have circulated into the earlier part of the 18th century.

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## **Chronological catalogue of the post-medieval corpus from BIG82.**

### **Roman**

> Copper-alloy coin

<3680>, [494]; period ,

c AD 360-96; irregular radiate. Diam 16mm; Wt 0.40g. Ax -; Wr -.

Obv faint traces of radiate crown. Obv illegible. Fragment.

### **Possibly Roman**

> Copper-alloy coin

<799>, [721]; period ,

?Roman, c AD late 3rd – early 4th centuries. Diam 24mm; Wt 2.40g. Ax ; Wr.

Obv head r. Rev standing figure. half – yellowy

### **Post-medieval English coins**

#### **James I**

> Copper-alloy coin

<509>, [257]; period ,

James I, 1614-25; farthing (Lenox 'round'). Diam 14mm; Wt 0.15g. Ax 6; Wr C.  
Obv IA-CO:D:G:MAG:BRIT.; two sceptres in saltire through crown – with five jewels Rev  
FRA:ET:HIB:REX, harp – with seven strings surmounted by a crown. Peck 1964, 39, no.55.  
Broken edges.

### **Charles II**

> Copper-alloy coin

<520>, [279]; period ,

Charles II, 1675; farthing. Diam 23mm; Wt 5.42g. Ax 6; Wr C.

Obv CAROLVS-A-CAROLO, laur, cuir, bust l. Rev BRITAN – NIA, Britannia seated on a  
globe l, ornamental shield, holding spray of leaves and a long spear, // 1675. Peck 1964, 145  
no.528.

> Copper-alloy coin

<559>, [363]; period ,

Charles II, 1672-79; farthing. Diam 22mm; Wt 5.10g. Ax 6; Wr D.

Obv JAROLO, laur, cuir, bust l.. Rev faint traces of Britannia seated l.

> Copper-alloy coin

<863>, [625]; period ,

Charles II, 1672-79; farthing. Diam 23mm; Wt 3.90g. Ax 6; Wr D.

Obv CAROLVS-A-CAROLO, laur, cuir, bust l. Rev BRITAN – NIA, Britannia seated on a  
globe l, ornamental shield, holding spray of leaves and a long spear, //167[. Peck 1964, 145.

> Copper-alloy coin

<544>, [344]; period ,

Charles II, 1672-79; farthing. Diam 21mm; Wt 2.34g. Ax ; Wr.

Obv CARO[LVS]. faint trace of bust l. Rev uncertain details

### **? James II**

> Copper-alloy coin

<548>, [363]; period ,

? James II, 1684-7; farthing. Diam 22mm; Wt 3.80g. Ax ; Wr.

Obv laur bust r. Rev. illegible. cf Peck 1964, 148

### **Late 17th century**

> Copper-alloy coin

<763>, [549]; period ,

c 1672 - 1699; farthing. Diam 25mm; Wt 4.46g. Ax ; Wr.

Obv corroded, illegible. Rev possible traces of Britannia seated l

> Copper-alloy coin

<846>, [557]; period ,

Late 17th century; farthing. Diam 22mm; Wt 4.20g. Ax ; Wr.

Obv corroded, illegible. Rev faint traces of Britannia seated l.

> Copper-alloy coin

<543>, [344]; period ,

Late 17th century; Diam 23mm; Wt 3.22g. Ax ; Wr.

Obv illegible. Rev traces of Britannia seated l.

### **William and Mary**

> Copper-alloy coin

<457>, [44]; period ,

William III and Mary, 1688/9 - 1694; halfpenny. Diam 28mm; Wt 10.31g. Ax 12; Wr D.

Obv GVLIEL[MVS ET MARIA].j ugate busts r, William laur [cuir] l, Mary (faintly) on r. Rev  
faint traces of Britannia seated l. cf Peck 1964, 160.

> Copper-alloy coin

<1082>, [570]; period ,

William (III) and Mary, *c* 1694; halfpenny. Diam 28mm; Wt 7.12g. Ax 12; Wr E.

Obv GV[LIELMV]S [ET MARIA].very faint jugate busts r, William I, Mary on r. Rev faint traces of Britannia seated l. cf Peck 1964, 160.

### **George III**

> Silver coin

<501>, [175]; period ,

George III, 1816; shilling. Diam 23mm; Wt 4.20g. Ax 12; Wr C/D.

Obv GEOR III D:G BRITT REX F:D //1816, laur head r. Rev crowned shield in Garter (very worn), edge milled. Spinks 436, no.3790.

## 6. Pottery, glass and finds from SWA81

### Assessment of the pottery, bulk and accessioned glass and other accessions from Swan Lane City of London, EC4R 3TN

Site code SWA81

Lyn Blackmore

## 20 Quantification and assessment

Category	Description	Weight
Post-medieval pottery	655 post-medieval sherds (max 126 ENV)	23.004kg
Bulk glass	139 hand-collected fragments (36 ENV),	1.409kg
Accessioned 'bulk' glass	33 fragments (9 ENV)	148g

Table 6 Finds and environmental archive general summary

### 20.1 The Pottery

Post-medieval pottery from contexts assigned to P2 amount to 655 hand-collected sherds (126 ENV, 23.004kg). Most are from cesspit A59.60 (948 sherds from three fills) but also from nine other contexts (groups A59.2, A59.6, A59.8, A59.9, A59.11, A59.13). All finds were recorded in c 2005 directly onto an excel spreadsheet, using standard Museum of London Archaeology codes for fabric, form and decoration, and noting the number of sherds, estimated number of vessels and weight. A report was written in the following years (see page xx).

### 20.2 The bulk and accessioned glass

#### *Introduction/methodology*

Bulk glass from this site amounts to 139 hand-collected sherds (36 ENV, 1.409kg). Some accessioned finds, however, are also from bottles and so are technically bulk glass, bringing the total to 172 hand-collected sherds (45 ENV, 1.557kg; Table 6). All are from period P2 deposits, most cesspit A59.60 (three fills) but also from nine other contexts ([17], [22], [47], [332], [952], [1592], [1801], [2251]; some but not all of these can be related to groups/sub-groups).

All finds have been recorded directly onto the MOLA Oracle database and noting the number of fragments, estimated number of vessels and weight. Other data includes glass colour, form/function and technology. Taking the assemblage as a whole the dates assigned to the glass assemblages from different deposits appear to agree well with those for the pottery

and pipes, and although a few residual or intrusive finds are present, the groups generally conform to the established sequence of forms outlined below.

### *Bottle glass*

Bottle glass is the main category on this site, with 56 fragments (1.359kg) ranging from 17th- to 19th-century in date. Seven of the 13 ENV are from fills [980]/[981] of cesspit A59.60, while six are from [1592] (**check feature type**). No complete profiles are present, but one early bottle of short cylindrical form, the wall tapering in to the base, is represented by 10 fragments from the base, body, neck and flaring rim from [980] <2756>; in Williamsburg the same form is dated to c 1640 (Noël Hume 1969, fig 17.6). Seven fragments (142g) are from two bottles of shaft-and-globe/onion form and dating to the late 17th century (contexts [981], [1592]), and there are also 10 fragments from two probable onion bottles, which could date to between 1680 and 1730 ([980], [981]). Wine bottles dating to the 18th century are represented by five sherds from three early cylindrical bottles (1760–1830) from contexts [17], [22] and four sherds (35g) from two cylindrical bottles from [1592],

Other finds comprise part of the base of a green glass octagonal bottle from [1592], probably used for wine or spirits, and 16 sherds from four case bottles (61g), all from [980] (<2755>, <2758>, <2760>, <3147>); most sherds are small but <2755> is a complete base. Context [1592] contained the base of a mould-blown oval bottle in natural green glass and the neck/rim of a bottle in natural blue glass, both possibly used for sauces.

### *Phials and flasks*

Only three phials are represented (6 sherds, 25g), all from contexts [980], [981] (<2757>, <2766>, <3140>). One is of bell-shaped form and of 17th-century date while the others are cylindrical and probably date to the 18th century. In addition there are five sherds from up to three small flasks, all from cesspit A59.60 (fills [980], [981], [986]) of which <2759> is a neck with part of what was possibly an oval body.

### *Window glass*

Window glass amounts to 108 sherds (25 ENV, 138g) from contexts [47], [52], [332], [952], [980], [981], [1952], [1801], [2251], the largest amount being from [2251], which contained 70 small burnt fragments, possibly debris from the Great Fire. The finds from context [980] include sherds from two diamond-shaped quarries, probably of 16th- to 18th-century date, while the [47] contained one sherd of ice glass dating to the 19th century.

