# DROP SHAFT FOR SOUTHAMPTON BUILDINGS HIGHWAY IMPROVEMENT SCHEME, CITY OF LONDON WC2A

## APPROX. SITE CENTRE NGR: TQ 3110 8151

## An Archaeological Watching Brief

COMPASS ARCHAEOLOGY

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November 2015

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# *Abstract*

*An archaeological watching brief was undertaken between October 21st and October 23rd 2015 on a drop shaft at the south-eastern end of Southampton Buildings, City of London WC2A. This work was commissioned by the City of London (Environmental Enhancement, Department of the Built Environment) and undertaken by Compass Archaeology.*

*This watching brief uncovered the remains of a mid-18th-19th century brick drain composed partly of re-used 16th-17th century bricks at 2.02m below road level at its NE end (17.98OD). This cut into two earlier fills. The upper fill (3) contained clay pipe and pottery dating broadly from the 17th-early 18th century. The lower fill (4) contained two fragments of pottery, one dating to the mid-late 16th century. However, these contexts probably represented fills within part of a larger sand extraction or quarry pit, thus are likely to be contemporary with residual pottery.*

*Four brick samples were taken from the drain. Three of these dated to the 16th-17th century, but on the basis of evidence that one of these was likely previously exposed to high temperatures and then re-used, and that the fourth brick sample can be dated to c.1750-1850, it would seem that the drain was most likely constructed during this period and at least partly composed of re-used bricks. The existence of an intrusive piece of English porcelain dating to c.1745-1900 in context (3) also supports this theory.*

*A natural orangey-yellow silty sand was observed at the bottom of the shaft; at 0.5m below the base of the drain in the case of the SE section of the shaft, down to the limit of excavation (15.17OD).*

**Contents**

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## 1. Introduction

**1.1** This document forms a summary of the results of an archaeological watching brief undertaken between the 21st of October 2015 and the 23rd of October 2015 in the area of Southampton Buildings, City of London, WC2A (see fig.1) The works involved excavating one drop shaft as part of the Highway Improvement Scheme in the existing road at the south-eastern end of Southampton Buildings.

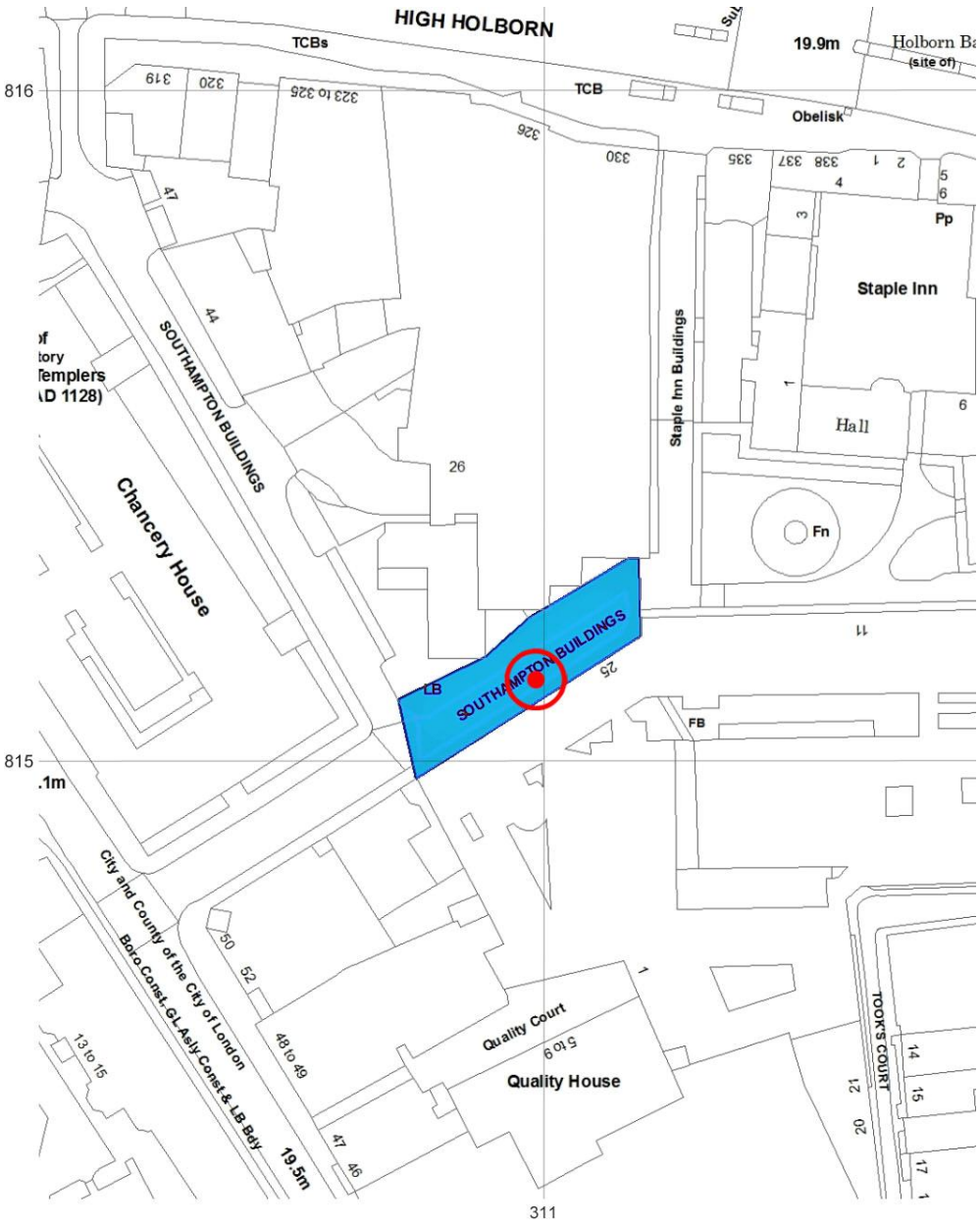


*Fig.1: Site location*

**1.2** The archaeological watching brief has been commissioned by the City of London Corporation (Environmental Enhancement, Department of the Built Environment).

## 2. Location, geology, and topography

**2.1** The shaft was located at the south-eastern end of Southampton Buildings, within the City of London, at NGR TQ 31099 81512, and is positioned approximately midway along and towards the southern side of the works area. It is 1.55m away from the light well to the SE and 1.85m along from its southern corner to the corner of the porch of 25 Southampton Buildings to the SE (see fig.2)

**2.2** According to the British Geological Survey (*North London, England & Wales, Sheet 256)* the site overlies part of the hackney gravel River Terrace Deposit. To the east this extends as far as the Fleet Valley, though just to the west it is replaced by the Lynch Hill Terrace.

**2.3** It is located just over 700m to the west of the Roman and medieval walled City, and a similar distance to the north of the Thames. The site lies on fairly level ground at approximately 20.0m OD, with a slight rise to the east.

