

London's Waterfront and its World, 1666–1800

John Schofield and Stephen Freeth

with contributions by
I M Betts, Lyn Blackmore, Julian Bowsher,
Jacqui Pearce and Alan Pipe

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Cover illustrations:

Front: Admiring the view of the City from Somerset Stairs, a detail of a painting of 1750–1 by Antonio Canaletto (Royal Collection, RCIN 400504)

Back: Cowrie shells found in the warehouses of about 1700 excavated on the Billingsgate site, evidence of London's involvement in the slavery trade (photo Andy Chopping)

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Summary

There are very few traces of the period 1666 to 1800 remaining in central London today; they must be uncovered and reconstructed by a combination of archaeology and documentary research.

This monograph brings together the archaeological and documentary evidence for a number of properties on four waterfront sites excavated by the Museum of London in Thames Street in the City of London in 1974–84: from west to east, Swan Lane (site A) and Seal House (site B), a short distance above the medieval and present London Bridges; New Fresh Wharf (site C) and Billingsgate Lorry Park (site D), a similar distance below the bridges. The archaeological discoveries for the period 1666 (the Great Fire of London) to about 1776 are presented and are placed in context by a study of the Thames waterfront on both banks from the west side of the City eastwards down to Deptford, originally a small town but now a suburb of London, six miles away. The detailed study ends with the decision, in 1796, to establish what became the London Docks downstream of the City. This is therefore an examination of the developments and processes which led to the construction of the first of the London Docks, the West India Dock, in 1801–6. Although the construction of that dock was the major new beginning of London's 19th-century worldwide commercial expansion, it should also be seen as the culmination of 150 years of previous intensive development of the waterfront in the City.

The area examined in greatest detail is from London Bridge to Custom House in Thames Street, and the lanes leading north from Thames Street in this eastern district. This area, next to and downstream of the Bridge, formed the centre of London's trading waterfront at this period. Excavations at two sites in Upper Thames Street a short distance above the Bridge are first described. On the west side of Swan Lane in 1981–2 (site A), a large group of pottery was found in a stone-lined cesspit, amounting to 648 sherds from up to 119 vessels, probably a house clearance from the immediately post-Fire period. At Seal House (site B), across the lane to the east, excavation in 1974 uncovered a row of six small brick houses on the east side of Black Raven Alley, which led from Thames Street to the wharf. They were built in 1671 by William Darvoll, and are shown on a survey of the site by William Leybourn in 1686, as they belonged to the Fishmongers' Company. A well which may have been in the cellar of one of the houses contained pottery, including complete vessels, of the early to mid-18th century in its fill. The houses were demolished in 1776 as large warehouses began to proliferate in the area.

In the study of the four sites in the medieval period published in 2018, the two downstream of London Bridge were New Fresh Wharf and Billingsgate Lorry Park (often called Billingsgate for short). At New Fresh Wharf (site C) in 1974–5, only small fragments of post-Fire walls were recorded, and their details are left in the archaeological archive; some details from documentary evidence are presented. At Billingsgate (site D) however, extensive remains of post-Fire buildings to about 1732 were excavated in 1982–3. These lay on Botolph Wharf, on both sides of the lane which bisected the wharf and led to the Thames. At the north end of the west half of the Wharf the pre-Fire church of St Botolph Billingsgate was not rebuilt but its site became secular buildings, a house of the Minshull family which reused a 15th-century undercroft formerly beneath the south aisle of the church as a cellar for storage. Francis Minshull was a merchant on an international scale with interests in America. The rest of Botolph Wharf was developed initially by Sir Josiah Child, who was prominent in the East India Company. The buildings here, a mixture of houses (probably with shops) on the street and warehouses, went through several periods of alteration before the whole wharf except for the church site was

redeveloped in the 1730s. The wharf was at the heart of the cartel organisation of wharfingers Joseph Ashton and others which increasingly paralysed the landing of imports.

The finding on the Billingsgate excavation of cowrie shells shows that they were stored here. The distinctive bright markings of the cowries immediately suggested exotic, probably tropical, species. Further identification confirmed at least two species, money cowrie and gold ring cowrie, both with long histories as economically significant commercial commodities. They form an early example of artefactual evidence for the slavery trade in London. An outline of London's connections with slavery from the 16th century to 1800 is presented.

A new period of warehouses on all the sites in the 18th century did not leave any physical remains to be studied, but the information is derived from documents, maps and plans. The study goes on to summarise the major debates of the 1790s about how to improve the port with new and grander docks, specifically to be built, as they were from 1801 downstream. The creation of the hub of the British Empire required large land clearances for new purposes in and to the east of the City after about 1750, which were apparently accomplished with no opposition. On four occasions large tracts of land were taken for commercial use or the rebuilding of London Bridge and its new roads.

The waterfront of the City of London was an important element in the development of London as an imperial centre, since it was the City's trading gateway to the world before the London Docks were established in the early 19th century. What happened to the buildings and the people living on and using these riverfront sites in the century after the Great Fire to about 1800 is both particular to London and an example of changes in the topography of an important port in the Atlantic world. The inventories of Minshull and another merchant who lived nearby, Richard Beckford, are transcribed. Two groups of late 17th-century and 18th-century ports are briefly surveyed as parallels: major ports on the west coast of continental Europe, from Hamburg to Cádiz, and five colonial towns on the eastern seaboard of the United States and in the Caribbean. London did not compare favourably with the most developed European ports in the character of its waterfront, but its material culture plays an important part in the history of the American and Caribbean colonial settlements. This is well illustrated by the finds recovered from Port Royal, Jamaica, part of which was buried beneath the sea in an earthquake of 1692.

Two arguments have come out of this research, and they are offered for future development by others. The first is that the archaeology of the port of London in the period 1666 to 1800 is best considered on the widest possible scale, by treating as one the whole riverfront conurbation from the City to Deptford. We should study the internal varieties of houses, artefacts, and ways of living within this single zone, and by combining archaeological analysis with the study of documents. The second idea is that the archaeology of post-medieval waterfronts must be advanced by comparative study of British, European and north American ports in the period.

The overall conclusions from this study are first that the Great Fire of London in 1666 changed an important and central part of the topography of the conurbation, but there were also many important continuities and the Great Fire should be placed in context. Second, archaeological sites along the waterfront, both in the City area and downstream as far as Deptford, have revealed a rich urban culture with many elements of foreign fashions, and these foreign influences were strongest in the nation's largest port. Third, the period 1666 to 1800 on the London waterfront was one of change as the need to store, distribute and send out increasingly large amounts of goods governed the nature of development on both sides of the Thames. Large complexes of warehouses were required, and these were built by removing swathes of domestic buildings. Fourth, during this period London became the hub of the new British Empire, but contributed to the exploitation of people from other lands known as slavery. The creation and prosperity of the British Empire affected many regions of the world and their inhabitants, but they also required constant change in the topography of the City and the lives of its inhabitants, as London became the hub of that empire.

Acknowledgements

The analysis and discussion presented here is the product of many years of work by many archaeologists and documentary historians. The main author of the site narratives and discussion sections dealing with the topography of the waterfront and its buildings is John Schofield; the documentary history of the sites is provided by Stephen Freeth incorporating previous research by Tony Dyson. The other principal contributors are Lyn Blackmore, who studied the medieval and post-medieval pottery, glass and other artefacts from Swan Lane (site A) and Seal House (site B); and Jacqui Pearce, who studied the pottery from Billingsgate (site D) and clay tobacco pipes from all three reported sites. Where a chapter is by several hands, the authors are named; Chapters 1 to 2 and 4 to 9 are by John Schofield. The appendices forming Chapter 10 were edited by Jacqui Pearce. The contributions and assistance of many others from the Museum of London and outside to the larger project of which this is part are acknowledged in the companion volume which dealt with the sites in the period 1100–1666.[1] The Billingsgate excavation of 1982–3 (site supervisor, Steve Roskams; finds supervisor Margrethe de Neergaard; project manager John Schofield)[2] is the main one reported here. For the present volume, we thank especially Brian Ayers and D H Evans for reading the drafts and for their views. Many colleagues at or formerly of the Museum of London have been of great assistance: Trevor Brigham, Tony Dyson and Trevor Hurst; and in the final stages of preparation, the Archive Manager Michol Stocco and her colleagues at the Archaeological Archive at the Museum of London Stores; Richard Dabb in the Picture Library of the Museum; and at Museum of London Archaeology, David Bowsher and photographers Andy Chopping and Maggie Cox. The site plans and other drawings have been produced by Carlos Lemos and Sue Cawood. A large number of images come from the Paul Mellon Collection at the Yale Center for British Art, New Haven, Connecticut, and this is only possible because the collection is in the public domain (licence CCO 1.0 Universal Public Domain Dedication). We are most grateful; without these images the work would have been much poorer. We also thank the London Topographical Society for permission to reproduce details from maps they have published. Other images cited in the footnotes are available online, and these images should be consulted as though they were part of the monograph. One particularly relevant resource is the archive of images of London at London Metropolitan Archives (LMA) of the Corporation of London.[3] Stephen Freeth would like to thank the archivists and staff of all the record offices used, and especially Peter Ross and his colleagues at Guildhall Library, who have been unfailingly helpful under trying conditions. Much appreciated also has been the assistance of Peter Capon at the Fishmongers' Company, which allowed access to the Leybourn plans of Company property in 1686.

We express thanks for the funding of the excavations and post-excavation work over the years 1974 to 2022 by the Department of the Environment of the British government, English Heritage, the Corporation of London, the Fishmongers' Company and the City of London Archaeological Trust. In 2022 the Marc Fitch Fund awarded a substantial grant for the artefactual analyses, photography and drawing work; and in 2023 awarded a second grant to assist with the cost of publication. At Archaeopress we thank Rajka Makjanic, David Davison and Mike Schurer.

[1] Schofield *et al.* 2018 (online version of text: www.colat.org.uk/london-waterfront/).
[2] Seen in a BBC TV documentary about the excavation in the *Chronicle* series, archived at several locaitons on the internet and at www.colat.org.uk.
[3] www.londonpicturearchive.org.uk.

1 The waterfront of the City of London, 1666 to 1800: introduction to the study

'By 1775, London was the centre of the world' – Fernand Braudel

'Very little is known about London during the 18th and early 19th centuries' – L D Schwarz

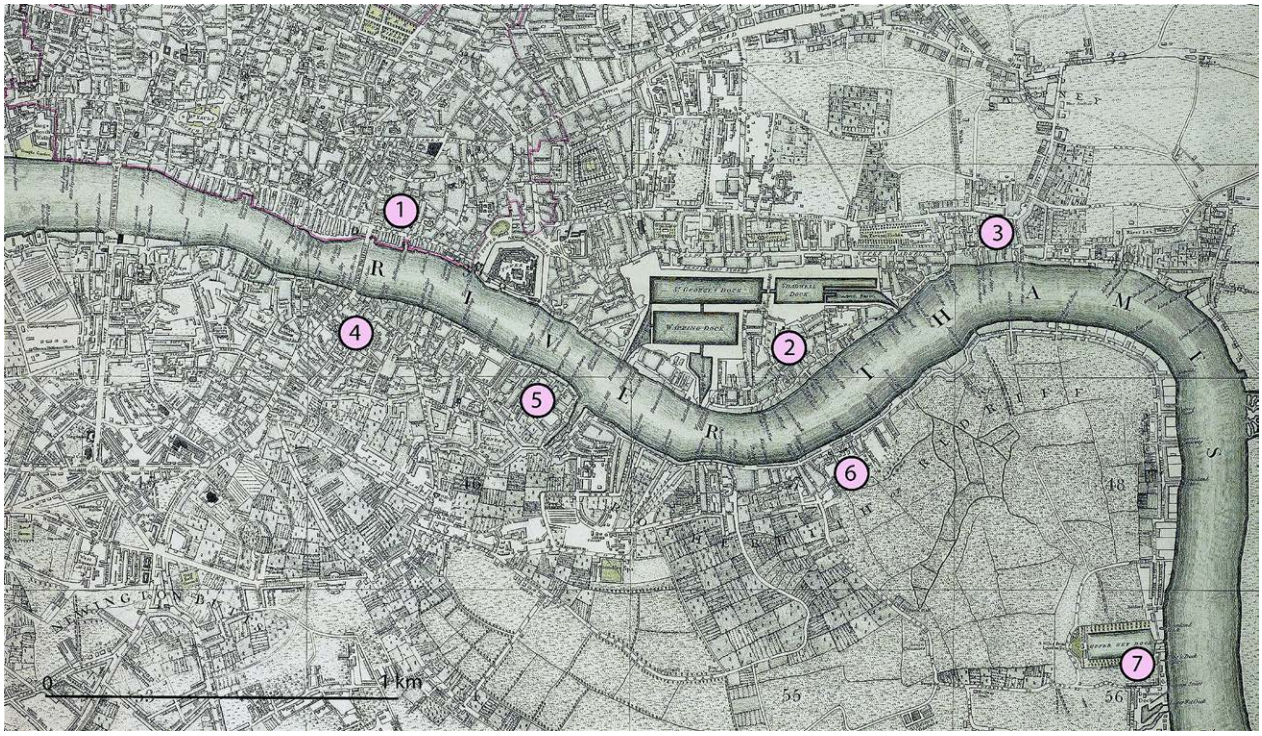


Figure 1 The City of London and settlements to the east, as will be studied in this monograph; from Carey's map of London in 1803 (LMA, London Picture Archive 31062). 1, City of London; 2, West India Docks; 3, Ratcliffe; 4, Southwark; 5, Bermondsey; 6, Rotherhithe; 7, Deptford

After the Great Fire of 1666, London became the centre of a commercial empire which was to stretch round the world. This was entirely new in London's history. The present monograph contributes to an explanation of life and work in London in the century and a half after the Great Fire.

The City waterfront along the north bank of the River Thames from 1666 to about 1800 is the central subject: the buildings and their uses, some of the people, their lifestyles and material culture. From this, suggestions can be made about the role of the waterfront in the development of London as the hub of an overseas empire by the middle of the 18th century. The topographical scope of the study however is not only the north bank within the City, but the contrasting nature of development on the south bank in Southwark, and the gradual expansion of port facilities and associated settlement to the east. The boundary downstream will be Deptford (Figure 1) though there will be mention of Blackwall which was a little further down the river. The historic port of London has always been at some distance from the sea.

The port of London in the 17th and 18th centuries has been studied before, but from an outside, general perspective. One influential view was the study of the English shipping industry by Ralph Davis in 1962. Unravelled here, sentences within a single paragraph describe the main historical developments:

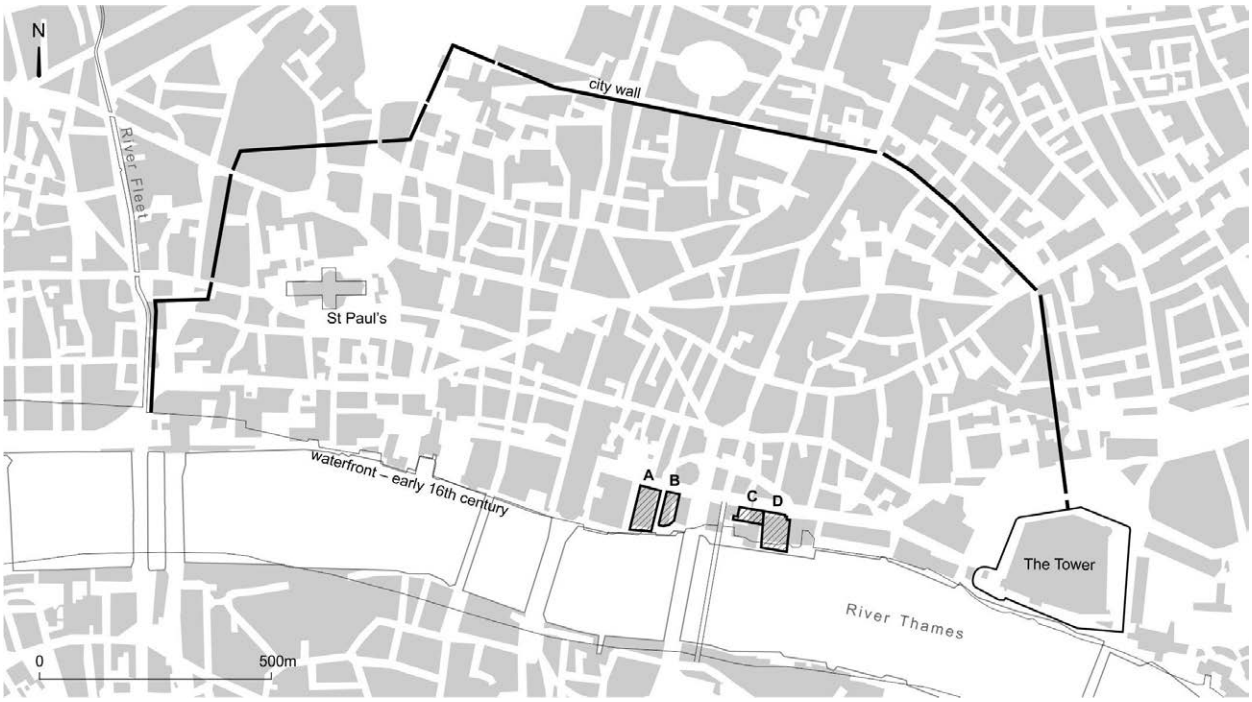


Figure 2 The City of London, showing the four sites in the study
(A: Swan Lane, B: Seal House, C: New Fresh Wharf, D: Billingsgate) (Carlos Lemos)

London was by far the greatest of the English seaports, without a serious rival. Until far into the 18th century the volume of its foreign and coastal trade at least equalled that of all the other ports put together. London participated fully in all important new trading developments from the reign of Elizabeth I until the American War of Independence, with the exceptions of long-distance fishery and coal exporting...

London pioneered the Mediterranean and East India trades in the last decades of the 16th century and for two hundred years ships from the outports were rarely seen in the Mediterranean and were unknown in the Indian Ocean. London opened up the American and West Indian colonies, and for over half a century almost monopolised their trade, throwing a meagre share to Bristol...

London's demand for imported timber and iron, for house- and ship-building, was the first to appear on a large scale in the 17th century, and grew faster than that of other ports until the end of the century. Most of the vast shipments of Newcastle coal were destined for London...

Through most of the 17th century London was increasing its share in the total volume of English trade and shipping; and then the shift of colonial trade towards the western ports [of Britain], and of Baltic and Norwegian trade to those of the north-east... and the increasing importance played in the total volume of trade by exported coal and corn, began slowly – very slowly – to nibble at its pre-eminent position [during the first half of the 18th century].[1]

In sum, the greatness of London in 1700 'depended before everything else on activity in the port of London'.[2]

This study concentrates on the central part of the waterfront of the City of London: the land and facilities south of Thames Street on both sides of the north end of London Bridge and between the Bridge and Billingsgate. It is primarily of archaeological and documentary evidence for a number of secular properties and the site of a parish church in the period 1666 to about 1750 on four sites which were excavated by the Museum of London ahead of redevelopment in 1974–84 (proper excavations in 1974 to 1983, and a watching brief on excavation by machines at Billingsgate Lorry Park in 1983–4). All four sites lie to the south of Thames Street and have river frontages; they are close together. On the west, upstream side of both medieval and modern London Bridge are Swan Lane (now Riverbank House) and Seal House (offices of 1975, by Holford Associates, at the time of writing scheduled for redevelopment again), while New Fresh Wharf (now St Magnus House,

[1] Davis 1972 (2nd impression of the 1962 study), 34.
[2] Davis 1972, 390. Davis thought that a quarter of London's 18th-century population depended directly or indirectly on the port; this figure may have actually been higher (Schwarz 1992, 9).

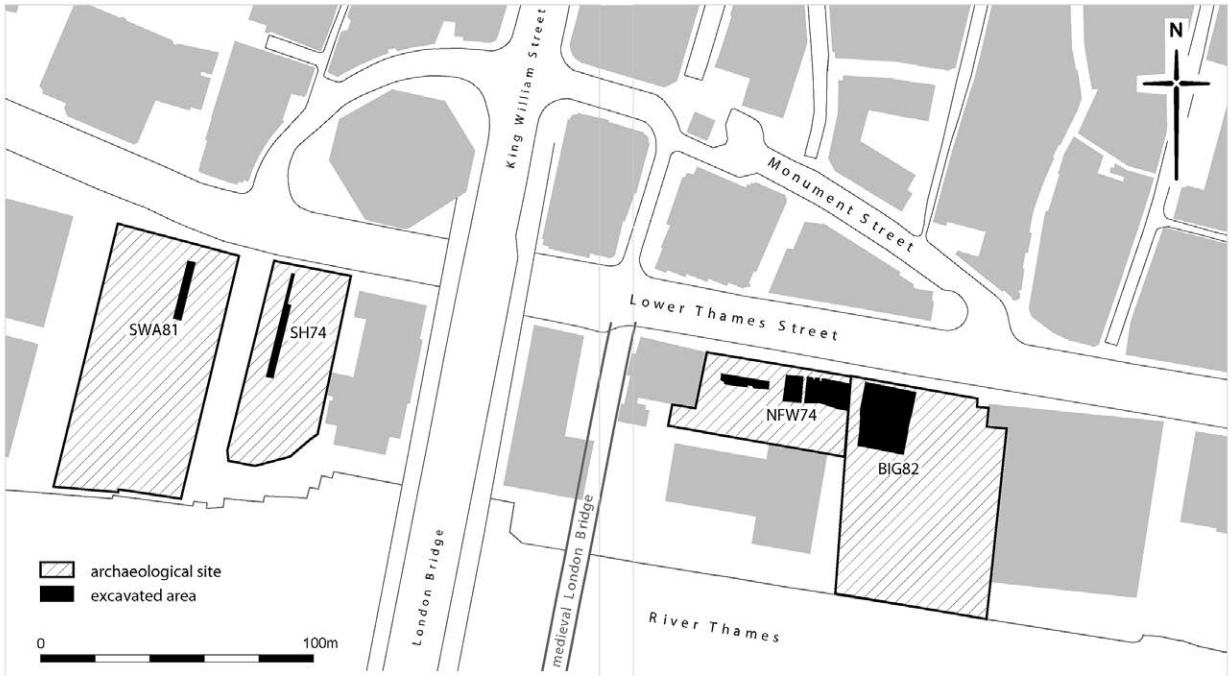


Figure 3 Location of the four study sites on either side of the present London Bridge, showing the areas of excavation (Carlos Lemos). From left to right, SWA81=Swan Lane, site A; SH74=Seal House, site B; NFW74 = New Fresh Wharf, site C; BIG82=Billingsgate lorry park, site D

Prefix	site codes	Address
A	SWA81	Swan Lane Car Park, 95–103 Upper Thames Street, EC4, 1981–2
B	SH74	Seal House, 106–108 Upper Thames Street, EC4, 1974
C	NFW74 (also SM75 and FRE78)	New Fresh Wharf, 2–6 Lower Thames Street, EC3, 1974–8
D	BIG82, BWB83 (earth moving)	Billingsgate Fishmarket Lorry Park, Lower Thames Street, EC3, 1982–4 (excavation in 1982–3, removal of the rest of the site by machines, 1983–4)

Table 1 The four study sites: their prefixes used in this text, their Museum of London site codes, and addresses at the time of excavation

1974–81 by R Seifert and Partners) and the Billingsgate lorry park (now the Northern and Shell Building, built as Simon Montagu House in 1983–5 by Covell Matthews Wheatley Partnership) are on the east, downstream side of both bridges (Figure 2, Figure 3). The four sites are labelled A–D from west to east, regardless of the date of excavation, as shown in Table 1, which also gives their main archive references (Museum of London archaeological site codes). The Roman and Saxon strata from these sites have been published, and their medieval and later strata up to the Great Fire of 1666 were published in 2018.[3] The detailed circumstances of the excavations, and the acknowledgements of the funding, the excavators and all who assisted the projects, are given in the previous account.[4]

As will be noted at several points in this text, the waterfront area around the bridge now looks completely different from what it did in 1666. But several of the lanes down to the north side of Thames Street are still conserved, with 19th-century buildings, to give some idea of what the area was like (Figure 4); or further west along the waterfront near St Paul's, a fragment of a street runs alongside 17th-century buildings (Figure 5).

The setting of the sites south of Thames Street in the immediately post-Fire period is shown by the map of Ogilby and Morgan of 1676, the relevant part given here as Figure 6. Since the 1770s and possibly for a few years before, Thames Street has been divided at the north end of the bridge into Upper Thames Street (to the west) and Lower Thames Street (to the east).

Detailed documentary study has been undertaken for the largest excavation, that at Billingsgate Lorry Park. The archaeological and documentary evidence is placed

[3] Miller *et al.* 1986; Brigham 1990 (Roman period); Steedman *et al.* 1992 (Saxon period to 1200); Schofield *et al.* 2018 (1100 to 1666).
[4] Schofield *et al.* 2018, xxii–xxiii.



Figure 4 Lovat Lane today, looking north (John Schofield)

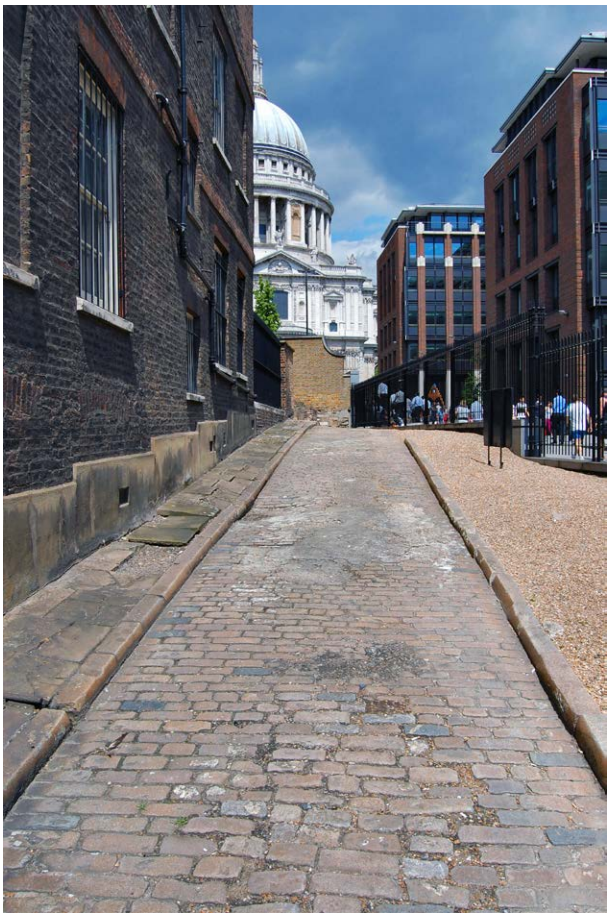


Figure 5 A fragment of post-Fire St Peter's Hill, in its pre-War form, now preserved along the side of the late 17th-century College of Arms, looking north (John Schofield)

in context for all four sites by study of several maps of the area, that is by Ogilby and Morgan in 1676, Morgan alone in 1682, Rocque in 1747 and Horwood (as updated by William Faden) in 1813. All these have been produced in facsimile in recent decades.[5] They are complemented by painted or drawn views of this part of the riverside, and especially by the panorama of the north bank of the Thames produced by Samuel and Nathaniel Buck as part of their project to publish engraved views of many British towns; the London views were published in September 1749.[6]

The East India Company, founded in 1601, is mentioned from time to time in the present account, but its detailed working is not a central theme.[7] The Company built ships in its yards at Blackwall (from 1614) and Deptford until 1639, but then both docks or yards were discontinued when the Company decided to concentrate on freighting rather than building its own ships.[8] The great majority of its records, in 1988 estimated to occupy nearly nine miles of shelving (since then transferred to the British Library), are of the period after 1750.[9] East India Company ships did not come into the Pool of London, as they were too large and the river here too shallow. But their imported goods did, in great profusion. They had an office on Botolph Wharf in the decades around 1700.

The locations of a wider group of archaeological sites on both banks of the Thames which are mentioned in this study are shown on the map of London Bridge and its environs in 1747 by John Rocque (Figure 7), and listed with their main published references in Table 2.

The questions being posed and the structure of the study

This work is not only an account of archaeological excavations and related documentary research, but is

[5] Respectively Hyde 1992; Barber and Hyde 2013; Hyde 1982; Laxton 1985.
[6] Hyde 1994, 47–8, pl 40–4. This panorama and many other views of the Thames from Woolwich to Hampton Court, up to 1750, were studied for their topographical information by Hugh Phillips in 1951.
[7] For a summary of the Company's history before 1800, Davis 1972, 257–66.
[8] For excavation of the Company dockyard at Deptford, Divers 2004.
[9] Moir 1988, ix, 10.

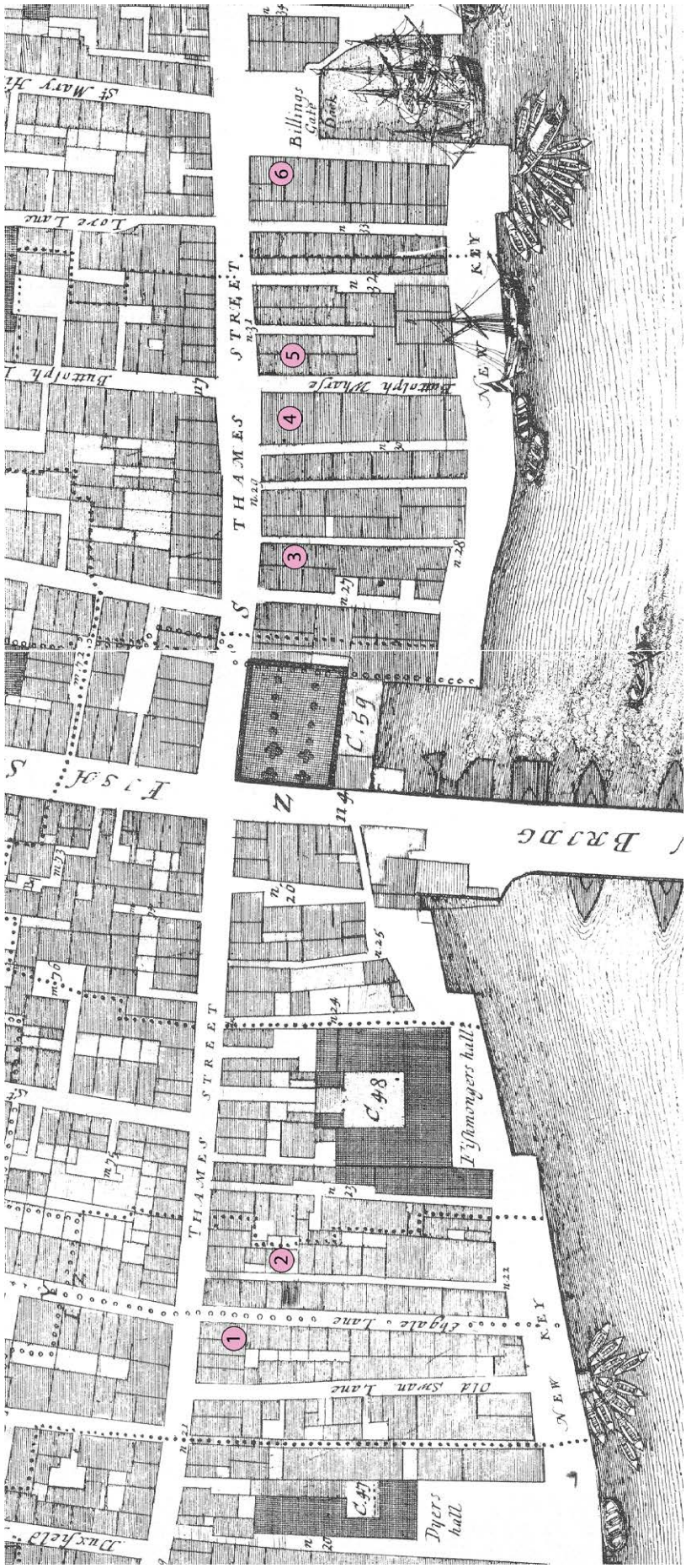


Figure 6 The study sites in their setting on the map of the City by Ogilby and Morgan, 1676 (Hyde 1992).
Key to sites: 1, Swan Lane (site A); 2, Seal House (site B); 3, New Fresh Wharf (site C); 4, Billingsgate, site of St Botolph; 5, Billingsgate, houses on other side of Botolph Wharf alley (site D); 6, west range of Billingsgate dock (included for comparison with other figures). The church marked C59 is St Magnus

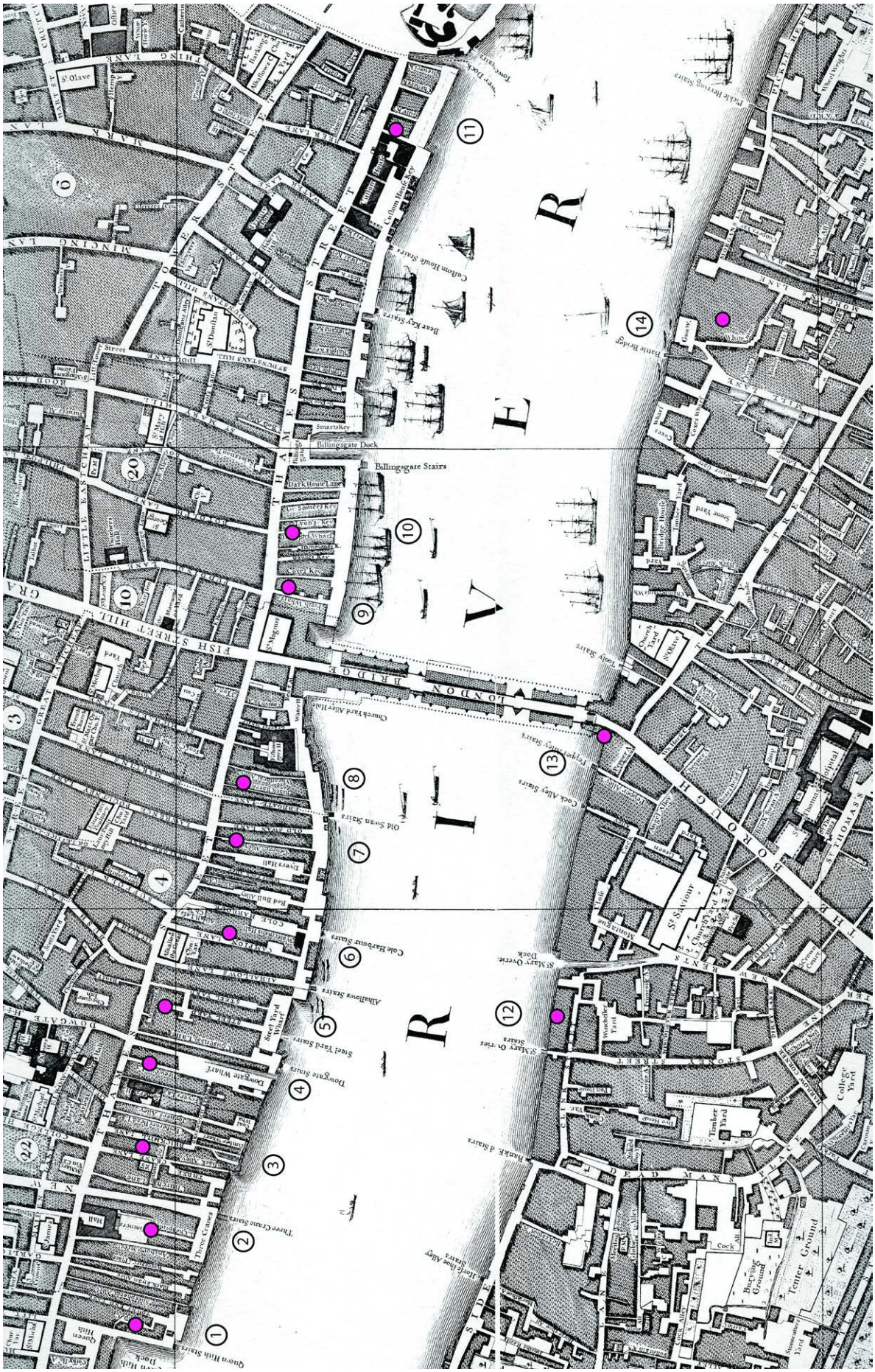


Figure 7 The central area of the waterfront of the City of London, showing the main sites used in this study (based on Rocque 1747, from Hyde 1982). For key to the archaeological sites shown, see Table 2

Number on Figure 7	site	Main archaeological publication
1	Bull Wharf	Ayre and Wroe-Brown 2015a, 2015b
2	Vintners' Hall and surroundings	Schofield with Maloney 1998, 297–8
3	Thames Exchange	Milne 1992
4	Walbrook	Schofield with Maloney 1998, 86
5	Steelyard	Schofield with Maloney 1998, 259–60
6	Watermark Place	Fowler and Mackinder 2014
7	Swan Lane/Riverbank House	this volume; Mackinder 2015
8	Seal House	this volume
9	New Fresh Wharf	
10	Billingsgate Lorry Park	
11	Custom House	Tatton-Brown 1974, 1975
12	Winchester Palace	Seeley *et al.* 2006
13	London Bridge	Watson *et al.* 2000
14	Fastolf Place	Blatherwick and Bluer 2009

Table 2 Archaeological sites on both banks of the River Thames excavated in recent years

also an enquiry. The study is permeated by two *general arguments* and a number of *questions*.