### *Vessel glass*

Vessel glass amounts 80 fragments from 12 items (180g), all from [980] and [981] and ranging from 16th to 17th century in date. Of the seven beakers represented, one is of cylindrical form (<2762>, <3144>) and is of Willmott type 1.7 (late 16th to late 17th century), with rigaree trails around the base and the body (Willmott 2002, 39, fig 11).

Two beakers have been recorded as being of squat form, of which <2764> is decorated with staggered optic-blown bosses and dates to the 17th century (type 3.3; Willmott 2002, 44, fig 23). Accession <2765> comprises 19 sherds from the rim and body of a plain beaker (type 3.1b; *ibid*, 43–4, fig 21) in colourless glass with a yellow tinge, found in [980] and dating to the 17th century. Two further sherds from the same beaker were also recovered from [981] (<3135>).

Two beakers are of pedestal form, of which the most complete, <2761>, has a plain flaring rim and two rigaree trails over wrythen optic-blown ribbing. It appears to be a hybrid of Willmott type 4.3, which has a moulded body but no trails and dates to between 1550–1650 (Willmott 2002, 47, fig 30) and type 5.1, which has applied trails on a plain body (*ibid*, 51, fig

40). This find should certainly be illustrated. Rim <3137> has staggered optic-blown bosses and is from a pedestal beaker of type 4.4, dated to c 1600–50 (ibid, 48, fig 31) In addition, there are four sherds from the piled foot and lower body of a German Römer beaker with raspberry prunts (type 7.2; ibid 53–4, fig 46) were found in [981]. This low coiled base suggests that this dates to the early/mid 17th century, as bases became taller in the late 17th to 18th century.

Other vessel glass is limited to four very small fragments, <3142> and <3143>, recorded as being from a beaker but in an unusual pinkish glass, two foot fragments from wine glasses, <2767> and <3138>), and the complete base, handle, and parts of the rim and body of a small plain bellied tankard, a form dated to the mid/late 17th century (<2763>, <3145>; type 9.1; Willmott 2002, 56, fig 51).

### *Other glass*

Two fragments from what might be a mirror were found in [88] (<501>).

### *Distribution*

Most of the bulk and accessioned glass is from cesspit A59.60, which contained a total of 157 fragments (36 EV, 931g), of which 117 fragments are from 25 accessioned items. It is currently unclear what the other contexts are and how they relate to the cesspit. In terms of current dating, the finds from all contexts could date to before 1700, although it is assumed that they were redeposited after the Great Fire. All finds are domestic in character.

## 20.3 The accessioned finds

	Roman	Medieval	Post-med	Not known	Total	Comments
Stone			0	1	1	
Vessel glass			14	0	14	80 fragments, 14 ENV, 180g
Coins/tokens			2	0	2	
Iron			6	0	6	
Copper alloy			9	0	9	
Lead			2	0	2	
Ivory			4	0	4	
<b>Total</b>			<b>37</b>	<b>1</b>	<b>38</b>	

Table 7 Summary of accessioned finds by material and period

### *Introduction/methodology*

The 37 accessions were recorded on the MOLA Oracle database, and also in an Excel file, using standard codes for material and object type.

Post-medieval

#### *Stone*

One fragment of burnt slate-like stone was found in [980] (weight 24g). No further work needed.

#### *Glass*

See above.

### *Iron*

Five accessions, plus the remains of a composite knife (<2257>; see bone/ivory) were found of which two are from [981] and three are from [980]. Two finds appear to be structural fittings, comprising part of a washer/nail <1736> and a doughnut-shaped collar with hemispherical section (external diameter 50–54mm, height 28.5mm) <1737>. The other finds comprise a length of wire, <3853>, and the remains of what may be a pair of shears or scissors, <3676>, now badly laminating, Object <3852> is incomplete and mainly represented by corrosion products.

### *Copper alloy*

Excluding coins there are nine copper alloy accessions, of which four are from [980] and five are from [981]. With the exception of <1737>, all are in poor condition. Identifiable finds comprise two small dress pins, one from each fill (<1770>, <3693>), a lace chape from fill [980] (<3846>), and two probable drape rings ([980], [981], <1768>, <3697>). Of interest is an oval disc in corrosion, <3698>, which is rather large and thick for a ring but could be stud or mount. A similar object found in recent excavations at Phipp Street, London EC2A, was thought to be from a box or a piece of furniture (Blackmore et al in prep, 322, fig 2). No decoration is visible on the X-ray, but cleaning might reveal something.

### *Lead*

Two lead weights were found, one very small from fill [981] (<382>) and possibly for coins, the other larger ([986], <1838>) and probably used for a variety of commodities.

### *Bone/Ivory*

Three finds, all of ivory, comprising two comb fragments (<2160>, <2161>) and a knife handle (<2257>); a third comb is listed in the original finds records but this appears to be an error as there is no accession card for such an object. The combs are both double-sided and of one piece construction, while the handle is of tapering cylindrical form with a small knob at the terminal. Dating of knives is generally dependant on the form of the blade, but <2257> is very similar to finds from the area of Tower Hill, where ivory was being worked in the early to mid 17th century (Blackmore 1996, 139–41, figs 21.18, 21.19; Sewart 1996; Goffin 2005).

### *Functional analysis*

All the identifiable finds are typical items of daily life in 17th-century London, notably glass bottles and drinking vessels. A few items associated with dress and personal hygiene are also represented, while the lead weights hint at trade of some kind.

### *Provenance of objects*

The bulk of the accessioned finds and approximately one third of the bulk glass are from cesspit A59.60.

### *Assessment work outstanding*

There is currently no text on features other than cesspit A59.60, but post-medieval pottery was found in a number of other contexts. It is not possible to comment on whether they are relevant to the study or not. A few fragments of bulk glass need to be accessioned.

The jetton <3695> and token <3825> need to be commented on by Julian Bowsher.

### *List of objects for investigative conservation*

The identification of the oval object <3698> would be helped if some investigative cleaning could be carried out to see if it was in a mount or setting of some kind and if there was any decoration or marking on it.

### List of objects for conservation/restoration for photography

None.

### Provisional list of objects for illustration

For pottery, some 45 vessels have already been selected for illustration, all from cesspit A59.60. In addition, a number of bulk glass and accessioned finds could be illustrated (Table 8).

Table 8 Provisional list of glass for illustration and/or photography, excluding pottery

Con-text	Group	Acc	Material	Object	Frag	Comment
980	A59.60	2257	Ivory	Comb	1	
981	A59.60	2161	Ivory	Knife	1	
980	A59.60	2761	Glass	Beaker	26	Pedestal beaker
980 981	A59.60	2762 3144	Glass	Beaker	4	Cylindrical beaker with rigaree trails
980	A59.60	2763	Glass	Beaker	5	Pedestal beaker
980	A59.60	2764	Glass	Beaker	1	Squat beaker
981	A59.60	3141	Glass	Römer beaker	4	
980 981	A59.60	2763 3145	Glass	Tankard	10	
980	A59.60	2759	Glass	Flask?	1	
980	A59.60	2756	Glass	Bottle	1	Profile reconstructable

## 21 Potential of the data

### 21.1 General discussion of potential

The ceramic assemblage from cesspit A59.60 is large and the existing report should be updated and published, ideally with the pottery illustrations. In the context of the four sites in the proposed publication, the cesspit group can be compared with contemporary assemblages not only from Seal House and Billingsgate but from other excavations, for example Lloyd's Register (cesspit [1415]; Blackmore 2005, 90–1, 138–40). This will help to understand the changing social and economic status of the area, especially if the finds can be related to specific properties and are considered in conjunction with the clay pipes. If possible pottery from more recent excavations in the area should be included, although virtually no 17th- or 18th-century material from Riverbank House or Watermark Place has been published (Fowler and Mackinder 2014; Mackinder 2015).

The non-ceramic finds assemblage, mostly from the same cesspit, is not particularly large, but adds to the picture of daily life on this waterfront site, and the finds are of value as dating evidence. All merit a mention, even if they are not discussed in detail, and a few are suitable for illustration.

## 22 Significance of the data

The pottery, glass and other accessioned finds are of primarily of local significance, although when considered within the context of London as a whole and as part of a sample including other sites in this part of the city (as noted above) the assemblage assumes a greater significance.

## 23 Publication project: aims and objectives

### 23.1 Revised research aims

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The following points listed in Chapter 4 of the current draft text are relevant to the pottery and finds; more may be added when the study has got underway.

1. How does the finds assemblage represent the material culture and lifestyle of the occupants
2. What are the sources of the pottery types present, especially the imports?
3. How does this reflect trade and consumerism?
4. What avenues can be suggested for future research?
5. How do the finds from A59.60 compare with those from contemporary cesspit clearance groups in the City?