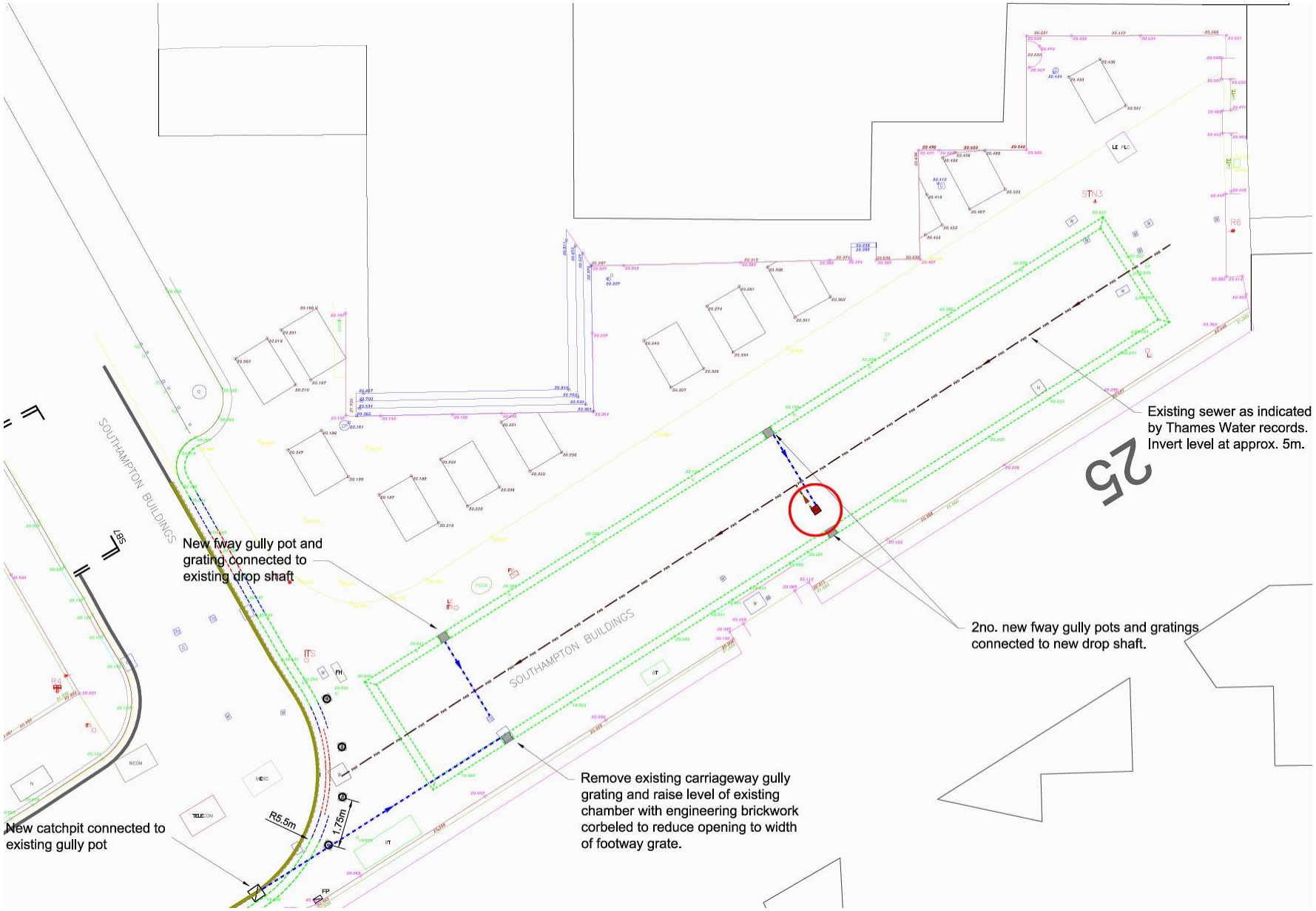


*Fig.2: Location of the new dropshaft highlighted on the Drainage Works plan (Dwg No: CoL/SB/DW/01)*

## 3. Archaeological and historical background

### 3.1 Prehistoric – Roman

The Roman road from Newgate to Silchester is known to have followed the line of High Holborn and New Oxford Street, thus passing about 100m to the north of the present works. Other evidence for extramural Roman activity in the area has been noted, including 2nd to 4th century burials to the east at Barnard's Inn and one possible burial (with reworked brickearth & Roman tile) at 15-17 Furnival Street/ 13 Took's Court. There is a further reference to a possible cremation urn – dark grey with a smooth lattice pattern and containing bones and a dish – found at Birkbeck Bank, Southampton Buildings, in 1905.

Limited archaeological investigation at 43-46 Southampton Buildings in 2000 (Telfer 2002, 4) revealed a single burial within a north-south ditch, some possibly disturbed cremation burials, and later Roman pits probably associated with agriculture.

### 3.2 Medieval

The settlement of Holborn is mentioned in Domesday (1086), and was probably centred around the crossing of the Fleet to the east; there is also a reference to *Holeburnstreete* itself (the old Roman road) in 1249, and development evidently spread along the road line westwards from the Fleet valley.

The shaft lies some 75m to the southeast of the site of the first church – the 'Old Temple' – of the Knights Templar, probably dating to the 1240s. The approximate location is shown on Fig.10 below and was noted during building works in 1876 and 1905, but was conclusively fixed in 2000 with the discovery during archaeological investigation of a substantial curved chalk foundation (*ibid*, 5-6). This appears to have formed the southernmost part of the circular nave wall. The Church was passed to the Bishop of Lincoln (c. 1161) following construction of the present Temple or Round Church off Fleet Street in the later 12th century, and was demolished *c* 1595.

The Bishop of Lincoln's residence subsequently passed to the Earls of Southampton – and hence becoming known as Southampton House (not to be confused with the later building of the same name in Bloomsbury Square). The house was apparently demolished and replaced by private tenements in the mid-17th century (Thornbury 1878).

Other probable medieval evidence in the area includes *c* 15th century brickearth quarries backfilled with domestic rubbish at 45 Quality Court, and other quarry pits recorded during a watching brief at 14 Cursitor Street. Both finds hint at the open nature of much of this area.

Apparently the earliest survey to give any detail of the area is the 'Agas' *Civitas Londinum* map of *c* 1562 (Fig.3). This also indicates that the site lay in an area open land behind the buildings fronting north onto Holborn – at this

stage there being no development immediately to the west, onto Chancery Lane. A similar view is given by Braun and Hogenberg's map of *c* 1572 (not illustrated).

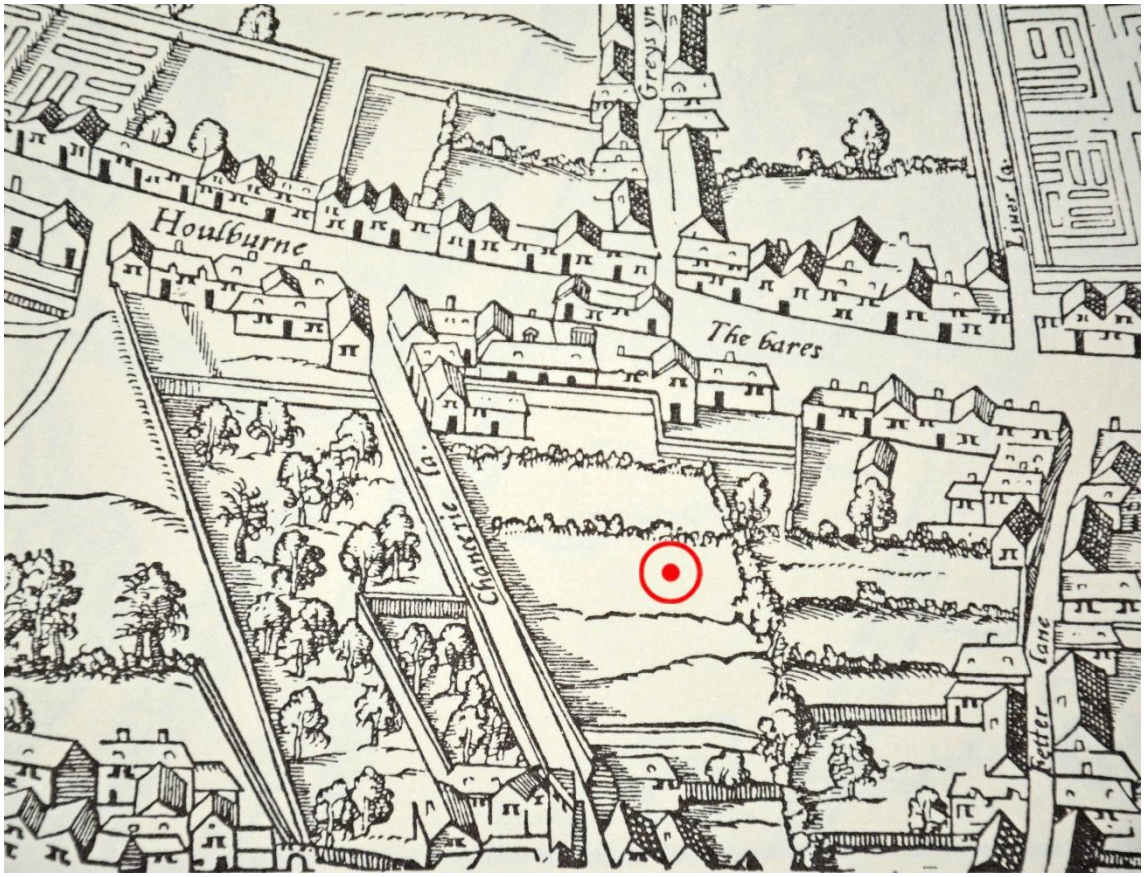


*Fig.3: Extract from the 'Agas' map of c1562, showing approximate site location*

By the time of Faithorne & Newcourt's map in 1658 the whole area is quite heavily built up (Fig.4). This part of the City was not reached by the Great Fire of 1666, which was stopped on a line to the east between the southern part of Fetter Lane and the Holborn Bridge over the Fleet (*cf.* Leake's Survey of 1667; not illustrated).


*Fig.4: Extract from Faithorne & Newcourt's map of 1658*

### 3.3 Post-Medieval

More detailed views of the area are given in 1676, 1746 and 1799 (Figs.5 to 7). Again these show the vicinity of the site as quite intensively developed, though with the large open garden of Staples Inn just to the east. More accurate surveys are provided by the Ordnance Survey maps of 1873 (not illustrated) and 1894 (Fig.8), with little difference in development for the immediate site area.

Later maps depict the Southampton Buildings pre- and post-war (Figs.9 & 10). The LCC bomb damage map (Sheet 62; not illustrated) shows that there was little or no damage in the immediate area, although adjacent plots were hit – with total destruction to the west and fronting onto Chancery Lane, and serious damage just to the east (around Staples Inn Hall and to the south).