The arguments are as follows. First, the Great Fire of London in 1666 changed an important and central part of the conurbation of London, but there were also many important continuities. Second, archaeological sites along the waterfront, both in the City area and downstream as far as Deptford, have revealed a rich urban culture for the years 1666 to 1800 with many elements of foreign fashions, and these foreign influences were arguably strongest in the nation's largest port. Perhaps in London we can study consumer tastes and consumption.

Against this background, the study has set itself a number of questions:

1. To what extent do these waterfront buildings follow the usual notions of rebuilding after the Great Fire? How do they compare with late 17th- and 18th-century buildings on other London sites? What changed between 1666 and 1800?

2. Was the City waterfront a distinctive place within the post-Fire City of London? How did it differ from the south bank facing it?

3. What is its place within the archaeology of post-Fire London as a whole?

4. How does this study elucidate the late 17th- and 18th-century port and its national and international connections?

5. What evidence has been found of London's links with slavery?

6. What were the buildings used for? How do studies of the present kind illuminate the history of buildings in London?

Chapter 2 comprises a survey of the structure of the port of London in the period 1666 to about 1750: major public works (including plans for a new wharf), the geography of stairs, how shipping was managed, and the system of carts working the waterfront. Chapter 3 is the central account of the archaeological excavations of 1974–84 on either side of the north end of London Bridge, and discussion of the excavated buildings, including their documentary history; then in Chapter 4 a view of other sites on both banks of the Thames and to the east of the City as far as Deptford, also up to about 1750. This development of the Thames downstream of the City places the development of the central waterfront area in context. Chapter 5 takes the history forward from 1750 to 1800, the time of monumental complexes of warehouses, and includes an account of the Sufferance Wharves on the south bank and east of the Tower. Chapter 6 introduces the little-researched subject of slavery in London, from the 16th century to 1800. Chapter 7 provides an epilogue to the London narrative, taking us into the 19th century and the end of the period studied in detail as the London Docks opened up a new era in the port's history. Chapter 8 is about connections with other ports: documentary evidence of traffic with British ports, then a short survey of the topography and archaeology of foreign (European) and colonial ports, including the finding of much London artefactual material in late 17th-century Port Royal, Jamaica. Chapter 9 comprises discussion of all the results and the questions posed: the buildings, material culture and lifestyle of the occupants of the sites; trade and ships; parallels for the topography of the waterfront in other contemporary ports in Europe,

North America and the Caribbean; the port of London as a factor in London's growth at this period; and cultural influences from abroad on London life shown by the excavated artefacts. One underlying question is whether the waterfront zone around and south of Thames Street looked and felt different from the rest of the post-Fire City. Specialist reports and appendices occupy Chapter 10: on the pottery and other artefacts, coins, ceramic building material, cowrie shells, and the transcription of two relevant inventories of merchants' houses. The archaeological material and the contents of the inventories are complementary sources, each providing what the other does not. Together they give us a rounded view of the material or household culture of the period.

Some of the people in this narrative have names. In the context of London's waterfront, that is not unusual: the study of the same sites in the period 1100–1666, already published, mentions many owners and occupiers of the waterfront properties from the 12th century, and especially from the 14th.[10] The names of the protagonists in the present work are in two groups: first, those who were responsible for redevelopment of the sites, rather like modern developers, but who probably only stepped onto the sites on a few occasions: Josiah Child and William Darvoll. The second, more interesting group are those who were major or minor tenants of the properties excavated, because the material culture may be theirs: Joseph and Henry Ashton, Edward Leaver, Francis Minshull (with his wife and later widow Elizabeth), and Robert Pallady senior and junior. We look at the houses of Thomas and Richard Beckford, both Masters of the Clothworkers' Company, on the east side of Billingsgate dock and nearby in Great Tower Street. The inventory of furnishings of Richard Beckford's house at his death in 1679, transcribed in Chapter 10, is a valuable insight into the lifestyle of a rich London merchant with property in Jamaica and investments in colonial shipping.

This monograph seeks to illustrate the lives and lifestyles of people in this part of London, as the port of London changed around them. It draws attention to the considerable amount of archaeological excavation, finds analysis and documentary research which has been undertaken in recent decades on the subject of London's waterfront from the City to Deptford in the late 17th and 18th centuries.

Conventions, methods and the archive

The four sites forming the archaeological and documentary core of this study have been given the letters A to D, from west to east (though there is no archaeological reporting on site C in this monograph).

[10] Schofield *et al.* 2018; Schofield 2019 is a summary.

The archaeological recording within each site is based on the *context*, that is an event in the past which produces a trace worth recording. This is usually a layer or a wall with a physical extent, but can also be a trace of digging, a cut in the ground such as a pit, ditch or grave. The contexts are numbered in a single series within each site, and are always reported with square brackets: so B[48] is context [48] from site B (Seal House), and D[549] is context [549] from site D (Billingsgate).[11] The contexts at site B are also grouped into 'groups' (for instance, those comprising a wall or a floor) indicated by the letters Gp, for example Gp 90 (or Gp B90), Gp 9. This system was not employed on site D, where the strata are grouped into broader 'Events'.

Like all London sites, those studied here produced large amounts of pottery: almost 61 kilos of sherds from Seal House and 41 kilos from Billingsgate. The acronyms used to identify individual types of native and foreign pottery (wares) and those used for the pottery forms are given in Chapter 10. Individual accessioned non-ceramic artefacts are numbered, again within each site code, and presented with pointed brackets, so D<710> is a gold finger ring from context D[549]. Where a dimension of an item cannot be reconstructed with confidence, a question mark is used, so a brick might be described as '? x 104 x 62mm'.

The excavated material, catalogues, reports and photographs from these excavations are housed in the Archaeological Archive at Museum of London Stores, currently at Mortimer Wheeler House, 46 Eagle Wharf Road, London N1 7ED. The four museum site codes, as given in Table 1 above, are used to aid navigation of the material. When consulting the archive, the museum sitecode should be substituted for the letter used here, so a trade token cited below as A<3825> should be cited as SWA81<3825>. Intending enquirers should note, however, that the Museum of London has temporarily closed the archaeological archive for two years from December 2022, so that it can be re-organised and properly catalogued as part of the general new arrangements accompanying the setting up of the new London Museum at West Smithfield. Further information can be found on the websites of the two museums.

Documentary sources for this publication have been numerous and crucial. For Seal House (site B), the records of the Fishmongers' Company have shown that the excavated site was part of a terrace of six

[11] This excavation recording system was developed in the City of London from the middle of the 1970s. The first recording manual for use on sites was compiled by John Schofield in 1980; the revised third edition of the manual was edited by Andrew Westman (1994). It is available for use elsewhere in the world: https://www.colat.org.uk/_assets/doc/mol-site-manual-3rd-edition.pdf. It has been examined as a model in other countries, for instance in Italy: Carandini 1991.

houses in Black Raven Alley built for the company by William Darvoll, plaisterer, in 1671. Extensive documentary research has been undertaken for the Billingsgate excavation (site D). This covered part of the site of the former church of St Botolph Billingsgate, destroyed in the Great Fire and owned by the parish; and part of Botolph Wharf to the east and south of the former church, owned by the City. The main areas of investigation have been the aftermath of the Great Fire; the redevelopment of both church site and wharf, including buildings and occupiers; and the trade carried on at the waterside. For the aftermath of the Great Fire, the City's records include a huge amount of information about rebuilding and the disputes that arose. A bitter and long-running dispute between the City and the tenant of the wharf, Josiah Child, who carried out an aggressive land-grab of some of the church ground to improve his tenancy, has been tracked both in the City's records and in the records of the court of Chancery at The National Archives.

For the redevelopment of the former church site up to about 1800, the parish records have much to say. The parish of St Botolph Billingsgate continued as a legal entity after the Fire despite the loss of its church, with boundaries unchanged. Its residents continued to elect their own churchwardens, vestry and overseers; levy their own rates; look after their own money; compile their own minutes and accounts; and grant their own leases. The only difference was that they now shared a church building and clergyman with the adjacent parish of St George Botolph Lane, with which St Botolph was united for worship and whose church was rebuilt. The costs of maintaining this church building were agreed and allocated at joint meetings of both parishes. This solution, adopted for all the destroyed churches of the City after the Fire, and possibly unique to London, was not reformed until after World War II. However it meant that detailed records continued to be compiled and preserved exactly as if the parish was still independent. For the redevelopment of the wharf, the City's records include head-leases as well as committee minutes. Use has also been made of the records of the Vintners' Company, the owners of Hammond's Key immediately to the west.

Other sources which have brought to life the buildings on the wharf, the personalities involved and their commercial activities are as follows. First, by great good fortune, many personal papers of the principal wharfinger up to 1728, Joseph Ashton, are preserved amongst the Chancery Masters' Exhibits at The National Archives. Second, Ashton's nephew Henry Ashton, who succeeded him as wharfinger, was a Director of the South Sea Company, part of the trade in enslaved people from Africa; the Royal African Company brought them from Africa to the West Indies, and the South Sea Company then distributed and re-sold them where they were needed. During Henry Ashton's time as a director, one of his distant relatives was appointed to the command of a slave ship and sent detailed reports back to Botolph Wharf. Third, Francis Minshull (d 1704), the parish's tenant of the large house built on the site of the former church, was another merchant. His commercial interests included wine and probably citrus fruit from the Canaries; the government of West Jersey (New Jersey) in north America, along with land speculation there; and the financing of several privateers during the wars with France and Spain. Finally the presence on the wharf of a Warehouse Keeper of the East India Company means that there are many references to Botolph Wharf in the voluminous records of that company, though searches so far have scarcely scratched the surface.

2 The port of London, 1666 to about 1750

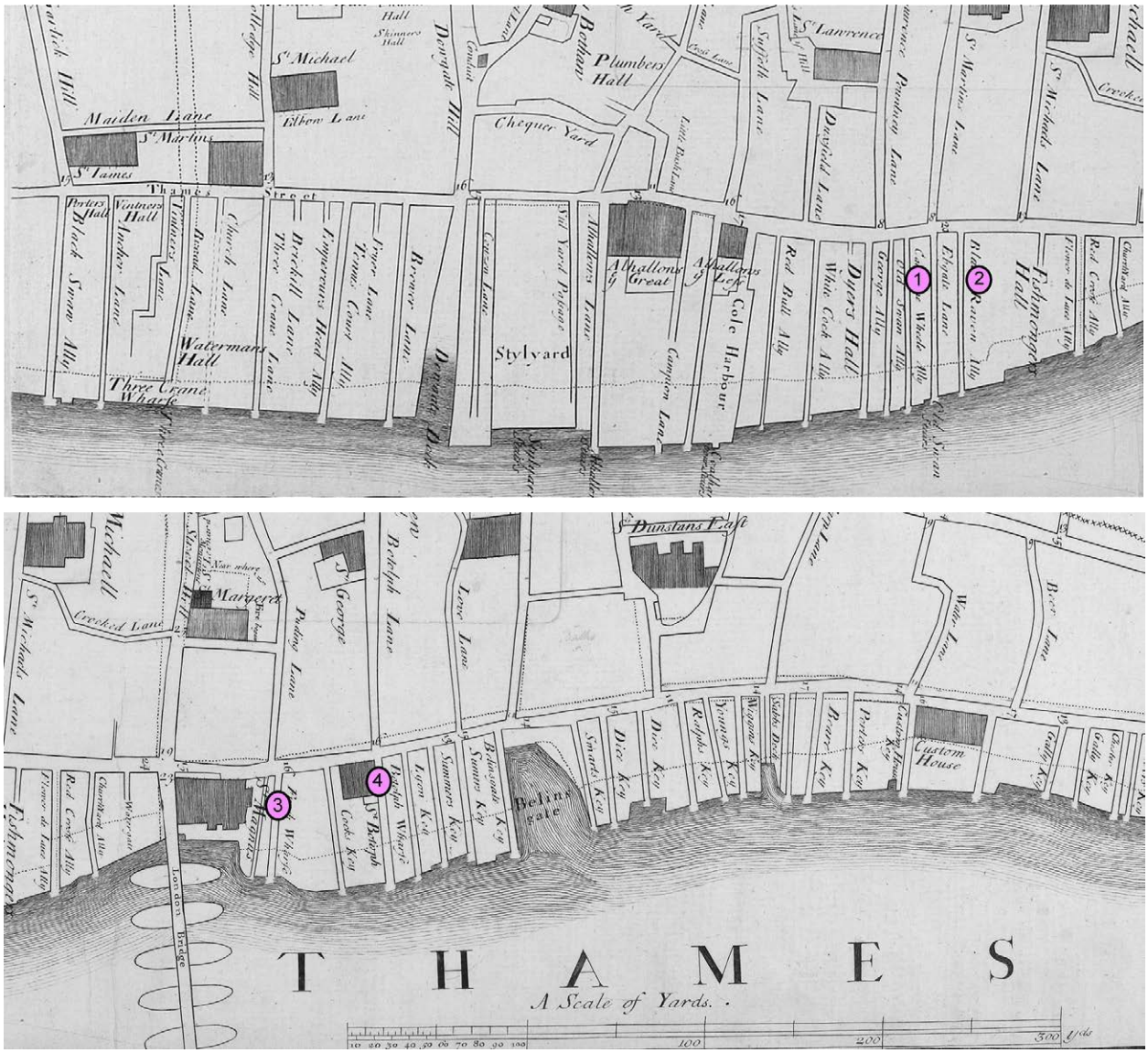


Figure 8 Extracts from the map of the City by George Vertue of 1723 (LMA, London Picture Archive 30632). Above, from Garlick Hill to St Michael's Lane; below, from St Michael's Lane to Beer Lane. Key: 1, Swan Lane (site A); 2, Seal House (site B); 3, New Fresh Wharf (site C), 4, Billingsgate Lorry Park (site D). Pudding Lane, where the Great Fire started, is opposite site C (no 3)

This chapter describes some of the setting within the port of London for the detailed archaeological reporting which follows: major public works on the central and eastern stretches of the City waterfront after the Great Fire; the arrangement of wharves, stairs and how shipping was managed; and how bringing or taking goods to and from the wharves was carried out by porters and carmen. The account begins shortly after the Great Fire of London of September 1666. The excavated sites were in two pairs, on either side of the north end of London Bridge, in the area close to where the Fire started.

A detailed survey of the streets and alleys in the Fire-damaged area was produced by John Leake in January–March 1667, and he annotated it with the width of streets at various points.[1] This was copied by George Vertue in 1723, and his map combines the pre-Fire street map with some of the proposed post-Fire improvements. Two extracts here show Thames Street from Garlick Hill in the west to Beer Lane in the east in 1666 and shortly after, with the locations of the archaeological sites added (Figure 8).

[1] Reproduced in Reddaway 1951, opp p54; and in Barber 2012, 44–5.

A word about the setting of the excavations may be necessary for those who are not familiar with recent archaeological and historical work on the London waterfront. The narrow zone between Thames Street and the present edge of the waterfront has been excavated on many sites since 1972.[2] Reclamation began in the Roman period along most of the City's waterfront, and localised expansions of the Anglo-Saxon period developed into the long area of alleys by the 16th century which are shown on Vertue's map.

Major public works on the City waterfront after the Great Fire

Raising the level of Thames Street and widening it

After the Fire slopes of streets down to the Thames and down to the Fleet valley on the west of the walled city were lessened by raising the lower parts of the streets and lanes with fire rubble, so that some parts of the City actually rose slightly in the vertical dimension.

In 1667 the Commissioners for Rebuilding issued instructions for Thames Street and its communicating lanes on the north side to be raised, 'for the preventing of inundations and for easiness of Ascent' (Table 3). This can be compared with Vertue's map; in the table the lanes are arranged from east to west, as in the history by John Strype which reported it in 1720. The first dimension in each line is the proposed raising of Thames Street at the point where it met the lane listed on the left.

There is a problem with understanding the measurements relayed by Strype: when a reduction in height is mentioned, are the measurements which follow afterwards raisings or reductions? Let us take the example of New Fish Street Hill. This was raised 2ft (0.6m) at its south end, abating or lessening to nothing at 280ft (85.4m) to the north, but then what does the 3ft (0.9m) at Eastcheap refer to, a raising or a reduction in height? Either is theoretically possible. In certain cases it looks like when a reduction is mentioned, then the next measurement is also a reduction, when the two measurements are similar, such as at Water Lane, St Michael's Lane and Dowgate. But if this is consistently the case, then there were some dramatic changes. St Mary-at-Hill [lane] would be raised 5ft (1.6m) at the south end where it met Thames Street, but reduced starting at a distance of 187ft (61.3m) northwards, by 5ft (1.6m) at a point 387ft (127m) north of Thames Street, yet only 1ft 6in (0.5m) below its pre-Fire level where it met Eastcheap. Clearly, the levels in this table require more scrutiny, to be aided by modern excavations near these streets, if strata survive.

In the area around the bridgehead, some suggestions can be made. St Martin's Lane, its south part now lost but originally opposite site B, was to be raised 6ft (1.8m) at Thames Street, and lessened in two stages by the time it reached Cannon Street. To east and west of the bridge the raising of Thames Street was between 3ft (0.9m) and 4ft (1.2m). This latter depth was also employed at the north end of Billingsgate in 1668.[3] Below the bridge the wharves and the lanes leading to them were supposed to be raised to a common height, using the level of Somers Quay (which had already been raised) as the standard; this would give a height of 5ft above the normal spring tide mark. But it cannot be established to what degree this requirement was carried out.[4] Between Tower Dock in the east and Puddle Dock in the west, a distance of 0.8 mile (1.3km) on Ogilby and Morgan's map, the level of Thames Street was raised by a variety of heights, between 2ft (0.6m) and 8ft (2.4m). Presumably the final raised level was approximately flat, as it is today. If so, this means that before the Fire, the level of the street rose and fell, usually by small amounts, along its considerable length. Around the bridgehead, the rises in the surface of Thames Street were notable. From east to west, assuming the post-Fire street was level, the pre-Fire junction with Pudding Lane was 6ft (1.8m) below; the bridge approach at New Fish Street Hill, only 160ft (49m) away, was only 2ft (0.6m) below; then next to the west the pre-Fire St Michael's Lane (opposite Fishmongers' Hall), 76m away, was 7ft (2.1m) below. So we might imagine the rising approach to the bridge, as one came down the hill, began on the north side of Thames Street, as New Fish Street Hill ended. No doubt there were the northernmost parts of the medieval stone bridge beneath Thames Street itself, where they remain. There was a similar lessening of the steep slope of Ludgate Hill, on the approach to St Paul's Cathedral, by depositing fire rubble particularly on the bottom section next to the Fleet river.[5]

Since this study is primarily about the alleys and land south of Thames Street, the next question is the nature of any widening of the street on its south side, at the north end of the four excavated sites. The amount of widening could be different above and below the bridge. Few detailed records of new stakings-out after the Fire have been preserved for this area, so there is little information on street widening where individual properties were concerned. Downstream of the bridge, the protruding north aisle of St Magnus church (shown in outline on Figure 8), which greatly constricted the width of Thames Street, was removed; and the nearby

[2] For the present four sites, the Roman period is reported in Miller *et al.* 1986; the Anglo-Saxon (to 1200) in Steedman *et al.* 1992; and the medieval and Tudor periods, to 1666, in Schofield *et al.* 2018. The process of land reclamation in the medieval period is best described in a report on work of 1974 at Trig Lane, west of the area shown in the map extract (Milne and Milne 1982).

[3] Mills and Oliver *Survey*, ii, 106.

[4] Reddaway 1951, 224.

[5] Schofield 2016a, 14.

Street or place	Details (first dimension is raising at Thames Street)
Tower Dock	3ft; 2ft 10in at 147ft to the N; against the middle of All Hallows Barking churchyard, to be reduced 6in
Beer Lane	8ft; 4ft at 90ft to N; to be reduced ('abated') 3in at 192ft, 6in at Tower Street
Water Lane	6ft; no reduction 83ft to N; to be reduced 1ft 11in at 128ft, 2ft at Tower Street
Harp Lane	7ft; 4ft 7in at 100ft to N; to be reduced 1ft 6in at 180ft; 3ft 4in at 270ft; 2ft 6in at Tower Street
Idol Lane	7ft; 4ft 2in at 90ft to N; to be reduced 2ft 3in at 165ft, 3ft 10in at 262ft, 2ft 6in at Tower Street
St Dunstan's Hill	4ft 2in at Idol Lane; 3ft 3in at 76ft to the N, 1ft at 126ft; to be reduced 2ft 1in at 226ft, 1ft 10in at Tower Street
St Mary-at-Hill	5ft; 2ft 6in at 87ft to the N; to be reduced 1ft 8in at 187ft, 5ft 8in at 287ft, 5ft at 387ft, 1ft 6in at Little Eastcheap
Love Lane	4ft; 2ft 6in at 100ft to N, 2ft 3in at 200ft; to be reduced 3ft 10in at 270ft, 3ft at 370ft, 2ft at 470ft, 3ft 10in at Eastcheap
Botolph Lane	4ft; 4ft 5in at 133ft to N, 10in at 233ft; to be reduced 2ft at 333ft, 2ft at 433ft, 3in at Eastcheap
Pudding Lane	6ft; 4ft 5in at 115ft to N; 1ft 8in at 212ft; to be reduced 1ft at 300ft, 2ft at 400ft, 5ft 9in at Eastcheap
New Fish Street Hill	2ft; 2ft at 80ft to N; to be reduced at 280ft, nothing; 1ft 9in at 380ft, 3ft at Eastcheap
St Michael's Lane	7ft; 6ft 9in at 80ft to N, 6ft 6in at 280ft, 2ft 10in at 380ft; to be reduced 8in at 480ft, 5in at Eastcheap; 'the Current of it is 13in upon 20ft'
St Martin's Lane	6ft; 6ft at 103ft to N, 4ft 3in at 203ft, 2in at 303ft; to be reduced 2ft 1in at 403ft, 1ft at Cannon Street
St Laurence Pountney Lane	4ft; 3ft 7in at 157ft to N; to be reduced 11in at 261ft, 4ft at 361ft, 1ft at Cannon Street
Green Lettice and Ducksfield Lanes	3ft; 1ft 10in at 135ft to N; to be reduced 2ft 11in at 235ft, 4ft 5in at 297ft, 4ft 5in at 397ft, 10in at Cannon Street
Suffolk Lane	3ft; 2in at 110ft to N; to be reduced 3ft 6in at 190ft, 7ft 9in at 290ft, 4ft 4in at the entrance into Ducksfield Lane
Bush Lane	3ft; 2ft at 103ft to N; to be reduced 8in at 203ft, 4ft 4in at 303ft, nothing at Cannon Street
Dowgate	3ft; 1ft 4in at 134ft to the N, 1ft at Budge Row
College Hill	3ft; 3in at 216ft to N, 'the Current 1 upon 35'
Garlick Hill	3ft; 11in at 216ft to N, 'the Current 1 upon 26'
Little Trinity Lane	4ft; 2ft 11in at 75ft to N; to be reduced 1ft 4in at 150ft, 2ft at 250ft, 1ft 6in at Great Trinity Lane
Huggin Lane	4ft; 3ft 1in at 63ft to N; to be reduced 1ft 10in at 153ft, 5ft 7in at 253ft, 2ft at Trinity Lane
Bread Street Hill	4ft; 3ft at 53ft to N, 3in at 153ft; to be reduced 2ft 11in at 253ft, 2ft at Trinity Lane end
Old Fish Street Hill	4ft; to be reduced 1ft at Old Fish Street
St Benet's Hill (St Paul's Chain)	8ft; 3ft at 100ft to N; to be reduced 2ft 5in at 190ft, 3ft at 340ft, 1ft at 490ft; 'in St Paul's Churchyard, as it was'
Addle Hill	6ft; 'and so gradually up the Hill'
Puddle Dock	8ft; 6ft 2in at 56ft to N, 3ft 3in at 196ft, 3ft 3in at 286ft, 9in at 386ft; to be reduced 1ft 7in at Carter Lane

Table 3 Modification of the gradients of the lanes north of Thames Street as specified in 1667 (Strype 1720, I.i., 228–9)

frontage pulled back by up to 8ft (2.6m), as we know from a survey by Robert Hooke (Figure 60 below).[6] In December 1667 the court of the Fishmongers' Company ordered that notice be taken of the ground staked out to be abstracted from the company for enlarging the street,[7] that is on the north side of their hall just upstream of the bridge, but there are no further details. Leake's survey of the ruined part of the city in 1666

[6] Hooke's work over a 30-year period surveying building sites after the Fire, and his own suggested plan for the rebuilt city, is studied in Cooper 1997; 1998a; 1998b. Unfortunately Hooke's celebrated diary was not begun until he had issued over half his certificates for sites, and his survey books, the equivalent of the series by Oliver and Mills, are now lost (Cooper 1998a, 27, 29).

[7] Herbert 1837, ii, 70.

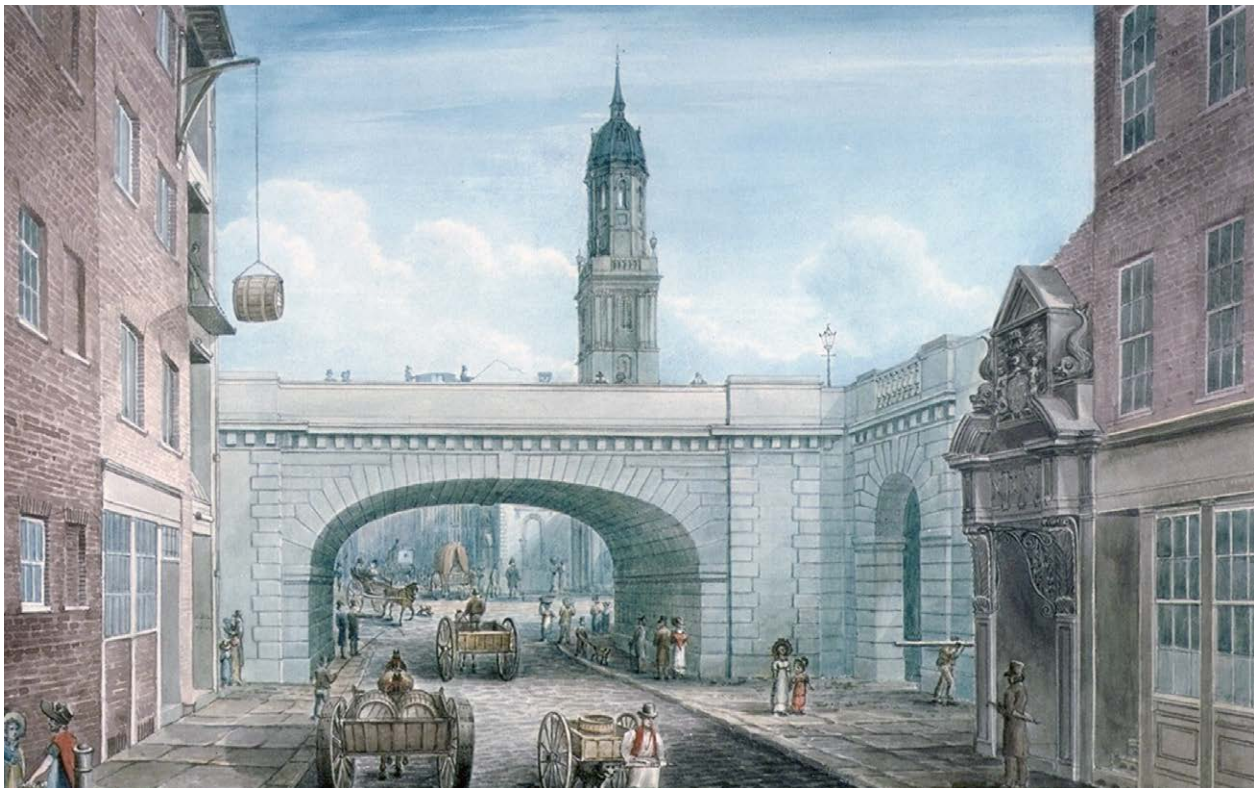


Figure 9 The arch of London Bridge over Thames Street, seen from the west in 1831, by G Yates (LMA, London Picture Archive 4802). To the right, the entrance to Fishmongers' Hall, marking the post-Fire south frontage of the street. The Hall itself lay behind a range of buildings fronting the street, here half removed for the new Hall of 1835, which survives

suggests that the pre-Fire Thames Street west of the bridge was about 20ft (6.1m) wide (this figure is given on Leake's survey, and is reproduced by Vertue, Figure 8). The street is shown at about this width in a view drawn from directly outside the Seal House site in 1831 (Figure 9). It therefore seems that on the properties on either side of Ebbgate excavated on sites A and B there was only a small amount of widening of Thames Street after the Fire, i.e. the frontage did not move much to the south. Black Raven Alley and Ebbgate, both of which stretched between Thames Street and the wharf, figure on a list in Mills' and Oliver's survey of 'divers alleys and passages' on the south side of Thames Street 'not fit to be opened',[8] where 'opened' presumably means 'widened', since they both appear on Ogilby and Morgan's map afterwards.

In 1708 Edward Hatton thought Thames Street 'a most extraordinary, spacious street in London'.[9] But this raised street, with new buildings on both sides for its entire length, still contained what we would view as bottlenecks to traffic, such as that on the north side of All Hallows the Great church, today covered by the raised viaduct of Cannon Street railway station (Figure 10). Just beyond the church westwards, outside the Steelyard, it was scarcely any better (Figure 11). Here the Hanseatic League of merchants had rebuilt their warehouse complex by 1680 and had a cartouche of their arms, carved in stone by Cibber, placed on the front.[10]

The reconstruction plans of Wren and Evelyn and the New Quay

Discussions about rebuilding the City began in the months immediately after the Fire, and the City indicated it was open to proposals for new layouts of streets.[11] Several proposals for laying out new streets and landmarks in the Fire-damaged area then circulated.

There was an intention to have a broad quay along the north bank of the Thames; of all the proposals for improvements, this was the first listed on 17 September 1666, only twelve days after the Fire had ended.[12] It was settled at 40ft (12.2m) wide in March 1667; cranes were to be painted blue and adorned with the King's arms.[13]

[8] Mills and Oliver *Survey*, ii, 23.
[9] Hatton 1708, i, 81.
[10] Gerhold 2016, 146–51, reproducing plans and elevations of 1680–1 and about 1714. The Cibber cartouche is now in the Museum of London.
[11] Porter 1998, 97–104 for the plans by Wren and others.
[12] Reddaway 1951, 60–1.
[13] Reddaway 1951, 224.



Figure 10 Upper Thames Street looking west, near the church of All Hallows the Great, by William Pearson about 1812 (BM 1880,1113.3349). According to Leake's post-Fire survey of the streets, Thames Street next to the church as shown here was only 19ft (5.8m) wide. Also shown here is the range of secular building styles along the north side of post-Fire Thames Street

The wharf would be clear of all buildings and made where necessary by extending the bank into the river, reusing Fire rubble.[14] One modern author has argued that the object of the new quay was to enable people to approach on land a building on fire, that is its purpose was to form open spaces to aid firefighting, not the landing of goods and international trade.[15] Perhaps all these purposes were relevant.

Intentions for the wharf are shown in the two best-known plans, those of Christopher Wren and John Evelyn. Although discussed by the King and others, they were never officially accepted as courses of action. The original Wren plan of September 1666 is held at All Souls College Library, and it has been redrawn fairly accurately several times (eg Figure 12).[16] In his major study of rebuilding after the Fire in 1951, T F Reddaway judged that the plan 'prepared in frantic haste on a faulty ground plan [...] would certainly have been altered in many places. Architects have given it unstinted praise, and at that it may be left.'[17]

[14] A plan of the waterline and the proposed improvements was attached to the royal Letters Patent for the wharf of 1671; but only for the upstream section from Baynard's Castle to the bridge. The plan is 103in (2.61m) long, and part is illustrated in Hunting 1988, 57. It is now LMA, COL/CH/01/098 (with a digital photograph on the catalogue website). No comparable plan of the waterfront east of the bridge appears to exist, but it is clear that a similar intention was carried out there.

[15] Perks 1935, 4–5.

[16] Three drawings at All Souls showing the evolution of the plan, two in Wren's hand, are catalogued by Geraghty 2007, nos 394–6.

[17] Reddaway 1951, 311, n1. In a review of the first edition of Reddaway's book, A H Thomas listed many shortcomings of the Wren plan: hardly any right-angles, a small St Paul's invisible from the east, and no provision for markets, laystalls or open spaces within the walls (Thomas 1940).



Figure 11 Upper Thames Street outside the Steelyard looking east, by John Wykeham Archer in 1861 (BM 1874,0314.416). Comparison with the immediately post-Fire maps shows that the frontage of the Steelyard was cut back by several feet after the Fire; before the Fire, Thames Street was only 19ft (5.8m) wide here. This bottleneck probably originated in the 12th century. Cannon Street railway station now covers the sites on both sides of the street

Evelyn had travelled more widely than Wren. He now produced his own proposed plan for the City.[18] The relocated Royal Exchange was to front the Thames where the Steelyard had been, in an area surrounded on three sides by colonnaded walks ('piazzas'), with vaults for warehouses beneath. Evelyn's plan was more baroque than Wren's: the centres of circles formed by the meeting of roads contained, besides the cathedral, the Lord Mayor's house, the Fleet conduit and 'the Fountain in Grace-church Street.' Both Wren's and Evelyn's plans involved having prominent public buildings with their main facades facing the river rather than a street. Clearly the bank of the river was to be architecturally embellished, at least on the City side.