### 23.2 Pottery method statement

---

1. Check quantification and finalise totals: 0.5 day
2. Discuss use of histograms or alternatives: 0.25 day
3. Read through and update report, checking all finds in LAA and items selected for illustration, and all data for digital archive: 2.75 days
4. Discuss the functional composition of the cesspit group and compare it to other cesspit groups in or near the City of London: 2 days
5. Contribute to general introduction to the combined pottery reports (with JP): 1 day
6. Contribute to discussion of research aims, including trade: 1 day
7. Liaison with illustrator/photographer/LAA, including checking of illustrations: 2 days
8. Editorial input and proof checking: 1 day

**Total 10.5 days** Note – this will be modified after the next block of work, when it is hoped to submit an estimate for the pottery illustration

### 23.3 Glass and accessioned finds method statement

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1. Check dating and all descriptions for digital archive: 0.75 day
2. Further comparative research: 0.75 day
3. Liaison with conservator, finds manager and LAA: 0.5 day

4. Write discussion of the finds for specialist report and/or thematic essay, with catalogue entries if needed: 2.5 days (to include further visits to LAA).
5. Prepare for and attend finds review, check illustrations and prepare captions: 1.5 day
6. Editorial input and proof checking: 1 day

**Total: 7 days**

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## 7. Pottery, glass and finds from SH74

### Assessment of the pottery, glass and accessioned finds from Seal House, 1 Swan Lane City of London, EC4R 3TN

Site code SH74

Lyn Blackmore

## 25 Quantification and assessment

Category	Description	Weight
Post-medieval pottery	1043 sherds (229 ENV)	60.936kg
Bulk glass	125 hand-collected fragments (58 ENV),	2.151kg
Accessioned glass	excluding bottle seals (in accessioned finds)	

Table 9 Finds and environmental archive general summary

### 25.1 The pottery

Most of the pottery from period P2 at Seal House, apart from the destruction phase at the end, is medieval, with only 21 sherds of post-medieval date (15 ENV, 245g), some of which are also residual. Pottery from period P3 is more abundant, with 1022 sherds (214 ENV, 60.691kg). All finds were recorded in c 2005 directly onto an excel spreadsheet, using standard Museum of London Archaeology codes for fabric, form and decoration, and noting the number of sherds, estimated number of vessels and weight. A report was written in the following years (see page [xx](#)).

Most finds are broadly of 16th- and 17th-century date: PMRE and Raeren stoneware date to between c 1480–1600, while Frechen stoneware and Surrey-Hampshire border ware both have ranges of 1550–1700. PMR and PMFR date to after 1580, while Martincamp type 3 stoneware dates to 1600–1650. Most of the latest finds (PMFR, TGW and CHPO), are all from [9]=[53], which was the wall of the brick cesspit B99, and so needs to be considered together with [119] and [168] (B99). The porcelain and redwares cannot be closely dated due to fire damage, but this small group may be one of the few examples on the site of material derived from the Great Fire (see also below, B122).

Of the finds from period P3, those from well group B137, recorded only in section, could be a late 17th-century clearance group, as several pieces are substantially complete (63 sherds from 15 post-medieval vessels (4.343kg). As it derives from a floor, not a cut feature, the group of pottery (141 sherds, 49 ENV) associated with the later phase of destruction of the brick range (B122) cannot be exactly be considered a clearance group. It comprises a mix of rather small 17th-century sherds with a small amount of mid 18th-century pottery.

## 25.2 The bulk and accessioned glass from Seal House

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### *Introduction/methodology*

Bulk glass from this site amounts to 550 hand-collected sherds and 37 sherds from sieved samples (393 ENV, 34.083kg; Table 6); all are from period 10 deposits, coming from a total of 22 contexts. Some accessioned finds, however, are also from bottles and so are technically bulk glass, bringing the total to 568 fragments (67 ENV, 2.361kg). In addition there are 21 glass accessions which are of post-medieval date; all were recorded, although at present only some are from contexts assigned period 10.

All finds have been recorded directly onto the MOLA Oracle database and noting the number of fragments, estimated number of vessels and weight. Other data includes glass colour, form/function and technology. Taking the assemblage as a whole the dates assigned to the glass assemblages from different deposits appear to agree well with those for the pottery and pipes, and although a few residual or intrusive finds are present, the groups generally conform to the established sequence of forms outlined below.

### *Bottle glass*

Bottle glass is the main category on this site, with 81 fragments (32 ENV, 2.157kg) ranging from 17th- to 19th-century in date, of which 73 fragments (26 ENV, 1.983kg) were recorded as bulk material. No complete profiles are present. Wine bottles are the dominant group, the earliest being of shaft-and-globe and shaft-and-globe/onion form (31 fragments, 6 ENV, 848g) and dating to the late 17th century (contexts [3], [47], [71], [88]). There are also four fragments from three probable onion bottles, which could date to between 1680 and 1730 ([71], [88]). Bottles dating to the 18th century comprise one neck/rim fragment from a possible mallet bottle ([38]), dated from 1725–60+, 22 fragments (110g) from seven squat cylindrical bottles (1735–1830) from contexts [6], [39], [66], [70], [155], and 13 fragments (794g) from nine early cylindrical bottles (1760–1830) from contexts [51], [66], [86], [105], [109], [156] and [165].

Other finds comprise the base of an octagonal bottle ([109], <524>), probably used for spirits, while a rim/neck could be from a case bottle ([47], <875>); one piece of amber coloured glass is from a cylindrical bottle probably used for beer ([66]). The three other fragments, from [6], [47] (<809>) and [51], are heat-altered and distorted, and probably represent debris left after the Great Fire.

### *Phials and flasks*

Only four phials are represented (9 sherds, 15g), from contexts [27], [29] and [39]. One small sherd of green glass from [9] (<868>) could be from a small flask (cf Noël Hume 1969, fig 16.9).

### *Window glass*

Window glass amounts to 48 sherds (27 ENV, 182g) from contexts [9], [39], [47], [49], [51], [63], [66], [88], [105], [109], [221], [484], [882]. Most sherds cannot be assigned to a specific type, but two fragments of potash glass from [39] are probably of medieval or early post-medieval date. The 12 fragments from [39] and [63] include two with rims and are probably from cylinder spun glass. Three fragments of sheet glass are of 19th-century or later date ([51], [66], [882]). The fragment from [51] is frosted on one side, while that from [66] has an irregularly dimpled surface with transverse ribbing in each cell.

### Vessel glass

Vessel glass amounts 35 fragments from 21 pieces (364g). Of the five beakers represented, four are of cylindrical form. One of these, <812> from [169] is a plain body sherd, but <444> from [66], has optic-blown wrythen ribs, while two are in the *façon de Venise* style and probable imports. Beaker <445>, represented by a rim fragment from [66] is very fancy, with marvered twisted canes of what appears to be red and opaque white glass (*vetro a retorti*) alternating with broad bands of opaque white glass (*vetro a fili*); the beakers itself is of colourless glass with a grey tinge. As it is very unusual to find red glass at this time it is possible that the twisted canes were originally fused rods of colourless glass and opaque white glass made in a different workshop from the beaker itself, which have decayed in a different way to it, causing a red effect.

Beaker <702> from [254] (three rim and body sherds) also has *vetro a fili* decoration. The fifth beaker, <447> from [66] is of pedestal form; only part of the base survives, so it is impossible to tell if it was of knopped or unknopped form (types 13.1, 13.2; Willmott 2002, 68-9, figs 75, 76). In addition, a flattened prunt, <662>, from a Römer beaker was found in [864]; this is of type 7.3 and dates to c 1600-50 (ibid, 54, fig 47). Produced in northern Germany and the Low Countries, this type of beaker is generally rare in England. Fragment <815> from [188], probably from the basal area of a goblet, is of dark blue glass, possibly from Bristol. Fragment <810> from [183] is from the foot of a goblet of uncertain form.

Five goblets/wine glasses are represented (seven sherds), of which <811> from [63] is of ribbed round-knop form and probably dates to the 1670s (broad dating 1550-1700; Willmott 2002, type 10.6). A rim fragment from [39] (to be accessioned) is from a wine glass with funnel-shaped bowl, while <816> from [66] is from a glass of drawn trumpet form, probably dating to the late 17th or early 18th century.

Other vessel forms comprise the near complete spout from a posset pot ([8] <681>; Willmott 2002, type 19.1) and part of a bowl from [66] (to be accessioned).

### Other glass

Two fragments from what might be a mirror were found in [88] (<501>).