*Fig.*5: *Extract from Ogilby and Morgan's survey of the City of London, c 1676*

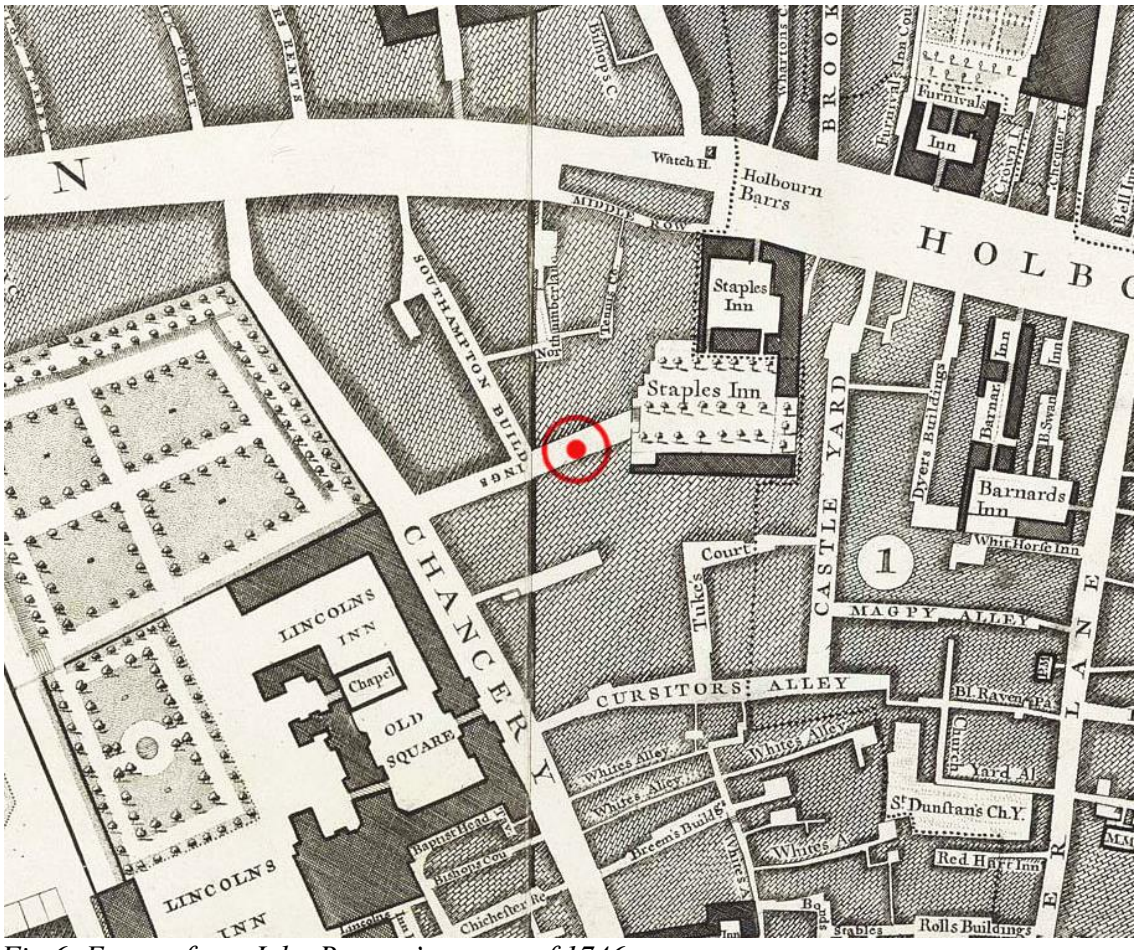


*Fig.6: Extract from John Rocque's survey of 1746*

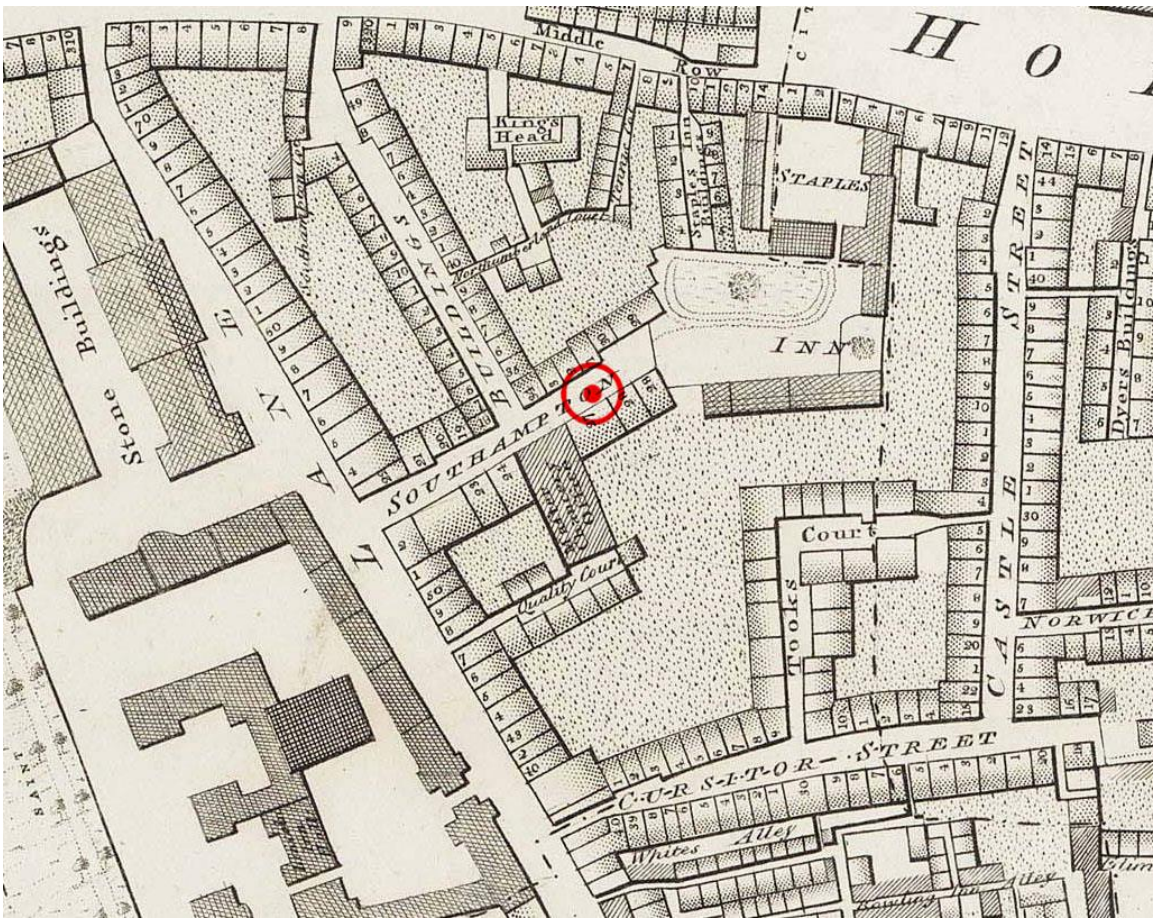


*Fig.7: Extract from Horwood's Map of London Westminster & Southwark, 1792-9*

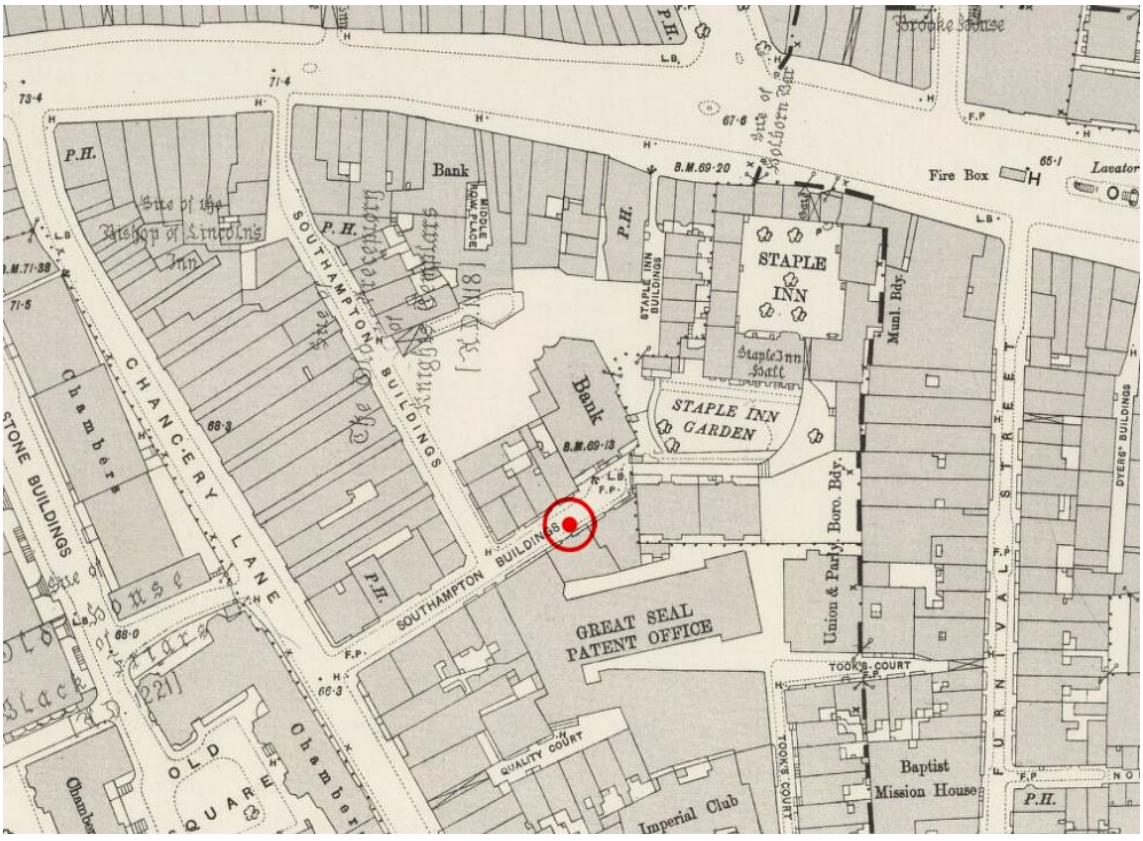


*Fig.8: Extract from the Ordnance Survey 5 foot: mile map of 1894-96*


*Fig.9: Extract from the Ordnance Survey 25-inch Edition of 1916*


*Fig.10: Extract from the Ordnance Survey 1:2500 map of 1951, Plan TQ 3181*

## 4. ARCHAEOLOGICAL RESEARCH QUESTIONS

The fieldwork presented an opportunity to address several research questions:

- What is the level of the natural ground surface, and what form does this take?
- Is there any evidence for Roman activity, including possible burials or cremations?
- What is the earliest evidence for post-Roman activity/occupation, and what form does this take? In particular, is there any evidence for medieval quarry pits (as recorded nearby) which may have preceded the development of this area?
- Is there any evidence for early development, including the construction of the present roadway (which appears to be shown on the Faithorne & Newcourt map of 1658), and how well can these be dated?
- What other evidence is there for other post-medieval activity or development?

## 5. Methodology

### 5.1 Fieldwork

The field and post-excavation work was carried out in accordance with Historic England guidelines (in particular, *Standards and Practices in Archaeological Fieldwork, Guidance Paper 3*). Works also conformed to the standards of the Chartered Institute for Archaeologists (*Standard and Guidance for an archaeological watching brief*). Overall management of the project was undertaken by a full Member of the Institute.

Adequate time was given for investigation and recording of the observed archaeological remains, although every effort was made to not disrupt the contractor's programme. During excavation spoil from archaeological levels was deposited separately, in such a way as to facilitate examination. The archaeological monitoring included an on-site photographic, drawn, and written record. The appropriate masonry and context sheets were completed for the shaft; recording the nature of exposed deposits and details of any archaeological finds and features. Where suitable, finds/samples were collected from deposits for dating purposes. Photographs, recording representative sections of the shaft and general site locations, were also taken.