Where these ideas originated is not known. Perhaps travellers like Evelyn had been impressed with the long, open quaysides at Antwerp and Rotterdam, as shown on maps of the 1650s (eg Figure 13); Evelyn had noted with approval the paved, stone-fronted quays at Genoa and Naples. At Genoa he inspected the new mole of 1651, 'a Worke of huge solid Stones Stretching itself for neere 600 paces into the maine Sea... doubtlesse of all the wonders of Italy, for the art, & nature of the designe nothing dos parallel this'.[19] Both Evelyn and Wren would have seen that in Paris long quays fronted with stone stretched along both sides of the Seine and similar public ways formed the edges of the main islands in the river.[20] These were mainly not for trade, but for embellishment of the city, and on the islands there quickly arose noble town houses fronting onto the quay, as for example the Hôtel de Lauzun of 1658 on the Quai d'Angers. In French ports on the Atlantic and Mediterranean coasts, the wharves were generally of timber for much of the 17th century, but quays of stone began to appear at Nantes in 1622 and Bordeaux 150 years later, in 1776. Lacking in the City of London were specially built promenades with trees along the quays, as at Bordeaux;[21] though upstream at Westminster, by

[18] For his plan, see LMA, London Picture Archive 30308, an engraving of 1775.

[19] In his Diary, de Beer 1959, 100.

[20] Soo 1998, 100, lists the recently-built quays which Wren would have seen along the Seine in Paris, and suggests they were stored in his memory.

[21] Le Mao 2015, 50–2.

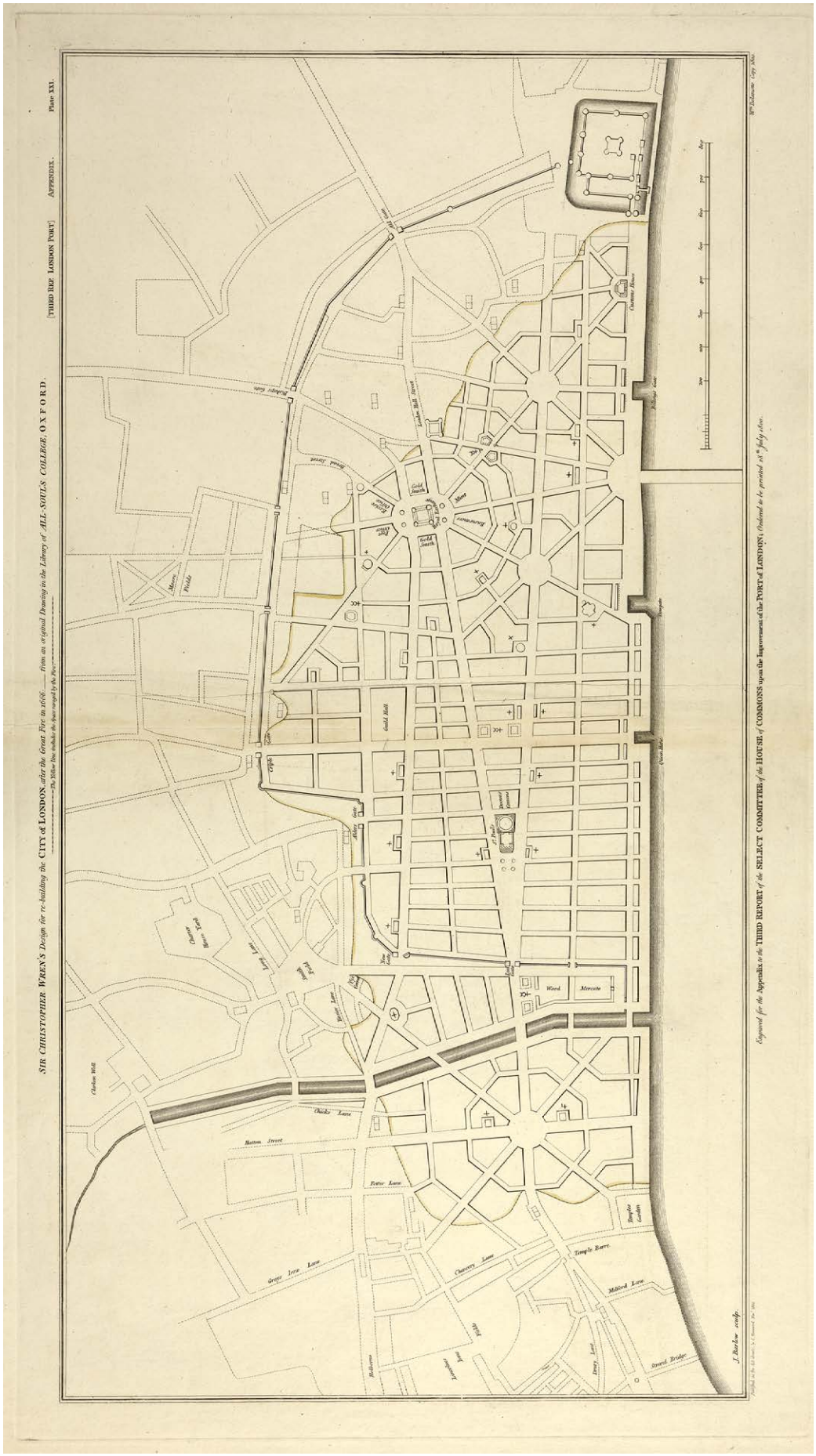


Figure 12 Wren's plan for the rebuilding of London, 1666; a copy of 1800 by W A Delamotte and J Barlow (Yale Center for British Art, Paul Mellon Collection, B1977.14.16652)

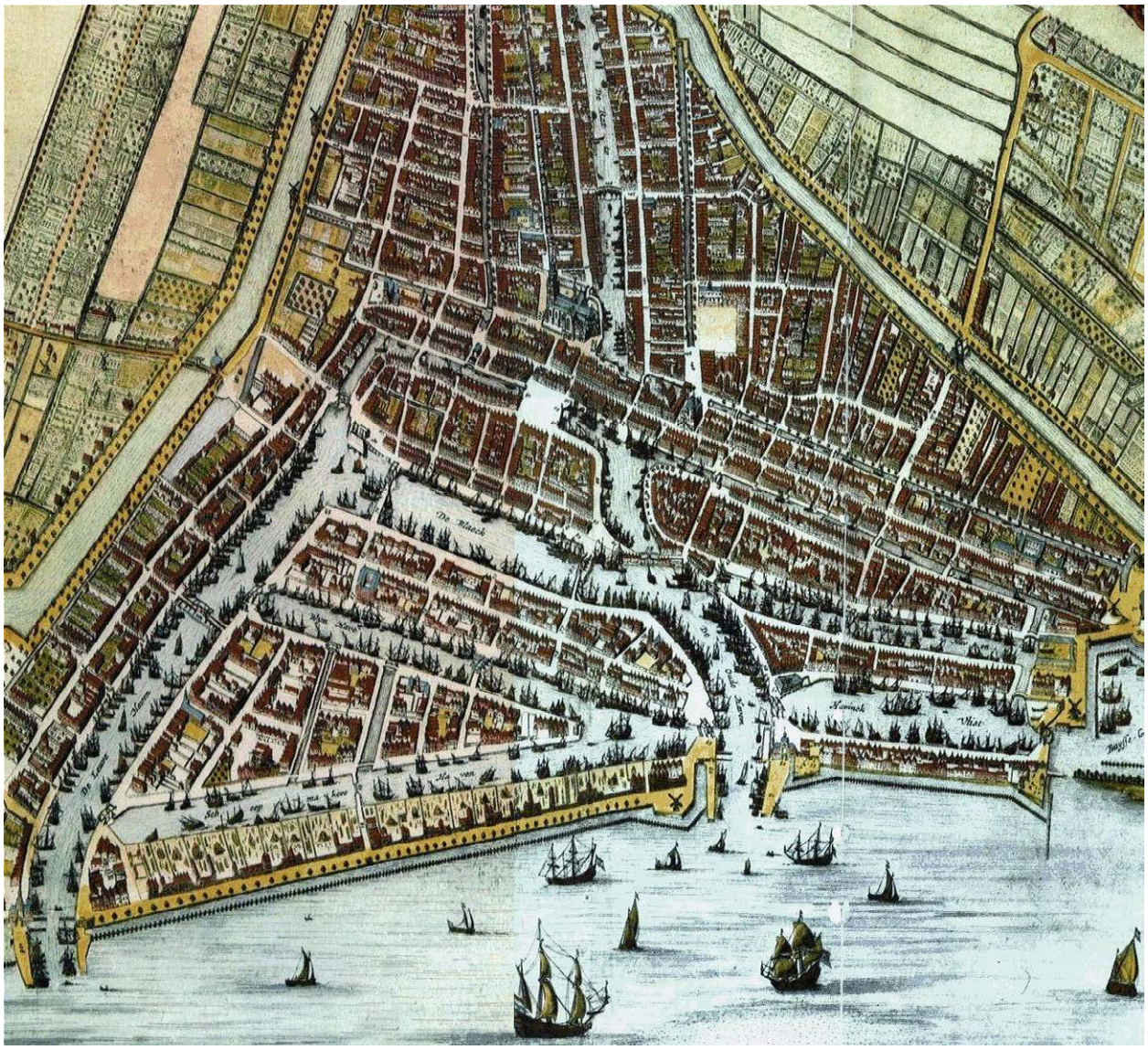


Figure 13 Extract from the map of Rotterdam by Willem and Johannes Blaeu, 1652 (Wikimedia Commons). The port was greatly developed between 1576 and 1621

1750, there were semi-public promenades from which the view downstream could be admired, such as the garden with its terrace and stair at Somerset House (Figure 14). In Canaletto's picture, there is a marked contrast between the stone of St Paul's Cathedral and the red and brown brick and tile of the waterfront.

What did the edge of the wharf in the City consist of, or look like? Was there ever a cleared space along the wharf? There are a small number of surveys of building sites by Mills and Oliver where 40ft of land had been or was to be 'laid into the Key of the Thames.'[22] Ogilby and Morgan's map of the City in 1676 shows an open strip of about 40ft (12.2m) along nearly all the waterfront from Blackfriars to the Tower; it is expressly called the 'New Key'. This may have been ideal, with some wishful thinking. Plans of properties show that stretches of the open wharf did exist, serving larger establishments: the Steelyard had an open wharf but with brick walls forming barriers on its east and west sides, and another open section within a large property was downstream of the bridge at Porter's Key next to Custom House.[23] A painting by William Marlow (1740–1813) apparently shows the quay at the end of one of the investigated sites, New Fresh Wharf (site C), around 1762 (Figure 15). Although there is artistic licence with the townscape behind (the tower of St Michael Cornhill makes an impossible appearance), the quayside in the foreground looks genuine enough. It is bordered by a stone river

[22] Mills and Oliver *Survey*, v, 46; Ralph's Quay east of Billingsgate in 1667, Jones 1966, 187–8; also in the parish of St Martin Vintry, ibid, 225–6.

[23] Gerhold 2016, 148, fig 166 and 143, fig 160.



Figure 14 Admiring the view of the City from Somerset Stairs, a detail of a painting of 1750–1 by Antonio Canaletto (Royal Collection, RCIN 400504)

wall. This can only be an ideal view composed of elements on several parts of the wharf.

Archaeological observations of post-Fire pieces of reclamation have been few, and the river wall itself has not been recorded in detail on any site.[24] The largest reported excavation to date has been recording of reclamation at the south-west corner of the City at Blackfriars in 2009–13.[25] Here the Fleet met the Thames, and as shown by Leake's plan of the damaged city, the upstream west corner of reclaimed land was further advanced than its equivalent on the east side. By the time of Ogilby and Morgan's map in 1676 the land on both sides of the Fleet mouth had been lined up on the Thames side, which required reclamation on the downstream corner. The excavations found evidence of wooden revetments and a stone wall for the 16th and 17th centuries, and dumping of material probably from the post-Fire reclamation, but no details of the post-Fire wall itself. Apart from this instance, the absence of information about reclamation and new lengths of river wall suggests that there was very little new reclamation, and that the cleared space for the New Quay was achieved by clearing back from the pre-Fire line. This would mean that many post-Fire properties bordering the Thames would have their riverside ends based on walls going back to the 15th century. There is one 19th-century watercolour view, proposed here to be of the quay wall at Paul's Wharf; it shows what may be a local corner of the pre-Fire waterfront wall, forming part of the edge of the quay fully two centuries later (Figure 16).

Downstream of the bridge, an open wharf was established at least at the public Botolph Wharf where the City could insist on it. The Wharf had a spaced-out row of small buildings along the water's edge, their individual ends corresponding with the alleys to the north as though they belonged to those properties. These quayside buildings appear on simplified panoramic views of the area as low sheds. It is probably also significant that on Rocque's map of 1747 the wharf is shown sporadically encumbered and closed by buildings above the bridge, while downstream of the bridge there is a clear wharf from the bridge to Custom

[24] There has been brief recording, of position only, of 'the lower part of the Wren-Ripley river wall' in the 1973 excavation immediately east of the present Custom House: Tatton-Brown 1974, 143 and fig 2.
[25] Stafford and Teague 2016.



Figure 15 The edge of the quay at New Fresh Wharf (site C), by William Marlow, looking west about 1762 (© Museum of London)



Figure 16 The waterfront wall, by John Wykeham Archer in 1852 (BM 1874,0314.339). The drawing is captioned 'Baynard's Castle', but this is unlikely as the castle had octagonal turrets at its corners. It is a corner of the major access point at Paul's Wharf, which lay next to the Castle, and which is confirmed by other drawings. The masonry resembles that of the 15th-century river wall excavated nearby at the Trig Lane site in the 1970s, and it seems likely that this portion is also pre-Fire

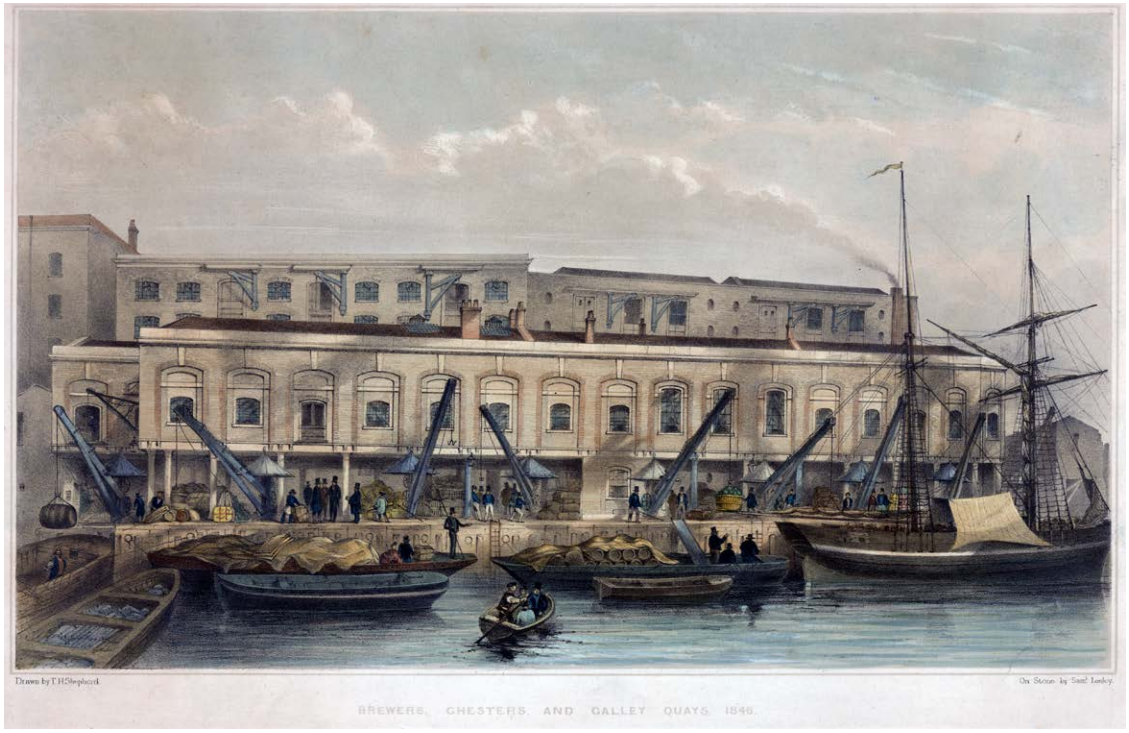


Figure 17 Brewers, Chesters and Galley Quays in a lithograph of 1846 by Samuel Lunley after a drawing by Thomas Hosmer Shepherd (Yale Center for British Art, Paul Mellon Collection, B1977.14.18549; a version of the drawing is BM 1880,1113.1616). Several kinds of boats, all common on the river, are also shown

House. This is one of the differences in development and use of the two sections of waterfront, above and below the bridge, which became pronounced by 1750.

Gradually however the warehouses were extended until they met the water, for the better unloading of lighters (the barge-like boats which took goods from and to the ships) directly into them. By the time of Horwood's map of the City in 1813, building encroachment had obliterated the wharf for all the length above the bridge. The Act which had sought to establish the Quay was repealed in 1821. The usual opinion of historians, following Reddaway, is that the cleared quay scheme faltered and never really came to fruition.[26] A wharf meant inefficient double handling when large warehouses were not within reach of a crane. The wharf was encroached upon by piecemeal building almost immediately.[27] Several extracts from the panorama of the Buck brothers in 1749[28] are given in the narrative below dealing with the individual sites. It is clear that the quay was by then occupied with buildings to the river's edge all the way from the bridge westwards to the Fleet with very few exceptions. The waterfront shown in the Buck brothers' panorama of 1749 is very like that shown before the Fire by Hollar in his Long View of 1647, even though the Fire had intervened.

A vivid picture of the daily working of the quay east of the study sites, at Brewers, Chesters and Galley Quays near Custom House, is shown by a lithograph of 1846 after a drawing by Thomas Hosmer Shepherd of 1821 (Figure 17); that is, several decades after the notional end of the study presented here. Goods were lifted by crane from small boats and were stored in the elegant arcaded range along the wharf; other warehouses with gibbet cranes in their top storeys, presumably with a courtyard below, were behind, fronting Thames Street as their landward artery. The organisation of landing, storing and moving of goods had been finely-tuned.

London Bridge

London Bridge, the history of which was reviewed in 2000 with the aid of recent archaeological investigations,[29] was largely unaffected by the Great Fire, since a previous local fire of 1633 had removed a section of buildings at the north end; and though part nearest Thames Street was rebuilt, there was an open space to the south which provided a fire break in 1666. The history of houses on the bridge until their removal in 1759 has recently been the subject of a detailed study.[30] The bridge is shown around 1750, before the removal of its buildings, by Antonio Canaletto (Figure 18); his drawing details the intense level of activity on the

[26] Reddaway 1951, 49, 60–1, 230–43.
[27] Eg at Cousin Lane between 1692 and 1718: Gerhold 2016, 107.
[28] This panorama has been published by Hyde 1994 and by Nurse 2017.
[29] Watson *et al.* 2000.
[30] Gerhold 2019.



Figure 18 London Bridge from the west by Antonio Canaletto around 1750 (BM 1909,0406.4). The buildings and constructions on the north bank on the left-hand side, from left to right, are Fishmongers' Hall, the Monument, the bridge waterworks, and the tower of St Magnus

river and the southern foreshore. But only small boats are shown on the river above the bridge.

The bridge plays a simple but important part in the narrative reported here. From 1476, when the drawbridge in the middle was so decrepit it could not be raised, until the entire bridge was replaced in the 1830s, the bridge formed the upper end of the Pool of London because large ships could not get through. An ocean-going ship could moor at the quays downstream of the bridge, and occasionally did until the 1960s. But it could not go through the bridge. The 18th- and especially 19th-century development of warehouses on the waterfront upstream of the bridge, many individually as large as those downstream of it, was made possible by use of barges. A summary of works on the bridge after 1750 is given below in Chapter 5.

It has been suggested that the arches of London Bridge had an unintended effect upon the quality of drinking water. Upstream of the bridge, freshwater was held back, and downstream the river was strongly tidal, not only more saline but polluted by industries. Thus 'there was probably a marked difference in the incidence of waterborne diseases between west and east London' to which the Bridge contributed.[31] Perhaps this was so at the beginning of our period, around 1700, but by the middle of the 19th century the high level of pollution of the river was being noticed at Westminster, upstream of the bridge.

[31] Wheeler 1979, 18.

Public buildings and places in central and eastern Thames Street

After the Fire, both Queenhithe and Billingsgate were rebuilt, and functioned largely as before. The history and buildings of post-Fire Queenhithe will not be recounted here, as the emphasis of study is on the bridgehead area and Thames Street to the east as far as the Custom House.[32]

Billingsgate was made a free market for the sale of fish by Act of Parliament in 1699.[33] Only the west and north sides of the dock were actually called Billingsgate. Smart's Key, a domestic property, formed the eastern, downstream side.[34] A plan of Billingsgate and Smart's Key was made by John Olley for the Corporation in 1697 (Figure 19). This shows the arcaded walk which was a public way to river stairs on the west (upstream) side of the dock, and the outline of buildings on the west and east sides.

By this time the front house on Smart's Key was 'Major Beckford's'. A view of 1736 shows the dock and its buildings (Figure 20, an engraving of 1762). The east and west sides are shown in enlarged detail later in this study (Figures 144, 145). Beckford's house had an imposing west front to the dock, with first-floor windows embellished in brick, no doubt the rubbed brick now required for such embellishments by the City.[35] The principal rooms would be on this floor, with views over Billingsgate. These buildings at the north corners of Billingsgate with Thames Street will be noted later, in discussion of houses along Thames Street.

[32] Illustrations and a summary of post-Fire Queenhithe to 1750 are in Phillips 1951, 69–70.
[33] Maitland 1756, ii, 791.
[34] Jones 1966, i, 193–5.
[35] Mills and Oliver *Survey*, i, xviii.

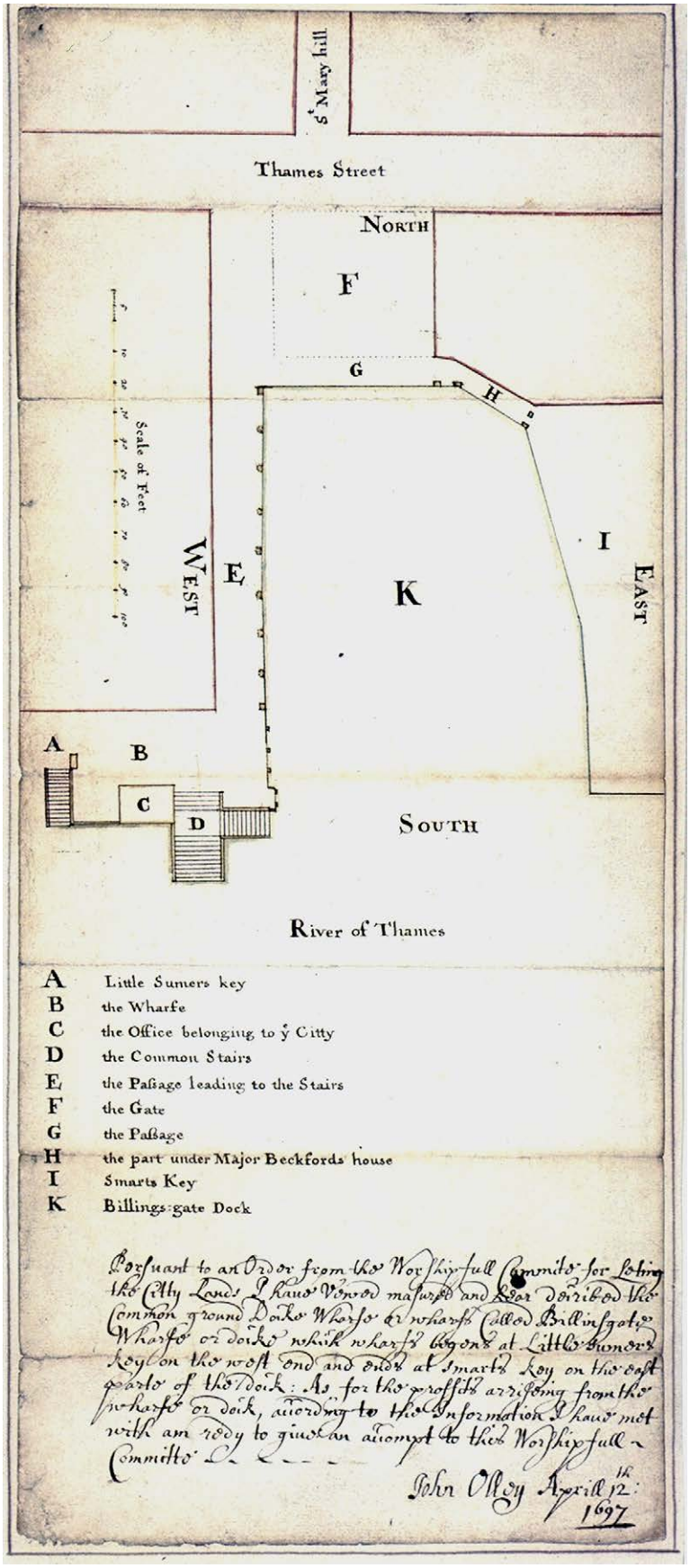


Figure 19 Plan of Billingsgate dock and the stairs by John Olley, 1697 (LMA, London Picture Archive 4367)

There were several Beckfords prominent in the society and politics of the post-Fire City.[36] The one concerned here is (Sir) Thomas Beckford, alderman and sheriff, and Master of the Clothworkers' Company in 1679; he died in 1685. Thomas Beckford was one of several who had properties staked out at Billingsgate in 1668.[37] In February 1670 'Major' Beckford obtained a lease from the City of a property at Billingsgate, a note being made that ground would be cut off from it to enlarge Thames Street. He undertook to construct a passage on columns (as later shown by Olley) from the Roomland (the open space on the north side of the dock) to Smart's Key. This took a little time to develop; in July 1676 Beckford and other tenants of the City at Billingsgate dock were building, having had their properties staked out by Robert Hooke and John Oliver in that year. In a further City Lands Committee record of 1677 Beckford is called Major Thomas.[38] He was known to Pepys as he supplied the navy with clothing.[39]

Two buildings bordered the west side of the dock, and presumably because they were the public buildings of Billingsgate, they were drawn several times in subsequent decades. By the street at the north end was a block of fishmongers' shops with four storeys over. Behind to the south was a range of eight bays four storeys high, incorporating a colonnaded walk along the edge of the dock. It had a balustrade on the top and may have had a flat roof. The buildings on both sides of the dock shown in Figure 20 (originally of 1736) are taken here to be originally of 1669, and their outlines in plan are as shown in 1697 by Olley. Their windows could have been altered by 1736, but these are essentially constructions of the immediately post-Fire years. These buildings will be further studied in Chapter 4. Billingsgate and the adjacent wharves are also shown in the Buck brothers' panorama of 1749 (Figure 21), though there is probably some artistic

[36] A family tree is published in Gollin 1981. A smaller family tree is given by Gauci 2013, Appendix 2, in his biography of William Beckford (1709–70).
[37] Mills and Oliver *Survey*, i, 16.
[38] LMA, City Lands Grant Books, CLA/008/EM/02/01/004, p 43–4 (23 February 1670), /005, f. 85 (19 July 1676), f. 108 (11 July 1677).
[39] Lemire 1999.



Figure 20 Billingsgate dock from the north in 1736 by Arnold Vanhaecken (LMA, London Picture Archive 319833; this version of 1762). There is no information on the dark-shaded building in the centre of the picture. The way through to Smart's Key can be seen at the far end of Beckford's house, on the left (compare Figure 19)

licence and certainly much simplification of the buildings. Nearby to the east, Bear Quay had a prominent stair down to the foreshore (no. 31 on Figure 21).

A short distance further to the east, a new Custom House was built by Wren in 1669–71 (Figure 22); it did not front Thames Street.[40] The architecture has been compared to the royal palace of 1645–9 in the Hague;[41] and the Wren scholar Margaret Whinney thought 'it appears to have been Dutch rather than French in derivation, perhaps owing to the influence of Hugh May'.[42] Destroyed by fire in 1715, it was reconstructed by Thomas Ripley in 1718–25 (Figure 23) and this was in turn destroyed by fire in 1814, and then rebuilt on an adjacent site by David Laing.[43] This was a royal building, placed here to gather royal income, and the official centre of business on the waterfront. In both Wren and Ripley versions, it was the grandest individual building on the waterfront; and its main façade was to the river. The Ripley Custom House was the only building in baroque style to grace the waterfront; baroque was the style of royalty and the royal circle, along with the western towers of St Paul's and details of some parish churches.[44] What impressed foreign visitors, however, was not the architecture at all, since London did not compare well with other capitals in that department, but the number of ships in the port and the number of shops along the major streets, both of which were unusual for their number in a European city.[45]

A short distance east of the Custom House was the Tower of London, which formed a notable architectural and military accent to the east end of the City

[40] The dimensions of the Wren building were worked out by Reddaway 1958, fig 2; along with the extent of the fire of 1715 and the Ripley building which replaced it, fig 5. The south, riverwards wall of the Wren building was noted in excavation on the site in 1973 (Tatton-Brown 1974).

[41] In its riverwards elevation, Wren's Custom House is said to have a similarity to that of the Noordeinde Palace in the Hague of 1645–9 by Jacob van Campen (Kuyper 1980, 68).

[42] Whinney 1971, 42.

[43] Jarvis 1961; SoL 15, 31–43; Colvin 1995, 1090. The building by Laing, repaired by Smirke, which largely survives though damaged in the War, is considered to be an early example of an office building, ie one with the same plan on more than one floor, internal light wells and corridors (Custom House Public Enquiry discussions, January 2022).

[44] Though note the reservations of Kerry Downes in Downes 2015.

[45] Lubbock 1995, 6–7.



Figure 21 Detail from the Buck brothers' panorama of the waterfront in 1749, showing Billingsgate (no. 29) and Bear Quay (no. 31) (Hyde 1994). The number 29 for Billingsgate is placed on what must be meant as Thomas Beckford's house with its way underneath. Compare Figure 20



Figure 22 Wren's Custom House, as it was in 1714; by John Harris, 1715 (LMA, London Picture Archive 2845)



Figure 23 The riverfront of the second post-Fire Custom House by Thomas Ripley, in 1753 by Thomas Bowles after John Maurier (Yale Center for British Art, Paul Mellon Collection, B1977.14.15888). A ship could tie up alongside and be unloaded. The building on the left edge may be the warehouse at the south-east corner of Porter's Quay, which was later subsumed into the enlarged site of the new Custom House of 1817

waterfront (Figure 24).[46] The royal pair of the Tower and the Custom House had been a striking feature of the seaward end of the waterfront since the building of the first Custom House in the 1380s.

Transport networks: wharves, stairs and how shipping was managed; carmen and their carts

As in previous periods, there was a thriving transport network to places all over England from nodes along both banks of the Thames in the central area of the waterfront. This naturally divided into destinations upstream such as Oxfordshire, which were served by routes from Queenhithe or wharves and public stairs upstream of the Bridge (for instance, Old Swan Stairs, shown in 1749 in Figure 57 below), and destinations in the lower Thames reaches and round the English coast in both directions (for instance to Yorkshire or Somerset), which started at points below the Bridge (such as Billingsgate, Figure 25). These services for transport of people were summarised in a survey of the Thames in 1758 (Table 4); the closely related matter of goods going to and coming from coastal ports is dealt with in Chapter 8 below. There was no idea of a single transport hub or terminal as there would be today; there was a wide choice of destinations from many landing places and wharves.[47] A longer list of destinations for coastal traffic (of goods rather than persons) around 1795 is given below in Chapter 8.

The captains of the ships for these journeys could be contacted at taverns in Thames Street or the lanes nearby; so the ferry trade and the taverns fuelled each other. Two of these taverns were the Harp in Harp Lane and the Lion and Key in Thames Street, probably next to Custom House Quay.[48]

There were also various forms of river stairs and access points to the river, at the ends of lanes. In the City part of the waterfront were substantial stairs which extended over the foreshore and functioned as major points of entry and for crossing the river.[49] Elsewhere short jetties of timber and rubble extended from the bank,

[46] For the development of buildings in the Tower of London in 1666–1750, Keay with Harris 2008.

[47] Further notes on routes, for instance to Hull and York, are brought together by Phillips 1951, 201–2.

[48] Phillips 1951, 200–1.

[49] Tucker 2010 is a survey of ferries on the Thames from Staines to Yantlet Creek in the estuary near Gravesend, with their histories and their present states.



Figure 24 The Tower of London from the river, engraved around 1750 by W H Toms after Leonard Knyff (1650–1721), so possibly incorporating older details (Yale Center for British Art, Paul Mellon Collection, B1977.14.18613)



Figure 25 People at Billingsgate in 1798 by C Ansell (BM 1880,1113.3395). This is perhaps a combination of various elements, and the crane is probably the one shown in other drawings on Dice Quay, next to Billingsgate and effectively part of it. A crane was a large machine



Figure 26 View on the Thames from York Stairs showing Westminster by Antonio Canaletto, between 1746 and 1747 (Yale Center for British Art, Paul Mellon Collection, B1977.14.4630). This shows the York Water Gate of 1626–7 (which survives) in its original setting, before later reclamation in front of it. The river stair in the foreground is probably Ivy Bridge. The tower is part of the York Buildings Waterworks, mentioned in 1725 and possibly standing in this form in 1712 when machinery powered by steam used it to pump water to Marylebone

as shown by Canaletto in a view of what is probably Ivy Bridge, at the end of Ivy Bridge Lane south of the Strand, west of the Savoy and Somerset House (Figure 26). Or there were lengths of low revetments along the bank with short stairs built into them, as shown on the Southwark bank by Canaletto around 1750 (Figure 27) A further type was simple paving of the foreshore and steps at the end of the lane; this was particularly the practice downstream (for instance at Wapping Old Stairs, Figure 28).

When the tide was out, it was dangerous to try going through London Bridge in a boat in a downstream direction, and must have been impossible in an upstream direction. By the time of Samuel Pepys in the middle of the 17th century there was an established procedure for handling this. If going downstream, one got out at Swan Stairs and walked round to a point below the bridge to resume with a different boat. This would have been at Billingsgate.

Some seagoing vessels docked at Billingsgate, as their predecessors had before the Fire (shown on the Wyngaerde panorama of the 1540s). But the majority must have sat in the middle of the river, to be unloaded and loaded by lighters or barges. The number of ships at any one time had impressed observers such as William Camden since well before the Fire: in 1657 Henry Belasye wrote that 'from [Greenwich] to London is loaded with so many tall ships that their very masts looke like an old forest', and Robert Kirk in 1690 thought that 'the ships of Thames are like one entire wood or forest from below the Bridge of London to Gravesend, a distance of 20 miles.'[50] It may have been impressive, but it was a traffic jam, and a problem from the outset of the post-Fire period. Congestion would have been increased in summer months since, at least in the 1680s, that is when imports from the Chesapeake in America and the Caribbean islands tended to arrive.[51] By 1725

[50] Maclean and Brett-James 1929–33, 334 and n5.
[51] Zahedieh 2010, 142–3.