### Distribution

The bulk and accessioned glass was recovered from 31 contexts. Most groups are small but slightly larger clusters occur in [47] (group 122; 29 fragments, 6 ENV, 278g) and in ungrouped contexts [39] (37 fragments, 14 ENV, 91g) and [66] (17 fragments, 13 ENV, 125g). Vessel glass occurs in nine contexts, the main concentration being in [66].

## 25.3 The accessioned finds (not coins)

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	Roman	Medieval	Post-med	Not known	Total	Comments
Stone			2		2	Excludes BM
Vessel glass			11		11	Plus 3 to be accessioned
Iron			24		24	Plus three composite
Coins/tokens			2	0	2	
Copper alloy			8		8	Includes one composite
Lead			3		3	
Bone/ivory			2		2	

Wood			7		7	Includes two composite
<b>Total</b>			<b>59</b>		<b>59</b>	

Table 10 Summary of accessioned finds by material and period

### *Introduction/methodology*

The finds were recorded on the MOLA Oracle database, and also in an Excel file, using standard codes for material and object type.

### *Post-medieval*

#### *Stone*

Three finds were accessioned, of which <732> is part of a mortar from [324], a period 9 context, and <669> is part of a possible hone from [104], a period 10 context. Neither can be closely dated but merit comment. The third find is a piece of marble and should be considered under building material.

#### *Iron and composite*

This is the most abundant category, with 24 accessions from seven contexts (plus the iron knife <3> discussed under copper alloy). Some objects, however, are almost certainly represented by more than one accession. In addition there is fitting <330>, a robust curved strap perhaps used for holding another fitting in place, which appears to be of post-medieval date.

Two finds are from period 9 context [173]. These comprise a complete rotary key in two pieces with an oval bow, shank of unknown section and bit with three equally sized wards.

The finds from period 10 include nine from [4], eight from [88], two from [51] and one each from [3], [109] and [155]. Accession <398> from [109] may be the remains of a lid from a container of some form.

Most finds appear to be structural in character, notably a badly fragmented rivet/clench bolt, <341> from [155], a complete staple from [51] (<473> and a large bolt, <12>, from [4], which secured timber 63 mm thick and was embedded in mortar to a depth of 51mm. The eight other finds from this context, <460>–<465>, <467>, <468> probably derive from two or three objects, but although strips and shanks are present the finds are so badly laminated that it is no longer possible to identify their original function.

The finds from [88] are more identifiable, with two large two long hooked rods/bars, both from [88] and with a sub-rounded cross section. The larger of the two, <425> is 290mm long, while <427> is c 220mm long. Other finds from this context include part of a possible hasp or hinge, <426> and two accessions, <316>, <553>, probably associated with the wood/iron bucket <57> (see wood, below).

#### *Copper alloy and composite*

Excluding coins, there are eight accessions from two period 9 contexts and six assigned to period 10. The former include

] a complete cast sub-rectangular buckle with integral cross bar <20>, from context [173]; possibly for use on a shoe, this has a copper-plated iron pin with remains of copper alloy roller (preserved on upper side only (length 21.6mm at outer edge, 18.6mm at centre; W 31mm, Th 2.5mm). The other find, <368> from [164] comprises three tiny flakes of sheet metal.

The most impressive of the period 10 finds is the composite scale tang knife <3> from context [3], which has the remains of the iron blade and the copper alloy shoulder plates,

plain on the back but decorated on the front with an engraved a saltire cross with triangular blocks of hatching at the corners and in cruciform arrangement within the triangular fields. More work is needed to determine the date of this piece.

The other finds comprise two very small dress pins <376> from [88], a possible button, <10> and a drape ring, <10> in four pieces from [4], and a coin weight with fleur-de-lis stamp, <26>, from [155]; accession <336> from [75] comprises four small pieces of metal.

### *Lead*

Three pieces of lead waste were accessioned, one from period 9 and two from period 10. The former, <339> from [173] is a thick piece of sheet metal, cut or sheet broken along the long sides. The most interesting of the period 10 finds is <456> from [109] which is a folded rectangular strip (length 125mm (unfolded), cut at both ends, with the number '5' and parts of two circles stamped on one side, and the remains of the number '7' by the edge of other side, partly cut through. Accession <361> from [4] is a long narrow strip, partly twisted at one end.

### *Bone/ivory*

As at Swan Lane, two ivory objects are represented. The first is part of a double-sided one-piece comb, <25> from period 9 context [173], which is similar to the Swan Lane finds but larger and with a more rounded end. The other is half of a large ivory ring, <34> (diameter c 50mm), from period 10 context [104], the original purpose of which is uncertain. In addition there is a piece of ivory waste <291> from context [514] which has not been recorded but which is likely to be of 16th or 17th-century date.

### *Wood and composite*

There are seven iron accessions, of which six are from [88]. These include a short spindle or bobbin, <2>, possibly double-ended (length c 153mm; cf Morris 2000, 2331, fig 1147), and an object with iron studs or hobnails along the surviving edge, <542>, which was originally recorded as a patten. It differs, however, from those shown in a study of medieval shoes and pattens from London (Grew and de Neergaard 1988) in that there are no projections to raise it off the ground, and is also shorter than the average shoe. This suggests it might be from a composite patten, although unlike the illustrated hinged 16th-century wooden-soled patten from Southwark (Egan 2005, 30–1, fig 14) in that it is of uniform thickness. The function of this find, therefore, is unclear, but it is not impossible that it is part of a small box lid; an example from York was dated to the 14th century, (cf Morris 2000, 2291, fig 1117) but such decoration was also used in the post-medieval period. [Check Morris/York](#)

The most important wooden item, the bucket/barrel is represented by 54 pieces, packed in four layers. The more complete of these show that it had a height of at least 330mm and an internal diameter of 270mm (Th 7mm); the groove for the base shows that this was less than 3mm thick at the edge. It was bound with at least four iron hoops with a height of c 35–40mm, the lowest set around the base (unless it has slipped). One stave has a vertical row of five small nail holes suggesting that it was made of reused timber, while differential colouring suggests that it was partly burnt before being discarded. The profile is difficult to ascertain, as the longest fragment has a slightly convex profile suggesting this was a barrel, and this is supported by the base:height ratio. Other pieces, however, have a straight profile, and one appears to have an iron mount for a handle attachment (this needs to be X-rayed). This argues for it being a bucket, which would be more likely in a well context. Two other accessions, <316> and <553>, both with iron and wood, probably also derive from <57>.

There are also two flat objects of semi-circular form, of which <543> is slightly thicker and flatter (original diameter c 280mm; cf Morris 2000, fig 1081, nos 8770, 8798), while <822> (original diameter c 300mm is thinner and is in less good condition, with developed a noticeable 'lip' around part of the outer edge. Both were recorded as barrels, and could

equally be bases, caskheads or lids; neither have dowel holes to allow them to be secured to another semi-circular disk, or any other perforations (ibid, 2243–51), although the edges are not particularly and would not fit into the groove in <57>. They seem to be from different objects, and neither is the same diameter as the bucket/barrel <57>; thus it would appear that three buckets/barrels are represented in well fill [88].

### *Functional analysis*

As a group, the accessioned finds are more varied than those from Swan Lane, with a mix of building-related and household items. On both sites there are few personal items.

### *Provenance of objects*

The finds derive from 14 contexts, associated or presumed associated, with the buildings on the site. Eight accessions are from period 9 contexts [169], [173] and [324], five of which are from [173] (group B108). The other finds are from period 10, the main groups being from [88] (well group B122, 17 accessions) and [4] (group B140, 12 accessions).

### *Assessment work outstanding*

A few fragments of bulk glass need to be accessioned, and the stone identifications for the hone and mortar need to be checked. The two coins should be examined by Julian Bowsher.

### *List of objects for investigative conservation*

Examination of the mineral-preserved organics on the knife <3> might tell if the handle was of wood, bone, horn or ivory. Accession <428> from [88] was originally recorded as slag and so not X-rayed, but may well be an object and should be X-rayed now. For the bucket/barrel, the largest piece in layer 1 and largest two in layer 2 of the box should be X-rayed to allow illustration and to show whether there is mount for the handle. The species of the wood also needs to be identified.

### *List of objects for conservation/restoration for photography*

No conservation input needed.

### *Provisional list of objects for illustration*

For pottery, some 11 vessels have already been selected for illustration, of which 10 are from well fill [88]. In addition, five pieces of bulk glass and accessioned glass and 15 other accessioned finds could be illustrated (Table 8).