The Client and the Assistant Director Historic Environment, City of London, were advised of the progress of the fieldwork.

## 5.2 Post-excavation work

The fieldwork was followed by off-site assessment and compilation of a report, and by ordering and deposition of the site archive.

Finds were treated in accordance with the appropriate guidelines. Finds and artefacts were retained and bagged with unique numbers related to the trench records. Assessment was undertaken by appropriately qualified staff.

Copies of this report will be supplied to the Client, the Assistant Director of City of London Historic Environment, and the Guildhall Library. A short summary of the fieldwork has been appended to this report using the OASIS Data Collection Form, and in paragraph form suitable for publication within the 'excavation round-up' of the *London Archaeologist*.

# 6 Results

The shaft will be discussed below (see fig.2 for its location). This will include a discussion of its stratigraphy, features, any finds, plus a selection of photographs.

## 6.1 The Shaft

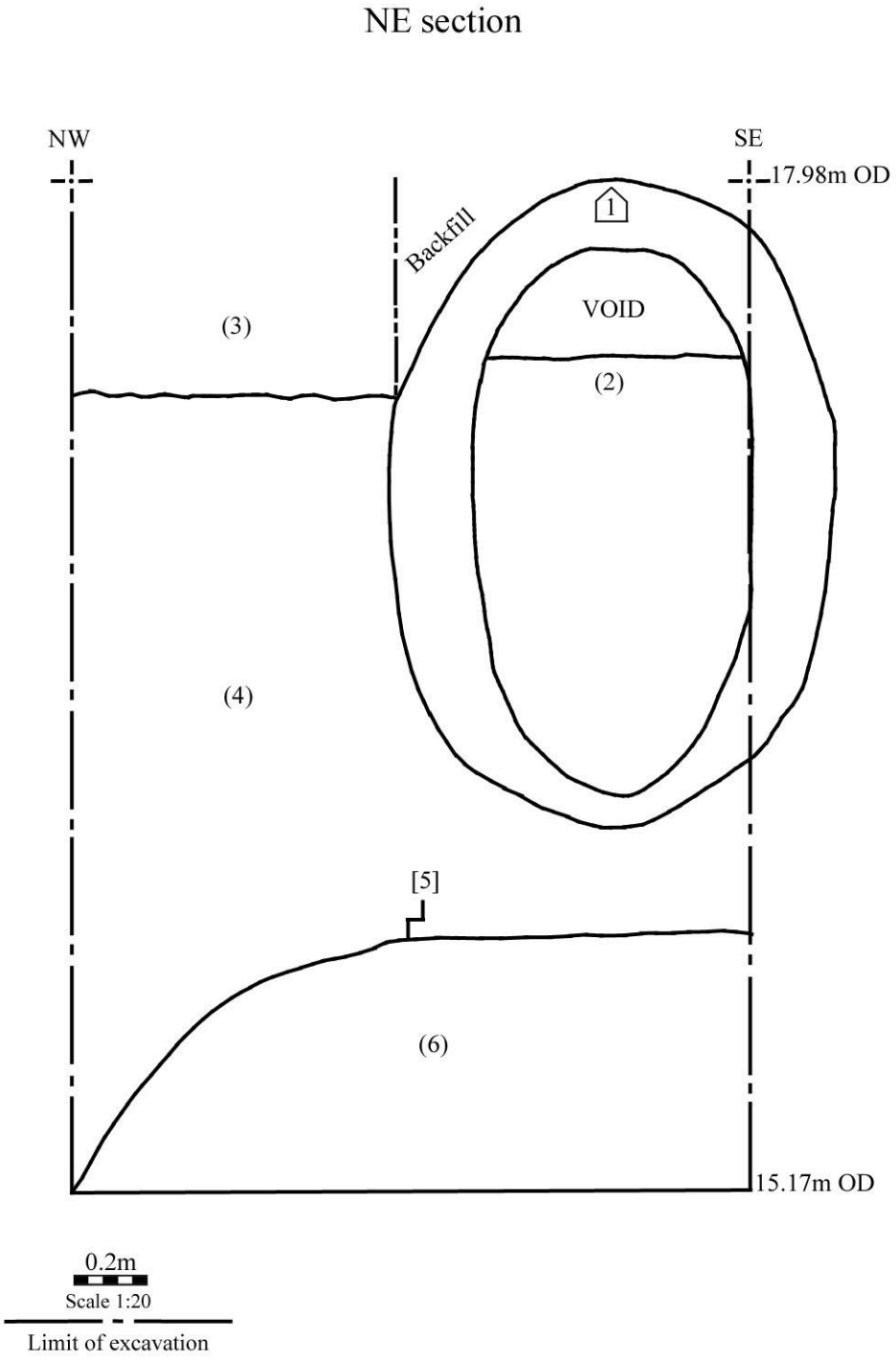


*Fig.11: Part of the drop shaft in section, facing NE. Present road level at c. 20.0m OD.*

*Fig.12: View of brick drain from top of drop shaft facing NE, with 0.5m scale. Most of the exposed extent of the brick drain running NE-SW can be seen, as well as the upper dark fill of context (3) to the north of the drain (left of image).*

The shaft was located at the south-eastern end of Southampton Buildings (see fig.2). It measured 1.88m NW-SE and 2.15m NE-SW, and was investigated on the 21st of October 2015 at a level of 17.43m OD at the north-eastern end. On the 22nd of October it was investigated to the level of 16.17m OD (eastern side) and on the 23rd of October to the level 15.17m OD.

**6.2** This brick drain, first excavated on the 21st of October, was exposed at a length of 1.56m running NE-SW, 0.55m deep at its NE end and 0.52m deep at its SW end.