County and place	Starting point
Berkshire Abingdon, Newbury, Reading	The Bull by Brook's Wharf, Queenhithe
Buckinghamshire Windsor	Queenhithe
Cambridgeshire Wisbech	Billingsgate
Cheshire	Smart's Quay
Cornwall Truro, Falmouth	Fresh Wharf or Bridgehouse, Southwark
Devonshire	Fresh Wharf or Bridgehouse, Southwark
Dorset	Bridgehouse, Southwark
Durham Sunderland, Newcastle	Dash's Wharf 'southward of Fishmongers' Hall'
Essex Harwich Colchester, Woodbridge, Maldon, Leigh	Hartshorn Brewhouse, East Smithfield Wiggin's Quay St Katharine's Dock
Kent Canterbury, Sandwich, Faversham, Milton Deal Maidstone Queenborough Gravesend	Bear Quay or Bridgehouse, Southwark Bear Quay Battle-bridge Bear Quay Billingsgate
Leicestershire	Ralph's Quay
Middlesex Staines, Shepperton, Sunbury, Hampton	Queenhithe
Norfolk	Dice Quay
Northumberland	Dash's Wharf
Nottinghamshire	Ralph's Quay
Oxfordshire	Brook's Wharf
Somerset	Battle-bridge
Suffolk	Dice Quay
Surrey Chertsey, Weybridge, Guildford Walton	Queenhithe Queenhithe and Hungerford Stairs
Yorkshire York, Hull, Leeds	Smart's Quay, Custom House Quay, Ralph's Quay

Table 4 Starting-points along the Thames for transport of goods and persons to many parts of England in the middle of the 18th century (Griffiths 1758, 264–5)

ships were arranged in 'tiers', that is grouped in lines, but the lines not touching the quay; the ships were held in place by their anchors. According to a French visitor, the French vessels formed one line, the Dutch another, ships from Newcastle a third and so on.[52] The tiers are shown in a view of 1750 (Figure 29). An Elder Brother

[52] Smith 1961, 196.



Figure 27 A detail of Canaletto's view of London Bridge around 1750, showing two short stairs joined by a low timber revetment on the foreshore (a detail of BM 1909,0406.4)

of Trinity House described to a parliamentary enquiry of 1796 (studied in detail in Chapter 7) how several landing places often had 17 or 18 ships in a tier, when about 12 was a safer proposition.[53] Since the goods being unloaded and loaded came in heavy containers or parcels, it is unlikely that the ships were unloaded or loaded up while being in a tier; goods could not be moved across a row of ships. Though documentary evidence has not yet been found to explain this, it seems sensible to assume that a ship was moved out into the river to be loaded from lighters, using cranes (sometimes temporary) on one or both vessels. It is therefore probable that the ships on the tiers were empty, having been unloaded, and were awaiting their outbound cargoes or instructions to go out in ballast. All larger and sea-going vessels would have stayed below London Bridge, and would be maneouvred around by rowing boats.[54] A port with a similar sometimes overwhelming number of arriving ships was Bordeaux, which had the same system of tiers.

In his handbook *Comes Commercii* (12th edition, 1699) Edward Hatton describes in detail the several kinds of porters who carried goods from ship to shore in lighters, craning and sometimes weighing the goods. He reserves sharp criticism for carmen, who transported the goods to and from the wharf in carts:

[53] Parliamentary Report 1796, 5–6.

[54] An engraving of 1795 shows how a ship was moved in the river, and no doubt turned round to face down river, dragged by one or more rowing boats with lines to its prow: BM 1880,1113.1669.



Figure 28 Wapping Old Stairs, undated view by Thomas Rowlandson (1756–1827)
(Yale Center for British Art, Paul Mellon Collection, B1977.14.310)



Figure 29 The City of London from the east in 1751 by Thomas Bowles (BM 1880,1113.1657). The townscape is simplified, but there is clearly congregation of shipping below London Bridge. Ships are arranged in tiers, and no ship is moored alongside the wharves, in this area at least

> 'who being generally very insolent noisy Fellows, and think thereby to baffle and run down young Merchants, or Servants to Merchants, who are not much acquainted with Waterside Business; I shall therefore show the Limitations and Restraints which the Carmen lie under, and the Rules by which they are to act; that so those who have occasion to deal with them, may the better know how to manage them.'[55]

The individual carman could be identified, if necessary, by a brass badge he wore with a number on it. The cart had to have the City arms branded on its shaft, and was of a prescribed size. Only one horse per cart was allowed, except when going up a hill or with timber, stone or other commodities which could not be divided. The horse had to be led by the carman on foot, and he could not 'drive his horses a-trot'. In the lanes above Thames Street, there was a one-way system: up Tower Dock to Tower Street; and at St Dunstan's Hill, St Mary Hill, St Martin's Lane, Dowgate Hill, Garlick Hill and Bread Street Hill no traffic down these lanes was allowed. Empty or laden carts could access Thames Street via Fish Street Hill, Whittington-Lane Hill (a name not otherwise known on the maps; College Hill?) and Wardrobe Hill. Over 70 locations throughout the City were specified as places where carts could stand to be hired. Thames Street was divided into 18 continuous small stretches in each of which the number of carts was regulated: in the area of the 1982 excavations at Billingsgate, two carts were allowed to stand in the street between Little Somers Key and Botolph Wharf, but six from Fresh Wharf to St Magnus corner, which must have caused much congestion outside St Magnus church. All carts standing in Thames Street were to stand on the south side of the street, which was never very wide. Rates for the carmen to charge to many places in the City were stipulated, as was how much made a single load of goods such as raisins, pepper, indigo, Turkey silk, cloves, calico, wine, sugar or tobacco.[56] The design of carts had evolved, with a long wheelbase of four wheels appearing around 1564, and a larger wagon with a swivelling front axle before 1650. There was a real growth nationally in the provision of transport services.[57]

Conclusions: the structure of the port

This survey has described the major public works on the central and eastern sections of the City waterfront after the Great Fire; wharves, stairs, how shipping was managed and how the transport of goods away from the waterfront was undertaken by the carmen. Apart from the raising and occasional widening of Thames Street, there was little that was truly new in the post-Fire building. London Bridge was not altered, and the public institutions (Billingsgate and Custom House) rebuilt without any serious extension of their sites. Up to 1750, the main activities of storage of goods being imported or exported were concentrated on the north bank of the Thames; though it was increasingly clear that the facilities along Thames Street were not up to the task. The widespread congestion on the wharf had become a contested issue much earlier, by 1700, and the excavated properties at Botolph Wharf, the main site excavated in the 1980s, were at the centre of the contested arrangements.

[55] Hatton 1699, 293.

[56] Hatton 1699, 293–300.

[57] Chartres 1977, 40.

3 The archaeological excavations of 1974–84

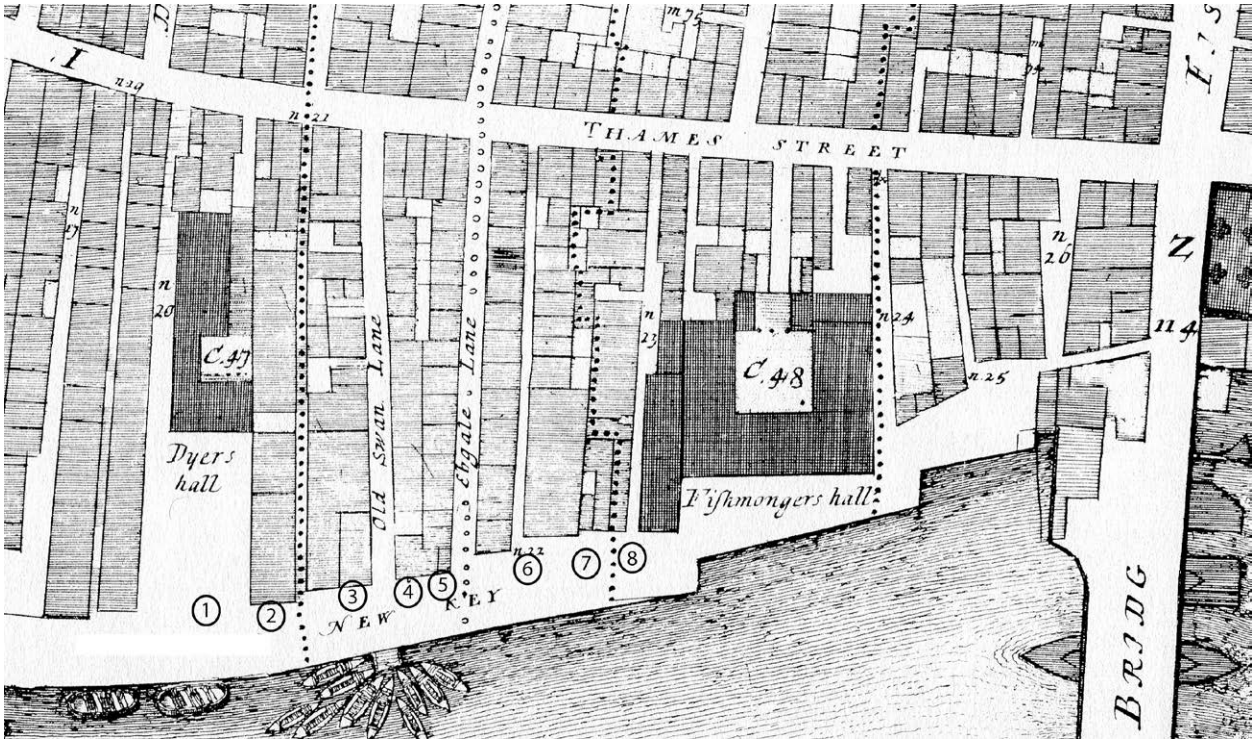


Figure 30 Fishmongers' Hall and the properties west of it, on Ogilby and Morgan's map of 1676 (Hyde 1992). The numbers of the medieval and post-medieval properties used in this study and in the previous one (Schofield *et al.* 2018) have been added. The Swan Lane excavation was on Tenements 1 to 5. The Seal House excavation was on a site comprising Tenements 6 and 7, though only Tenement 6 was investigated in a trench on the property on the east side of Black Raven Alley (n22)
Key to names of alleys in 1676: n20 White Cock Alley; n21 George Alley; n22 Black Raven Alley; n23 Wheatsheaf Alley; n24 Red Cross Alley; n25 Church Yard Alley; n26 Gully Hole

The archaeological excavations which form the central part of this monograph took place between 1974 and 1984: from west to east, at Swan Lane (site A) in 1981–2, Seal House (site B) in 1974, New Fresh Wharf (site C) in 1974–8, and Billingsgate Lorry Park (site D) in 1982–4.

Thames Street above the Bridge, 1666–1780: the Swan Lane and Seal House excavations and their setting

Here the results at two of the excavations, at Swan Lane (site A) and at Seal House (site B), both immediately above the bridge and west of Fishmongers' Hall in Thames Street, are presented. They comprise the contents of a single cesspit at Swan Lane, and the recording of a range of small brick houses on the east side of Black Raven Alley at Seal House, a few metres to the east. The properties forming the two sites are shown on an extract from Ogilby and Morgan's map of the City in 1676 (Figure 30). Tenements 1 to 5 lay on the west side of Ebbgate Lane (today Swan Lane) and were excavated on the Swan Lane site; Tenements 6 to 8 lay on the east side of the lane, of which only Tenement 6 was excavated at Seal House (the name taken from a 19th-century building which formed the east boundary of the excavation site, actually the adjoining property).

Swan Lane (site A)[1]

John Schofield, with contributions by Lyn Blackmore and Jacqui Pearce

The site of an excavation and watching brief during construction in 1981–2 at Swan Lane comprised five medieval properties, which in the publication in 2018 of the results for the period 1100 to 1666 were called Tenements 1 to 5, from west to east along Thames Street.[2] When the building of 1982 was in turn

[1] Fragments of walls and other features dating to the period after 1666 from their construction details, brick types or associated finds were recorded, particularly in the watching brief over the site, but often in difficult conditions. Their records remain in archive (site SWA81).
[2] Schofield *et al.* 2018.



Figure 31 Swan Lane: selected pottery from cesspit A59.60 (contexts A[980]/[981]). Back row, left to right: London tin-glazed ware/TGWC caudle cup, Metropolitan slipware/METS dish, Surrey-Hampshire border whiteware with brown glaze (BORDB) rounded mug. Front row: Surrey-Hampshire border whiteware/BORDY money box, London tin-glazed ware/TGW C porringer, Surrey-Hampshire border redware/RBOR lid, London tin-glazed ware/TGW C mug

demolished for redevelopment in 2006–9, features particularly outside its footprint were recorded. These included fragmentary observations of foundations in and around the post-Fire Dyers' Hall, which is shown by Ogilby and Morgan on Figure 30 (to be destroyed in another fire in 1681), and part of a cesspit on Tenement 2 which was backfilled with domestic debris attributable to the Great Fire of 1666.[3]

The only feature of the 1981–2 recording reported here, a second cesspit, lay at the north-east corner of Tenement 4, that is the second property westwards from the corner of Ebbgate (now Swan Lane), seen during the watching brief during the new construction. A ragstone cellar or cesspit with a gravel base (A[3282]) had been backfilled with organic material to a maximum depth of 550mm (feature A59.60). The lower part of the fill was recorded as A[981] and searched with a metal detector; the hand-excavated upper fill, recorded as A[980], had been truncated.

A large group of pottery came from the fill of the stone-lined feature (fills A[980/981]; Figure 31), amounting to 565 post-medieval sherds from up to 119 vessels, many substantially complete (20.599kg); there is also one residual sherd of early medieval pottery (26g). In addition, 86 sherds (2.361kg) were apparently associated with a plank A[986]. Many sherds from this context are from the same vessels as those in A[980/981], in several cases actually joining; possibly the plank was a fragment of flooring. The combined assemblage of 651 sherds (119 ENV, 22.96kg) is thus treated as one group and discussed in detail in Chapter 10, Table 18. Other finds from the pit are illustrated in Figures 32 to Figure 35.

A number of different ware types are present, comprising redwares from the London area and Essex (including Metropolitan slipware), Surrey-Hampshire border wares (both white and red variants), tin-glazed wares and imports. Essex redwares, particularly the Harlow-type fineware PMFR, are the dominant type, followed by Surrey-Hampshire border whitewares, both of which went out of use *c.* 1700. The tin-glazed wares fit this pattern, with decorative styles that were in use from *c.* 1630, but nothing obviously later than 1680. Other than Frechen stoneware, the remaining fabrics cannot be dated so closely, but as the bulk of the datable material is quite homogenous it is possible that the pottery was in use around the time of the Great Fire. The fact that only three sherds show any real evidence of burning, which might be expected in such a central location close to the seat of the blaze, might suggest that the pottery was already in the cesspit and so was protected from the fire; alternatively, it may have escaped the flames and been discarded after the fire.

[3] Mackinder 2015, 69, 74–5.





Figure 32 Swan Lane: selected pottery from cesspit A59.60. London tin-glazed ware: dishes and chargers, saucer (3rd row, right), bowls (4th row) (all scale 1:3) (all scale 1:3); porringer with scrolled handle (bottom row) (scale 1:2)



Figure 33 Swan Lane: pottery from cesspit A59.60: Portuguese tin-glaze ware armorial plate (scale 1:3)

In terms of the functional composition of the group, forms associated with the serving and consumption of food and drink are the most common by sherd and vessel count (45 and 24 ENV respectively). The former include chargers, dishes, plates, porringers, a saucer, bowls and a chafing dish; for drinking, mugs, cups, jugs and a costrel. Vessels used for cooking are less common, with sherds from four cauldrons, three skillets, two pipkins and eight tripod pipkins. There are also sherds from an albarello, a jar, two lids and three money boxes. Sanitary wares (15 ENV) are, however, the most common by weight. These finds are discussed more fully in Chapter 10. As a whole, the group is a good example of the range of forms in use in London in the mid-later 17th century.

A significant group of glass fragments was recovered from the cesspit, totalling 157 sherds, (31 ENV, 930g) of which all but one tiny fragment are from fills [980] and [981] (Figure 34). As with the pottery, in some cases sherds from the same items were found in more than one fill. The finds include the remains of three wine bottles, one of shaft and globe/onion form and two of onion shape, three case bottles and one short cylindrical bottle (Figure 34, <2756>). There are also fragments



Figure 34 Swan Lane: glass from cesspit A59.60: bottle A<2756>, beaker A<2761>, rounded tankard A<2763/3145> (scale *c.* 1:3)

from two or three flasks, three phials (two possibly of 18th-century date) and eight windows, notably parts of two diamond-shaped quarries from [980]. Vessel glass is relatively common, with 80 pieces from some ten vessels, of which eight are beakers (Figure 34(<2761>) and one of Römer form; the others are from a tankard (Figure 34; [980] <2763>/[981] <3145>) and the feet of two wine glasses/pedestal beakers.

The non-ceramic artefacts from the pit comprise eleven objects of copper alloy, including a token, five of iron, two of lead, parts of two ivory combs ([980] <2160>; [981] <2161> and an ivory knife handle ([980] <2257>).

A total of 92 clay tobacco pipe bowls, 292 stems and 35 mouthpieces were recorded in the fill. These can be dated to *c.*1660–80 by 29 examples of type AO15 bowls (the most common in the fill), ten bowls of type AO13 and one of type AO16. There are also 25 pipes of type AO9 and 20 examples of type AO10, both of which date to *c.*1640–60. All are milled to some extent, and none is marked or decorated. A single type AO28 pipe bowl (<3735>) dates to *c.*1820–40 and is clearly intrusive. This is marked with the initials JC (unidentified) and is decorated with moulded leaf seams.

A date of 1650–80 is indicated by the pottery and two tokens, one of Hans Krauwinkel (<3965>, A[981]), the other of William Swift of the City of Worcester (Figure 35; A<3825>, A[980]) dated to 1580–1635 and 1648–72 respectively. The clay pipes indicate a date of after about 1660. Most of the glass dates to the late 17th century and the few 18th-century finds could be intrusive. The survival of many substantially complete pots, though broken, suggests that they had been discarded together and were smashed *in situ*. It is also possible that the pottery and other finds were thrown in the cesspit in the years just before the Great Fire, which would account for their not being burnt.



Figure 35 Swan Lane: copper-alloy token A<3825>, William Swift of Worcester (scale 1:1)

Seal House (site B)

John Schofield
with contributions by Lyn Blackmore, Jacqui Pearce and Stephen Freeth

In the previous publication of the medieval period and up to 1666, the history of this site as three tenements, labelled Tenements 6 to 8, was recounted.[4] Tenements 6 and 7 together comprised the 19th-century basement in which the excavation took place in 1974 (Figure 36). For the present post-Fire study, only the results from excavation on Tenement 6 will be discussed, with a note on the documentary evidence from Tenement 7. The excavation was of a narrow north-south strip situated on the east side of Black Raven Alley, the narrow lane which bisected Tenement 6; this remained as the west boundary of the excavation site shown in Figure 36. The intended new building, a block of offices next to Fishmongers' Hall, was built in 1975–6. By 2006 it was intended to replace this.[5] At the time of writing (2023), the site has not yet been redeveloped. The present proposal by architect Eric Parry is for an 11-storey block with the name of Seal House.

Tenement 6

The Fishmongers' Company had acquired part of the east half of Tenement 6 and all of Tenement 7 by

[4] Schofield *et al.* 2018; the archive report at MLAA is Schofield 2016a.
[5] Schofield 2006. This contains a photographic account of the building works of 1975–6.



Figure 36 Seal House during excavation in 1974, looking north (John Schofield). Compare the plan on Figure 38 which shows where the post-Fire houses were found. The basement wall on the left was formerly one side of Black Raven Alley, up to the time of the excavation (though in bombed ruins) and subsequent redevelopment. The foundations which cross the trench are those of the 19th-century building shown below in Figure 196

1600. Three people with houses in Black Raven Alley, which had bisected Tenement 6 since the 14th century, paid the fee for staking out foundations on separate occasions between 1668 and 1671; that in April 1671 was for six houses by William Darvall.[6] In January 1671 William Darvoll [sic], citizen and plaisterer, had undertaken with the Fishmongers' Company to build four or more tenements in the alley in return for a lease of 61 years at £20 pa. By the end of May 1671 he had built six tenements.[7]

Tenement 6 and its surroundings appear on Ogilby and Morgan's map of 1676 (Figure 30); and a plan of the Fishmongers' property was made for the Company in 1686 by William Leybourn (Figure 37).[8] Six small

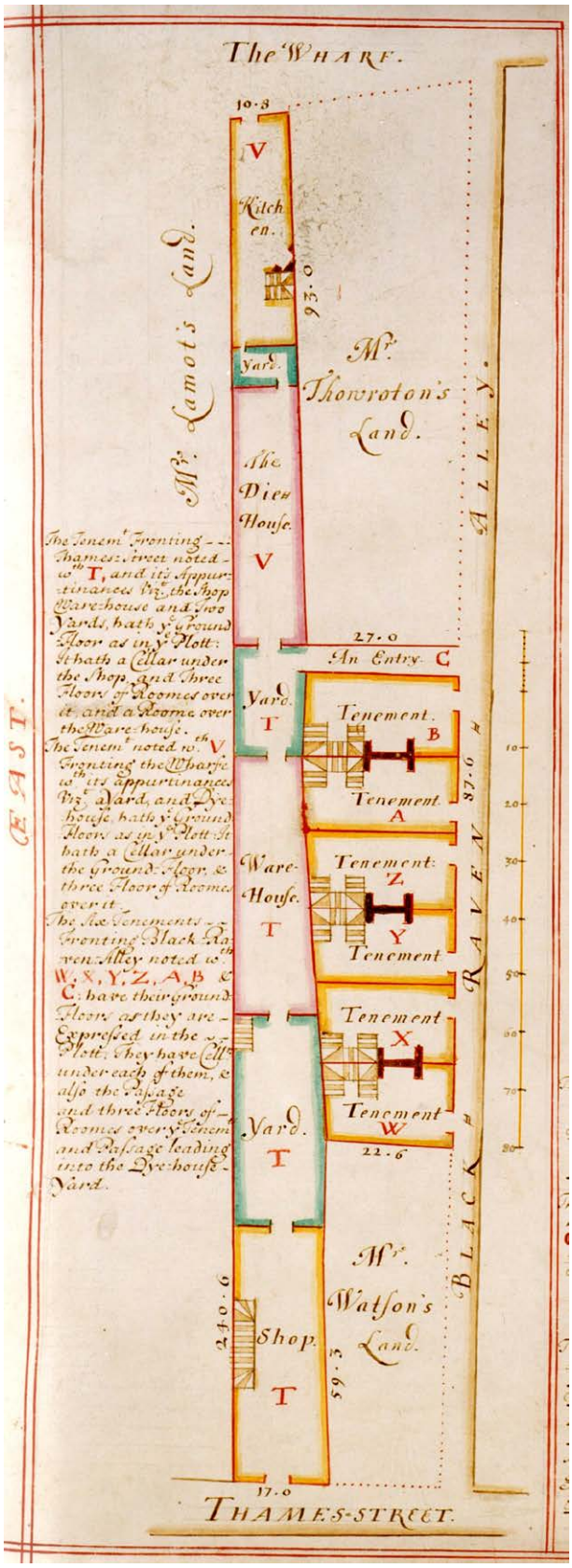


Figure 37 Seal House: Fishmongers' Company plan of 1686, showing Darvoll's six houses of 1671 (William Leybourn, Fishmongers' Company, Plan Book, f6; photograph by Edwin Baker). Thames Street and north are to the bottom. The long thin property to the left (east) is Tenement 7

[6] Mills and Oliver *Survey*, i, 17.
[7] Gerhold 2016, 103; Fishmongers' Company, Court minutes, LMA, CLC/L/FE/B/001/MS05570/005, pp225, 241.
[8] This Plan Book is held by the Fishmongers' Company at their hall. It is titled 'A book of planographies, or ground plots; of the severall

buildings along the east side of the Alley are called 'tenements' W to Z and A to B; clearly the houses built by Darvoll, in a single block. Because the term 'tenement' has been used in this work to refer to a whole property from Thames Street to the river, the term 'house' will be used to designate the individual buildings W to Z and A to B on the 1686 plan.

The Fishmongers' records contain frequent references to Darvoll's houses. In June 1678 Darvoll's widow Anne petitioned the Fishmongers for a reduction in her rent, complaining of her 'loss by bad tenants' in the houses in Black Raven Alley. She was granted a rent rebate of £10. Darvoll's lease was later assigned to Richard Goodchild, bricklayer, who died early in 1722 leaving his freehold and leasehold property (unspecified) to his wife Mary for her life.[9]

In February 1735 the Fishmongers leased the property again, to John Garrett, citizen and girdler, for 20¼ years at £25 pa. Garrett was allowed to convert all or some of the houses to warehouses if he wished, and this appears to have been done, partially. The next lease, of May 1754, to John Armitage and William Brook, wine merchants, for 21 years at £27 pa, describes the property as tenements and warehouses, 'formerly six tenements'. These tenants must have run into trouble. William Brook released his tenancy back to the Fishmongers almost immediately, in February 1756, by endorsement on the lease of 1754. He did this through a Samuel Weaver, who had his power of attorney. Whatever John Armitage did about the lease is not known, but later that same month the Fishmongers leased the property again, this time to Samuel Weaver of Rood Lane, wine merchant, for 20¾ years from the previous Christmas at £20 5s for the first nine months and £27 pa thereafter.[10]

The Company's 'Views' of tenanted property include the property in Black Raven Alley in the 'West Walk' (their perambulation of the west half of the City). They generally refer to it as 'warehouses', though occasionally as 'houses'. There is frequent mention in the years 1762–74 of the need for 'water trunks' (downpipes?) and 'shuts' (chutes? gutters?). A 'water trunk' was also needed for the 'water cock' at the north end of the warehouses, apparently on the exterior. There is also mention of 'the brestsomer [bressummer] front there', and in 1766 of bulging brickwork in the front wall, which needed to be propped by beams across Black Raven Alley. Samuel Weaver was ordered to take down a dangerous new chimney, after his neighbours complained.[11]

A plan of the six houses in 1772 made for the Fishmongers' Company by John Gorham shows how they had changed. The two at the north end (W and X) are still houses, though altered since 1671. The fireplaces are still there, but both houses have new, smaller staircases, and the ground floor of House W is now subdivided as a shop, with living quarters above. The other four houses (Y, Z, A, B) appear to have been converted to warehouses. Though still described on the key to the plan as houses, their fireplaces and staircases have been removed, and their doorways altered. In addition house B at the south end appears to have been enlarged across the former entry from Black Raven Alley to the back of Tenement 7. Despite this, the basic layout and party walls have been retained.[12]

In 1776 the Fishmongers accepted an offer from Charles Barrow and Andrew Smith to pull down and rebuild Darvoll's houses, along with refurbishing Tenement 7. An undated plan probably shows this new building. The site of the six houses has been merged with Tenement 7 to form one large warehouse space supported on pillars along the line of the former boundary wall between the two, entered either from Black Raven Alley or from Tenement 7. At the north end is a small room with a fireplace, presumably an office. Another plan shows the property 'as rebuilt 1820', so this time it had all been rebuilt, some of it for the second time in 50 years.[13] The destruction of Darvoll's houses is therefore placed in 1776.

The archaeological features of this period recorded in 1974 were mainly the parts of three brick buildings, B:Buildings 8 to 10 from north to south (Figure 38).[14] Each of the B:Buildings 8 to 10 comprised two houses. It is suggested that the excavated remains (Figure 39) were parts of a single block of six houses and that these are the houses erected by Darvoll in 1671. Reference is also made in the following account to the two overall periods of occupation and use which are employed in the archive report for the site. Period 9 in the latter comprised the remains of the buildings, and included Gps B90, 99, 107–9, 113, 115, 119; period 10 comprised

Tenements, Sheds, Yards, Gardens, Grounds &c, scituate in & about LONDON which belong unto the Worshipful Company of FISHMONGERS'.

[9] Fishmongers' Company, Court minutes, LMA, CLC/L/FE/B/001/MS05570/005, p455; Surveyor's inspection book of rented company property near the Hall 1725–50, LMA, CLC/L/FE/G/012/MS05860/002. See also Goodchild's will, TNA, PROB 11/583 fos. 203v–205v.

[10] Fishmongers' Company leases, LMA, CLC/L/FE/G/245/MS06925. Samuel Weaver used a heraldic seal, apparently *Three eagles' heads erased, with crest An eagle's head.*

[11] Fishmongers' Company, Committee minutes, LMA, CLC/L/FE/B/008/MS05573/003 (1758–68), pp188, 267, 359, 363, 366, 416; /004 (1768–82), pp177, 214.

[12] Fishmongers' Company plan book, 'West Walk', 1772, LMA, CLC/L/FE/G/044/MS21537.

[13] Fishmongers' Company, Committee minutes 1768–82, LMA, CLC/L/FE/B/008/MS05573/004, pp280–1, 288–9, 303–4, 313; also scrapbooks of old plans, 'West Walk', LMA, CLC/L/FE/G/045/MS21538/001, no. 12 (dated 1820); and CLC/L/FE/G/046/MS21539/001, no. 34 (undated, *c.* 1776).

[14] In the archive report and plans (Schofield 2016a), these buildings have letters: B:Building 8 here = Building H, B:Building 9 = Building N, and B:Building 10 = Building J.

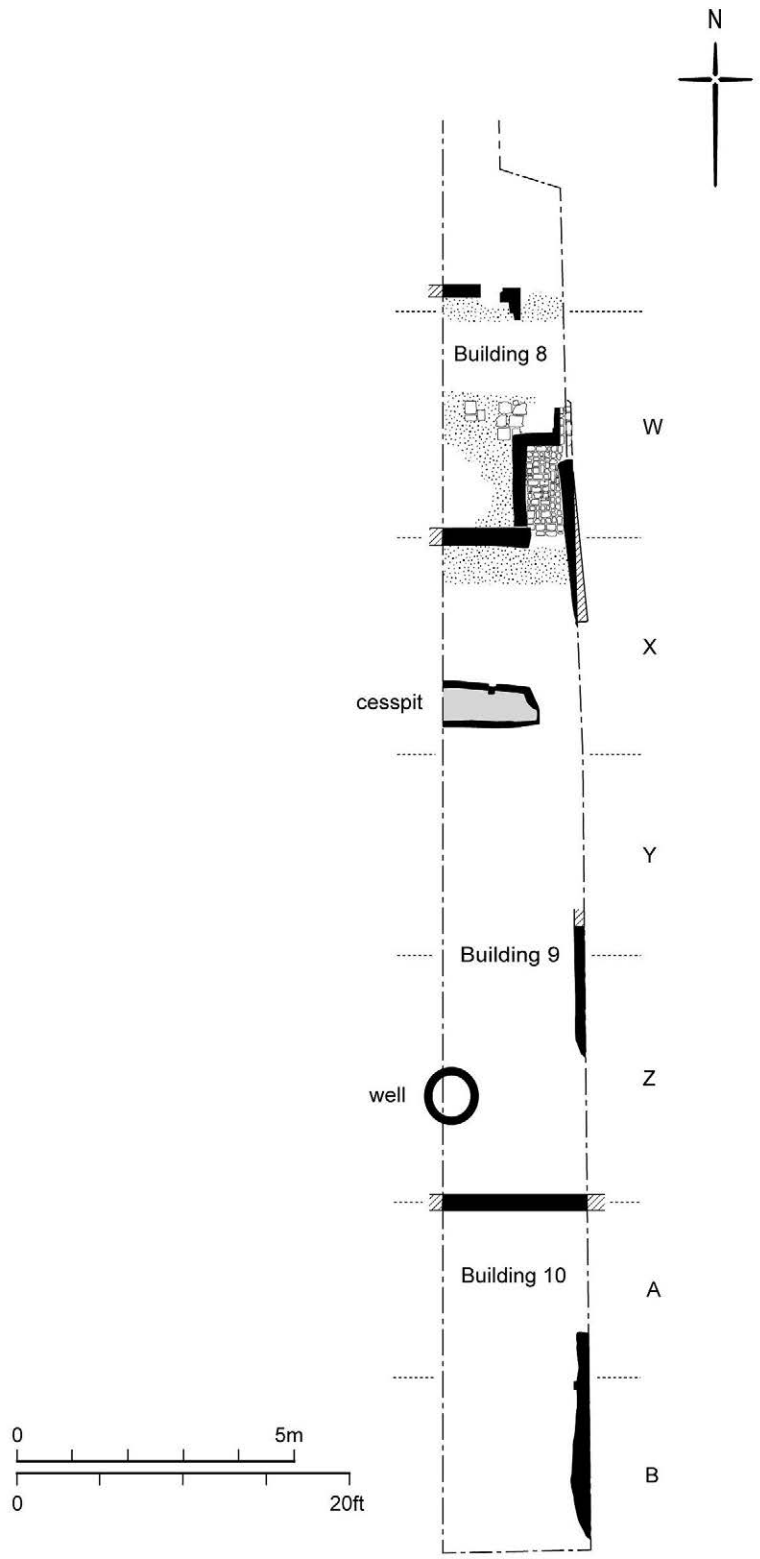


Figure 38 Seal House: period 9 plan (Carlos Lemos and Sue Cawood). The house letters W to Z and A to B from Leybourn's plan of 1686 are added, suggesting the correspondence. This plan has north to the top, ie turned through 180 degrees when compared with Figure 37. The cesspit is Gp B99 and the well is Gp B124

rubble layers from the destruction of the buildings, and included Gps B117, 122, 131 and 135. The pottery from these two periods is listed in detail, as an example of the analysis, in Tables 23 and 24 in Chapter 10.

B:Building 8 comprised the lowest remains of two of the houses, labelled W and X on the 1686 plan (Figure 37). Its walls stood about 0.75m high, and were found immediately below the concrete slab covering the site (Figure 40).

The north end comprised two small fragments of brick wall, suggesting a doorway and a corner; further south, a larger portion of similar wall led southwards and turned a right angle into the east baulk. This wall bordered a small area of brick paving, contained just under the east baulk by a rough north–south foundation (Gps B110, 121) from which 10 sherds (6 ENV, 117g) of 17th-century pottery and two sherds from a shaft and globe wine bottle were recovered). In the excavated area were two fragments of a tiled floor, predominantly of tiles in plain glazes, probably arranged in a chequerboard pattern, with some patching of larger early 16th-century Flemish tiles in similar yellow/green and black glazes (Gps B107–9, 119). The tiles had been laid on a base of clay then mortar. In the clay B[173] in Gp B108 were part of a double-sided ivory comb (Figure 41, B<25>), a copper-alloy buckle (Figure 42, B<20>), an iron rotary key, complete but in two pieces (B<301>) and a small piece of lead waste (B<339>).