**Table 11 Provisional list of glass for illustration and/or photography (excluding pottery)**

Con- text	Per- iod	Group	Acc	Material	Object	Frag	Comment
63	10	125	811	GLASS	WINE	2	
66			444	GLASS	BEAK CYL	2	
66			445	GLASS	BEAK CYL	1	Photo
234			702	GLASS	BEAK-CYL	3	
864			662	GLASS	ROEMER	1	
173	9	108	20	COPP	BUCK	1	Shoe buckle
3	10	135	3	COPP	KNIF	1	Decorated shoulder plate
155	10	131	26	COPP	WEIG	1	
173	9	108	301	IRON	KEY	2	Draw from X-ray
4	10	140	12	IRON	BOLT?	1	
88	10	137	425	IRON	HOOK	1	

88	10	137	427	IRON	HOOK	1	
88	10	137	57/1	IRON	BUKT		Reconstruction drawing
173	9	108	25	IVOR	COMB	1	
104	10	132	34	IVOR	RING	1	
109	10	132	456	LEAD	WAST	1	Stamped
88	10	137	2	WOOD	SPINDLE?	1	
88	10	137	542	WOOD	PATT	1	Photo?
88	10	137	543	WOOD	LID?	1	Photo?
88	10	137	822	WOOD	LID?	1	Photo?

## 26 Potential of the data

### 26.1 General discussion of potential

#### *Pottery, Bulk and accessioned glass and other accessions*

The pottery amounts to an assemblage of some size, with two significant deposits, one associated with the demolition of building 8 ([47], group B122; 141 sherds, 5.511kg), the other from well group B137, fills [86],[87] and [88] (63 sherds, 15 ENV, 4.343kg). A further 36 sherds (17 ENV, 559g) are from a drain (group B125). Clearance groups, which that from the well appears to be, are more typical of the 18th century and may have been prompted by a number of reasons, one of them being a desire to replace older ceramic styles with the new factory made dinner services in Staffordshire salt-glazed stoneware, creamware and pearlware that were entering the market with dramatic effect on consumer tastes (Blackmore 2005, 247). In this case, however, rebuilding after the Great Fire seems a more likely explanation, and the group can be compared with that from the cesspit on Swan Lane and others, including two in Fenchurch Street (Blackmore 2006, 90–1, 138–40).

The bulk glass assemblage is not particularly large and mainly fragmented, but adds to the picture of daily life, especially when considered together with the pottery and other finds. Four or five pieces of vessel glass merit illustration, and the unusual façon de Venise-style beaker <445> should be photographed.

Like the glass, the other accessioned finds, also add to our understanding of life in this part of the waterfront after the Great Fire. Fifteen items are suitable for illustration, and the bucket/barrel <57>, needs a reconstruction drawing.

## 27 Significance of the data

#### *Bulk and accessioned glass*

The pottery, glass and other accessioned finds are of primarily of local significance, although when considered within the context of London as a whole and as part of a sample including other sites in this part of the city (as noted above) the assemblage assumes a greater significance.

## 28 Publication project: aims and objectives

### 28.1 Revised research aims

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The following points listed in Chapter 4 of the current draft text are relevant to the pottery and finds; more may be added when the study has got underway.

6. How does the finds assemblage represent the material culture and lifestyle of the occupants
7. What are the sources of the pottery types present, especially the imports?
8. How does this reflect trade and consumerism?
9. What avenues can be suggested for future research?
10. How do the finds compare with those from contemporary well and cesspit groups in the City?
11. What was the function of the two iron hooked objects from [88]?
12. What was the function of wooden object <542> from [88]?
13. Is <57> a bucket or a barrel? What is it made of, and was it burnt?

### 28.2 Pottery method statement

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9. Check quantification and finalise totals: 0.5 day
10. Check all data for digital archive: 1 day
11. Discuss use of histograms or alternatives: 0.25 day
12. Check discussion of pottery distribution in the main text and update where necessary: 1 day
13. Read through and update specialist report, checking all finds and items selected for illustration: 2 days
14. Discuss the functional composition of the two main groups and compare them to other cesspit groups in or near the City of London: 2 days
15. Contribute to general introduction to the combined pottery reports (with JP): 1 day
16. Contribute to discussion of research aims, including trade: 1 day
17. Liaison with illustrator/photographer/LAA, including checking of illustrations: 2 days
18. Editorial input and proof checking: 1.25 days

28.2.1

28.2.2 **Total 12 days, plus illustration - Note – this will be modified after the next block of work, when it is hoped to submit an estimate for the pottery illustration**

### 28.3 Glass and accessioned finds method statement

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7. Discuss wooden objects with Damian Goodburn: 0.5 day (including 0.25 day for Damian Goodburn)
8. Identify wood used for bucket <57>: 0.25 day (Anne Davis/Lara Carretero)
9. Check dating and all descriptions for digital archive: 1 day

10. Further comparative research: 0.75 day
11. Liaison with conservator, finds manager and LAA: 0.5 day
12. Write discussion of the finds for specialist report and/or thematic essay, with catalogue entries if needed: 2.5 days (to include further visits to LAA).
13. Prepare for and attend finds review, check illustrations and prepare captions: 1.5 days
14. Editorial input and proof checking: 1.5 day

**Total: 8.5 days**

## 29 Bibliography

Blackmore, L, 2005 The pottery, in *Holy Trinity Priory Aldgate, City of London: an archaeological reconstruction and history* (eds J Schofield and R Lea), MoLAS Monogr Ser 24, 227–47, London

Blackmore, L, 2006 Medieval and post-medieval pottery, in R Bluer and T Brigham with R Nielsen, *Roman and later development east of the forum and Cornhill: excavations at Lloyd's Register, 71 Fenchurch Street, City of London*, MoLAS Monogr Ser 30, 123–40, 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 Monogr Ser 19, London

Grew, F, and de Neergaard, M, 1988 *Shoes and pattens*, HMSO Medieval Finds Excav London 2, London

Morris, C A, 2000 *Craft, industry and everyday life: wood and woodworking in Anglo-Scandinavian and medieval York*, The Archaeology of York 17/13, York

Noël Hume, I, 1969, *Guide to artifacts of Colonial America*, New York

Willmott, H, 2002 *Early post-medieval glass in England, 1500–1670*, CBA Res Rep 132, York

## 8. Clay tobacco pipes from SWA81

### Swan Lane

Post-excavation assessment of the clay tobacco pipes

Site code: SWA81

Author: Jacqui Pearce

Date: 28/01/20

## 30 Quantification and assessment

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

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Category	Description	Weight
Clay tobacco pipes	92 bowls, 292 stem fragments, 35 mouthpieces	N/A

*Table 12 Finds and environmental archive general summary*

### 30.2 The clay tobacco pipes

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The clay tobacco pipes from one selected group at SWA81 were recorded in accordance with current MOLA practice and entered onto the Oracle database. The pipe bowls have been classified and dated according to the Chronology of London Bowl Types (Atkinson and Oswald 1969), indicated by the prefix AO. None of these pipes were seen and reported by David Higgins, whose report on the Swan Lane pipes is not included here.

*Table 13 Clay tobacco pipe quantification*

Total no. of fragments	419
No. of bowl fragments	92
No. of stem fragments	292
No. of mouthpieces	35
Accessioned pipes	2
Marked pipes	1
Decorated pipes	1
Imported pipes	
Complete pipes	
Wasters	
Kiln material fragments	
Boxes (bulk/accessioned)	1 box bulk, 2 accessioned items

A large collection of clay pipe bowls, stem fragments and mouthpieces was recorded from contexts [980] and [981]. No other pipes from the excavation were examined for the post-Fire project. Although these have been reported by David Higgins, he did not see the finds covered by this assessment. All pipes recorded here are London-made and the great majority have been smoked.

Both contexts have been dated to c 1660–80 by types current during this period: AO15 (x29 bowls), AO13 (x10) and AO16 (x7). There are also numerous pipe bowls made c 1640–60: type AO9 (x25 bowls) and AO10 (x20). Given the balance of types present, it seems possible that the date of deposition may have been closer to c 1660 rather than later. Many of the pipe bowls have milling around the rim and a small number have been burnished. None, however, are decorated, and none from this period are marked.

Two pipes have been accessioned, one of them in error (a type AO13 <3733>), and the other (from [981] <3735>) is clearly intrusive (a type AO28, current c 1820–60). This is represented by the base of the bowl and spur only, and has moulded leaf seams as well as the maker's initials ?JC moulded in relief on the sides of the spur.

## 31 Potential of the data

### 31.1 General discussion of potential

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The selected clay pipes from SWA81 have good potential for further work as part of the wider examination of the post-Fire features at Swan Lane.

## 32 Significance of the data

The clay pipe fragments from SWA81 are significant in relation to the site and general vicinity, and are certainly important as part of the wider examination of the post-Fire waterfront sites.