Specialist analysis of four brick samples from the drain (see Appendix.III) indicates that three out of four were produced in the 16th-17th century, whilst one frogged brick sample recovered can be dated to between c.1750-1850. This combined with the observation that the fabric of one of the older bricks was much reduced in places so likely exposed to heat before being re-used, would suggest that older bricks were re-used in a drain that was potentially constructed at the turn of the 19th century.

*Fig.13: View of exposed drain, facing SE with 0.5m scale. The south-western extent of the drain appears to have been remade (right of image).*

*Fig.14: Oblique view of brick drain exposed after further digging, facing E with 0.5m scale, including disturbed area to the south-west (right of image)*

It appears that a portion of the drain at its south-western extent was potentially disturbed at some stage, as the bricks are not arranged in the same standardised form as they appear on the rest of the drain, as can be seen from fig. 14. The width across the exposed disturbed area was 0.53m, and it started 0.3m from the SE limit of excavation and extended to 0.49m below the top of the drain.

*Fig.15: Detail of brick drain 'disturbed' at its south-western extent, facing SE with 0.5m scale.*

By the 22nd of October 2015, a section through the drain itself had been exposed. In particular, the brick arch of the NE extent of the exposed drain could be clearly seen (see fig. 16 below). The brick ring itself measured c.0.23m across at the top, and roughly 0.1m at the bottom where there was only one brick course. In addition, the internal drain height was 1.51m. The width across the internal drain was 0.76m at its NE exposed extent and 0.77m at its SW exposed extent.

In figs.16 and 17 context (2) can be seen which reaches a depth of roughly 1.3m in the interior of the drain at the NE end. Some of this fill, especially at the SW end, may represent some kind of backfill which occurred when a portion of the SW end of the drain was disturbed.

*Fig. 16: Detail of brick arch of the NE extent of the exposed drain facing NE with 0.8m scale*

*Fig.17: View of brick arch of the NE extent of the exposed drain, and the NW side of the drain (left of image )which measures 0.23m wide, facing NE with 1m scale*

*Fig.18: Further view of brick drain arch and side, facing NE with 0.8m scale*

*Fig.19: Detail of brick drain bottom, NE at top of frame with 1m scale*

*Fig.20: Detail of ceramic square drain inlet in the side of brick drain, facing N and partially exposed in section*

In the north-western side of the brick drain, evidence for a smaller connecting drain with a ceramic lining was found near the north-eastern extent of excavation. The drain surround itself, seen above in fig. 20, was 0.26m wide and 0.28m high. This appeared to contain a smaller circular pipe with a metal cover at the revealed end. Its form and material is indicative of a date contemporary with the brick drain. A hinge can be seen in the above image which would have allowed the drain cover to open and close according to pressure on either side.

*Fig.21: View of the absolute extent of the NE end of the drain beyond the limit of excavation, facing NE*

Figure 21 shows that the drain may have gone through several stages of alteration. The view of the drain beyond the limit of the drop shaft excavation at the SE end shows that it might abut a wall running NNW-SSE. The existence of a lower arch in this wall could suggest that the drain within the area of excavation may represent an enlargement of drain facilities. A lintel is also present which may have been an attempt to secure the structural integrity of the smaller arch. Another drain in the NW wall can also be seen, although this seems to be of a different form than that seen in fig.20.

*Fig.22: View of the absolute extent of the SW end of the drain beyond the limit of excavation, obscured by debris, facing SW. The NE end of the drain was chosen as the representative section of the drain for all photos as it was less obscured*

**6.3** The drain cuts into two earlier dark fills, contexts (3) and (4), though no construction cut was readily visible. Context (3) was artefact-rich, containing animal bone, CBM, clay pipe and pottery. Context (4) also contained animal bone, CBM and pottery, but with much fewer examples. Analysis of the clay pipe recovered from context (3) (see Appendix. IV) indicates they can be generally dated to the 17th century, whilst the pottery assemblage from the same context is generally dated to the early 18th century, and that of the earlier context (4) to the mid-late 16th century. Marks indicating chopping and dismemberment on the animal bones from both contexts entails they were processed for food production (see Appendix V). Their occurrence corresponds with the idea that (3) and (4) constituted backfill deposits.

On the 23rd of October, the lower dark fill of context (4) appearing below the base of the drain had been revealed, and this reached to 0.5m below the base of the brick drain in the eastern corner of the SE section of the shaft, but dipping down to c.0.7m towards the SW (see fig.24) and at only c.0.3m below the base of the drain in the NE section. Below this, the silty orangey-yellow natural sand of context (6) can be seen. In the NW section of the shaft, context (4) dives down to a depth of 1m below the level of the base of the drain (see fig.25 below). This fill contained some pottery, CBM and animal bone fragments. Both this deposit (4) and the overlying (3) appear to be fills within a large cut feature, extending in all directions beyond the limits of the dropshaft and dug into the natural sand. This is most likely to be a quarry pit, of which there are a number of post-medieval examples in the area. In this particular case the finds indicate that backfilling took place in the early 18th century, although there was also some earlier residual material.

*Fig. 23: View of NE section of the bottom of the shaft, facing NE. The orangey-yellow natural can clearly be seen, as well as some of the darker fill above.*

*Fig.24: Oblique view of bottom of shaft, with the dark fill (4) in the SE section visible (upper right-hand corner of image), facing E with 0.6m scale*

*Fig.25: Oblique view of the bottom of the shaft, with the dark fill (4) diving down to the NW visible (upper left of image), facing N with 0.6m scale*

## 7. Conclusions

This watching brief uncovered the remains of a mid-18th-19th century brick drain composed partly of re-used 16th-17th century bricks at 2.02m below road level at its NE end (17.98mOD). This cut into two earlier fills. The upper fill (3) contained clay pipe and pottery dating broadly from the 17th-early 18th century. The lower fill (4) contained two fragments of pottery, one dating to the mid-late 16th century. These deposits, which the drain cut into, appear to represent a backfill within a large and earlier cut feature which was most likely a 17th-early18th century quarry pit. Earlier pottery within contexts (3) and (4) is residual.

Four brick samples were taken from the drain. Three of these dated to the 16th-17th century, but on the basis of evidence that one of these was likely previously exposed to high temperatures and then re-used, and that the fourth brick sample can be dated to c.1750-1850, it would seem that the drain was most likely constructed during this period and at least partly composed of re-used bricks. The existence of an intrusive piece of English porcelain dating to c.1745-1900 in context (3) also supports this theory.

A natural orangey-yellow silty sand was observed at the bottom of the shaft; at 0.5m below the base of the drain in the case of the SE section of the shaft, down to the limit of excavation (15.17OD).

# 8 BIBLIOGRAPHY

## 8.1 Digital Sources

British History Online www.british-history.ac.uk

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**Appendix I**: Oasis Data Collection Form

## OASIS ID: compassa1-229616

### Project details

| | |
|---|---|
| Project name | Drop shaft for highway improvement scheme, Southampton Buildings, City of London |
| Short description of the project | An archaeological watching brief was undertaken on a drop shaft at the south-eastern end of Southampton Buildings as part of a highway improvement scheme. This watching brief uncovered the remains of a mid-18th-19th century brick drain composed partly of re-used 16th-17th century bricks. This cut into two earlier fills. The upper fill (3) contained clay pipe and pottery dating broadly from the 17th-early 18th century. The lower fill (4) contained two fragments of pottery, one dating to the mid-late 16th century. These deposits, which the drain cut into, appear to represent a backfill within a large and earlier cut feature which was most likely a 17th-early 18th century quarry pit. Earlier pottery within contexts (3) and (4) is residual.<br>A natural orangey-yellow silty sand was observed at the bottom of the shaft; at 0.5m below the base of the drain in the case of the SE section of the shaft, down to the limit of excavation (15.17OD). |
| Project dates | Start: 21-10-2015 End: 23-10-2015 |
| Previous/future work | No / No |
| Any associated project reference codes | SHB15 - Sitecode |
| Type of project | Recording project |
| Site status | Local Authority Designated Archaeological Area |
| Current Land use | Transport and Utilities 1 - Highways and road transport |
| Monument type | DRAIN Post Medieval |
| Significant Finds | CLAY PIPE Post Medieval |
| Significant Finds | POT Post Medieval |
| Investigation type | "Watching Brief" |
| Prompt | Direction from Local Planning Authority - PPS |

### Project location

| | |
|---|---|
| Country | England |
| Site location | GREATER LONDON CITY OF LONDON CITY OF LONDON Southampton Buildings |
| Postcode | WC2A |
| Study area | 4 Square metres |
| Site coordinates | TQ 31099 81512 51.516800172417 -0.110357868991 51 31 00 N 000 06 37 W Point |