Three sherds (66g) of post-medieval redware were found in the tile floor (Gp B119), two of PMRE and one from a Dutch redware dish, but the 11 other sherds (46g) from this and the preceding deposits (Gps B107, 108, 109) date to the 13th to 15th centuries (7 sherds, 29g). They include a cup and a jug in Langerwehe stoneware from Gp B109. This floor went under an east–west crosswall B[44]) and survived for nearly 2m further south. Here the clay and mortar in which it was set (B[43], [173], [340]) rose up slightly around a



Figure 39 Seal House: B:Building 8, looking north after the wall B[44] between two houses had been removed (its place shown by the nearer white scar on the tiles). The other scar crossing the trench behind is the lowest course of a Victorian foundation (2m scale) (John Schofield)



Figure 40 Seal House: B:Building 8, the north room looking east (2m scale) (John Schofield). This is the basement of house W in the plan of 1686; built 1671. The wall on the extreme left is Victorian (its line shown in Figure 39). The area of tiles on the right was laid with tiles in a chequerboard design, as can be faintly discerned



Figure 41 Seal House: fragment of post-medieval double-sided ivory comb B<25> from layer B[173] (Gp B108) (scale 1:2)



Figure 42 Seal House: cast sub-rectangular buckle with central bar, B<20> from layer B[173] (Gp B108) (scale 1:1)

brick-lined cesspit which ran into the west baulk of the excavation (B[9], [53]; Gp B99). This cesspit had been roofed over in mortared brick, a flat roof being obtained by supporting the bricks on small timber beams; they had later fallen or had been pushed in. In all 61 sherds of pottery (50 ENV, 1006g) were recovered from four fills of the cesspit B[9], which lay within the confines of house X on Leyburn's plan (Gp B99). Most are medieval, and several date to the 15th century, but seven post-medieval sherds (3 ENV, 85g) are also present. Those from B[53], B[119] and B[168] date broadly to the later 16th and 17th centuries (ware types BORDY, PMRE), but B[9] contained three burnt sherds of fine post-medieval redware, tin-glazed ware and Chinese porcelain, as well as clay pipe dating to *c.* 1660–1680. These finds could, therefore, have been deposited *c.* 1666, but fire damage makes it impossible to date them precisely. The only other finds from the cesspit are two tiny pieces of glass, one from a window, the other of green glass and possibly from a small flask (B<868>).

A brick wall (B[44]; Gp B120) crossed the excavation from west to east, on top of the tiles. The weight of the building above had caused the tiles to sink by several centimetres. The 1686 plan shows that the wall recorded in the excavation was common to two of the houses (W and X) and supported an axial chimney stack, which must have been supported above on the ground storey by corbelling. The stack would have risen through two or two and a half storeys, with further hearths on the first floor on either side. The south wall of this double unit (i.e the wall between houses X and Y in 1686) was not present, except that a small amount of bricks and stone B[152] was recorded in or near the west baulk at approximately the correct position (Gp B112: no associated pottery or finds).

Further south, a cellar of brick on a rubble and mortar foundation cut through the destruction of a pre-Fire building on the east side of the excavation trench, its exterior west face just inside the cutting (B[73, 33, 324]; Gp B90). It was not investigated, but six sherds (5 ENV,

144g) of 12th-/early 13th-century pottery and part of a stone mortar (B<732>) were recovered from the fill associated with its construction B[73]. It is placed here due to its general character and its correspondence with the stair-well plan of houses W and X. This suggests that houses Y and Z, like W and X, had small cellars below the stairs, though in the case of Y and Z any floor surfaces in the rest of the basement area did not have tiles *in situ* as in houses W and X.

Again to the south, a brick and ragstone wall (B[61]; Gp B114: no associated pottery or finds) crossed the excavation over Fire debris. It survived only 0.3m high and was 0.35m wide. This is called B:Building 10. Correspondence with the plan of 1686 indicated it was the party wall between houses Z and A. In the south-east corner of the excavation, a large dump of half-mortared rubble (B[76]; Gp B115) related to B:Building 10 is also placed in this phase on the grounds that it contained a single sherd of 16th- to 17th-century Frechen stoneware (B[76]) and coincides with the expected site of the joint stairwells of houses A and B, the two most southern of the six, as shown in 1686. Fragmentary brick surfaces lay north of the wall (Gp B113), from which 28 sherds (26 ENV, 354g) of 13th- to 15th-century pottery, a piece of copper-alloy waste (B<368>) and part of a glass cylindrical beaker with wrythen optic-blown ribs (B<812>), probably of early to mid 17th-century date, were recovered (B[132], B[169]).

The archaeological dating evidence for this row of brick buildings is given in Table 22 in Chapter 10. The pottery recovered from this part of Tenement 6 amounts to 120 sherds (98 ENV, 1.752kg), most of which is residual medieval material (99 sherds, 83 ENV, 1.465kg). There are, however, 21 sherds (15 ENV, 287g) which can be broadly dated to the later 16th and 17th centuries, comprising early London-area post-medieval redware (PMRE), which went out of use *c.* 1620, and Essex-type fine post-medieval redware (PMFR), Frechen stoneware and Surrey-Hampshire border whiteware, all of which have date ranges of 1550/80–1700. The latest finds comprise eight sherds of burnt tin-glazed ware, and possibly part of a CHPO lid, from Gp B121, and single sherds of TGW and CHPO from cesspit B[9], which, together with a sherd of PMFR, are also fire damaged.

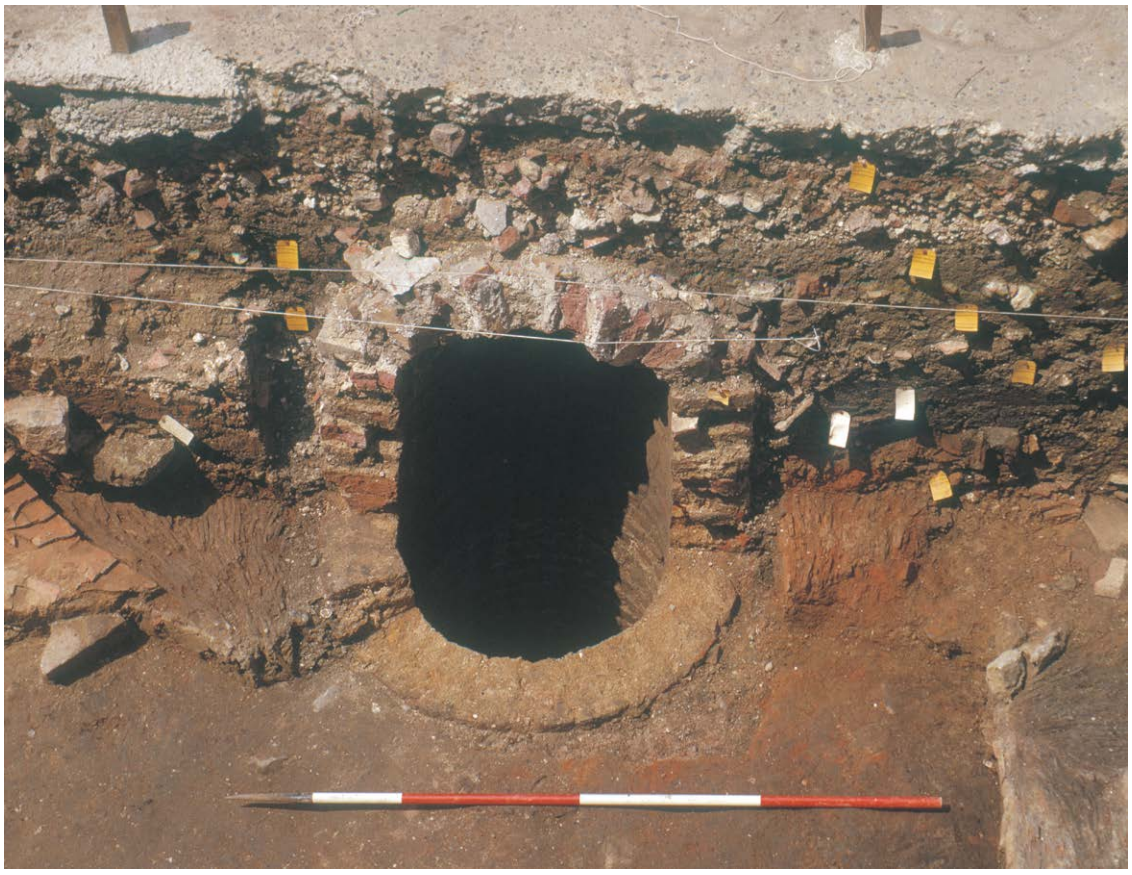


Figure 43 Seal House: part of the west baulk, showing well B[26] during excavation, looking west. Digging the shaft for the well had gone through strata of the pre-Fire B:Building 4, which show on both sides (2m scale) (John Schofield)

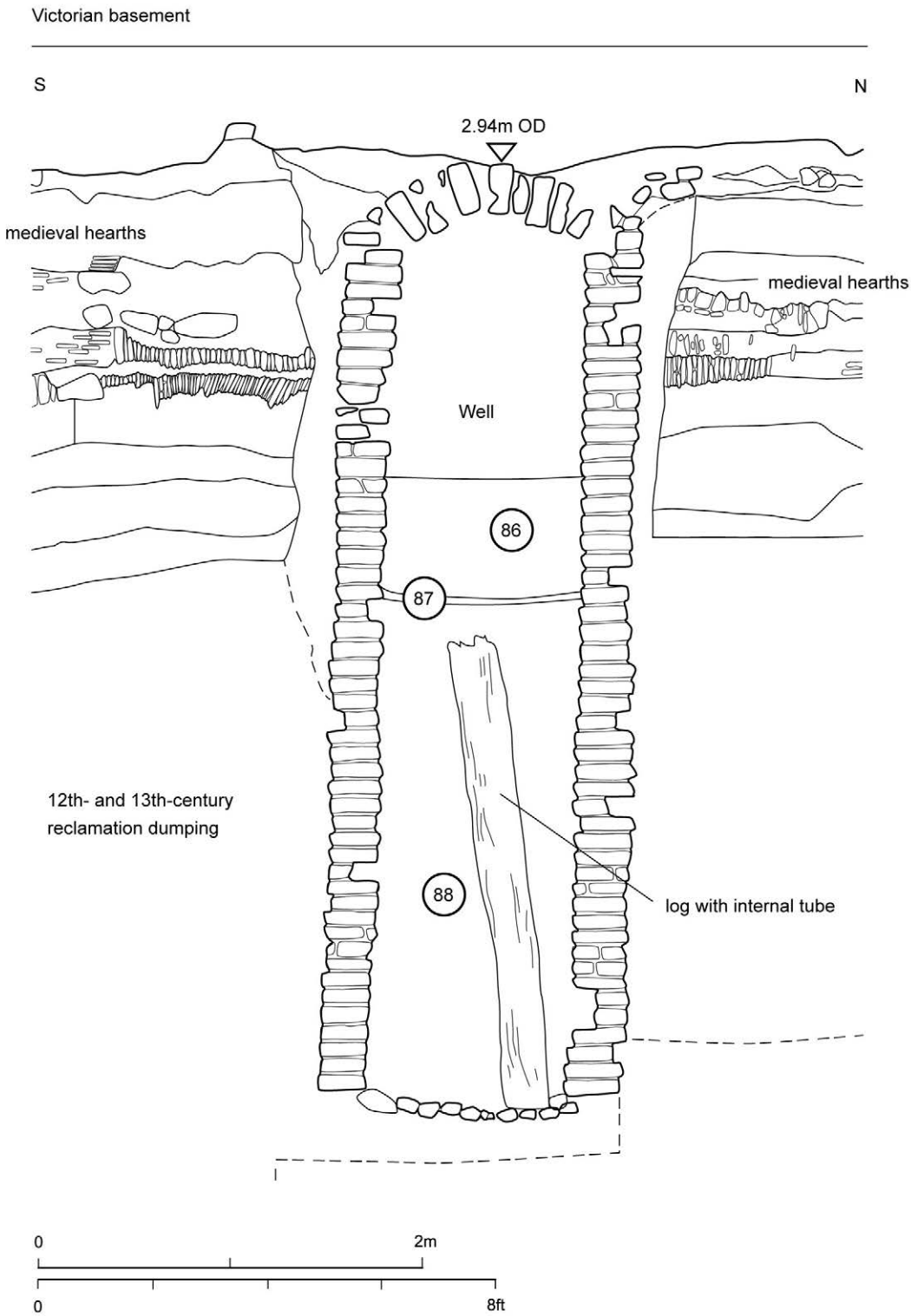


Figure 44 Seal House: extract from the section along the south part of the west baulk, showing well B[26] and within it a log with an internal longitudinal bored cavity, a rising main for a pump. The well was dug through the remains of medieval buildings (compare Figure 43) and 12th- and 13th-century reclamation dumping beneath (the edge of the medieval waterfront was about 4m to the south, to the left) (Sue Cawood)

The glass and other finds are also of mixed date but include sherds from a glass cylindrical beaker from Gp B113 and a shaft and globe wine bottle from Gp B121 which date to the early/mid 17th century and after *c.* 1650 respectively. This group of finds may, therefore, represent material in use at the time of the Great Fire. As the range of buildings and this cesspit were constructed immediately after the Fire, these finds are probably derived from the vast amount of rubbish that would have been lying around.

It seems likely from the archaeological evidence that the block of six houses was erected in a single operation. The strongest evidence for this is that the tile floor in the basement of the northernmost two houses, houses W and X in 1686, was laid down before the spine wall separating the two houses was built on top of it (the mortar scar from the wall is shown in Figure 39).

To the south and half way along the west side of the main trench, a well was recorded in section, from top to bottom, in the west baulk (Gp B124; B[26]). In a shaft cut to –1.12 OD a layer of chalk blocks was laid and the shaft of the well made of bricks, without any perceptible scaffolding, built straight up. This is shown with the upper 0.7m of its wall removed in Figure 43. The eight sherds of pottery (7 ENV, 241g) in the construction cut for the well (B[64]) were entirely medieval, presumably derived from the layers through which the well had cut, but clay pipe with a broad date range of *c.* 1580–1910 was recovered from the same fill. The well stood half in and half outside the west baulk of the excavation, so the subsequent excavation cut it down the middle. This is shown in Figure 44, an extract from the larger section. This also shows that within the well was a log with a hole bored longitudinally within it and side outlets at both ends (B[485]), which must have been part of a pump mechanism (in modern parlance, a rising main). Perhaps another section of timber with a borehole would have reached to contemporary ground level above; the surviving section was firmly anchored in the primary silting within the well.

On its east side was a small area of paved bricks which may have served it (not illustrated; Gp B136). Three clay pipe bowls, 33 stems and three mouthpieces were recorded in or on it. All bowls are of type AO15, dating to *c.*1660–80. One of the bowls and 18 of the stem fragments are encrusted by kiln muffle and overfired.

The date of construction of the well, as opposed to its period of use which is considered next, is not certain. From its position in the archaeological sequence and its construction, it is clearly post-Fire. If it dates from the immediately post-Fire period, it would have been in the basement of house Z.

The natural silting inside the well, Gp B137 (B[88]), consisting of black silt with occasional oysters, grew around the vertical oak beam. Next to the top of the drilled beam were the remains of a well-bucket, or possibly a barrel, which had fallen or been dropped down the well (Figure 45, B<57>/<316>/<553>). Made of wooden staves, it is now represented by 56 pieces. The more complete of these show that it had a height of at least 330mm (13in) and an internal diameter of 270mm (10.6in); the staves were about 7mm thick. It was bound with at least four iron hoops *c.* 35–40mm wide, 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.

Fill B[88] was also rich in pottery and clay tobacco pipes, the former comprising 32 medieval sherds (12 ENV, 512g) and 60 sherds from 12 post-medieval vessels (4.325kg), several near complete and dating to 1660–1700 (Figure 46). Over B[88] was B[87] (depth *c.* 60mm); a thinner layer of coarse orange sand with fine rubble, which contained two sherds (2 ENV, 15g) of 17th-century pottery with some clay pipe and animal bone. Taking these two deposits together, the assemblage is dominated by Surrey-Hampshire border wares (BORDG/BORDY, RBOR) with a total of 42 sherds (7 ENV, 2.505kg), with smaller amounts of London-area and Essex redwares (PMR, PMFR: 13 sherds, 3 ENV, 1.442kg), but single vessels in tin-glazed ware and Staffordshire-type slipware are also represented along with part of a jar imported from Spain or Italy. The forms present are mainly associated with the serving and consumption of food, with handled bowls in PMR and BORDG and dishes in BORDY and TGW D. Four porringers in PMFR, BORDG and RBOR) would have been used at the table. The only forms associated with cooking are a tripod pipkin (leg only) and a colander with piecrust rim in RBOR. Other finds comprise part of a BORDY stool pan, part of a possible candlestick in TGW C, the base of an STSL cup and the base of a thick-walled Spanish (SPOW) jar with turquoise tin glaze. The pottery from the well is discussed in more detail in Chapter 10.

Other finds comprise a large collection of clay pipes, 20 fragments (696g) of bottle, window and vessel glass, including part of a posset pot (Figure 47) and two small fragments from a possible mirror (B<501>). One of the three bottles is of a shaft and globe form, smashed but near complete, another is of onion form (complete neck/rim and a body sherd). The third is represented by four small body sherds which could be intrusive, as they appear to be from a squat/early cylindrical bottle dating to after 1735. The seven items of copper alloy and iron include a small copper-alloy dress pin (B<376>), two large hook shaped objects (B<425>, B<427>), and the remains of a hasp (B<426>), all made of iron and



Figure 45 Seal House: pieces of 18th-century bucket B[88] <57> (scale 1:4)



Figure 46 Seal House: selected pottery from B[88], silt in well B[26]. Back row, from left to right: BORDG handled bowl, BORDY flanged dish, PMR handled bowl. Front row, from left to right: Spanish jar with turquoise glaze (SPOW), PMFR porringer, RBOR porringer, BORDG porringer, BORDY stool pan. The pottery suggests a deposition date of 1660 to 1700 but clay tobacco pipes in the same layers are of 1690 to 1710

possibly related to the use of the well. Also present are six wooden objects, including the bucket noted above (Figure 45; B<57>/<361>/<553>), a small ?spindle (Figure 48) and three wooden discs which could be from buckets or barrels (B<543>, Figure 49; B<553>, B<882>), fragments of two leather shoes (B<182>, B<865>) and a quantity of animal bone.

The latest pottery from the well is a small (3g) sherd of pearlware dating to 1770–1860 from the uppermost silt B[86], which also contained four fragments from green glass wine bottle of early cylindrical form dating to after *c.* 1735/50. Thus, from the pottery, the two lower silt layers B[88] and B[87] are of the same general date, but B[86] is later.



Figure 47 Seal House: B<681> from B[88], part of a glass posset pot (scale 1:3)



Figure 48 Seal House: possible spindle from B[88] (scale 1:2)



Figure 49 Seal House: front and back views of half the base of an oak barrel B[88] <543> (scale 1:3)

The silting in the well (B[87] and [88]) produced clay pipes; a total of 34 clay pipe bowls, 69 stem fragments and five mouthpieces. They are dated to *c*.1690–1710 by types AO19, AO20 and AO22, with 18 examples of the last type recorded. They were found with bowls of types AO12, AO15 and AO18, ranging in date from *c*.1640 to *c*.1680. One of the type AO22 pipes is complete (Figure 50), a relatively uncommon find for this period, when pipes tended to have a long stem that was easily broken. Its resting place in the silted-up fill of the well probably explains why it remained intact. Five stem fragments are burnt and encrusted with kiln muffle, which may suggest pipe manufacture nearby.

The well is apparently the only post-Fire example to have been recorded on an excavation in the waterfront zone south of Thames Street. It was about 53m (170 ft) north of the edge of the quay, so not far from the river. Water could have been easily obtained from the stair at the river end of Ebbgate (the [Old] Swan stairs). There must have been a special reason for the well's construction; but the pottery from it is domestic.

Demolition of the period 9 houses

After a period of use, B:Building 8 (Darvoll's range) was demolished (Gps B117, 122, 128, 131, 135). This is called period 10 in the detailed excavation records. The demolition was perhaps begun between 1735 and 1754, as described by the documentary evidence; the houses had certainly gone by 1776. Though division of the demolition layers into several groups is made here, they are best considered as a single event or a small number of closely-related events such as would have constituted the demolition of a row of houses. They were overlaid by 19th-century rubble (Gp B140). The pottery from these demolition layers dates to around 1740 and is listed in Table 23 in Chapter 10.



Figure 50 Seal House: Gp 137, B[88]<970>, complete clay pipe of type AO22, c.1680–1710 (scale 1:2) (© Museum of London)

The pottery from a roughly-laid layer of brick, B[47] (Gp B122), amounts to 138 sherds (51 ENV, 5.479kg, 3.12 EVEs), many of which are burnt. The wares fall into three groups: lead-glazed earthenwares, tin-glazed wares and imports. The first comprises London area redwares (PMRE, PMR), Essex (PMFR) and Surrey-Hampshire border whitewares (EBORD, BORDB/G/Y), of which the redwares (41 sherds from five vessels) amount to over half the weight of the group (2.991kg). Most sherds are from a large handled bowl in PMR, similar to finds from a site to the north-east, Monument House; also present are three sherds from other cooking pots/jars (PMRE, PMFR) and a bowl (PMR). The six whitewares sherds are all from different vessels: two mugs (one in BORDB, the other possibly in the earlier whiteware EBORD, a chamber pot, a pipkin and two dishes (BORDG and BORDY).

Tin-glazed wares are the most numerous by sherd count (71 sherds, 31 ENV), but less important than the redwares by weight (1.891kg); the fact that most pieces now appear black makes it hard to be sure how many were originally decorated. Dishes/chargers are the most common form, with sherds from up to 12 examples, some with rims of Britton type B or C. At least one of these has a plain white glaze (TGW C), while at least six have the remains of painted decoration; two are decorated in the Wan Li style, while a deep dish with scalloped rim has Chinamen in grasses-style decoration (TGW E) typical of the late 17th century. Other forms include a porringer, one or two salts/candlesticks, three jars, a small ointment pot and a chamber pot, all typical of the later 17th century. As sherds from 24 of the 31 tin-glazed vessels represented are burnt, they could be debris from the Great Fire. The same applies to the imports (unburnt), which comprise German stonewares from Siegburg, Frechen (including a jug with the arms of Amsterdam) and Westerwald, a sherd of north Italian marbled slipware and Chinese porcelain of the Ming dynasty, probably imported shortly before the Great Fire: part of a large dish or plate with Wan-li decoration and fragments from two or three bowls. The latest ceramic finds are six plates, two with rims of Britton type I (after 1675), and two octagonal, one plain, the other with Chinese fence decoration. The latter are not burnt, and date to *c.* 1740–80. The group contains no salt-glazed stoneware, which came into use *c.* 1720, nor any creamwares or English porcelain, which were introduced in the 1740s; but a date of 1776 is plausible.

Other finds from demolition dump B[47] (Gp B122) include part of a glass case bottle (<875>), part of a bottle of uncertain form (<809>), 18 fragments from a shaft and globe wine bottle and five fragments of glass from two windows. Four clay pipe bowls, 30 stem fragments and three mouthpieces were recorded. These are dated to *c.*1660–80 by two bowls of type AO15, found with an earlier bowl of type AO12 (*c.*1640–60). All bowls are overfired and have traces of kiln muffle attached, as do some of the stem fragments. None of the bowls are marked.

This large group of pottery in Gp B122, layers from the demolition of the northernmost pair of Darvoll's houses, forms a small but important assemblage in its own right, adding to a growing corpus of early and mid 18th-century pit groups, for example at Mitre Street[15] and Old Church Street, Chelsea.[16] Such clearances may have been prompted by a number of reasons, one 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.[17]



Figure 51 Seal House: Fire-damaged triple-spouted pedestal flower vase (TGW C) dating to the later 17th century, from demolition deposit B[3] (Gp B135) (scale 1:2)

Further demolition rubble (Gp 135) contained a smaller amount of pottery, totalling 30 sherds (23 ENV, 1.120kg), of which seven are of medieval date and the remainder date to *c.* 1580–1700 (B[75]) and 1630–1700 (B[3]). The latest datable pieces are a jar, a bowl and a near-complete pedestal vase with three spouts in TGW C (Figure 51). Of these, the flower vase is the most notable as it would appear to have been a casualty of the Great Fire; several of the other tin-glazed wares are also blackened. With the exception of part of a flower pot, the pottery comprises kitchen and tablewares. Clay pipe was also present in this group (B[3]). The non-ceramic finds comprise one small sherd from a shaft and globe

[15] Site MIR84; Pearce 1998, 104; Blackmore in Schofield and Lea 2005, 197–8.
[16] Jarrett 2000; Blackmore 2005; Blackmore 2008, 15–18.
[17] Blackmore 2005, 247.



Figure 52 Seal House: copper-alloy shoulder plate from an iron scale tang knife B<3> from B[88]. Part of the tang can be seen below the shoulder plate, with rivets to hold the 'scales' (handle plates) (scale 1:2)



Figure 53 Seal House: copper-alloy weight with a fleur-de-lis stamp B[155] <26> (scale 1:1)

or onion/mallet wine bottle, an illegible copper-alloy coin (B<4>), a copper-alloy shoulder plate from an iron scale tang knife[18] (Figure 52), four fragments of copper-alloy sheet metal (B<336>) and part of an iron mount or hasp (B<372>).

Further demolition deposits of the other houses (Gps B117, 128) yielded seven sherds (5 ENV, 72g) of 16th- and 17th-century pottery and three small fragments (9g) of green glass, possibly from wine bottles of early cylindrical form; if this identification is correct, these finds should date to after *c.* 1735/50. The largest dump of pottery was in the four layers making up Gp B131, which totals 613 sherds (72 ENV, 31.992kg) of which 547 sherds (31 ENV, 30.764kg), are of post-medieval date (see Table 23); most are from layer B[51], which contained *c.* 500 small sherds of PMR from an estimated 30 jugs. Three of the deposits in this group date to the 16th century, but B[51] contains a number of sherds dating to the 19th century; it is not known if these are stratified or intrusive. Other finds from these dumps include an illegible coin, identified as a halfpenny, from Gp B135 (B<4>), a small copper-alloy weight with a fleur-de-lis stamp (Figure 53, B<26>), a complete iron staple (B<473>) and part of a rivet (B<341>), part of a wine glass or pedestal beaker (B<810>), two pieces of bottle glass, four of window glass and a burnt lump of pale green glass. The bottles were possibly of squat cylindrical and early cylindrical form, dating to after 1735 and 1735/50 respectively, while one of the window glass fragments is frosted and of 19th-century date.

A small brick drain ran through the sites of the houses, cutting the small area of paved bricks which bordered the well (Gps B123, 125; seen in the background of Figure 36, just above the kneeling figure).[19] It would be the only trace of buildings after 1776 on the site. The silt inside the drain (which was only one brick high as found, though it could have been higher if it was dug from a higher level, now lost) contained 11 clay pipe bowls, 46 stems and six mouthpieces from Gp 125. These are dated to *c.*1680–1710 by bowls of types AO22 and AO21. Some of the stems are heavily burnt and one has muffle adhering. It is probable that these came from a production site nearby.

In 19th-century rubble covering the site, Gp B140, context [4] produced three pipes. These are of type AO27 (*c.*1780–1820), and two of them are decorated, one with moulded vertical ribbing and leaf seams (B<873> Figure 54), and the other with Masonic symbols (B<874>). The latter, which incorporates the 'all-seeing-eye', encapsulates the late 18th-century ideals of the Freemasons, and is relatively well represented in London excavated contexts, while the former is one of the more popular decorative types of the period. All three type AO27 pipes have a maker's mark moulded



Figure 54 Seal House: four views of a pipe from Gp B140, B[4], type AO27, c.1780–1820, with maker's initials illegible, B<873> (scale 1:1)

[18] A scale tang knife was a type of knife, with 'scales' of wood or ivory riveted through the tang to form the handle: see Cowgill *et al.* 1987, fig 3, 26–7 and catalogue of medieval examples.

[19] Described in the archive report, Schofield 2016a, plan fig 63.

in relief on the sides of the heel. In one of these, the initials are illegible (<873>), and in the second they take the form of stars (<872>), which cannot be linked with any one workshop. The third pipe (<874>), which has Masonic decoration, was probably made by John Jarman (initials IJ), who is recorded in Bishopsgate in 1805–47.[20] This is the only identifiable maker's mark on pipes from site B.

Tenement 7

This tenement was acquired by the Fishmongers' Company before 1600. On the plan of 1686 it is shown with its component buildings in two separate tenancies (a shop in Thames Street, with warehouse at the end of a yard behind; and a dyehouse and kitchen at the south (river) end, accessed from Black Raven Alley) (Figure 37). The wharf appears to be open space, near to Fishmongers' Hall and above the bridge. The tenant was John Parrett, citizen and fishmonger and sometime Common Councillor, who had rebuilt all of this after the Fire. William Parrett, presumably a descendant, secured a new lease in 1713. This must have been extended, because around 1725 the Fishmongers' surveyor noted that Parrett's lease was for 36 years, expiring in 1755.[21] In 1776 the whole of Tenement 7 was refurbished, being effectively merged with the site of Darvoll's houses on Tenement 6, and in 1820 the whole complex was rebuilt.[22]

Discussion, Seal House in 1666 to 1750

Tenements 6 and 7 were destroyed in the Great Fire of 1666 and rebuilt on their external pre-Fire boundaries. The buildings forming the Thames Street frontage are only partly known. For Tenement 6, the site of the 1974 excavation, there were no remains to report for any range along Thames Street, and no plan details in 1686. On Tenement 7 the plan of 1686 shows the building as a shop, any internal partition removed; the text next to the plan describes this building as of three storeys over the shop, like the other houses to the east in front of Fishmongers' Hall at the same date (illustrated in Chapter 4).

Black Raven Alley, in its medieval and post-Fire form, bisected the wide Tenement 6; the tenement had split into many small parts by 1500. In 1974, the time of the archaeological excavation, a narrow strip of derelict buildings, still left unchanged from the Blitz,

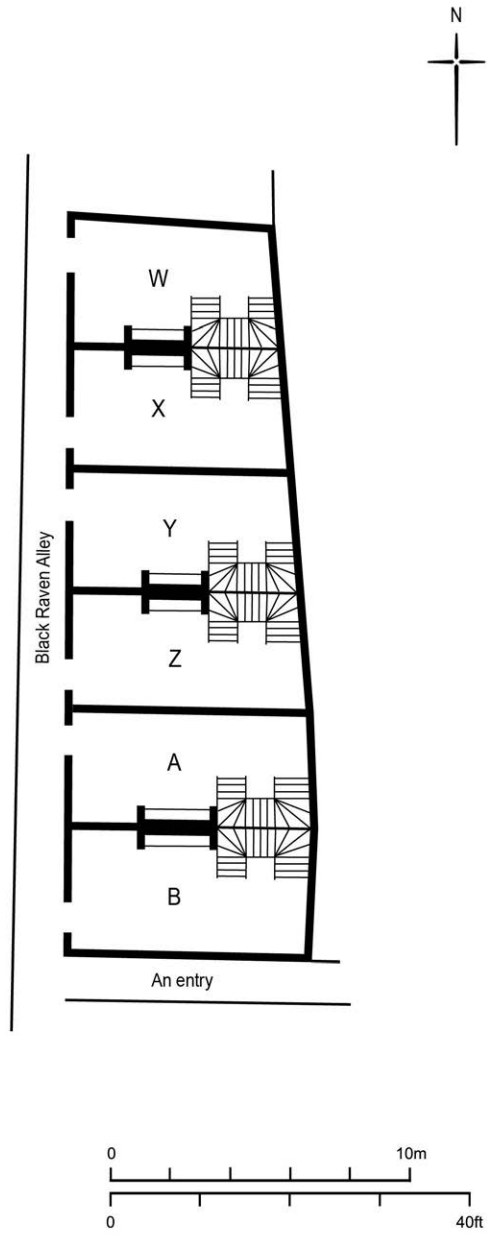


Figure 55 Darvoll's houses in Black Raven Alley in 1686 (William Leybourn, Fishmongers' Company Plan Book, f6 ; redrawn by Sue Cawood). A–B, W–Z are the labels given by Leybourn to individual houses. The Leybourn plan has been turned through 180 degrees, so north is to the top

formed the space between the alley and Swan Lane to the west (this strip, and the alley, are now subsumed within the development of 1975). This western part was not excavated, and is not greatly illuminated by documents as parts were owned by private individuals whose records have not survived. It included a further dyehouse which had been there since 1649, and which was to be rebuilt in 1668.[23] Part of the larger eastern part of Tenement 6 had been acquired by the Fishmongers' Company by 1600 (the ground built upon by William

[20] Oswald 1975, 139.

[21] Fishmongers' Company, Surveyor's inspection book of rented company property near the Hall 1725–50, LMA, CLC/L/FE/G/012/MS05860/002; Gerhold 2016, 103; Woodhead 1965, 126.

[22] Fishmongers' Company, Committee minutes 1768-82, LMA, CLC/L/FE/B/008/MS05573/004, pp280-1, 288-9, 303–4, 313; also scrapbooks of old plans, 'West Walk', LMA, CLC/L/FE/G/045/MS21538/001, no. 12 (dated 1820); and CLC/L/FE/G/046/MS21539/001, no. 34 (undated, *c*. 1776).

[23] Doolittle and Jones 2020, 29.

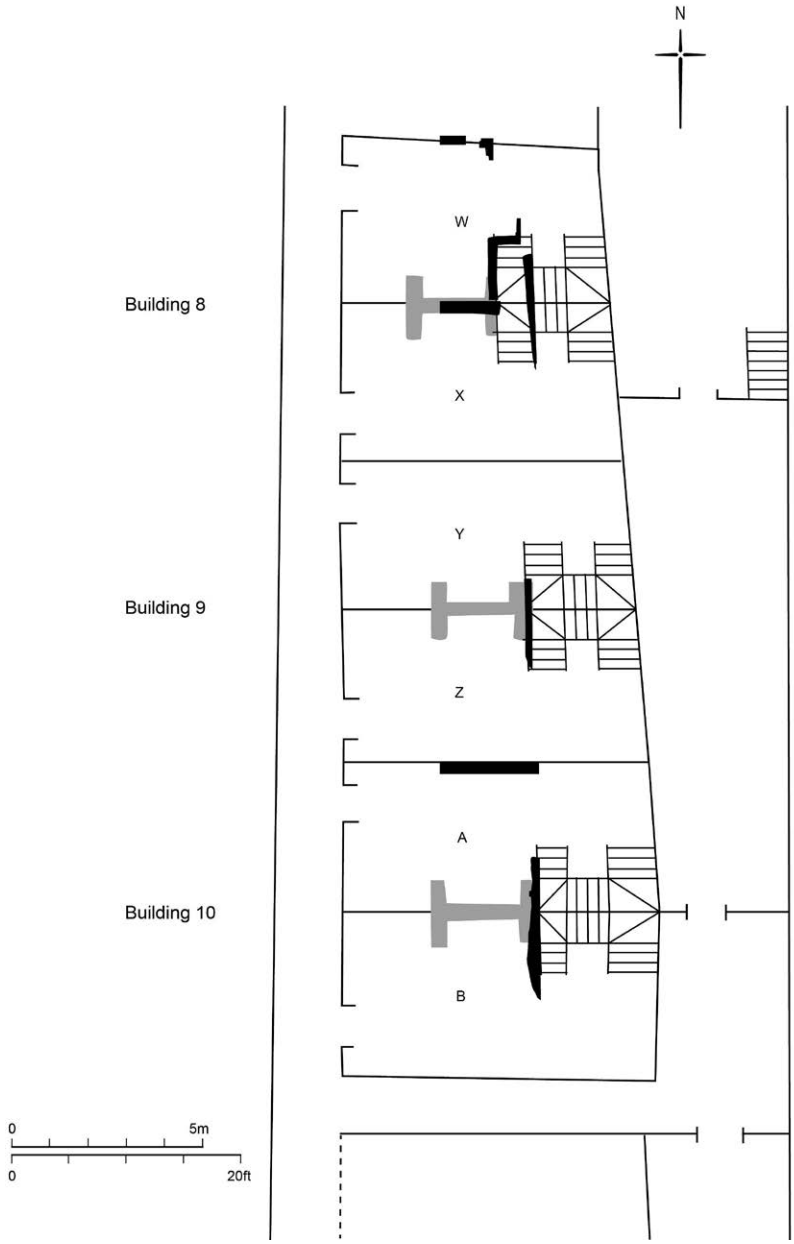


Figure 56 Seal House: the post-Fire buildings superimposed on the building outlines from the Leybourn plan of 1686 (John Schofield and Sue Cawood)

Darvoll). In June 1750 there is mention of a wharf and warehouse at the south end of (probably) Tenement 6 or Tenement 7 on the east side of Old Swan Stairs and fronting the Thames. The warehouse was 30ft long and 28ft deep (9.1m by 8.5m), and had a lower floor with 'a large wheel crane compleat' and a counting house; the upper floor had a crane in front. 'Opposite to the said wharf' was a new warehouse 24ft 6in (7.5m) wide, four storeys high with a crane loft.[24] These two buildings with their external cranes are probably those shown at the foot of Swan Lane by the Buck brothers in 1749 (Figure 57 below).