## 33 Publication project: aims and objectives

### 33.1 Revised research aims

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No further research aims are proposed for the clay pipes.

### 33.2 Clay pipe method statement

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The clay tobacco pipes should be published as part of the post-Fire waterfront project, with

the following tasks proposed:

4. Analysis and research – comparing the finds from SWA81 with those of similar date from other neighbouring waterfront deposits.
5. Writing report.
6. No illustration is proposed (in the absence of marked or decorated pipes).

Total estimated specialist time: 1.5 days.

## 34 Bibliography

Atkinson, D R and Oswald, A, 1969 London clay tobacco pipes, *J British Archaeol Assoc* 32, 171–227

CLAY TOBACCO PIPES FROM EXCAVATIONS AT SWAN LANE

IN THE CITY OF LONDON

D A HIGGINS

Excavations at Swan Lane / Upper Thames Street (SWA 81) were carried out by the Department of Urban Archaeology at the Museum of London during 1981. The pipes were examined by the author in March 1989. At this date five of the bulk contexts (64, 789, 980, 981 & 2215) and nine of the registered finds (721 <3731>, 952 <3732>, 980 <3733>, 981 <3735>, 1592 <3734>, 1592 <3736>, 1592 <3737>, 2213 <3738> & 2213 <3739>) on the computerised catalogue of finds were missing. In addition bulk finds from contexts 60 and 189, not previously listed, were found. The eighteen contexts actually examined contained a total of 132 fragments of pipe (38 bowl, 86 stem and 8 mouthpiece fragments). These ranged in date from c1610–1850 and were all considered to be of London origin. There was a notable absence of the shorter and more decorative pipes usually found in deposits from the second half of the nineteenth century. Marked Pipes. Only three marked pipes were examined, although it is likely that at least some of the missing registered pieces would have been marked. The three marked pieces all came from context 17 and are likely to date from c1810–40. One bowl, <182>, has the moulded initials II on the spur and an incuse stamp reading JARMAN on the bowl (National Catalogue No 1131). John Jarman is recorded at Bishopsgate from 1805–47 (Oswald, 1975, 139). The other two pieces, <183> & <184>, both have star symbol marks on the sides of their heels.

Decorated Pipes. The only decorated pieces are the two pipes with star marks on the heel mentioned above. Both have simple leaf decoration on the seams in addition to which one of them, 17 <183>, has a crude spread eagle motif on either side of the bowl. This type of decoration seems to have been fairly common in early nineteenth century London. It may have originated from pipes intended for export with the American eagle on. Such pipes with a more fully developed arms and motto were certainly made during the late eighteenth / early nineteenth century in the South Lancashire pipe works.

Imported Pipes. No pipes considered to have been imported from outside London were identified.

Complete Pipes. No complete pipes were recovered from the excavation.

Significant Groups. Only three of the contexts contained sizable groups of pipes. The largest was context 952 which contained 22 bowl, 40 stem and 4 mouthpiece fragments. This material appears to fall into two main groups which date from c1610-40 and 1650-80. It is not certain whether this represents a real difference with two distinct deposition phases or whether it is the result of an artificial division created by the bowl form typology. Context 1592 contained 1 bowl, 24 stem and 1 mouthpiece fragments. It appears, from the stem fragments, to have been a good deposit of c1800-40. This may be confirmed if the three registered pieces which are missing from this deposit can be found. Context 2172 contains 6 bowls and 7 stem fragments which range in date from c1640-70. Context 17 only produced a small group (3 bowls, 1 stem and 1 mouthpiece) but it includes the three marked and two decorated pieces mentioned above. They are all consistent with a date of c1810-40 and may in fact date from c1810-30.

#### Bibliography.

Atkinson A & Oswald O, 1969, 'London Clay Tobacco Pipes', in The Journal of the British Archaeological Association, Third Series, Vol XXXII, 171-227.  
Oswald A, 1975, Clay Pipes for the Archaeologist, British Archaeological Reports, British Series  
No 14, 207pp.

28 March 1989

## 9. Clay tobacco pipes from SH74

### Seal House

Post-excavation assessment of the clay tobacco pipes

Site code: SH74

Author: Jacqui Pearce

Date: 29/01/20

## 35 Quantification and assessment

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

Category	Description	Weight
Clay tobacco pipes	77 bowls, 253 stem fragments, 21 mouthpieces	N/A

*Table 14 Finds and environmental archive general summary*

### 35.2 The clay tobacco pipes

The clay tobacco pipes from post-Fire contexts at SH74 were recorded in accordance with current MOLA practice and entered onto the Oracle database. The pipe bowls have been classified and dated according to the Chronology of London Bowl Types (Atkinson and Oswald 1969), indicated by the prefix AO.

*Table 15 Clay tobacco pipe quantification*

Total no. of fragments	351
No. of bowl fragments	77
No. of stem fragments	253
No. of mouthpieces	21
Accessioned pipes	3
Marked pipes	3
Decorated pipes	2
Imported pipes	
Complete pipes	
Wasters	
Kiln material fragments	
Boxes (bulk/accessioned)	2 boxes bulk, 3 accessioned items

The full collection of clay pipes from SH74 was recorded and reported by David Higgins. Only pipes recovered from post-Fire contexts are covered in this assessment. All pipes recorded appear to be of London manufacture.

Ten contexts have been dated only very broadly to c 1580–1910 as they yielded only stem fragments, as well as mouthpieces and small fragments from bowls of unidentifiable form. Identifiable bowl forms are divided mainly between types current c 1660–80 (x2 AO13, x12 AO15, x2 AO18 and x8 AO18A) and those made between c 1680 and c 1710 (x1 AO19, x8 AO20, x1 AO21 and x24 AO22). Most are milled to some extent but few are burnished and there are no marked or decorated pipes of this period. A small number of pipe bowls made c 1640–60 were also recorded (x1 AO9, x1 AO10 and x3 AO12). The largest collection of pipe fragments comes from context [88] (33 bowls, 66 stems, 5 mouthpieces), dating to c 1690–1710.

Significantly, there is evidence for clay pipe manufacture on the site or nearby. This is reported in detail by David Higgins (not included here). Wasted pipe fragments were recorded in several contexts, taking the form of highly fired and burnt pieces, many encrusted and fused deposits. There are also many pieces with traces of glaze, which is very unusual, especially with pipes fired in a muffle kiln rather than in saggars, as at SH74. This is shown by the large number of fragments with traces of muffle adhering. The overall quantity of waste fragments is relatively small, suggesting that the kiln was nearby, rather than on the site. The few wasted bowls suggest that this kiln was working between c 1640 and 1680.

The latest pipes recorded come from context [4] and date to c 1780–1820. These consist of three pipe bowls of type AO27. They each carry makers' marks moulded in relief on the sides of the heel, and two are decorated as well. One simply has a star on each side of the heel (<872>). The second (<873>) has the initials defaced, and is decorated with moulded ribbing around the bowl, and leaf seams. The third example (<874>) is incomplete but is decorated with Masonic emblems and marked with the initials IJ. They were found with mid to late 17th-century examples, with a latest date of c 1700–10, and could possibly be intrusive.

## 36 Potential of the data

### 36.1 General discussion of potential

The post-Fire clay pipes from SH74 have very good potential for further work as part of the wider waterfront project. The evidence for manufacture needs further examination and comparison with other contemporaneous kiln waste assemblages (particularly at BIG82).

## 37 Significance of the data

The clay pipes from SH74 are certainly significant in relation to the site within its general neighbourhood, and as part of the wider examination of the post-Fire waterfront sites. The evidence for manufacture is important in the context of the wider London pipe industry.

## 38 Publication project: aims and objectives

### 38.1 Revised research aims

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The following research aims are proposed for the clay pipes:

3. Can the source of clay pipe production evidenced on the site be located?
4. How does the evidence for clay pipe production compare with material from other excavated sites of the same date across London?

- 1.

### 38.2 Clay pipe method statement

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The clay tobacco pipes should be published as part of the post-Fire waterfront project, with the following tasks proposed:

7. Analysis and research – comparing the SH74 clay pipes with contemporaneous examples from other neighbouring waterfront deposits, and examining the evidence for pipe manufacture.
8. Writing report.
9. Illustration of 6 pipes was proposed by David Higgins. This should be supplemented by photography of stems and other pieces relating to manufacture, up to an overall total of 15 images (final selection to take place at analysis).

Total estimated specialist time: 3 days.