### Project creators

| | |
|---|---|
| Name of Organisation | Compass Archaeology |

| | |
|---|---|
| Project brief originator | City Archaeologist |
| Project design originator | Compass Archaeology |
| Project director/manager | Geoff Potter |
| Project supervisor | Florence Smith Nicholls |
| Type of sponsor/funding body | City of London Corporation |
| Name of sponsor/funding body | City of London |

## Project archives

| | |
|---|---|
| Physical Archive recipient | Museum of London Archive |
| Physical Contents | “Animal bones,” "Ceramics" |
| Digital Archive recipient | Museum of London archive |
| Digital Contents | “Animal bones,” "Ceramics" |
| Digital Media available | "Images raster / digital photography","Text" |
| Paper Archive recipient | Museum of London Archive |
| Paper Contents | “Animal bones,” "Ceramics" |
| Paper Media available | "Context sheet","Correspondence","Photograph","Report","Section" |

## Project bibliography 1

| | |
|---|---|
| Publication type | Grey literature (unpublished document/manuscript) |
| Title | Drop shaft for Southampton Buildings Highway Improvement Scheme, City of London, WC2A: An Archaeological Watching Brief |
| Author(s)/Editor(s) | Smith Nicholls, F |
| Date | 2015 |
| Issuer or publisher | Compass Archaeology |
| Place of issue or publication | 5-7 Southwark Street, London, SE1 1RQ |
| Description | Short report detailing the results of the watching brief. This includes discussion of the background, the shaft, photographs, a plan of the location of the shaft, finds analysis, and interpretations / conclusions. |

| | |
|---|---|
| Entered by | Florence Smith Nicholls (mail@compassarchaeology.co.uk) |
| Entered on | 9 November 2015 |

## Appendix II: Pottery report

*Paul Blinkhorn*

The pottery assemblage comprised 57 sherds with a total weight of 1703g. It was recorded using the conventions of the Museum of London Type-Series (eg. Vince 1985), as follows:

| | |
|---|---|
| **BORDY:** | **Yellow-glazed Border Ware**, 1550-1700. 3 sherds, 120g. |
| **BORDG:** | **Green-Glazed Border Ware**, 1550-1700. 15 sherds, 409g |
| **COLS:** | **Colchester Slipped Ware**, 1400-1550. 1 sherd, 8g. |
| **ENPO:** | **English Porcelain**, 1745-1900. 1 sherd, 14g. |
| **FREC:** | **Frechen Stoneware**, 1550 – 1700. 1 sherd, 59g. |
| **LONS:** | **London Stoneware**, 1670 – 1900. 1 sherd, 107g |
| **MG:** | **Mill Green Ware**, 1270 – 1350. 1 sherd, 2g. |
| **PMBL:** | **Post-medieval Black-glazed Redware**, 1600 – 1900. 3 sherds, 84g. |
| **PMR:** | **Post-medieval Redware**, 1580 – 1900. 12 sherds, 251g. |
| **PMSR:** | **Post-Medieval Slipped Redware**, 1480 – 1650. 1 sherd, 17g. |
| **STMO:** | **Staffordshire-type mottled brown-glazed ware**, 1650-1800. 5 sherds, 444g. |
| **TGW:** | **English Tin-Glazed Ware**, 1600-1800. 11 sherds, 168g. |
| **TGW SPNG** | **Tin-Glazed ware with sponged decoration**, 1700 – 1740. 2 sherds, 20g. |

The range of ware-types is typical of sites in the London area. A few fragments of residual medieval wares were present in the form of single sherds of COLS, MG, and MPUR, and, given the date of the group, most, if not all the Border Ware is also likely to be either redeposited or curated. Overall, some of the sherds are fairly large and well-preserved while others are smaller, suggesting further that there is a residual element to the group.

All the pottery occurred in context 3, other than a single sherd of BORDG (14g) (*fig.26*) in the form of a knop from a lid and another of MG (2g), both of which occurred in context 4, suggesting a date of the mid-late 16$^{th}$ century from the former.

The group of material from context 3 appears to be part of a dump of domestic pottery, and largely table-wares. The Border Ware assemblage was mainly plates and bowls, as was the tin-glazed ware (TGW). The PMR group was very fragmentary, but did include a foot and a handle from a pipkin or cauldron. The sherds of STMO were all from the base of a single large storage vessel. Drinking pottery was rather scarce other than a single tyg represented by the sherds of PMBL, and the stonewares, both from bottles. The single sherd of ENPO is from a tea-pot.

A fragment of a heavily-worn tin-glazed floor tile (38g) was also present, along with another, orange-glazed earthenware example (63g) in a hard, fine orange fabric. The former was 15mm thick, the latter 23mm.

The presence of the sherd of ENPO would suggest an assemblage date in the mid-late 18th century, but this seems a little late given that common pottery types of that period such as Creamware are entirely absent, and thus it may be intrusive. If this is the case, then the latest pottery from the site is the two sherds of TGW SPNG (fig.27), both from the same vessel, suggesting an overall date of the early decades of the 18th century for the group.

*Fig.26: A fragment of green-glazed border ware from context (4), dating to the period 1550-1700*

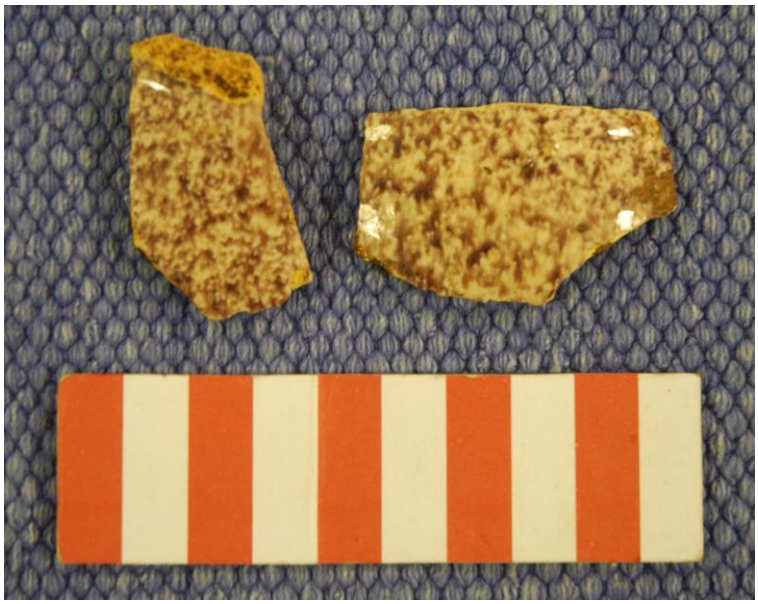

*Fig.27: Two fragments of tin-glazed ware with sponge decoration from context (3), dating to the period 1700-1740*

**Appendix III: Brick report: Context [1]**

*Sue Pringle*

Bricks A, B and D are unfrogged and appear to be in local red fabric 3033 which has a date range in London of c. 1450/80 to 1666/1700. Brick B seems to have a slightly indented margin to the upper face, typical of this brick type. The bricks are likely to be of 16th or 17th century date. The fabric of brick D appears to be very reduced in places – the sample chip is completely black – suggesting that it may once have been exposed to heat and subsequently re-used in the drain.

Brick C has a frogged base with an illegible stamp. It appears to be in a local post-fire red fabric with calcareous lenses and yellow skin, fabric 3034, which has a date range of c. 1666 to 1900. The presence of a frog indicates a date after c.1750, probably between c. 1750 and 1850.

| Brick | Height | Width | Depth | Weight |
|---|---|---|---|---|
| A. Red stock complete | 21.5cm | 10cm | 5.7cm | 2.3kg |
| B. Red stock slightly damaged | 22cm | 9.7cm | 6.2cm | 2.1.kg |
| C. Yellow stock | 23.3cm | 10.5cm | 6.5cm | 2.4kg |
| D. Red stock in two pieces | 21.8cm | 10cm | 6cm | 2.2kg |