Darvoll's six small houses in Black Raven Alley merit further examination. Leybourn's plan of them in 1686 is redrawn with north to the top as Figure 55, and the archaeological evidence superimposed upon it in Figure 56.

The plan shows that the doors to the alley of all six were arranged symmetrically, towards the outside of each of three pairs. In its humble way, this was a designed building. Leybourn says that the houses all had cellars and three floors above the ground floor (probably three storeys with attics when viewed from the front). Evidence of the cellars, in the form of tiled floors, survived only for the two most northern houses, W and X (recorded as B:Building 8). The well B[26] lay beneath house Z. The identical internal plans of these six houses and the fact that at basement level a tiled floor was built for two of them before the party wall was erected indicates that these two, and presumably all, were built in a single operation, by Darvoll. The southernmost house, according to Leybourn, was slightly different

[24] Phillips 1951, 204, from the *General Advertiser* of 8 June 1750.

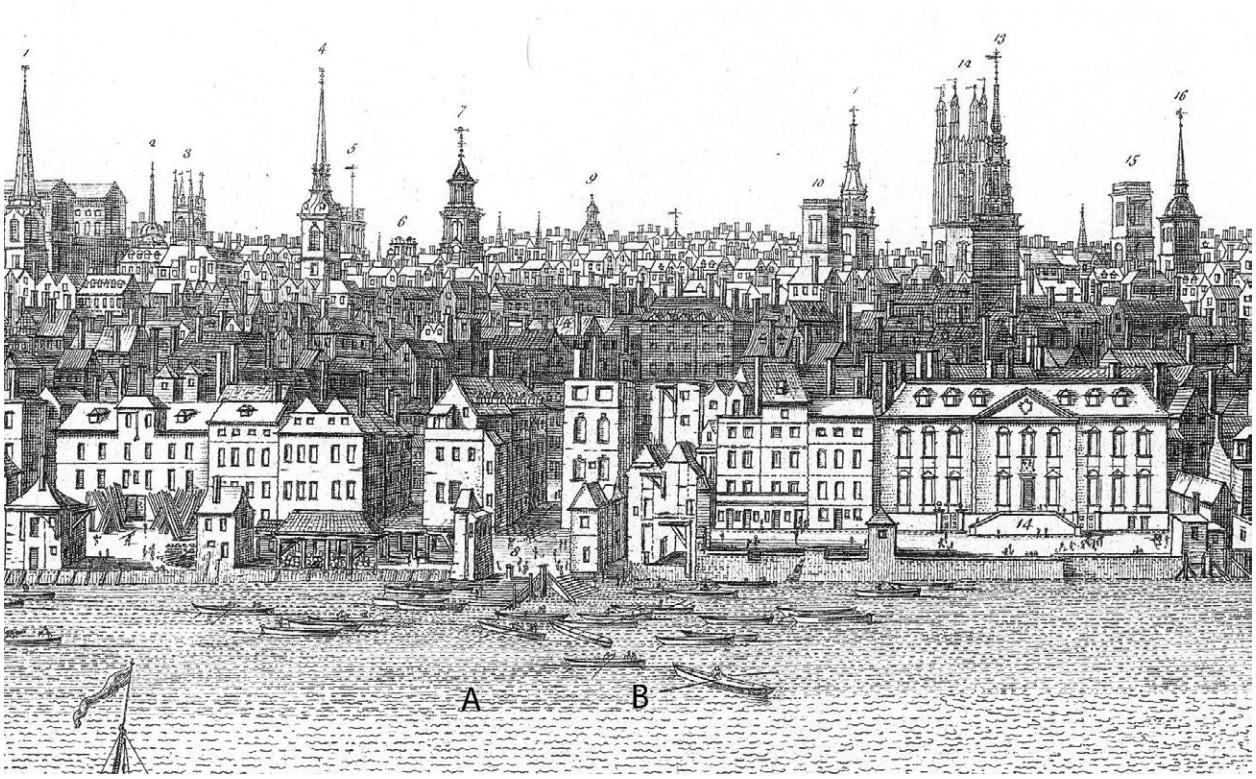


Figure 57 The Thames frontage upstream of the Bridge, on the panorama by the Buck brothers of 1749 (Hyde 1994). Key: 8 Old Swan Stairs (the number is just visible above the stairs); 14 Fishmongers' Hall; A, site A; B, site B

from the others, extending at first-floor level above the entry leading from Black Raven Alley to the back of Tenement 7.

The house of one room in plan on several floors was widespread in the London conurbation in the 17th century, and had been for several centuries previously in timber-framed form. But these at Black Raven Alley were unusual in having the stair, larger than a simple newel, at the back of the room between the chimney and the back wall They were also longer along the side than usual, filling the plot at right angles. Parallels for this in published house-plans of the late 17th or 18th century in London are hard to find; one is provided in a reconstruction of a house in Colombo Street, Southwark, of about 1700.[25] As the Black Raven Alley houses had fireplaces on the ground floor, and presumably in the upper chambers, they seem to have been designed as houses from the start, that is not as shops or workshops with accommodation over. They were fully domestic.

Some other details about buildings in Black Raven Alley are known. A case before the Fire Court in December 1668 concerned a tenement in Black Raven Alley on which a dyehouse 'with utensils and coppers' had been leased to William Gibbs, a dyer, in 1649; there is no detail as to where this was in the alley, but it may have been on the west side which does not appear on Leybourn's plan.[26] Dyehouses were a feature of the street above the bridge before the Fire; they were not found below the bridge before or after 1666. The dyehouse on Tenement 7 (on Leybourn's plan) shows that the waterfront above the bridge was still used for dyeing after the Fire, at least in this part near the bridge.

The waterfront is shown in 1749 by the Buck brothers (Figure 57). This shows the riverfront ends of the Swan Lane and Seal House properties, and Fishmongers' Hall. The properties west of the Hall were evidently still mostly domestic with small warehouses and work places, some no doubt geared to the human traffic through Old Swan Stairs at the foot of Ebbgate, as shown in the panorama; that is, as taverns or shops for food. But within the property which has been studied, Tenement 6 and its row of small houses, commercial forces were taking over: some or all of them were converted from houses to warehouses in 1735, as noted in the documentary section above. This change is in the same decade as the rebuilding of Botolph Wharf into a new complex of warehouses to be noted on the Billingsgate site below. The redefinition of the warehouse function with larger warehouse buildings

[25] Guillery 2004, 136, fig 111.

[26] Doolittle and Jones 2020, 29.

(that is, individually larger in area) in the 1730s on both sites seems to be a significant coincidence.

Fishmongers' Hall

The excavated sites of Swan Lane and Seal House lay immediately west of Fishmongers' Hall (Figure 57). Post-Fire Thames Street upstream of the bridge contained several livery company halls, including the Vintners, the Watermen, the Joiners, the Dyers and the Fishmongers. These are further described in Chapter 4 below.

Fishmongers' Hall was rebuilt to the design of Edward Jerman in 1667–72 (he died in 1668, and the hall was finished by Thomas Lock). Jerman, one of the three surveyors appointed by the City to work on the reconstruction after the Fire, provided designs for a number of company halls, though most of them were completed after his death.[27] A surviving plan of the ground floor rooms, with all the chambers named and showing the fittings in two kitchens, drawn in 1772 by George Gwilt.[28]

The Hall and the buildings which screened it from Thames Street on the north side feature in a plan of 1686 by William Leybourn, in the book of plans of the company's London estate (the plan of the buildings on Thames Street has been redrawn here in Figure 143 below).[29] A view of the hall from the riverfront on the south perhaps of the 1740s is given in Figure 58; this shows that all the windows were originally typical transom designs of the Restoration period, later replaced by sashes. The hall was of brick with stone details, and investigations in the basements in 1751–62 showed that timbers were used in foundations and possibly in the walls.[30] It resembled slightly earlier houses in Amsterdam, for instance Prinsengracht 237 of 1649.[31] The post-Fire hall was replaced by the present one in 1832–5, but a stone panel of the company arms by Edward Pierce, from the Thames Street entrance, is preserved in a courtyard of the 1970s west of the hall.[32]

Fishmongers' Hall had its south façade facing the river (Figure 58) and only a few yards behind the limit of the open quay. It was made to be seen from the considerable traffic on the river. A few other institutional buildings upstream of the bridge also indulged in this display, such as Watermen's Hall across Swan Lane (shown to advantage on Kyp's panorama of London of 1720) and the house of the Master within the Steelyard, a five-bay house next to the wharf with a roof-top balcony, which lay just to the west.[33]



Figure 58 The riverside elevation of Fishmongers' Hall by Sutton Nicholls, undated but perhaps 1740s (Yale Center for British Art, Paul Mellon Collection, B1977.14.16896)

[27] Colvin 1995, 545–6, 622.
[28] LMA, CLC/L/FE/G/043/MS21536, f.1.
[29] For the plan, Gerhold 2016, 187–8.
[30] Metcalf 1977, 70.
[31] Meischke *et al.* 1995, 64, fig 102.
[32] Bradley and Pevsner 1997, 387.
[33] Gerhold 2016, 150, fig 168.

Thames Street below the Bridge, 1666 to 1780: the New Fresh Wharf and Billingsgate sites

The character of Thames Street below the bridge in the immediately post-Fire years is shown by Ogilby and Morgan's map of 1676 (Figure 59). Samuel Pepys approved of the street's improvement, by widening on both sides (though only at certain points, not comprehensively), and its raising by up to 8ft (2.6m) with Fire rubble. The boundaries of all the properties on either side remained medieval in origin, though the width of lanes may have been adjusted (normally widened) and the evidence for each must be assembled when a lane is considered.

The block of properties east of St Magnus church studied here had street numbers by the time of a sketchmap of them in 1778 in the records of St Botolph's parish (Figure 62 below) and Horwood's map of 1813 (Figure 173 below): nos 1–13 Lower Thames Street. No.1 was in the parish of St Magnus, and nos 2–13 lay within the parish of St Botolph Billingsgate, which was united with that of St George Botolph Lane (the church of which was rebuilt) after the Fire. The properties studied here, in the scheme established in the previous report, are called Tenements 9 to 16. The relations of the excavated sites C and D to the tenements and their addresses from the late 18th century are shown in Table 5. New Fresh Wharf (site C) comprised Tenements 9 to 14, but little of the period survived to be recorded; the majority of the upper levels of the excavation in 1974–5 were removed by machine.[34] Only some notes on the documentary evidence are presented here. The Billingsgate excavation of 1982–3 lay on the north-west quarter of Botolph Wharf, here called Tenement 15a–15b. Tenement 16 to the east was excavated by developer's machines in 1983–4, and constrained recording was only of the alignments of medieval structures along with the recovery of many artefacts.

A fixed point in the post-Fire topography is provided by the rebuilding of the parish church of St Magnus the

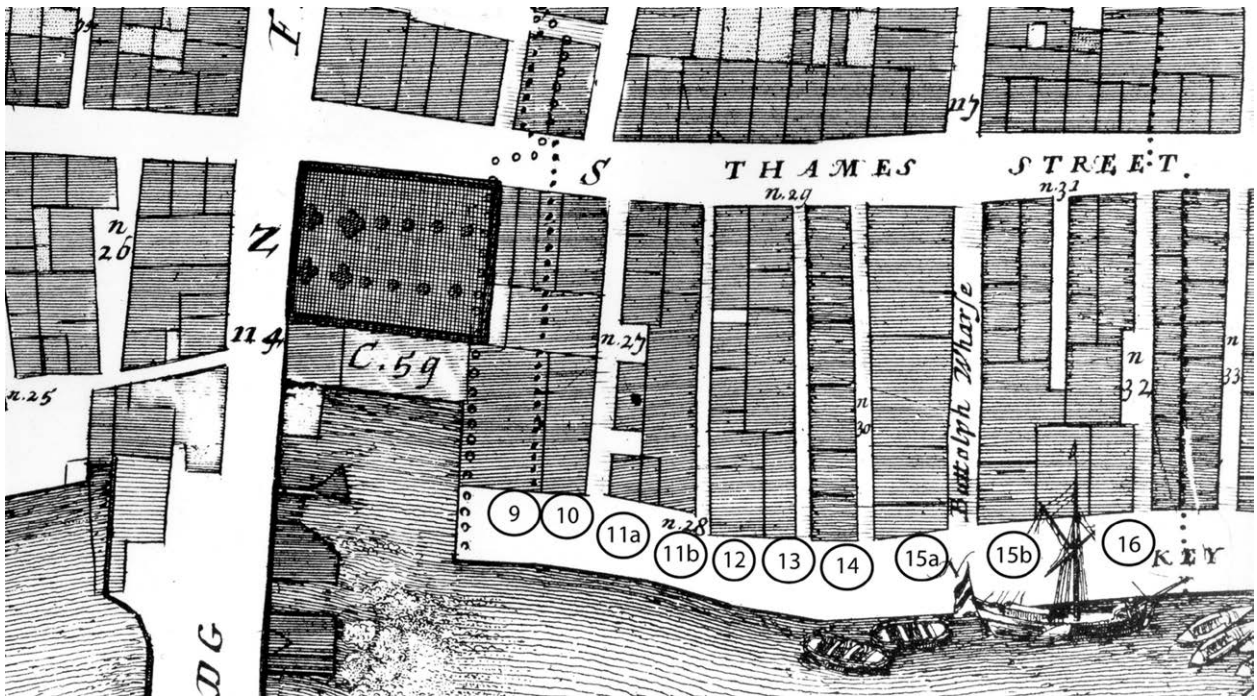


Figure 59 Properties south of Thames Street between St Magnus and Billingsgate, on Ogilby and Morgan's map of 1676 (Hyde 1992). The excavation at New Fresh Wharf lay on Tenements 10 to 14; the excavation at Billingsgate lorry park was on Tenements 15a and 15b; the watching brief on earth moving in 1983–4 was on Tenement 16. The former church of St Botolph Billingsgate lay at the north end of Tenement 15a (see also Table 5)
Key: C59 St Magnus [being rebuilt]; n27 Fresh Wharf; n28 Grant's Quay; n29 Cox's Quay; n30 Hammond's Quay; n31 Lyon's Quay; n32 Great Somers Quay; n33 Little Somers Quay

[34] Some post-Fire layers were recorded in the north section of the site in the area subsequently identified as Tenement 14; they are shown on the section which has been published, Schofield *et al.* 2018, Figure 291 (Section 14), top right. They include a brick drain with an unusual circular section.

Tenement	Address from late 18thc	Excavation
9	1 Lower Thames Street	Not excavated
10	2 Lower Thames Street	New Fresh Wharf, site C, 1974–5 [but not reported in detail here, very little survived]
11	3–4 Lower Thames Street	
12	5 Lower Thames Street	
13	6 Lower Thames Street, Cox's Quay	
14	7 Lower Thames Street	
15a	8–9 Lower Thames Street	Billingsgate Lorry Park, site D, 1982–3
15b	10–11 Lower Thames Street	
16	12–13 Lower Thames Street, Lyon's Quay	excavated by machines 1983–4

Table 5 The tenements downstream of the bridge excavated at New Fresh Wharf and Billingsgate (sites C and D)

Martyr in 1668 and 1674–84 to the design of Christopher Wren; this stands immediately west of the New Fresh Wharf site. Though it has been altered several times, including most notably the contraction of both aisles in 1762–8 to provide a pedestrian walkway through the tower to function with London Bridge, it contains many features of the immediately post-Fire period, especially its woodwork.[35]

New Fresh Wharf (site C)

John Schofield with contributions by Stephen Freeth

Thames Street was widened on the south side after the Fire in this stretch east of the bridge and St Magnus. This was almost certainly done in early 1667.[36] Four years later, in 1671, Robert Hooke measured the amount to be taken from Tenement 14 (the easternmost tenement on the New Fresh Wharf site) to widen the street. This was 'eight foot in depth at the east end and seaven foot nine inches at the west, and the bredth of the front to be twenty one foot and four inches' (Figure 60).

Some details of the post-Fire buildings are available.[37] On Tenement 9 at the west end (the Cross Keys), a high building was quickly erected. A lease of 1669 describes the property as comprising a cellar; a shop over the cellar; a large kitchen lying in part over the said shop and in part over another shop in the occupation of Sarah Hopkins (tenant of Tenement 10 to the east); a small room on the south side of the said kitchen; a great chamber over the said kitchen and a room on the south side of the said chamber; two chambers over the said great chamber and a small room at the south end of the said chambers; a garret over the said two little chambers and a small pair of leads on the south end of the said garret.[38] The large New Fresh Wharf property (Tenement 11) was in at least two parts; in 1684 the southeast part had a crane on it.[39] It seems likely that many of the smaller tenancies within these long pre-Fire properties remained intact though rebuilt after the Fire. This is clearly the case with Tenement 14 or Hammond's Quay belonging to the Vintners' Company, the easternmost property on the New Fresh Wharf site, where its five small parts were retained. But the combined rental value of the property rose from £35 6s 8d before the Fire to £55 6s 8d.

One incident on the site illustrates the perils of congestion of buildings and ships. In 1760 there was a fire at the north-west corner of the site, adjacent to St Magnus church. As reported in an unnamed newspaper:

> 'A fire broke out at an Oil Shop adjoining St Magnus Church, Thames Street, which consum'd that House and three others in front; it burn'd backwards to Fresh Wharf and Cox's Wharf, and consumed most of the Warehouses, and a great Part of the inside of the Church and did considerable Damage to several other Houses; a thousand Hogsheads of Sugar, a large quantity of wine, Rice, and Oil was likewise consumed; two men were blown up and killed by some Gunpowder taking fire, and another lost one of his eyes and had his Nose tore off; a Lighter took fire, but was extinguished with little Damage, a large Dutch ship lay close by the Wharf, but was happily got off before the flames reached her, with no other Damage than breaking her bowsprit. It seemed that this unhappy accident was occasioned by a Servant who was drawing off some Oil, leaving the Candle too near whilst he went to see Lord Ferrers pass from the Tower'.[40]

[35] RCHME 1929, 27–30; Jeffery 1996, 256–9; Bradley and Pevsner 1997, 231–3.

[36] Staking-out for street widening had been mostly completed by the end of May 1667: Cooper 1997, 166 and note 29 on 173. Properties within Cox's (Cocks) Quay and Fresh Wharf (ie not on Thames Street) were being staked out from early 1667: Mills and Oliver *Survey*, i, 25, 34.

[37] This paragraph is from research by Tony Dyson.

[38] LMA, CLC/522/ADDMS1030.

[39] LMA, CLC/434/MS14014.

[40] Transcribed in Phillips 1951, 202–3.

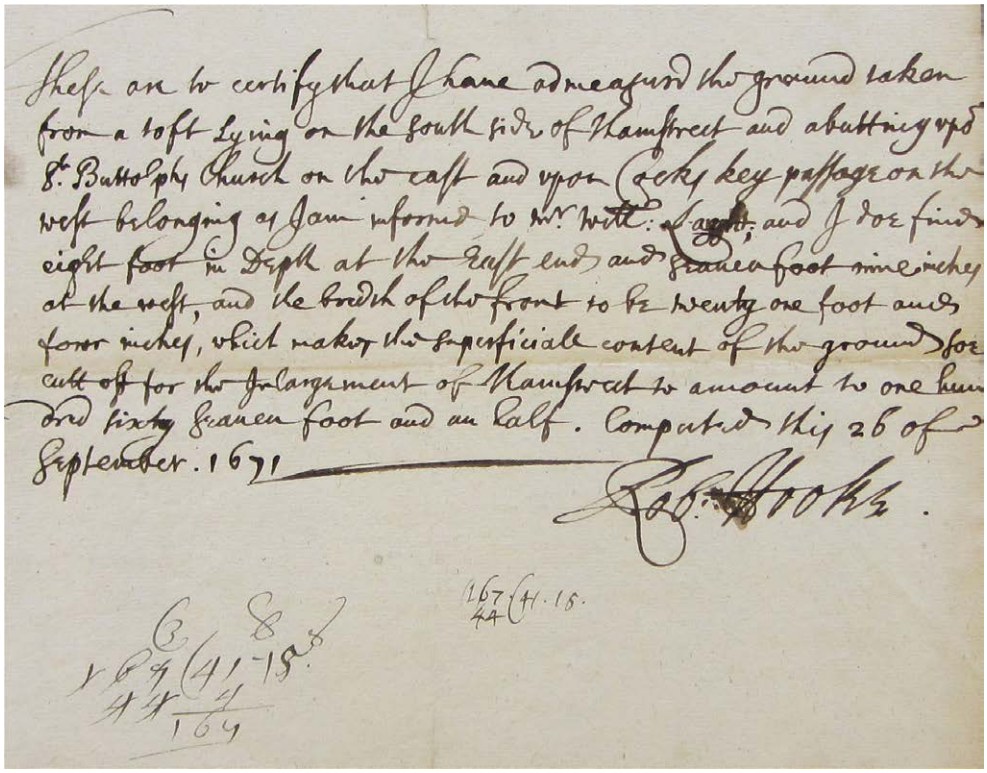

These are to certify that I have admeasured the ground taken from a soft Lying on the South side of Thamstreet and abutting upon St Buttolphs Church on the east and upon Cocky key passage on the west belonging as I am informed to Mr Wm. Hewett and I doe find eight foot in Depth at the East end and fourteen foot nine inches at the west, and the breadth of the front to be twenty one foot and four inches, which makes the superficiale content of the ground soe cutt off for the inlargement of Thamstreet to amount to one hundred sixty fourteen foot and an half. Computed this 26 of September. 1671

Figure 60 Certificate issued by Robert Hooke for the widening of Thames Street by removal of a strip at the street end of Tenement 14, 1671 (LMA, Comptroller's Deeds Box K, no.10; Stephen Freeth)

The church of St Magnus had its roof burnt but suffered only 'slight' damage.[41] A board recounting the details of the fire is in the church.

Billingsgate (site D): documentary evidence

Stephen Freeth

The Billingsgate site excavated in 1982–3 lay over the north end of a wide property called Tenement 15 in the scheme established for the study of properties on either side of London Bridge which was published in 2018.[42] This account of the documentary evidence for the period 1666 to about 1780 is in four parts, dealing with (i) the site of the parish church of St Botolph Billingsgate; (ii) the rest of Tenement 15 apart from the church site; (iii) a survey of uses of Botolph Wharf, and (iv) connections between Botolph Wharf and slavery.

St Botolph Billingsgate church site 1666-1780[43]

St Botolph's, dedicated to the patron saint of travellers, stood in the northwest corner of Tenement 15, on the west side of the alley leading to Botolph Wharf. Its north wall adjoined Thames Street; its west wall formed the boundary with Hammond's Key, the property of the Vintners' Company (Tenement 14); its south wall and a projecting vestry adjoined Botolph Wharf; and its east wall adjoined the alley down to the waterside.[44] St Paul's Cathedral held the advowson until 1666, when the church was burnt down in the Great Fire and not rebuilt. The parish was then united with St George Botolph Lane, the next parish to the north. Parts of the church site were used to widen Thames Street, or acquired by adjacent occupiers. The rest was redeveloped by the parish with houses or shops and two burial vaults.

St Botolph's was a small church. Leake's outline of it after the Great Fire shows it as roughly square, conforming to the building line either side in Thames Street and with a projection (the vestry) in the southeast corner.[45] We can assemble the dimensions of the outside walls, and the subsequent buildings on the site, from various sources (Figure 61).

A plan attached to a lease of Botolph Wharf dated 1 July 1680 (Figure 64 and Figure 65 below) purports to show the east and south walls of the church before the Fire.[46] However this cannot be taken at face value because the church was no longer there.[47] The length of the east wall is shown as 51ft (15.5m) plus 11ft (3.4m) for the projecting vestry, a total of 62ft (18.9m), but this omits

[41] RCHME 1929, 27.
[42] Schofield *et al.* 2018.
[43] This report owes a great deal to preliminary work by Tony Dyson, which is gratefully acknowledged.
[44] The term 'Botolph Wharf' was often used not just for the quayside but for the whole of the wharf area. West of the central alley this ran up to the church. East of the alley it ran up to Thames Street, and included two houses facing the street.
[45] BL, Add. MS 5415.1.E, reproduced in Barber 2012, 45. This projection is misinterpreted as an open yard in Lobel 1989.
[46] LMA, Comptroller's Deeds Box 36, no.27 (lease and counterpart).
[47] For a full discussion of this plan, see the account of the rest of Tenement 15 apart from the church site, below.

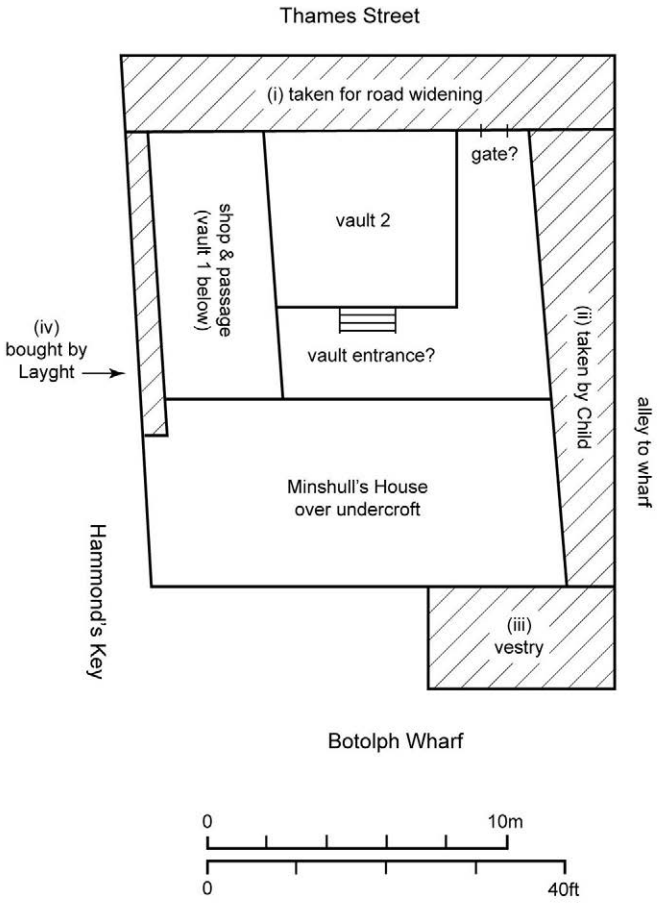


Figure 61 Encroachments on the site of St Botolph's church after 1666, suggested state in 1693 (Stephen Freeth, drawing by Sue Cawood). The outer line of the plan is the extent of the church and vestry in 1666

about 9ft (2.7m) taken after the Great Fire to widen Thames Street. When this is added back, it gives a length of about 60ft (18.3m) plus the vestry, or *c* 71ft (21.6m) in all.[48] The church's south wall on the same plan is shown accurately as 50ft 6in (15.4m) long overall: 29ft 6in (9m) from its southwest corner to where the vestry projected at a right angle for 11ft (3.4m); and then a further 21ft (6.4m) from the southwest corner of the vestry to the alley to the wharf. The vestry itself is 11ft (3.4m) wide and 21ft (6.4m) long.[49] The church's north wall, not shown on the 1680 plan, was 55ft (16.8m) long. It was measured by Robert Hooke the City Surveyor on 17 March 1673.[50] By this date the wall itself had been demolished several years earlier as part of the widening of Thames Street.[51] Hooke needed to calculate the compensation to the parish for the loss of this ground. He therefore located the 'stone wall buried under the street'.[52] The church's west wall, also not shown on the 1680 plan, was about 62ft (18.9m) long before the Fire. A committee of the Court of Aldermen measured it in July 1667 after road widening as 53ft (16.2m) long.[53] The north and south walls of the church were thus of unequal length: 55ft (16.8m) and 50ft 6in (15.4m) respectively. The 1680 plan shows the boundary with Hammond's Key curving out gently to the west as it extended south to the river. The west wall of the church may have followed this alignment, or been stepped.

After the Fire, there were by 1674 four different encroachments upon the church ruins (see Figure 61):

(i) The strip from the north side around 9ft (2.7m) wide, already mentioned, to widen Thames Street. This ground is not shown on the 1680 plan.
(ii) A strip from the east side, about 10ft (3m) wide at the north end and 5ft (1.5m) wide at the south end, to improve the access to Botolph Wharf.
(iii) The site of the former vestry, acquired by Josiah Child to enlarge Botolph Wharf.
(iv) Part of the former west wall of the church, purchased by William Laight or Layght.

Encroachment (i) was staked out by the City Surveyor in or before May 1667 from the north side of the church site to widen Thames Street. It was 9ft (2.7m) wide (north/south) at the west end and 9ft 3in (2.8m) wide at the east end.[54]

Encroachment (ii) was a unilateral action by Josiah Child to improve the entrance to Botolph Wharf. The existing entrance was poorly aligned with Botolph Lane on the north side of Thames Street and caused traffic problems for carts.[55] The wharf entrance before the Fire was straight and wide, as shown by Leake, and not as shown on the 1680 plan (Figure 64 and 65), which is misleading.[56] But its location a few feet east of Botolph Lane was awkward. Child now moved the wharf entrance several feet to the west and aligned it with Botolph Lane. This created a pronounced 'kink' in the alley to the waterside, as it bent westwards towards

[48] This is new research since Schofield *et al.* 2018.
[49] These details of the south wall were omitted from Schofield *et al.* 2018, 201.
[50] LMA, Comptroller's Deeds Box K, no. B75.
[51] Staking-out for street widening had been mostly completed by the end of May 1667: Cooper 1997, 166 and endnote 29 on 173. This is new research since Schofield *et al.* 2018, 201.
[52] Note that in direct quotes from original documents, spelling, punctuation and the use of capitals have all been modernised for ease of reading unless otherwise stated.
[53] Repertory 72, now LMA, COL/CA/01/01/076, fos. 141r–v.
[54] LMA, Comptroller's Deeds Box K, no. B75; Cooper 1997, 166 and endnote 29 on 173. The north side of Thames Street was also widened: see for example LMA, Comptroller's Deeds Box K, nos H56, K6, L6. This last document (L6) relates to 11ft 6in (3.5m) taken from the north side of Thames Street at the southeast corner of Botolph Lane.
[55] TNA, C 24/1121/54, deposition of Henry Goodhew, 19 September 1688.
[56] BL, Add. MS 5415.1.E, reproduced in Barber 2012, 45. For a full discussion of the 1680 plan, see the section below on the rest of Tenement 15.

the new entrance, and was achieved by slicing off part of the east end of the former church. The new entrance was staked out by the City Surveyor on the same day in or before May 1667 that he staked out encroachment (i) above. Child importuned him to stake out a tapering strip of ground from the east side of the church site, stated many years later by witnesses to have been about 10ft (3m) wide at its north end and about 5ft (1.5m) wide at its south end. Child was forceful, and the City Surveyor did as requested even though he had no authority to do so. Child then enlarged the house on the east side of the alley across most of the former entrance.[57] In July 1667 a committee of Aldermen (the same one as already mentioned) measured the reduced dimensions of the site of the former church as 46ft (14m) on both the north and the south sides.[58] On 23 January 1668 a royal licence ratified Child's demolition of the church's east wall and allowed him to use the stone to rebuild the wall several feet further west, 'to the height of the second floors of the houses in Thames Street'.[59] Child's new wall, several feet inside the east wall of the former church, was discovered during the archaeological excavation (see Figure 81).

Encroachment (iii) was the site of the former vestry. In June 1667 Child applied to the City (at that time responsible for the vacant sites of the destroyed churches) for permission to demolish the remains of the vestry and incorporate its site into Botolph Wharf. The Court of Aldermen agreed to this in July. Child was required to pile up the stones of the former vestry within the walls of the ruined church. He also had to give a bond to rebuild the vestry should the church itself be rebuilt, and to buy it at a fair valuation if not.[60] Child's bond in £500 was signed on 18 July.[61]

Encroachment (iv) took place in 1673–4 when William Laight or Layght (and other spellings), clothworker, purchased much of the remaining west wall of the former church from the City Corporation. Laight was the Vintners' Company's tenant of the northern end of Tenement 14, immediately to the west. His house before the Fire had joined to the church's west wall, in so doing overflying a foot passage to the riverbank about 5ft (1.5m) wide. He needed to buy the wall if he was to rebuild with confidence. The City agreed, and sold it to him. He then demolished the old wall and rebuilt it anew. His purchase is recited in a Fire Judges' decree as having been 2ft 6in (0.8m) wide and 36ft (11m) long.[62] The decree does not say when this happened, but the churchwardens' accounts show that it was in 1673-4.[63] Laight paid the City £22 10s for this ground. The money was refunded to the parish on September 1674, to be put towards the rebuilding of St George Botolph Lane. It was described as for 'some small part of the parish church of St Botolph Billingsgate, not to be rebuilt'.[64] The west wall of the church had measured 53ft (16.2m) after road widening, so Laight's purchase of 36ft (11m) will have left 17ft (5.2m) remaining.

After all these encroachments the remains of the church site were roughly as shown in Figure 61. This ground was gradually redeveloped by the parish with shops or houses and two burial vaults. Initially the ruins of St Botolph's, like those of other churches, were used to store supplies for refugees after the Fire: in April 1670 it was proposed to convert those parts of St Botolph's, St Magnus and three other churches 'not already appointed to be set out for enlarging streets' into public store-yards for coals and other fuel.[65] Later the parish allowed sheds on the church site and received an annual rent. These sheds were cleared some time in 1674–6.[66] References to the church site as 'churchyard' or 'burial place' suggest that it was also used for burials.

The key documents about the redevelopment of the site are five parish leases. Two are originals (1678 and 1704); the rest (1671, 1691 and 1693) are recited in the lease of 1704.[67] On 31 January 1671 the parish leased to Joshua Green, citizen and vintner, for 71 years from the Feast of the Annunciation next following, for a peppercorn for the first year and £20 pa thereafter,

[57] The City v Child, TNA, C 24/1121/54, witness depositions of Abraham Jaggard, Henry Goodhew and John Oliver, a City Surveyor, September-October 1688. The City Surveyor who agreed to the staking-out was presumably Robert Hooke.