## 39 Bibliography

Atkinson, D R and Oswald, A, 1969 London clay tobacco pipes, *J British Archaeol Assoc* 32, 171–227

CLAY TOBACCO PIPES FROM EXCAVATIONS AT SEAL HOUSE,  
106–8 UPPER THAMES STREET, LONDON

D A Higgins

Excavations on this site in 1974 (SH 74) produced a total of 405 fragments of pipe (92 bowl, 292 stem and 21 mouthpiece fragments) from a total of 30 contexts. Half of these deposits contained only material ascribed to the seventeenth century and a further six deposits were late seventeenth to

early eighteenth century in date. In contrast only one deposit was considered to be of eighteenth century date and eight were of nineteenth century date. The majority of the pipe bearing deposits recovered were therefore laid down during the seventeenth or early eighteenth century. All of the pipes are of typical London styles and it is likely that all of them were made locally. Evidence for actual pipe production on or near the site was recovered from a number of deposits in the form of wasted pipes. Contexts 4, 9, 21, 22, 27, 63, and possibly also 6, 38, 64, 71 and 104 produced fragments of kiln waste. Contexts 21 and 22 produced the largest numbers of waste pieces (13+ and 30+ pieces respectively) and also appear to be uncontaminated with later material. The waste consists of highly fired and burnt pieces of pipe which often exhibit warping and encrustation with fused deposits. Many of the pieces show specks or patches of yellowish, and in one instance greenish (context 27), glaze. Traces of glaze on pipes is rare since it was not normal to have any glaze in the pipe workshops or kilns. Early seventeenth century pipes from Barnstaple in Devon were, however, fired in saggars in pottery kilns and wasters there do show runs of glaze. This practice of firing pottery above pipes in the same kiln was common in the Netherlands. What is unusual about the Seal House waste is that the pipes appear to have been fired in a muffle kiln rather than in saggars. The evidence for this comes from the fact that many of the fragments have traces of the clay muffle lining adhering to them. The muffle was a large chamber built within the outer walls of a pipe kiln and within which the pipes were stacked and sealed for firing. Waste pipes were typically embedded within this structure to reinforce it. These structures were much smaller than pottery kilns and no evidence has ever been found that they were used for anything other than firing pipes. The presence of glaze on the waste pieces therefore remains a mystery. The total number of waste pieces recovered (about 60-70) is relatively small, perhaps supporting the view that the actual kiln was elsewhere. Only a few bowls were considered to be wasters, but these suggest that the kiln was operating during the period c1640-80. From context 9 is a type 10 variant (Atkinson & Oswald 1969 typology) which appears to have been embedded in a muffle and there is an overfired type 12 in context 27 which is possibly a waster. The majority of waste bowls, however, appear to be spur types based on the type 15 bowl form (eg figs A & B). There are eight possible waste bowls of this type, one each in contexts 6 and 38, two in context 22 and four in context 4. In all about 70 seventeenth or early eighteenth century bowls were recovered from the site (types 5, 9, 10, 12, 13, 15, 18, 20 and 22), none of which bore any maker's mark or decoration. There was one seventeenth century stem in context 3 with traces of decoration on, the decoration consisting of milled bands around the stem. In contrast only about 10 later bowls were recovered (types 25, 27 and 29) which between them bore six or seven makers' marks, three of which also had moulded bowl decoration. Context 4 contains an abraded type 25 bowl (c1690-1740) which probably was marked originally and was the only pipe from the site with an internal bowl cross. This context also contained three type 27 bowls (c1790-1840) with moulded marks. One of these has leaf and flute decoration on the bowl and defaced initials on the heel sides, another has a typical London style of Masonic decoration on the bowl and the maker's initials IJ on the sides of the heel and the third has a plain bowl with the symbol mark of a six-armed star on either side of the heel. Another plain type 27 bowl in context 6 has the maker's initials WW (fig D) and there is a type 29 bowl (c1840-80) in context 37 with leaf and acorn decorated seams and the maker's initials H ?S on the sides of the heel. In context 39 is a type 25 bowl of c1700-50 with crowned initials on the sides of the heel. Context 39 is the only good eighteenth century deposit from the site. Unfortunately, the initials on the pipe are illegible, having been defaced in the mould. There is one final decorated piece, a bowl fragment of c1800-50 in context 71 with crude leaf decoration on the seams. The heel is missing.

Despite the fact that none of the pipes in it are marked or decorated, the most important deposit for our understanding of London pipes as a whole is context 88, the fill of a well. This is by far the largest group of pipes from the site and appears to have been deposited over a relatively short period of time (there is a limited range of bowl forms, the fragments of pipe are relatively large and there are many joins between them). The pipes almost all show signs of having been smoked and therefore represent domestic not kiln waste. The group contains the remains of 34 pipe bowls (one type 12, two type 15 (eg fig E), two type 18, four type 20 and twenty-five type 22). The type 20 and 22 pipes are usually dated to c1680-1710 which is later than the terminal date of c1680 for the other types. Either the dating for these types must be adjusted to allow for an overlap, for example in the period c1670-90, or all the earlier forms must be considered residual. This point will have to be reviewed after more work has been carried out but already other groups (for example Watling Court 1978 context 1618) suggest that types 18 and 20 should be contemporary. The presence of a large group of type 22 bowls allows them to be compared. It is notable that the majority of the pipes are only half milled (and in fact the average of the group is almost exactly half milled, the milling index being 2.09). Although only two type 18 pipes are present these are both fully milled (milling index 4.0), while the four type 22 pipes fall between the two, having an index of 2.75. The most important feature of the group, however, is the fact that it has been possible to reassemble two of the pipes (figs F & G). Complete seventeenth century pipes are extremely rare. It has only recently been possible to find enough examples to start making meaningful observations about the relationship between stem length, bowl form and chronological and status changes. One of the pipes has a complete stem of 273mm, while the other is just chipped at the end, but is also 273mm long. The damage is so slight that the original length can safely be assumed to have been c275mm. Both pipes therefore had stems of c10" in length. Previously only one example of a complete type 22 pipe has been noted, with a length of 13" (Atkinson & Oswald, 1969, 209). It is not clear though whether this is the stem length or the overall length of the pipe. The length of these pipes is in keeping with the shorter types of other late seventeenth century pipes which have been recorded (Higgins, 1987, 64). It is also very close to the lengths of the stylistically similar type 18 pipes from the Watling Court site (context 1618). It seems, therefore, that both type 18 and 22 pipes were amongst the 'common' grade (cheap and towards the shorter end of the range) produced for the late seventeenth century market. Typically they had stem lengths in the range of c10-11".

#### Illustrations

A SH 74 4, c1660-80, internally cut and bottered rim, three-quarters milled, cut spur, 7/64" bore. This pipe shows some signs of encrustation and is possibly a waste piece from a kiln. It is certainly of similar form to other waste pieces from the site.

B SH 74 4, c1670-90, bottered rim, fully milled, flattened base to spur, 7/64" bore. Unusually for a London pipe this bowl is burnished (good quality). It also has an unusually long and elegant form. The bowl has encrustations and glaze spots on it and is presumably a kiln waster made on or near the site.

C SH 74 4, c1660-80, bottered rim, not milled, cut heel, 7/64" bore. Plain, rather funnel shaped form.

D SH 74 6, c1780-1820, simple horizontally cut rim, heel not trimmed, 5/64" bore. Thin walled bowl with the moulded maker's mark WW.

E SH 74 88, c1660-90, internally cut and bottered rim, half milled, cut spur, 7/64" bore. A large variant of the type 15 bowl, part of the large group in context 88 and perhaps contemporary with the type 18, 20 and 22 pipes in it.

F SH 74 88, c1680-1710, bottered rim, milled, cut heel, 8/64" bore. The bowl is damaged but has been restored in this drawing. The stem is complete to the cut tip and has a length (measured underneath from the tip to the nearest part of the heel) of 273mm.

G SH 74 88, c1680-1710, bottered rim, half milled, cut heel, 8/64" bore. The stem is very slightly damaged at the tip but survives to a length (measured underneath from the tip to the nearest part of the heel) of 273mm. It is estimated to have been c275mm originally.

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First draft, 17 November 1988.

Revised 2 June 1989.

## **10. Animal bones from BIG82 and SH74**

### **ASSESSMENT OF THE ANIMAL BONES FROM THE POST-FIRE LEVELS IN BIG82 AND SH74**

Rebecca Gordon (April 2020)

#### **Introduction**

The animal bones from the post-fire (1666-1750) layers at Billingsgate (BIG82) and Seal House (SH74) were evaluated as part of a larger project to assess the archaeological

material from London's Waterfront 1666–1750. The remains from each site were examined to determine their potential to inform on domestic consumption, the provisioning of food and animal-related industries in the waterfront area 100 years after the Great Fire.