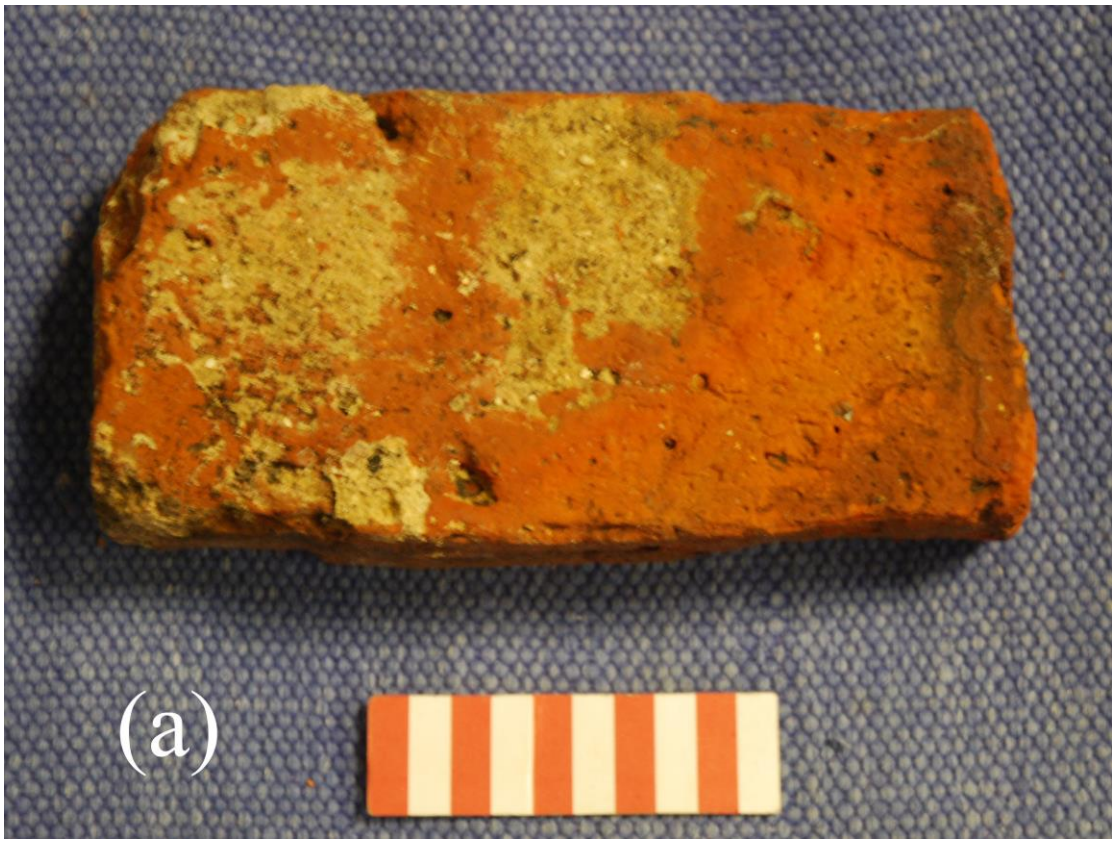


*Fig.28: Brick sample A*

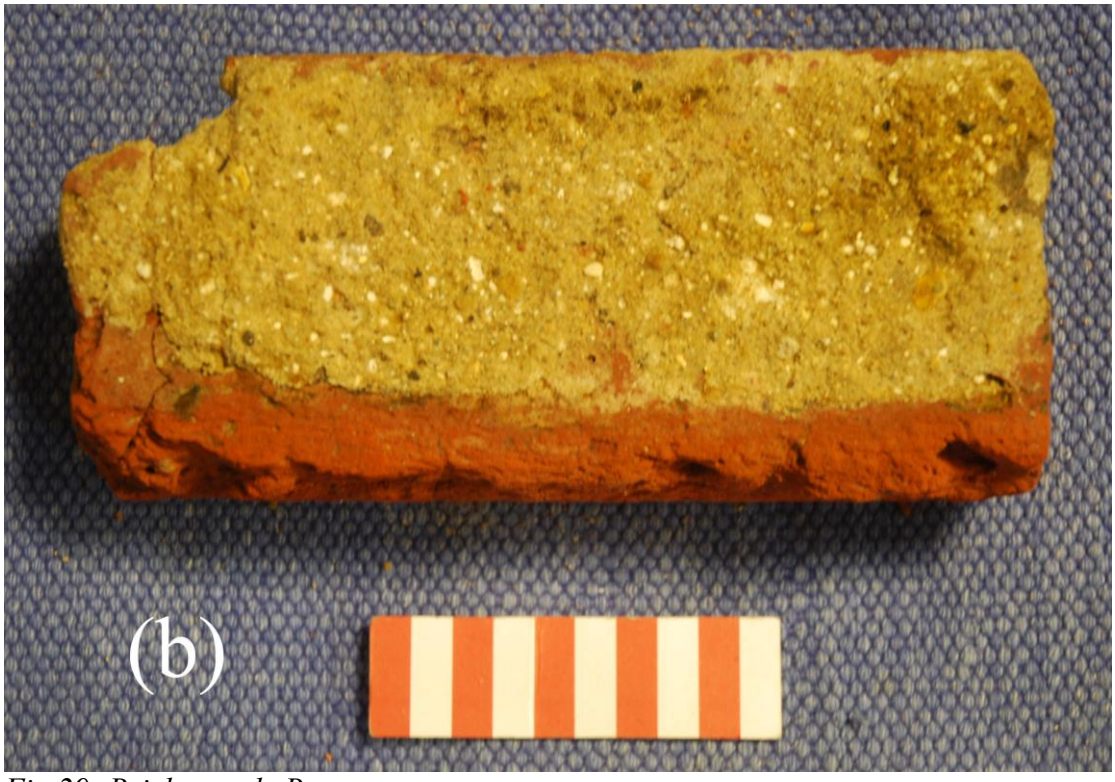


*Fig.29: Brick sample B*

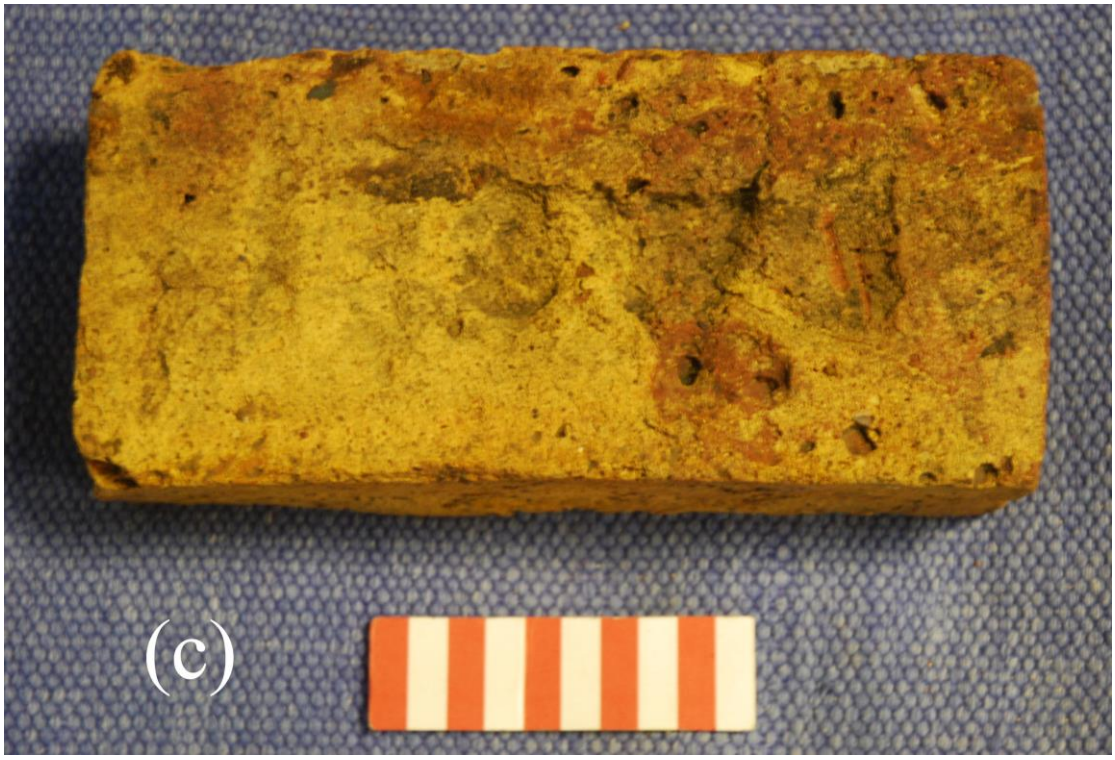

*Fig. 30: Brick sample C*

*Fig. 31: Brick sample D*

**Appendix IV: Clay tobacco pipe report**

*Florence Smith Nicholls*


*Fig. 32: Four clay pipes with complete or near-complete bowls from context (3), dating from 1610-1680*

A total of 27 clay pipe fragments were recovered from context (3) in the drop shaft. This included 4 complete or semi-complete bowls with partial stems attached, one partial bowl and 22 partial stems. All four diagnostic clay pipe fragments with bowls and stems attached seen above in fig. 32 can be dated approximately to the 17th century, with (b), (c) and (d) all dated to 1610-1640 and (a) potentially dating to 1660-1680. The partial bowl fragment is dated to 1640-1660.

The state of preservation for the assemblage is relatively standard, and their general 17th century date reflects the interpretation of context (3) as a 17th-early 18th century quarry pit fill.