[58] Repertory 72, now LMA, COL/CA/01/01/076, fos. 141r–v. An unresolved problem is that this does not match what was found during the excavation. Child's realignment of the wharf entrance started from the north-east corner of the former vestry, and not as stated by the witnesses (which would also have required a triangular slice from the site of the former vestry). Perhaps this was for structural reasons.

[59] Entry Book of Warrants 1667–71, TNA, SP 44/25, fos. 49v–50, calendared in *Cal State Pap Dom 1667–8*, 182. The City Surveyors were examined about this before the Privy Council (TNA, C 24/1121/54, deposition of John Oliver, 19 October 1688), but there appears to be no record in the Privy Council registers. See also Child's Pleading and the City's Answer, TNA, C 7/73/60.

[60] Repertory 72, now LMA, COL/CA/01/01/076, fo. 123 (20 June 1667) and fos. 141r–v (16 July 1667). See also TNA, C 7/72/53 (Child v the City, 1688: further Answer by the City).

[61] LMA, COL/SJ/03/021.

[62] Fire Judges' Decree, William Layght clothworker v Vintners' Company, 6 July 1675, LMA, CLA/039/01/009, fo. 135ff. Laight's purchase must have overlapped by about three feet (0.9m) with the west wall of the large medieval cellar within the church site, let by the parish in 1671 on a building lease as described next. The overlap was presumably necessary for structural reasons.

[63] St Botolph Billingsgate churchwardens' accounts 1673–4, 'measuring [and] opening..Mr Lait's ground': LMA, P69/BOT3/B/007/MS00942/001, fo. 236v.

[64] Warrant for payment, LMA, COL/SJ/03/042. See also the churchwardens' accounts 1674–6, LMA, P69/BOT3/B/007/MS00942/002, p29.

[65] Parliamentary Archives, cited in *Eighth Report of the Royal Commission on Historical Manuscripts* (1881), Appendix 1, 145a.

[66] Churchwardens' accounts 1674–6, LMA, P69/BOT3/B/007/MS00942/002, p29.

[67] LMA, CLC/119/MS23737/022. These documents were transferred by the parish in the 19th century to the City Parochial Foundation, whose archives are now at LMA.

> *All that place where there lately stood one large cellar or vault* [the undercroft]*..in length from east to west 46ft* [14m]*, and in breadth from north to south 20ft* [6.1m]*.. situate on the south part of the said late parish church of St Botolph Billingsgate and late in the tenure or occupation of Josias Child his undertenants or assigns..And also all their right of erecting any building or superstructure over..where the said cellar or vault lately stood.*[68]

(The term *vault* is used in the records, but *undercroft* will be used here for clarity, as there were also burial vaults within the reduced footprint of the former church.)

This building lease can be confidently linked to the large medieval undercroft or cellar discovered by the archaeologists at the south end of the church site (D:Building 10), though truncated at its east end by Child's enlargement of the central alley, encroachment (ii) above, and further altered slightly at its west end by Laight's purchase, encroachment (iv). Josiah ('Josias') Child had become the parish's tenant of this undercroft a few months before the Fire.[69] From the measurements, the undercroft extended across the whole of what was left of the church site. The lease is described in the churchwardens' accounts in May 1673 as 'One lease of the house built over the vault, being let to Mr Joshua Greene [sic] at £20 per annum'.[70] Newcourt, usually reliable, describes this lease incorrectly as relating to the separate churchyard in Botolph Lane.[71] By 1674 this lease had been assigned to John Sutton and sublet to Francis Minshull (or Minshall and other spellings). The churchwardens' accounts for 1674-6 contain the entry,

> *Received of Mr Minchell by Mr Sutton's order .. two years' rent, £40.*[72]

The medieval undercroft below the house continued in use, accessible from the central alley to the wharf. In April 1692 Francis Minshull obtained an Order from the Lord Mayor preventing Joseph Ashton, Child's subtenant of Botolph Wharf, from blocking his access by

> *erecting a stable in the passage going to Botolph's Wharf, whereby he stops up the ancient lights of the said Minchell's cellar and hinders his passage into the same cellar.*[73]

On 28 January 1678 the parish leased another part of the former church site to the same Francis Minshull, now described as citizen and vintner. This was for 21 years at £4 pa. The ground was a new walled passage 13ft (4m) wide 'within the walls' and 30ft (9.1m) long, running south from Thames Street alongside the western boundary of the church site (i.e. with Tenement 14). This passage gave Minshull better access to his house. It was also an asset to the parish. It incorporated a new burial vault, and a 'shed' above the vault to protect it from the weather and provide income for the parish poor. The shed, not mentioned in the lease, is known from the vestry minutes and churchwardens' accounts. Minshull paid a large fine for it (£88 'for a fine for a shed to be built over a vault'), so it must have been on or near Thames Street. His landlord Sutton also paid £20 for permission 'for a passage to Mr Minchell to the back house for the better improvement thereof'. Access to the house was presumably down one side of the shed.[74]

The new burial vault was of brick, and cost £20 to Mr Horne, bricklayer; £30 to Mr Day, carpenter; £3 7s to Mrs Heard, plumber, for a 'vent pipe'; and £3 to Dr Pinfold, presumably a diocesan official, for permission.[75] Access to the vault was probably from outside the east wall of the passageway. One of those interred in the new vault was William Laight, now living in Buckinghamshire, at his own request.[76] On 2 January 1691 the churchwardens extended this 1678 lease to Francis Minshull for 45 years from the Feast of the Annunciation 1697 at £4 pa, thus bringing the term into line with that of Minshull's house.[77] The vestry minutes mention a large fine of £140 to be paid by Minshull, and describe this new lease as of 'the shop in Thames Street'. The 'shed' was now a shop.[78]

The parish soon needed a second burial vault.[79] On 10 April 1693 it obtained a faculty for a burial vault

[68] Recited in the lease of 1704, LMA, CLC/119/MS23737/022. The City was still responsible for the church site at this date, so the churchwardens had sought permission for the lease on 1 December 1670: Repertory 76, now LMA, COL/CA/01/01/080, fo. 23v.

[69] Schofield *et al.* 2018, 237.

[70] LMA, P69/BOT3/B/007/MS00942/001, fo. 231v.

[71] Newcourt 1708–10, I, 310. Richard Newcourt (d 1716) was principal registrar of London diocese from 1669 to 1696, responsible for its central records. His *Repertorium Ecclesiasticum Parochiale Londinense*, a detailed parochial history of the diocese, is now an admired reference work. His account of St Botolph Billingsgate was undermined by the parish's misleading replies to the episcopal visitation in 1693 (LMA, DL/B/C/001/MS09538, fos. 101 onwards).

[72] LMA, P69/BOT3/B/007/MS00942/002, p29. The accounts for 1677–8 (p. 33) give Sutton's full name: 'Received of Mr John Sutton, gardener, for one year's ground rent of Mr Minshall his house, £20.'

[73] Ashton papers, TNA, C 110/49, box 1, bundle 9.

[74] LMA, CLC/119/MS23737/022; St Botolph's vestry minutes 4 and 11 March 1676, 14 December 1677, LMA, P69/BOT3/B/001/MS00943/002; Churchwardens' accounts 1674–6, LMA, P69/BOT3/B/007/MS00942/002, p29. Newcourt 1708–10, I, 310.

[75] Churchwardens' accounts 1674–6, LMA, P69/BOT3/B/007/MS00942/002, p31. There is no trace of any faculty for this burial vault.

[76] St Botolph Billingsgate burial register, 21 March 1688, 'William Laight buried in Vault', LMA, P69/BOT3/A/007/MS04797. See also Laight's will, dated 29 May 1687, proved 27 March 1688, TNA, PROB 11/390, fos. 274v–77.

[77] Recited in the lease of 1704, LMA, CLC/119/MS23737/022.

[78] Vestry minutes 16 Dec 1690, LMA, P69/BOT3/B/001/MS00943/002. The minutes add, 'that if the parish think good to build ["beld"] another shop to join the aforesaid shop, the parish may build on the partition ["peteshone"] wall without paying anything for it' [i.e. to Minshull]. This second shop was achieved by the lease of 1693, described next.

[79] Vestry minutes 22 March 1693, LMA, P69/BOT3/B/001/MS00943/002.

arched with brick of between 19ft (5.8m) and 20ft (6.1m) square and about 8ft (2.4m) deep, with a 'decent shed' above to protect it from the weather.[80] One week later the churchwardens leased the necessary ground to Minshull for 62 years at £2 pa. This was 20ft (6.1m) square, abutting north on Thames Street, south on parish ground in Minshull's occupation (i.e. his house), east on the alley to the wharf and west on buildings adjoining Hammond's Key.[81] Newcourt makes it clear that this plot was to be above the new burial vault, for Minshull to build a shed or shop. Minshull paid a fine of £150.[82]

The parish now had three leases running in the hands of Francis Minshull: first (1671) of the undercroft, on which was now a house in which the Minshulls appear to have lived;[83] the second (1678, extended 1691) of the passage giving access to the house, with a shop, probably near the street, below which was a burial vault; and the third (1693) of ground in the angle of the other two, i.e. north of the undercroft and east of the passageway, containing another shop with burial vault beneath. The first two leases would both expire in 1742, and the third in 1755. The former church site at its north end was only 43ft 6in (13.3m) wide, and the new burial vault was probably constructed alongside the older one to allow access below ground from the one to the other. The two vaults could then share one entrance. This entrance is likely to have been on the south side for privacy, accessed by a path from Thames Street. The new burial vault and shop were duly built, but Minshull exceeded his authority by adding a 'low room' above the shop. The churchwardens hoped to use this as a vestry.[84]

In 1701 the parish needed cash urgently. Workmen who had beautified St George Botolph Lane had not been paid, and a rate assessment to raise £200 had been disputed. On 15 March 1701 a proposal to mortgage the parish rents was rejected by the Vestry. On 27 February 1702 the disputed rate assessment was annulled by the Court of Arches. A financial crisis ensued. There are no further entries in the vestry minutes, merely five blank pages, until December 1703. Finally in April 1704 the Vestry granted Elizabeth Minshull, Francis Minshull's widow and executrix, a reduction of the overall rent for her three leases from £26 pa to £6 pa for 20 years, in return for a lump sum of £220.[85] The relevant deed is dated 19 May 1704 and is endorsed with useful notes. These describe the 1691 lease as 'the lease of Mrs Minshull's passage to her house', and the 1693 lease as 'the lease to Mrs Minshull for the stationer's house'.[86]

In 1732–5 Francis Minshull junior, described as 'Captain Francis Minshull', spent £210 on improvements to his dwelling house. No details are given. In recognition of this and for an additional 30 guineas the Vestry awarded him a 13-year extension of his lease (i.e. the two leases of 1671 and 1678/1691). This ensured that all three leases would expire in 1755. The shed or shop above the second burial vault, the subject of the third lease (1693), was described somewhat disparagingly as 'the front shed now inhabited by Mrs Ann Holden in Thames Street'.[87]

In 1755 all three leases came up for renewal. The first two, Minshull's former house, were now treated as one property: a house lately occupied by Henry Woodcock, orange merchant, with a shop with room above (called the 'new room', perhaps added in 1732–5 by Capt Minshull). The third lease, the shed above the burial vault, was now a house occupied by Thomas Bradley (sometimes Bradly), who also occupied the room above Woodcock's shop. The first house was to be advertised in the *Daily Advertiser*; Bradley was merely to be invited to renew his tenancy. Both properties required substantial repair.

Alexander Brander was the successful bidder for the first house, including the room above the shop. He was granted a lease from Lady Day 1756 for 31 years at £31 10s pa, plus £170 on repairs, including shoring up the house and giving it a new front of grey stock bricks. Thomas Bradley was granted a lease of the other house (which he already occupied) for 7, 14 or 21 years from Michaelmas 1755 at £16 pa, plus £50 on repairs. He asked to build over the passage on the east side of his tenancy, so long as he did not block it or cause a nuisance. Later evidence suggests that this was agreed.

In 1757 Alexander Brander complained that the wharfingers had blocked the doorway from his house to the gateway to Botolph Wharf (ie the alley to the river). The churchwardens were ordered to get it cleared. In 1762 he asked permission to extend his counting house over part of the churchyard adjoining his house. This was to be 12 ft (3.7m) north-south and 5ft (1.5m) east-west and no more than 9ft (2.7m) in height, 'no part of the pavement to be disturbed or the building rest on

[80] Faculty register, LMA, DL/A/A/021/MS09532/001, p82.
[81] Recited in the lease of 1704, LMA, CLC/119/MS23737/022.
[82] Newcourt, 1708–10, I, 310. The fine is not mentioned in the lease.
[83] Later documents show that Francis Minshull had acquired the remaining term of the 1671 lease.
[84] Newcourt 1708–10, I, 310. The room cannot have been ideal. In 1718 the parish negotiated free use of the vestry room at St George Botolph Lane on Wednesdays for seven years, and the right to keep a chest there for books and accounts for 40s pa. See vestry minutes 10 July 1718, LMA, P69/BOT3/B/001/MS00943/002.
[85] Vestry minutes 15 March 1701, 27 February 1702, 12 and 20 April 1704, LMA, P69/BOT3/B/001/MS00943/002. Francis Minshull had died in March 1704: Woodhead 1965, 116. He was buried on 28 March 1704 at St Dionis Backchurch (St Botolph Billingsgate burial register, LMA, P69/BOT3/A/007/MS04797).
[86] LMA, CLC/119/MS23737/022.
[87] Vestry minutes 7 September 1732 and 14 November 1735, LMA, P69/BOT3/B/001/MS00943/002.

it'. Permission was granted. The extension must have been jettied out at first-floor level. In 1778 Brander was granted a lease of the second house, formerly Bradley's, for 10½ years from Michaelmas 1776, still at £16 pa. In 1786 he was granted a lease of both properties, which 'he now lives in', for a further 21 years from Lady Day 1787 at £80 pa.[88]

Brander was another orange merchant. In 1781 and 1784 he and his partner Alexander Read were using no.8 Lower Thames Street as their business address. They probably lived on the premises while using the street frontage as a shop. Their stock was kept in a brick warehouse or warehouses on Fresh Wharf. In 1787 Brander alone added a cellar and warehouse on Cox Key to the warehouses on Fresh Wharf. He later sublet no.8 to Theophilus Hearsey and John Mendham, also orange merchants. They too seem to have lived there. They had warehouses on Fresh Wharf and two other houses, nos. 18 and 19 Botolph Lane.[89]

Plans of both properties, now two contiguous houses or shops numbered 8 and 9 Thames Street, are in the vestry minute book commenced in 1757.[90] A small-scale plan of the whole parish is at the front of the book (Figure 62), and a numbered set of three large-scale plans of the parish's rented properties is inverted at the back. All four appear to have been drawn in 1778 by James Baron, churchwarden in 1776 and 1777. 'Plan No.3' of the numbered set shows these houses in Thames Street. No.8 is much larger than no.9, and has a wider frontage than in 1693, perhaps 21ft (6.4m) east-west. It is also L-shaped, incorporating the Minshulls' former house above the undercroft. There is no passageway to this house from Thames Street (no longer needed), and the new, wider street frontage seems to have expanded across much of the second burial vault. No.9 still shares a party wall with no.8, but seems to have been rebuilt slightly east of its former site. It now has a narrower frontage than before, perhaps 18ft (5.5m) east-west, and its north-south dimension is little more than 10ft (3m). These will have been the alterations by Minshull, Brander and Bradley since 1732.

No.9's new location reduced the access to the burial vaults from Thames Street to a passageway no more than 3–4ft (0.9–1.2m) wide, barely wide enough to carry coffins, leading to an east-west path c6ft (1.8m) wide along no.9's back side.[91] The new entrance to the vaults was probably underneath the 1762 first-floor extension of Brander's counting house. This extension is indicated on both plans and would have acted as a covered porch during funerals.

The Minshulls, tenants until 1755, were wealthy and well connected. Francis Minshull was described as a citizen and vintner in the parish lease of the passageway in 1678. The Vintners' Company membership records show that he was the son of Christopher Minshull, a yeoman of Arundel, Sussex. He was apprenticed to James Longe, citizen and vintner in 1657, made free in 1666 and elected to the Livery in 1677. In 1694–5 he paid a fine of £25 to avoid being a Younger Warden. He seems never to have joined the Company's Court.[92] He was a vestryman of St Botolph Billingsgate from at least October 1675, and a churchwarden in 1683–4. On 27 November 1688 he was chosen as a Common Councilman for Billingsgate Ward.[93] At the episcopal visitation in 1693 the parish described him as an orange merchant.[94]

Francis Minshull's business interests were wide. He was involved in the Canary wine trade (and perhaps the orange trade too?), and in November 1702 at the outbreak of war with Spain was one of the English at Tenerife or elsewhere in the Canaries at risk of being interned, though he seems to have left in good time.[95] He was part-owner with other merchants including John de Grave of several privateers in the wars with France and Spain, such as the *De Grave,* a 52-gun privateer operating in the Aegean in 1697;[96] and also the *Great Russell*, 24 'great' guns (1695 and 1702); the *Russell* galley, 16 guns (1702); and the *Queen*, 14 guns (1702).[97] In December 1698 the *De Grave* was lent to the East India Company to carry the Company's Ambassador to the court of the Great Mogul, together with a gift of twelve brass cannon.[98]

He was a Proprietor of West [New] Jersey in 1699, 1701 and 1702, though he may never have visited the

[88] Vestry minutes 16 December 1757, 12 November 1762, 7 January 1778, 15 March 1786, LMA, P69/BOT3/B/001/MS00943/003.

[89] Sun Fire policy registers, LMA, CLC/B/192/F/001/MS11936 as follows: vol 292/444884 (1781); vol 322/493862 (1784); vol 341/526029 (1787); vol 397/624842 (1794); vol 398/624070 (1794); vol 400/637816 (1795), where no.8 Lower Thames Street is described as 'two houses communicating'; vol 426/743287 (1803).

[90] LMA, P69/BOT3/B/001/MS00943/003.

[91] Horwood's map (1813 edition, Figure 173 below) shows the narrow passageway from Thames Street.

[92] LMA, CLC/L/VA/B/001/MS15201/005 (29 June 1677); CLC/L/VA/C/010/MS15212/001 (1 May 1666); CLC/L/VA/C/017/MS15220/001 (1 Sept 1657); CLC/L/VA/D/002/MS15333/006 (1694-5, Fines of Wardens).

[93] Vestry minutes, P69/BOT3/B/001/MS00943/002.

[94] LMA, DL/B/C/001/MS09538, fos. 101 onwards. The parish had many orange merchants, for example: Richard Hopkins, who in 1699 occupied one of the two houses facing Thames Street on the east side of the alley to Botolph Wharf (draft sublease, Ashton papers, TNA, C 110/146, box 2). This must reflect the trade of the wharf.

[95] TNA, SP 94/229, fos. 244–7, 250–4, 259. Friends in London listed Minshull amongst those at risk of internment, but he was not one of those who petitioned later to be released. These included Peter Minshull and Fitton Minshull, who may have been relatives. See also TNA, C 10/265/54 (1703).

[96] TNA, HCA 26/3/133. See Heywood 2004, 145–73.

[97] TNA, HCA 26/3/42 (22 October 1695); HCA 26/17/38, 109, 115 (23 June, 31 August, 1 September 1702). See also Jones 1972, 342.

[98] TNA, T 11/14, 27 December 1698.

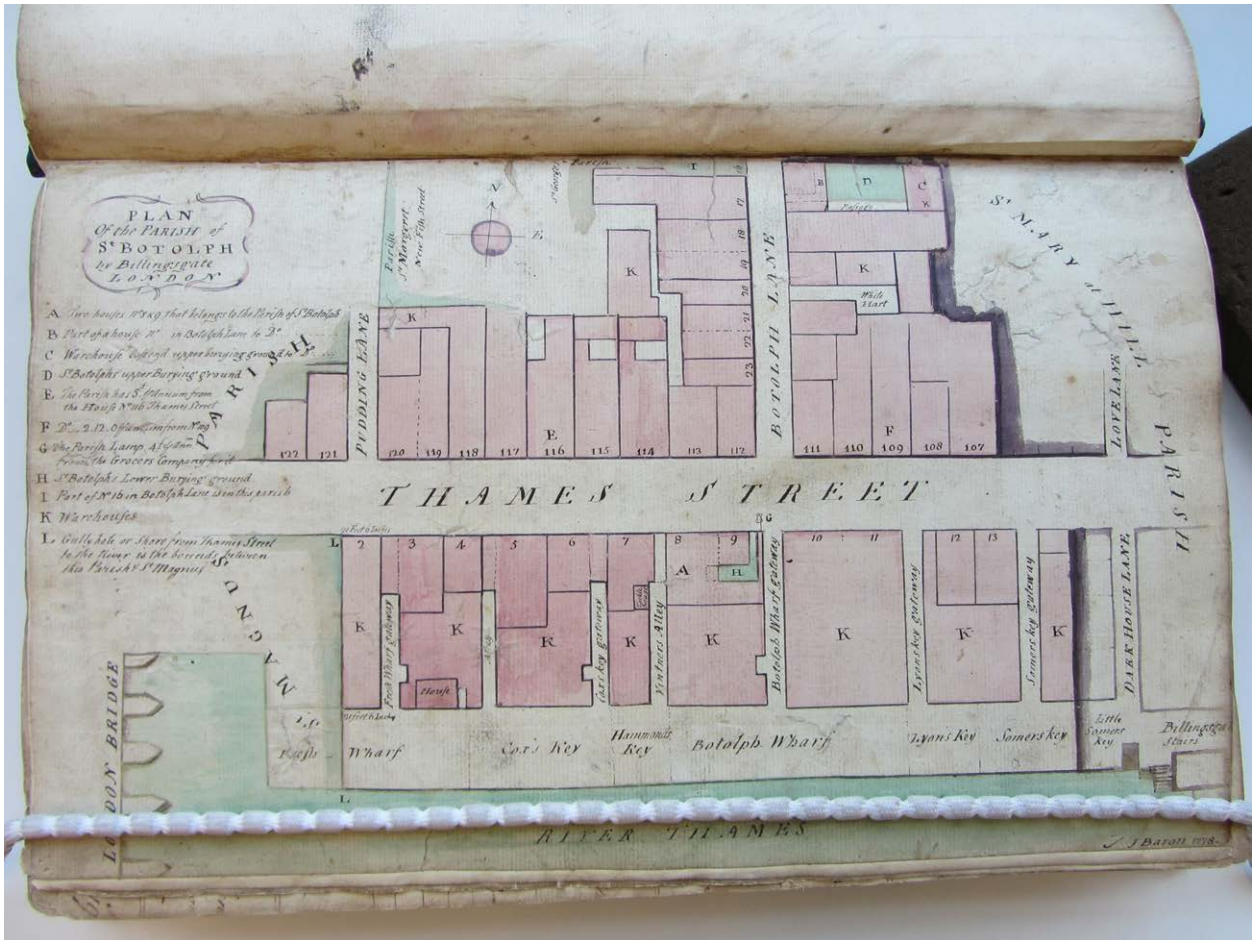


Figure 62 Plan of the parish of St Botolph Billingsgate, 1778 (LMA, P69/BOT3/B/001/MS00943/003) (Stephen Freeth)

province.[99] He was also a shareholder of the West [New] Jersey Society, a land development company which purchased tracts of land from the Proprietors. He attended the General Courts in 1692, 1693 and 1694, and was elected a member of the managing committee from 1694 to 1698, as is clear from the Society's surviving records.[100] These include the beautiful brass seal matrix of the Province of West Jersey (Figure 63). It is not clear how this came to be amongst the Society's archives, but at this time the right of government of West Jersey, as opposed to land development, was certainly a source of great dispute.[101]

Francis Minshull left five children when he died, four of them minors. As a result, although he also left a widow, Elizabeth, the City authorities inventoried his estate after his death in order to make formal provision for the children through the Court of Orphans.[102] This inventory (transcribed in Chapter 10 below) gives details both of his house upon the medieval undercroft and of his business dealings. The house appears to have comprised three storeys besides the cellar, together with an outside yard. The ground floor comprised a dining room, a 'little parlour' and a kitchen. The first floor contained the 'Widow's Room' (presumably Elizabeth Minshull's) and a room above the kitchen, both used as bedrooms, and the second floor comprised three garrets, also used as bedrooms. The dining room's furniture included five tables, two mirrors, 12 Turkey-work chairs, a Turkey-work carpet, a picture above the fireplace and tapestry hangings. The inventory later mentions 276oz 15dwt of plate and two watches, besides some old gold and other silver. Much of this may also have been in the dining room. The little parlour contained a desk, 14 'Spanish skins' and two 'buckskins', which may indicate that it was used for business and for trade stock. The cellar (the medieval undercroft) contained three 'chests of Florence' (chests for glass containers of olive oil from Florence) and half a hogshead of wine. In the yard was a lead cistern,

[99] *Cal Stat Pap Colonial, America and W Indies, 1699 and Addenda 1621–98*, 595; *1701*, 855.i; *1702* , 483.i.
[100] TNA, TS 12/14, 15, 23.
[101] Pomfret 1951; Lurie 1987.
[102] Court of Orphans inventory, 11 December 1704, LMA, CLA/002/02/01/2641; Common Serjeant's Book, LMA, CLA/002/01/005, f. 126. For a transcript of the inventory see Chapter 10.



Figure 63 Seal matrix of the Province of West Jersey (TNA, TS 12/99) (Stephen Freeth). Motif: a Native American seated beneath a tree laden with fruit, surrounded by symbols of Plenty. Inscription above: REDDE CAESARI QUAE CAESARIS (Render unto Caesar the things which are Caesar's). Legend: SIGILLUM PROUINCIAE CAESARIAE OCCIDENTALIS IN AMERICA 1687 (Seal of the Province of West Caesaria [Jersey] in America 1687). Brass, oval. 90 mm x 75 mm. Attached to the reverse is a large circular projection or ring of brass filled with wood. This bears hammer marks

washing tubs, a bottle rack and ten dozen glass bottles (presumably stock in trade). This yard was surely near the kitchen.

There was also a shop, treated by the appraisers as if it was another room after the cellar, so probably the shop on Thames Street built in or soon after 1678. Its contents included a cask of lemon juice, two large vats, three hogsheads, five empty casks, and what may have been materials for further casks or barrels ('heads' [end pieces], nails and hair), along with 96 'Genoa chests', 70 lbs of beeswax and 1,000 fans. Other goods 'sold since the intestate's decease' included oranges and lemons (£454 7s 8d), a hogshead of tobacco (£24 15s), wine (£109 17s) and hair (£7 17s). Other effects included Minshull's leases from the parish; a lease of lands in Sussex; an 'adventure of lead'; and part-shares in two galleys, the *Queen* and the *London*, and a pink called the *Betty*.[103] An insurance claim for £187 10s was pending for the *De Grave*, 'being lost'. Lists of debtors and creditors indicate his many business contacts and trading interests. The whole inventory amounted to over £2,320 net of debts owed. The house is further explored when the archaeological remains of it (buildings D:Building 10 and 11) are described, below.

Elizabeth Minshull later moved to the parish of St Dionis Backchurch in Fenchurch Street. In her will proved in 1728 she asked to be buried in St Dionis next to her husband and other family members. She left money to the poor of St Dionis and of St Botolph Billingsgate, and her houses in Thames Street held under several leases from St Botolph's parish to her son Francis junior. These were now in the occupation of Henry Woodcock (apparently her son-in-law) and John Holden. She also left Francis junior her 99-year Exchequer annuity of £60 pa commencing in 1706.[104] Elizabeth's daughter Margaret Minshull, spinster of St Botolph Billingsgate, travelled to Bath and then Bristol for her health and died there in December 1732. Her bequests included £5 to the poor of St Botolph Billingsgate, over £1400 in India bonds and annuities, and silver engraved with family heraldry (Slany and Minshull families). Her will was proved by her brother Francis junior, now described as of St Botolph Billingsgate mariner.[105] He died in 1776. He was now a merchant of East Greenwich (presumably the town in Rhode Island), and left his Exchequer annuity and his lands in 'West [New] Jersey, Pennsylvania and elsewhere in America' to his great-nephew Francis Minshull, a Captain in the Life Guards.[106]

No. 8 Thames Street was let from Lady Day 1756 for 31 years at £31 10s pa to Alexander Brander. No. 9 was let on a repairing lease for 7, 14 or 21 years from Michaelmas 1755 at £16 pa to Thomas Bradley. At Michaelmas 1776 no. 9 was re-let on a repairing lease for 10½ years, again at £16 pa to Alexander Brander. From Lady Day 1787 both properties were re-let to Alexander Brander for 21 years at a total rent of £80 pa. Brander now sublet no. 8 to Theophilus Hearsey and John Mendham, orange merchants. They seem to have lived there, perhaps in Minshull's former house while using the street frontage as a shop, as is shown by fire insurance policies. They also had warehouses on Fresh Wharf, and two other houses, nos. 18 and 19 Botolph Lane.[107] The two burial

[103] 'A small sailing vessel, usually having a narrow stern; *specifically (a)* a flat-bottomed boat with bulging sides, used for coasting and fishing; *(b)* a small warship in which the stern broadens out at the level of the upper deck to accommodate quarter guns, used esp. in the Danish navy' (*OED*).

[104] TNA, PROB 11/626, fos. 21v–23, dated 19 May 1724, proved 26 November 1728. The date of the will, exactly 20 years after the parish had re-let the three sites to her for 20 years, shows that the leases had been renewed. These later leases are untraced.

[105] TNA, PROB 11/656, fos. 134–5, dated 18 February 1730, proved 26 January 1733.

[106] TNA, PROB 11/1023, fos. 16v–17v, dated 17 July 1772, proved 16 August 1776. See also Chancery Pleadings, TNA, C 11/825/23 (dated 1745) and C 11/831/15 (dated 1750) where he is described as 'Captain Francis Minshull', one of the Committee of the West New Jersey Society or New Jersey Society.

[107] Sun Fire policy registers, LMA, CLC/B/192/F/001/MS11936 as follows: vol 397/624842 (1794); vol 398/624070 (1794); vol 400/637816

vaults were presumably closed in 1853 and subsequently cleared after legislation prohibited further burials in the City churchyards.

Tenement 15, apart from the church site, from 1666 to 1780

There is a great deal of information about the layout of Botolph Wharf from 1666 onwards.[108] Fortunately for us, if not for the City authorities, the City's tenant of Botolph Wharf was an ambitious and forceful naval contractor, Josiah Child, who had acquired the tenancy from his mother Elizabeth Soane in December 1659. Her husband Thomas Soane had been granted a 31-year lease of Botolph Wharf in 1645, and in 1653 Elizabethwas granted a 38-year extension.[109] In December 1659 she assigned the lease to Josiah Child, her 28-year-old son by a previous marriage.[110]

Child was a brilliant businessman. Before his death in 1699 he had amassed a huge fortune, a baronetcy and a country estate at Wanstead in Essex.[111] He took his claim for compensation after the Great Fire to the Fire Judges' Court. He argued that not only had he lost his investment through the destruction of the wharf and its warehouses, on which he and his family had spent £3,000 before the Fire; he had also lost the most profitable part of the wharf through the compulsory creation after the Fire of an open quay 40ft (12.2m) wide from the water's edge. Furthermore, immediately after the Fire 'in obedience to the King's Majesty's command' he had spent £1,000 on cranes and sheds to help normal trade to resume. When these failed to meet the new building regulations after the Fire, he had rebuilt them for a further £6,000.

His claim was successful. On 24 September 1672 he was awarded 60 years from the previous Midsummer, a new lease, and a reduction of his rent from £50 pa to £30 pa.[112] We may note in passing that he was also tenant of Hammond's Key immediately to the west (the southern end of Tenement 14, leased from the Vintners' Company), and the owner of Lyons Key immediately to the east (Tenement 16).

Child's tenancy comprised not just the quayside but the whole of Tenement 15 as far as Thames Street, excluding St Botolph's church. A central alley led from the street to the river, and on the east side of the alley were two houses facing Thames Street. One of Child's first acts after the Fire was to move the entrance to the central alley several feet to the west, slicing off the east end of the former church in the process (encroachment (ii) on the church site, above). This created a pronounced kink at the north end of the alley. He then rebuilt the two houses facing Thames Street with wider frontages but tapering towards the back, shifting their north-west corner at Thames Street some 5ft (1.5m) to the west across most of the former entrance to the alley. The wharf entrance was now 13ft 6in (4.1m) wide, wider than before the Fire, a combination of 10ft (3m) taken from the church plus 3ft 6in (1.1m) of the old entrance.[113]

These two houses had been sublet in 1645 by Thomas Soane for 30 years to Thomas Rodbard, for a fine of £50 and a rent of £20 pa. By the time of the Fire the sublease was held by Rodbard's widow Bridget, and the houses were occupied by her kinsman Thomas Rodbard who was paying her £40 pa. The high rent suggests that the two houses were used as one. On 4 July 1667, after the Fire, Child evicted the Rodbards in the Fire Court. They had lost 8ft (2.4m) from their frontage to street widening and were happy to leave. The Fire Judges' Decree describes the property as a 'capital house', i.e. a very large one, and there is no record of Child evicting another subtenant. The two houses had probably become one.[114] Child now rebuilt them as two houses again.

For various reasons Child refused to sign the new lease of Botolph Wharf or to pay any rent after the Fire Judges' decree of 1672, and in 1680 the City sued him in Chancery. The Chancery records (and Child's counterclaim) contain much further detail about Botolph Wharf.[115] For example, the sheds built by Child immediately after the Fire were all put up cheaply on one side of the wharf, and let out at considerable profit while he rebuilt the other side of the wharf in a more permanent fashion.[116]

(1795), where no. 8 Lower Thames Street is described as 'two houses communicating'; vol 426/743287 (1803).

[108] The term 'Botolph Wharf' was elastic. The adjacent wharves, Hammond's Key to the west (owned by the Vintners' Company) and Lyons Key to the east, were both too small to be worked independently. Other than in specific legal documents, 'Botolph Wharf' was often used collectively for all three. The two smaller wharves were also often described as at or part of Botolph Wharf.

[109] Schofield *et al.* 2018, 234, from the City Lands Grant Books. The leases are untraced, but their texts (without their plans) are in the City Lands Copies of Deeds, LMA, CLA/008/EM/02/02/009, fos. 130v–134 (Thomas Soane) and 134v–138v (Elizabeth Soane).

[110] Ibid., fo. 138v. Thomas Soane was Josiah Child's stepfather. The Fire Judges consistently refer to Soane as Child's 'father-in-law' and (correctly) to Elizabeth Soane as Child's mother, but the *OED* confirms that 'father-in-law' was a term for stepfather. This is new research since Schofield *et al.* 2018, 233 and 257.

[111] See *ODNB*. Child died in 1699. His tomb of about 1704 survives in the church of St Mary, Wanstead. The elaborate sculpture presents him in Roman costume with a wig: Cherry *et al.* 2005, 355–6, pl 22.

[112] Fire Judges' Decree, LMA, CLA/039/001/008, fo. 237 ff.

[113] TNA, C 24/1121/54, especially the depositions of John Hawes, Nathaniel Hawes and Henry Goodhew, September-November 1688.