The Billingsgate assemblage produced 679 bone fragments from 110 contexts and Seal House produced 228 bone fragments from 14 contexts. At both sites, the animal bones were characteristic of food waste from households, although there was some evidence for industrial or animal processing waste at Billingsgate. The majority of the occupants' diet was provided by domestic mammals while wild species and fish supplemented the diet.

## Methodology

Identifiable bones and teeth and unidentifiable fragments were recorded by context. Bones and teeth with ageing (tooth wear and fusion) and metrical data for the major domesticates were also quantified. The state of preservation for each context was recorded using Harland et al. (2003) to determine the condition of the bones as excellent, good, fair or poor. General observations regarding butchery, burning, gnawing and ABGs (associated bone groups) were noted where applicable. There were no bones from samples, therefore small bones from mammals, birds and fish will be underrepresented.

## Taphonomy and bone modification

The BIG82 animal bone assemblage was well-preserved. Sixty-three per cent of contexts had bones in good condition and 35% were in fair condition (Table 1). Butchered bones were identified in 23 contexts which included chop marks to dismember the carcass and disjuncting for meat cuts. There were few incidences of gnawing suggesting the remains were quickly buried after disposal. Burnt bones were uncommon meaning the remains were not often exposed to domestic fires. No ABGs were observed, most of the bones were from animals processed for food. Several contexts [270, 271, 345, 441, 494, 602, 869] have bones with green stains from close contact with copper artefacts.

On the whole, the preservation of the SH74 animal bone was good, only a few bones exhibited a notable amount of abrasion and erosion (Table 1). Primary and secondary butchery evidence was frequent and observed in nine contexts. Gnawing marks were rare, which again implies rapid burial of the remains. There was no evidence of burning or ABGs in the assemblage. Bones from contexts [119, 168, 173] have green stains from copper artefacts.

## Results

### *BIG82 post-fire (1666-1750)*

The species recovered were mainly sheep/goat (*Ovis aries/Capra hircus*), followed by cattle (*Bos taurus*) with smaller quantities of pig (*Sus scrofa*) (Table 2). Together, dog (*Canis familiaris*) and cat made up four fragments. Wild mammals included hare (*Lepus* sp.) and rabbit (*Oryctolagus cuniculus*). Domestic birds included chicken (*Gallus gallus*) and goose (*Anser* sp.) from juvenile and adult birds. Two fish bones were found which are probably from the cod family.

A good amount of fusion data is available for sheep/goat with 93 bones (Table 3). Cattle fusion evidence is much less with 28 bones but the size is adequate to provide some information on cattle husbandry. Mandibles with tooth wear evidence for sheep/goat and cattle are negligible and will not contribute to the ageing evidence. There is limited metrical

data for cattle as their bones were heavily butchered. Sheep/goat has 39 bones that will provide information on livestock size and shape. There is a lack of ageing and metrical data for pig.

The assemblage primarily contains domestic food from features associated with the tenements. The presence of hare reveals some evidence of high-status consumption. The bones of calves, lambs and piglets may attest to the elite's preference for tender meat as well as evidence for small-scale animal rearing on-site or nearby. Egg-laying hens were identified and would have provided an additional source of protein. Context [310] had six complete sheep/goat metapodials which were found with food waste. Deposits of metapodials are typically associated with primary butchery or skin-processing. If these bones are associated with processing sheep or goat skins (i.e. tawying) these activities may have been carried out nearby.

#### *SH74 post-fire (1666-1750)*

Cattle and sheep/goat were the most common domestic species with lesser quantities of pig (Table 2). Hunted species included fallow deer (*Dama dama*), hare and rabbit. Chicken and goose were the main domestic birds, although duck (*Anas sp.*) and a possible swan (*Cygnus sp.*) were also noted. Fish bones were few, represented by four fragments.

There is a paucity of ageing for cattle, sheep/goat and pig which will limit the analysis of slaughter profiles and metrical data is too insufficient to explore changes in livestock size and shape (Table 3).

The composition of the Seal House assemblage is similar to Billingsgate as it consists predominately of food waste. Wild species such as hare and fallow deer indicates high-status consumption was taking place. The bones from juvenile calves, lambs and chicken were recovered suggesting that young animals were consumed and bred on-site.

#### **Potential and significance**

The post-fire animal bones from BIG82 and SH74 will help gain a better understanding of the inhabitants' diet. The largest quantity of bones came from BIG82 which has greater potential to inform on food and dietary preference, whereas SH74 has less than 100 identifiable bones for cattle, sheep/goat and pig, which will prevent detailed analysis. However, the data from BIG82 and SH74 can be combined to increase the sample size therefore studying the bones as a single assemblage. Wild species and the analysis of meat cuts from body parts should indicate status and wealth.

Ageing data from BIG82 will provide insights into how sheep/goat and cattle were husbanded. Again, it might be worth combining the ageing evidence from both sites to increase the size of the dataset. Sheep/goat metrical data can be used to examine changes in their size and shape from livestock 'improvements' and the introduction of new breeds. Further observation into the disposal of animal bones may demonstrate how space was utilised at the sites.

Comparison with contemporary sites in London can highlight potential patterns or variations in diet and animal husbandry at other sites around the city's waterfront.

Examples of sites for comparison:

Mariner House, London, 1650 – 1700 (Morris 2011)

Mark Browns Wharf, London, 1645-1800 (Locker 1996)

The remains are of local significance as they will provide evidence of the diet, economy and provisioning and add to the narrative of the occupants. They are not, however, of regional significance and will contribute little to the wider investigation of the waterfront as this assemblage is limited to select layers associated with the nearby tenements.

## Recommendations

It is recommended the investigation of the animal bones continue to full analysis and a basic report is produced for the site archive. This will ensure comparative data is available for future researchers interrogating other waterfront assemblages in London.

During the assessment of BIG82, human bone from St Botolph Billingsgate Church was found in the faunal assemblage. These should be separated and integrated with the rest of the human bone from the site.

## Tasks for full reporting

- Full recording and bone catalogue (3 days)
- Analysis and quantification (2 days)
- Writing/editing/research (3 days)

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- Morris, J. (2011) *The Faunal Remains from Mariner House, Crutched Friars, London, EC1 (MCF06)*. Unpublished Report. Osteology Section, Museum of London Archaeology.

## Animal bone assessment tables:

Table 1: Condition and taphonomic modifications for hand-collected bones from each context

Preservation	BIG82	SH74
Excellent	1	0
Fair	39	2
Good	69	12
Poor	1	0
Total	110	14

Table 2: Number of hand-collected identifiable and unidentifiable fragments from BIG82 & SH74

Taxa	BIG82	SH74
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Cattle	62	24
Sheep/goat	120	27
Pig	29	14
Dog	1	
Cat	3	
Deer		1
Bird	34	52
Fish	2	4
Other	13	8
Unident	415	98
<b>Total</b>	<b>679</b>	<b>228</b>

Table 3: Number of ageable and measurable specimens for cattle, sheep/goat and pig

Taxa	BIG82			SH74			Total
	Fusion	Tooth wear	Metrical	Fusion	Tooth wear	Metrical	
Cattle	28	2	6	7	1	2	10
Sheep/goat	93	2	39	13	0	6	19
Pig	10		1	6	0	0	6
<b>Total</b>	<b>131</b>	<b>4</b>	<b>46</b>	<b>26</b>	<b>1</b>	<b>8</b>	<b>35</b>

The assessment also includes one table each for BIG82 and SH74 which list the numbers per context (where bones are present) of the main domesticated species, deer, birds, fish and unidentified specimens.

## 11 Leather objects from SH74 and BIG82

Beth Richardson

Cattle leather shoe-parts <182> from the main fill SH B[88] consist of partial soles and vamp (upper) fragments from two or possibly three shoes. The two vamp fragments are basically strips (each about 2mm high and 10mm long) with torn or decayed upper edges from the lower area of the shoe just above the lasting margin. They have no diagnostic features. The soles are multi-layered (so post-medieval); one consists of a partial insole, midsole and tread sole (all from the 'seat' or heel area) of the shoe, one is a much smaller semi-circular heel (two thin layers joined with stitching around the perimeter) and one is a (?) midsole and tread sole seat/heel joined with two iron nails. Because they are so fragmentary none of these shoe parts can be closely dated by (eg) fastening details, but the complex methods of sole-construction and suggestion of stacked heels suggests that like the tobacco pipes they could date to the late 17th- or early 18th-century.

Cattle leather shoe-part <2120> from BIG82 [470] must be intrusive. It is a piece from a machine-stitched, front-opening 19th-century boot or shoe with six metal-lined eyelet-holes.

BIG <22> [630] is missing from the archive.

CBM Betts