***Key:***

***Abbreviations across head of table***

**BH** = Bowl height
**BW** = Bowl width
**SL** = Stem length
**SW** = Stem width
**BS** = Borehole size

***Abbreviations within text of table***

**BA** = On bowl, facing away from the smoker
**BF** = On bowl, facing smoker
**BL** = On bowl, on left hand side as smoked
**BO** = On bowl, covering the entire bowl
**BR** = On bowl, on right hand side as smoked
**H** = On base of hill
**SH** = On sides of heel
**SL** = Stamp or decoration along the length of stem, on left side as smoked
**SR** = Stamp or decoration along the length of stem, on right side as smoked
**SS** = On sides of spur
**SP=** On base of spur

All bowls have been identified using the following guides:

* = Atkinson, D and Adrian, O, (1969), *'London Clay Tobacco Pipes' Journal of the Archaeological Association. Third Series Vol.XXXII*

^ = Oswald, A, (1975), Clay Pipes for the Archaeologist, British Archaeological Reports 14

All dates are approximate, all measurements are given in millimetres, (mm).

| Context | Form | Type | Date | Count | BH | BW | SL | SW | BS | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| (3) | Slightly damaged bowl with partial stem | 13* | 1660-1680 | 1 | 23 | 20 | 14 | 8 | 2.5 | Milling on rim and greatly discoloured due to burning; (a) in fig.26 |
| (3) | Slightly damaged bowl with partial stem | 5* | 1610-1640 | 1 | 25 | 20 | 19 | 8 | 3.5 | Milling on rim; (b) in fig.26 |
| (3) | Bowl with partial stem | 5* | 1610-1640 | 1 | 23 | 20 | 22 | 9 | 3 | Flat heel and milling on rim; (c) in fig.26. |
| (3) | Slightly damaged bowl with partial stem | 5* | 1610-1640 | 1 | 23 | 18 | 41 | 8 | 3 | Maker's mark on H, potentially a T or fleur-de-lys; (d) in fig.26. |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| (3) | Partial bowl | 9 | 1640-1660 | 1 | 25 | 20 | - | - | 3.5 | Milling on rim and possible incisions on SP |
| (3) | Partial stem | - | - | 1 | - | - | 69 | 7 | 3 | |
| (3) | Partial stem | - | - | 1 | - | - | 77 | 6.5 | 3 | Burnt at end |
| (3) | Partial stem | - | - | 1 | - | - | 63 | 6 | 4 | |
| (3) | Partial stem | - | - | 1 | - | - | 55 | 7 | 3.5 | |
| (3) | Partial stem | - | - | 1 | - | - | 52 | 8 | 3.5 | |
| (3) | Partial stem | - | - | 1 | - | - | 50 | 7 | 3.5 | |
| (3) | Partial stem | - | - | 1 | - | - | 48 | 8 | 2.5 | |
| (3) | Partial stem | - | - | 1 | - | - | 46 | 8 | 3 | |
| (3) | Partial stem | - | - | 1 | - | - | 45 | 7.5 | 3 | |
| (3) | Partial stem | - | - | 1 | - | - | 43 | 9 | 3 | |
| (3) | Partial stem | - | - | 1 | - | - | 43 | 6 | 3.5 | |
| (3) | Partial stem | - | - | 1 | - | - | 42 | 8 | 4 | |
| (3) | Partial stem | - | - | 1 | - | - | 40 | 6 | 3.5 | |
| (3) | Partial stem | - | - | 1 | - | - | 35 | 7 | 3 | |
| (3) | Partial stem | - | - | 1 | - | - | 31 | 8 | 3.5 | |
| (3) | Partial stem | - | - | 1 | - | - | 31 | 6.5 | 2.5 | |
| (3) | Partial stem | - | - | 1 | - | - | 30 | 8 | 3 | |
| (3) | Partial stem | - | - | 1 | - | - | 30 | 8 | 3 | |
| (3) | Partial stem | - | - | 1 | - | - | 29 | 8 | 3 | |
| (3) | Partial stem | - | - | 1 | - | - | 28 | 6 | 3 | |
| (3) | Partial stem | - | - | 1 | - | - | 28 | 6 | 3 | Burnt at end |
| (3) | Partial stem | - | - | 1 | - | - | 23 | 6 | 3 | |

## Appendix V: Animal bone report

*Valentina Bernardi*

### Introduction

The bone assemblage was recovered from a drop shaft, and appears to represent the fills of a disused quarry pit. It is formed by 29 specimens (Table 1), belonging to the following taxa: Cattle, ovicaprines, swine, and birds. Chopping and dismembering marks on the bones, suggest that the bones were processed for food production. Weathering is slight to moderate, quite a lot of the breakage seems to have taken place when bones were already dried.

### Methodology

The animal bones were assessed by direct observation. For each animal bone fragment the following characteristics were recorded where applicable: context, element, taxon, fusion, side, fragmentation, modification and weathering. The identification of taxa and elements was carried out following Hillson (1992) and Schmidt (1972). Estimation of age by observation of the fusion stage of the epiphyses was recorded following Silver (1969). The positions of butchery marks and fragmentation were recorded according to Binford (1981). Evidence of gnawing and condition were also recorded.

Because of the small number of specimens and because most of the cows and sheep bones in this assemblage do not present diagnostic zones, the NISP (Number of Identified Specimens) and MNI (Minimum Number of Individuals) quantification methods were preferred to the DZ (Diagnostic Zones) methods, as the latter would have ignored over 50% of the assemblage recovered thus limiting even more the information that could be gathered from the assemblage.

### Context (3)

Constituted by 25 specimens, 8 belonging to cattle, 2 to pigs, 9 to ovicaprines, and 5 to birds. Epiphyseal fusion indicates that some of the cattle bones belonged to juvenile individuals.

**Context (4)**

Constituted by 3 cattle and one ovicaprine specimen, chopping marks are present on the cattle remains. Reactive new bone growth was noted on the spine of a cow's vertebra.

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Schmidt, E. 1972. *Atlas of Animal Bones for Prehistorians, archaeologist and quaternary geologist.* Amsterdam: Elsevier Science LTD.

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| context | taxon | side | bone part | fusion | weathered | fragmentation | butchery | gnaw | burned | pathology | other | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | Bos | left | prox tibia | unfused | 1 | end plus shaft | | | | | | | | | | |
| 3 | Bos | unsided | rib | unfused | 1 | facets and body | | | | | | | | | | |
| 3 | Bos | unsided | rib | no observable | 1 | body fragment | | | | | | | | | | |
| 3 | Bos | unsided | rib | no observable | 1 | body fragment | | | | | | | | | | |
| 3 | Bos | unsided | long bone | no observable | 1 | shaft splinter | chopping | | | | spiral fracture | | | | | |
| 3 | Bos | inrelevant | vertebra | fused | 1 | part of body plus spine | chopping | | | | | | | | | |
| 3 | Bos | unsided | rib | unfused | 1 | neck plus body | | | | | | | | | | |
| 3 | Bos | unsided | rib | no observable | 2 | body splinter | | | | | | | | | | |
| 3 | Ovis | unsided | rib | no observable | 1 | body fragment | chopping | | | | | | | | | |
| 3 | Ovis | unsided | rib | no observable | 1 | body fragment | | | | | | | | | | |
| 3 | Ovis | left | scapula | no observable | 1 | neck and spine | | | | | | | | | | |
| 3 | Ovis? | unsided | horn core | | 2 | fragment | | | | | | | | | | |
| 3 | Ovis | inrelevant | vertebra | fused | 1 | half body and spine | chopping | | | | chopped in half verticaly | | | | | |
| 3 | Ovis | unsided | rib | fused | 1 | neck plus part fo body | | | | | | | | | | |
| 3 | Ovis | unsided | rib | no observable | 2 | body fragment | | | | | | | | | | |
| 3 | Ovis | unsided | rib | no observable | 1 | body fragment | | | | | | | | | | |
| 3 | Ovis | unsided | rib | no observable | 1 | body fragment | | | | | | | | | | |
| 3 | Sus | right | D femur | fused | 1 | one end plus shaft | filleting | | | | | | | | | |
| 3 | MSM | unsided | vertebra? | no observable | 1 | | | | | the fragment present a expanded diploe and consequent disapperance of the cortex. | | | | | | |
| 3 | bird | unsided | long bone shaft | no observable | 1 | shaft | | | | | | | | | | |
| 3 | bird | unsided | long bone shaft | no observable | 1 | shaft | | | | | | | | | | |
| 3 | bird | unsided | tibiotarsus | fused | 1 | complete | | | | | | | | | | |
| 3 | bird | unsided | coracoid | fused | 1 | complete | | | | | | | | | | |
| 3 | bird | unsided | hunerus | fused | 1 | complete | | | | | | | | | | |
| 4 | Bos | unsided | rib | no observable | 1 | body fragment | | | | | | | | | | |
| 4 | Bos | inrelevant | vertebra | fused | 1 | half body and spine | chopping | | | reactive new bone groth on the spine | | | | | | |
| 4 | Bos | unsided | rib | no observable | 2 | body fragment | | | | | | | | | | |
| 4 | Ovis | unsided | rib | no observable | 1 | | | | | | | | | | | |

Table 1: List of all elements by context