[114] Fire Judges' Decree, LMA, CLA/039/01/001, pp339ff, calendared in Jones 1966, i, 97. Jones missed the significance of the phrase 'capital house'. See also Schofield *et al.* 2018, 257, 271.

[115] TNA, C 7/73/60 (pleadings, Child v the City, January 1688); C 7/72/53 (further Answer by the City); C 24/1121/54 (witness depositions, The City v Child). The City won its case: Chancery Decree November 1688, TNA, C 78/1596 no.1.

[116] TNA, C 24/1121/54, deposition of Abraham Jaggard, 19 September

The Chancery records also reveal how Child and the City disagreed about the plan to be drawn on his new lease. This needed to take account of changes since the Fire (such as the widening of Thames Street), and of an ongoing dispute (his appropriation of the east end of the former church). In the end the City's lawyer produced a compromise. Some details on the plan were pre-Fire while others were post-Fire, a mixture of different features of different dates.[117]

Child's lease of Botolph Wharf still exists. It is dated 1 July 1680, although the Chancery records show that it was still unsigned in 1688. Attached to it is the compromise plan (Figure 64, Figure 65). Some details are pre-Fire: the destroyed church of St Botolph is shown in outline, even though the site had by now been encroached upon. Other details are post-Fire, such as the open wharf next to the Thames.118

What is less obvious is that the plan shows the church site and the wharf *after* the widening of Thames Street, not before. Road widening had taken 9ft (2.7m) off the northern edge of the church site soon after the Fire, as described in the previous section. It had also taken 8ft (2.4m) from the fronts of the wharf's two houses on Thames Street, which was why the Rodbards were willing to leave. None of this ground is shown on the plan. This is clear from later leases of the wharf. The plan shows the east wall of the church excluding the vestry as 51ft (15.5m) long. If this had been its length *before* road widening, the later leases would show it reduced by 9ft. Instead they continue to show it as 51ft long.[119]

The outside dimensions of the wharf on the plan are also misleading: 39ft (11.9m) along Thames Street from the church to the eastern boundary, and 206ft (62.8m) from that point south to the Thames. Both were copied from the pre-Fire lease of 1653. By 1680 neither was true. On both lease and counterpart of 1680 these dimensions are accompanied by the phrase 'little more or less'. These words, often mere common form, may here be significant, and acknowledge that these dimensions were out of date. The dimensions of the former church have no such words.

The plan also shows the two houses facing Thames Street as rebuilt by Child after the Fire, along with the kink in the alley. However the conjunction on the plan of church outline (pre-Fire) and rebuilt houses (post-Fire) has resulted in an impossibly narrow entrance to the wharf from Thames Street. This narrow entrance never existed in real life.[120] The City authorities would never have allowed such a public nuisance. The pre-Fire entrance to the wharf was straight and wide, as on Leake's plan of the ruined City after the Fire,[121] and as confirmed by archaeology. The real wharf entrance after the Fire was wider than it had been before.

In a final twist, the Mayor's Court depositions contain a stray document prepared by arbitrators between the City and Child. It is dated 19 May 1686, in the middle of the Chancery case, and lists key points to be included in a new lease to Child of Botolph Wharf. These points look as if they were intended to remedy the weaknesses in the lease of 1680, and cast doubt on whether it was ever used.[122]

The 1680 plan also shows the other buildings on the wharf as rebuilt by Child after the Fire. This too was confirmed by archaeology. There were seven warehouses, four on the west side of the central alley and three on the east side, plus two tenements (dwelling houses) next the quayside (see Figures 64 and 65). The only detail which cannot be taken literally relates to the northernmost warehouse on the west side, where it fits awkwardly around the vestry. Neither church nor vestry existed by this date, and this warehouse was no doubt a rectangle like the others.

One tenement next the quayside was much larger than the other. The wharf suffered intermittently from spring tides, not to mention its everyday noise and bustle, so both tenements can only have been suitable for people involved with the wharf. Perhaps the larger one was for the wharfinger and the other one for an assistant.

Child also built a much more substantial gateway to the wharf. The entrance was now 15ft (4.6m) high, with gates which were often locked. The alley was no longer an open passage as it had been before the Fire. Above the entrance was now a 'great building' in brick, three storeys high. This extended upwards above the entrance for 30ft (9.1m), and back along the alley for '20ft (6.1m) or 25ft (7.6m)'. The entrance before the

1688.

[117] TNA, C 7/73/60, pleadings, Child v the City, January 1688. These make it clear that the plan on Child's lease was a deliberate mix of pre- and post-Fire detail. A box of legal papers among the City archives, 'City of London v Sir Josiah Child about Botolph Wharf, 1667–88', LMA, COL/CCS/SO/01/17/001, may hold further information but is unfit for production.

[118] LMA, Comptroller's Deeds Box 36, no.27 (lease and counterpart, the lease sealed by the City, and the counterpart sealed but not signed by Child). The plan was drawn by William Leybourn and checked by John Oliver (TNA, C 24/1121/54, deposition by Oliver, 19 October 1688).

[119] The exact measurements are as follows: 1720: 50ft 10in (15.5m) (LMA, Comptroller's Deeds Box 52, no.5); 1732: 51ft 8in (15.7m) (Box 28, no.22); 1793: the same (Box 153, no.9). The vestry site was purchased by Child with the City's agreement and incorporated into the Wharf.

[120] This is a new interpretation of the 1680 plan since Schofield *et al.* 2018, 238. The plan is also illustrated and discussed in Gerhold 2016, 142.

[121] BL, Add. MS 5415.1.E, reproduced in Barber 2012, 45.

[122] LMA, CLA/024/06/041.

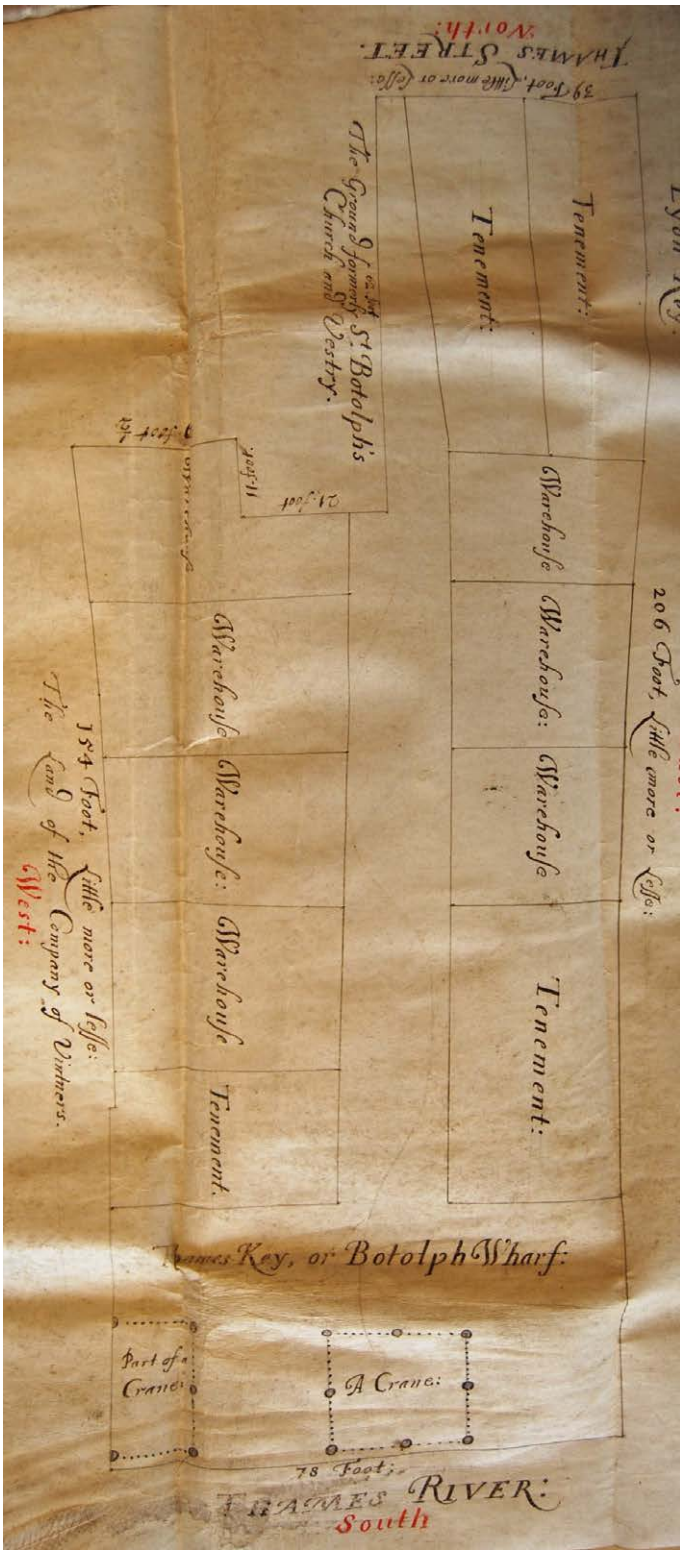


Figure 64 Plan of Botolph Wharf, 1680, including some elements copied from an earlier plan of 1653 (LMA, Comptroller's Deeds, Box 36 no.27; Stephen Freeth)

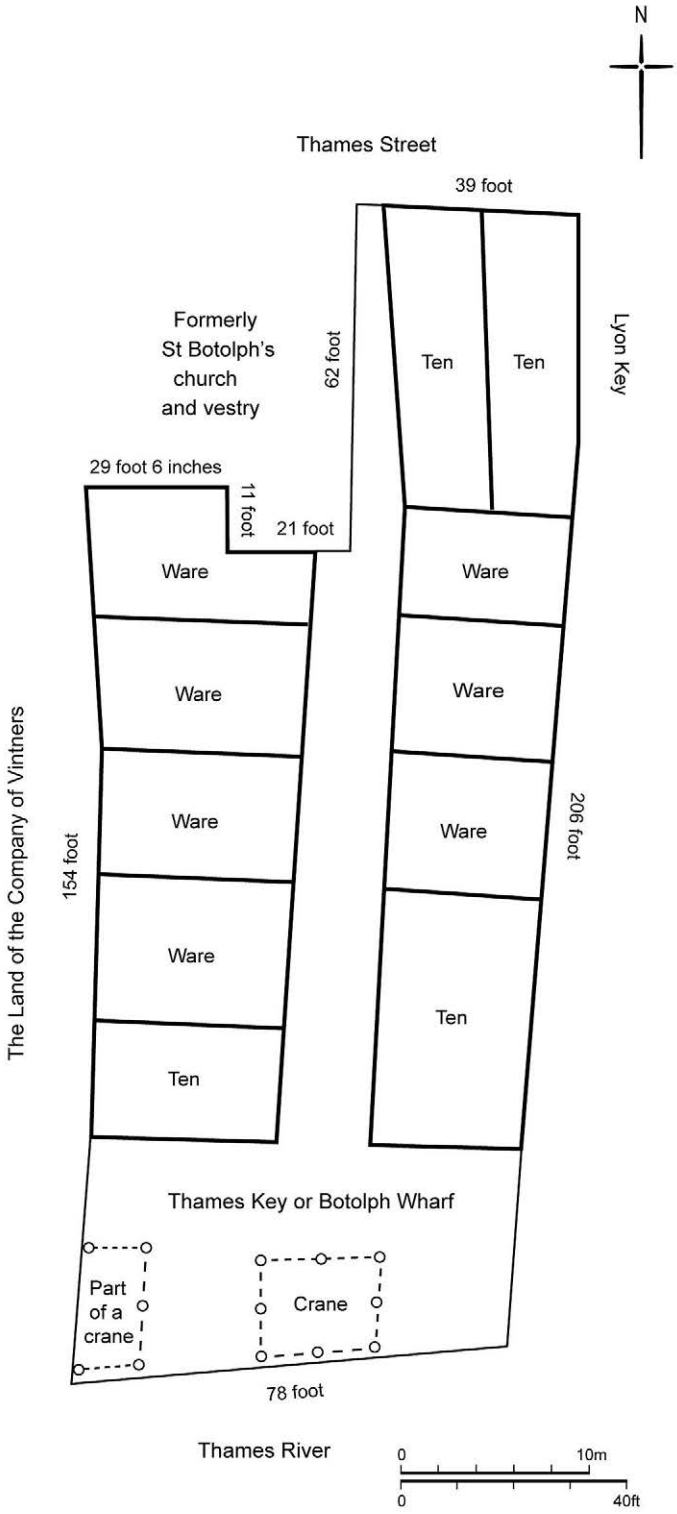


Figure 65 The 1680 plan of Botolph Wharf redrawn (Sue Cawood). Ten=Tenement; Ware=Warehouse

Fire had merely had a room over it extending back 8ft (2.4m).[123] None of this is shown on the 1680 plan.

For Josiah Child, Botolph Wharf was a passive investment once the capital expenditure had been completed. He was involved in Hammond's Key and Lyons Key as well, and now sublet all three together.[124] This made him a considerable profit on his rents of £30 pa to the City for Botolph Wharf and £13 6s 8d pa to the Vintners' Company for Hammond's Key. (He owned the freehold of Lyons Key.) The subtenant about whom most is known is Joseph Ashton, wharfinger. Ashton was a vestryman of St Botolph Billingsgate from December 1687, and in August 1688 was reimbursed for his expenses over a child found on the wharf. In December 1689 he was chosen as Scavenger, and in July 1691 he paid £15 in lieu of all other parish offices.[125]

Much is known about Ashton's business at Botolph Wharf. His descendants sued each other in Chancery in the late 1730s and many of the contents of his desk are now amongst the Chancery Masters' Exhibits at TNA.[126] Ashton and his business partners worked on the wharves personally and made a fortune in the process. They may have lived in the houses facing the riverside. In the early 1690s they were already among the wealthiest wharfingers.[127] By 1712 Ashton had enough capital to take a series of one-year leases of Covent Garden Market at £750 pa from the Duchess of Bedford (a member of the Child family). These continued until at least 1718, and he is described as of St Botolph Billingsgate, 'gentleman'.[128] He was a powerful character, arousing strong opinions. 'To his opponents he was an unscrupulous, foul-mouthed drunken bully, all too ready to throw his antagonists into the Thames if they crossed his path. To others he was an extraordinary man of business, and a very notable overseer of workmen.'[129] In his latter years he was on bad terms with his wife.[130]

The Ashton papers reveal a succession of subleases by the Child family. On 1 December 1685 Josiah Child sublet to Joseph Ashton, John Peacock and Samuel Warburton for two years at £1,200 pa, Lyons Key, Botolph Wharf and Hammond's Key, with the two double cranes, one single crane, wharfinger's house and warehouses, late in the occupation of Thomas Peacock of London, grocer, father of the aforesaid John Peacock.[131] Thomas Peacock may be the 'Mr Peacock' who was tenant of the cellars under St Botolph's church in 1659–62.[132] He may also have been the subtenant of the three quays before the Fire.

John Peacock died in 1691.[133] By 1695 Ashton and Warburton were tenants at will of the three quays and took a further four-year sublease at £1,600 pa which expired in 1699.[134] On 20 June 1699 Josiah Child junior, the second baronet, sublet the three quays to Ashton alone for 14 years at £1,600 pa. They are described as

> *Lyons Key and that that was Mr Polliday's house Botolph Wharf and Hammond's Key..and the double cranes and one single crane and all the warehouses cellars and other buildings belonging*
>
> *Also the dwelling houses (sic) of the said Joseph Ashton thereon*
>
> *Also the messuage on the said wharf known by the sign of the Hen and Chickens in the occupation of William Eaton* [amended to *John Clarke*], *victualler*
>
> *And one other messuage in Thames Street in the occupation of Richard Hopkins, orange merchant*
>
> *And one other messuage in Thames Street known by the sign of the Hare late in the occupation of Edward Leaver.*[135]

'Mr Polliday's house' (or former house) was probably on Lyons Key, though the phrasing is obscure. The 'Hen and Chickens' was on Hammond's Key.[136] The two houses in Thames Street were those on the east side of the alley to Botolph Wharf. The second one, the 'Hare'

[123] TNA, C 24/1121/54, deposition of John Hawes, October 1688. He says there were four storeys over the gateway, but he must be including the ground floor. Thirty feet is not enough for four storeys.
[124] I differ here from Roseveare 1996, 100, 102, 106–7, who gives Child a much more active role at the wharf.
[125] Vestry minutes, LMA, P69/BOT3/B/001/MS00943/002, pp62, 67, 76.
[126] TNA, C 110/48, 49, 140, 146 and 181. Sadly the 58 books of account for Botolph Wharf which were handed to Chancery officials in January 1740 appear not to have survived. See the schedule of documents in C 110/140.
[127] Spence 2000, 123, 163.
[128] Ashton papers, TNA, C 110/140; C 110/146, box 2.
[129] Roseveare 1996, 102.
[130] Lambeth Palace Library, Court of Arches, A 27; Aa 35/75; E 29 /38: case papers, 1728, Joseph Ashton of St Botolph Billingsgate v Hannah Horne alias Ashton, for restitution of conjugal rights. She will have been Ashton's second wife. His first wife Mary was buried in the family vault on 19 April 1723. See St John at Hackney burial register, LMA, P79/JN1/025.
[131] Original parchment lease, Ashton papers, TNA, C 110/146, box 2.
[132] Schofield *et al.* 2018, 237.
[133] Will of John Peacock of London, wharfinger, dated 9 December 1687, proved 4 August 1691, TNA, PROB 11/403, fos. 325, 325v. He left two thirds of his rights in his partnership with Ashton and Warburton to his mother Hannah Peacock, and one third to his brother Nathaniel Peacock of Amsterdam, merchant. They appear not to have continued the partnership.
[134] This sublease is recited in TNA, C 9/196/1, Ashton's pleading in Ashton v Fleet, 1708, mentioned further below.
[135] Draft texts of this sublease are in the Ashton papers, TNA, C 110/146, box 2. The houses mentioned here but not in the lease of 1685 will have been let separately until 1699. In 1688 Josiah Child senior was letting the two houses facing Thames Street for £150 pa (deposition of Nathaniel Hawes, November 1688, The City v Child, TNA, C 24/1121/54).
[136] Vintners' Company Court minutes, MS 15201/7, p469 (26 June 1733).

was next to the alley: in 1693 the parish officers of St Botolph Billingsgate complained of the encroachment by Josiah Child on the east end of their church, saying that Edward Lever (sic) 'a pitch and tar man' was the occupier of the house built there.[137] Richard Hopkins therefore occupied the other house, next to Lyons Key. Ashton's 'dwelling houses' were on Botolph Wharf proper, as is clear from other records discussed below. A Chancery witness in 1688 had described Botolph Wharf as containing just one wharfinger's house, not two, but houses could be converted to warehouses and back again, or subdivided.[138]

'Mr Polliday' is presumably the 'Robert Pallady late of Botolph Wharf, citizen and weaver deceased', mentioned in the will of his son Robert, d.1691.[139] This will also says that Joseph Ashton was the administrator of the goods of Robert Pallady senior. The wording suggests no great affection for Ashton; Pallady senior and Ashton may have been in partnership. On 26 June 1716 Elizabeth, Lady Child, widow of the second baronet, renewed the 1699 sublease to Joseph Ashton for sixteen years at the same rent of £1,600 pa, the quays and other property being described exactly as before. An accompanying deed explained that only £1,500 pa would be payable so long as Ashton did not join any wharfingers' cartel.[140]

There is also information about the upkeep of the wharf. In autumn 1691 the Court of Aldermen ordered Joseph Ashton to remove encroachments into the Thames at Botolph Wharf, otherwise the Bridge House artificers would demolish them.[141] In September 1695 Ashton and the other wharfingers between the Tower and the Bridge joined together in a secret copartnership or cartel for 21 years to share the business and direct the flow of trade to individual wharves. However by 1707 Ashton was sufficiently disillusioned to sue the others in Chancery. The documents in this lawsuit, Ashton v Fleet, and Fleet's counterclaim include lengthy statements by Ashton's supporters of the heavy costs of Botolph Wharf.[142] John Olley, citizen and carpenter had been employed by Josiah Child in the late 1680s to rebuild and repair both Botolph Wharf and Hammond's Key and their warehouses. Thomas Holt of Wanstead, gentleman, produced a cash book to show that between 1686 and 1689 Child had spent a total of £1,864 9s on 'Botolph Wharf', though some of this money may have been spent on Hammond's Key and Lyons Key 'for that the said wharf and keys..was generally called by the name of Botolph Wharf'. Richard Hazard, carpenter, stated that between 1687 and 1695 Child had spent a total of £2,104 6s 6d on the three wharves.[143]

Ashton too had carried out building works. He had erected a new building at the waterside for the Warehouse Keeper of the Prize Office, at its request. This brought in 8s per week. By so doing, he had prevented the Prize Office from relocating to Deptford. The upstairs of the same building had been let to Mr White, the Warehouse Keeper of the East India Company, at 2s 6d per week. Ashton had also sublet part of the gateway at Botolph Wharf to a fishmonger at £5 pa[144] 'Gateway' means the alley to the wharf.

Joseph Broad, Ashton's 'chief book-keeper and cashier', added that the Prize Office's new building was on Hammond's Key, and that the Prize Office used Botolph Wharf for 'gross and combustible goods'. This was very lucrative. The fees from the Prize Office to the cartel from 1695 until April 1707 had been £5,684 19s 4d, almost all of it earned by Botolph Wharf. In his opinion the warehouses at Botolph Wharf, Hammond's Key and Lyons Key were the best and most substantial between London Bridge and the Tower. Ashton's improvements had also included

> *an addition to the warehouses belonging to Botolph Wharf being a jetting out over the gateway at the said wharf, and from such jetting out..a bridge..to some other warehouses belonging to the said wharf called the Hare warehouses.. that made the said warehouses more convenient..and over the said jettings out did cause a warehouse to be built.*[145]

Once again 'gateway' means the alley down to the wharf. John Clarke of Botolph Wharf, citizen and distiller, added that in 1704 Botolph Wharf had collapsed through the 'weakness or badness of the timbers'. Ashton had seen to its repair.[146]

The Chancery documents also describe Ashton's domestic arrangements. According to Ashton, with perhaps a little exaggeration, he had had to go into the country in 1695 for his health, lending his dwelling house on Botolph Wharf to his partner Samuel Warburton. Warburton then leased the house from the wharfingers'

[137] Episcopal visitation 1693, LMA, DL/B/C/001/MS09538, fo. 101.
[138] Deposition of Nathaniel Hawes, November 1688, The City v Child, TNA, C 24/1121/54.
[139] TNA, PROB 11/407, fos. 53, 53v. Will dated 6 January 1690, proved 17 November 1691.
[140] Original sublease and accompanying deed, Ashton papers, TNA, C 110/140. The counterpart of the sublease is in C 110/181.
[141] Repertory 95, now LMA, COL/CA/01/01/099, fos. 344v, 346v, 347, 349v (24 September –6 October 1691).
[142] Pleadings: Ashton v Fleet, TNA, C 9/196/1; Fleet v Ashton, C 9/377/9. Witness depositions in 1711: TNA, C 24/1309 no.17 and 1317 no.1. For the cartel see Roseveare 1996.
[143] Witness depositions, 1711, TNA, C 24/1317 no.1, pp70, 81, 86.
[144] Ashton's Answer dated 24 May 1707, Fleet v Ashton, TNA, C 9/377/9. The Prize Office administered prizes captured in time of war. The capturing force would commonly be allotted a share of the value of such ships and their cargoes, following due process in the High Court of Admiralty. Commissioners appointed by the Court would then auction the ship and its contents.
[145] Witness depositions, 1711, TNA, C 24/1317 no.1, pp18, 22–5. The 'Hare warehouses' may have been behind the 'Hare', the house facing Thames Street on the east side of the alley.
[146] Ibid., 52. Clarke was presumably the proprietor in 1699 of the 'Hen and Chickens' on Hammond's Key.

cartel. When Ashton returned two years later Warburton refused to surrender the house and Ashton had to lodge elsewhere. Worse still, the cartel then converted the house into warehouses and made a great profit. Ashton now feared trouble from the Child family under his lease.[147] Joseph Broad in 1711 provides further details. Ashton and Warburton had both lived in the same house from 1687, Ashton downstairs and Warburton upstairs. After regaining the property, Ashton converted it into additional warehouse space. He also

> *did convert a little slip of building belonging to Botolph Wharf in the gateway into a stable which was just large enough for a pair of horses, and also in the said gateway made a coach house by running up a few slight deal boards.*[148]

Nathaniel Russell, a carpenter, gives the dimensions of these new structures. He had built for Ashton a

> *stable in Botolph Wharf gateway about 14 foot long and 6 ft wide, and altered a warehouse in the gateway 36 ft long and 6 ft wide and made a stable of one part of it and let the other part of it being about 10 ft long by 6 ft wide to a fishmonger at £5 a year rent.*
>
> *[He] also built a coach house in Botolph Wharf gateway of about 18 ft long by about 6 ft wide and a hay loft, which since April 1707 or thereabouts were taken down again and carried away.*[149]

The stable, coach house and hayloft were near the great medieval cellar or undercroft discovered during the excavation and discussed in detail in the *London's Waterfront* volume of 2018. This undercroft remained in active use, accessed from the central alley to the wharf. On 14 April 1692 the Lord Mayor had to intervene when Francis Minshull, tenant of the undercroft, complained that Ashton's stable was blocking his light and access and creating a fire risk. The stable must have been amended,to Minshull's satisfaction if it was still there in 1707.[150]

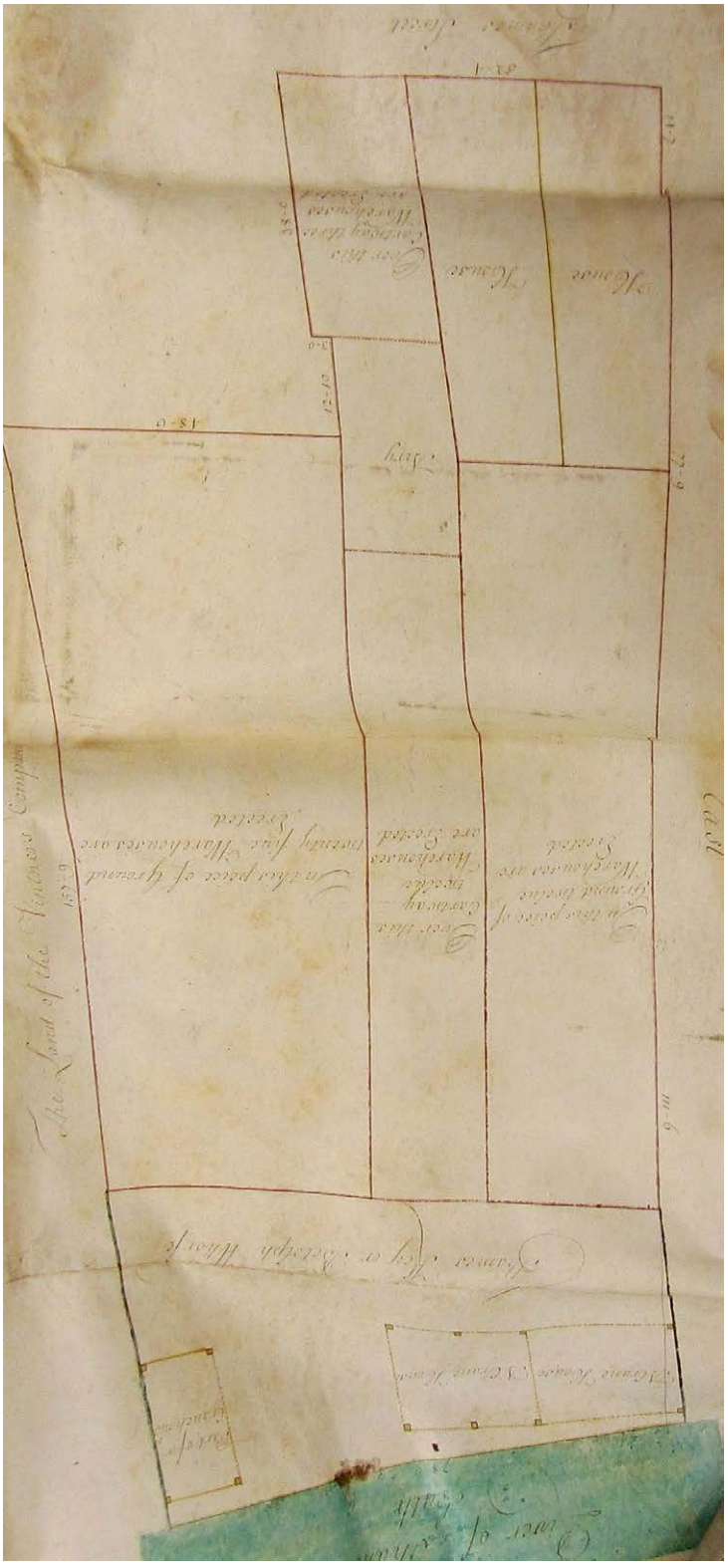


Figure 66 Plan of buildings on Botolph Wharf by Isaac Olley, 1720 (LMA, Comptroller's Deeds, Box 52 no.5; Stephen Freeth). The plan has been rotated so north is to the top

[147] Ashton's Answer dated 24 May 1707, Fleet v Ashton, TNA, C 9/377/9. Ashton's house on Botolph Wharf was perhaps the larger of the two tenements facing the waterside on the 1680 plan.

[148] Deposition of Joseph Broad, 1711, TNA, C 24/1317 no.1, pp19, 24.

[149] Deposition of Nathaniel Russell, 1711, TNA, C 24/1309 no.17, p10. Russell had also refurbished the Hen and Chickens, *'then an alehouse, wherein the defendant* [Ashton] *himself now lives'*. Ashton no longer needed his old house on Botolph Wharf.

[150] Ashton papers, TNA, C 110/49, box 1, bundle 9.

On 4 March 1720 the City granted a new lease of Botolph Wharf to Richard Child, Viscount Castlemaine.[151] This was for 12½ years at £30 pa and included an outline plan by Isaac Olley, the City's Clerk of Works (Figure 66; Figure 67). Apart from the two houses facing Thames Street, the 'cartway' (alley) down to the wharf and the cranes, Botolph Wharf now consisted entirely of warehouses, 52 of them, over the cartway as well as on each side of it. All these buildings will have been laid out by Josiah Child or by Ashton.

The west side of the alley, south of the former church, now bore 25 warehouses, while the east side, south of the two houses on Thames Street, bore a further twelve. (A warehouse at this date was a room or cellar, not a whole building.)[152] The 'great building' over the entrance to the wharf was now three warehouses, extending back 38ft (11.6m) to what seems to have been a light well, beyond which were a further twelve warehouses above the cartway (though this is hard to imagine). Presumably all of this had been rebuilt in brick to conform with the new regulations after the Fire. The plan does not show the building used by the Prize Office and East India Company because this was on Hammond's Key. Nor does it show the stables, coach house and hay loft built by Russell. Anything not cleared away since 1707 was presumably now concealed on the plan by the warehouses above the cartway.

Joseph Ashton died in 1728, a rich man.[153] He had done well out of Botolph Wharf, though problems continued; in the 1720s the Thames tides were washing away the foundations of the wharf, oozing into the cellars and spoiling the goods stored there.[154] He was succeeded at Botolph Wharf by his nephew Henry Ashton. Henry lived at Clapton in Hackney and was largely absent from the wharf, managing affairs through agents on site. He died in 1731. He left his lease of Botolph Wharf, due to expire at Michaelmas 1732 and which he intended 'very soon to renew for a long term with

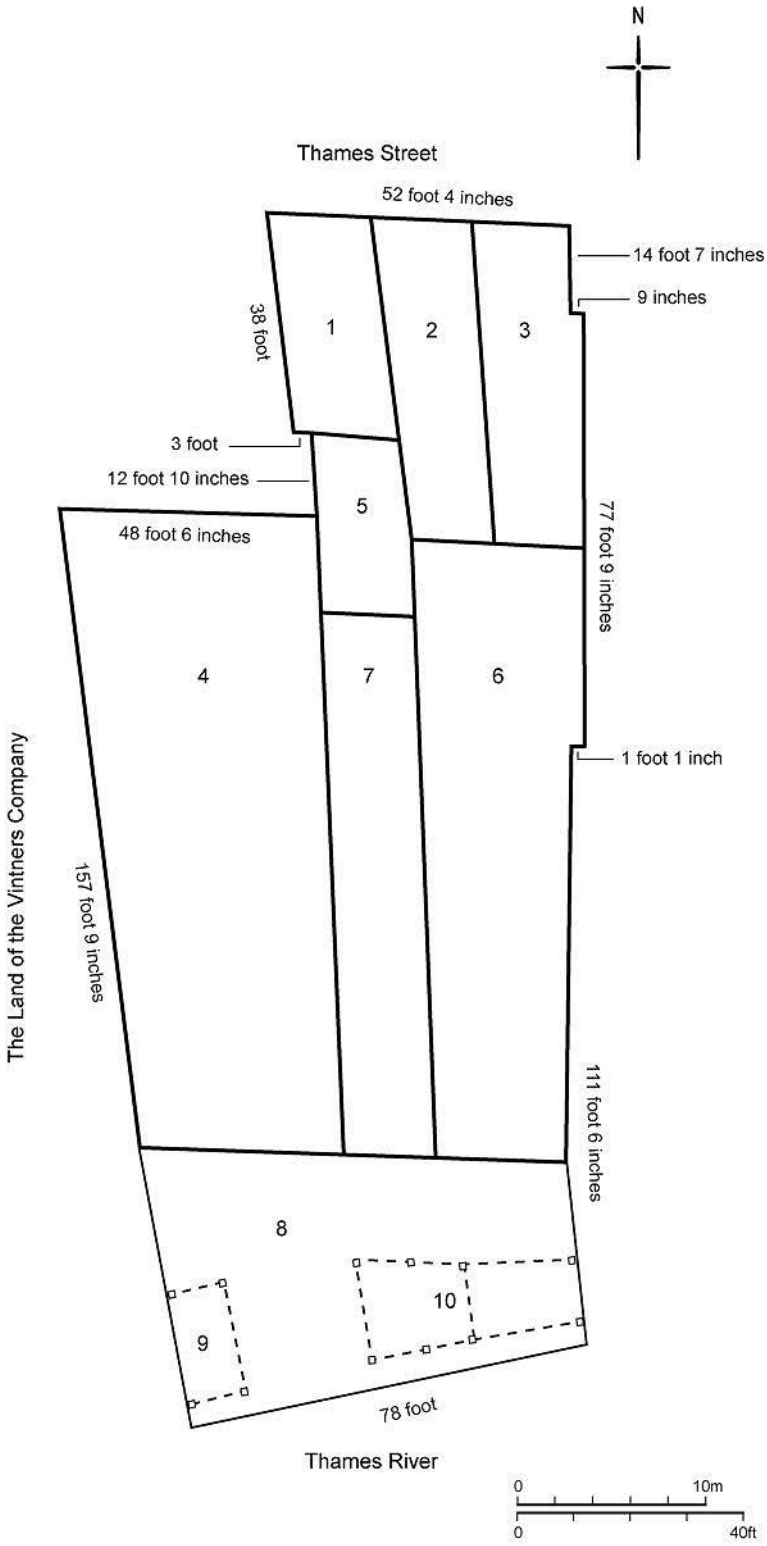


Figure 67 The 1720 Botolph wharf plan redrawn with parts numbered (Sue Cawood)
Key: 1 Cartway with three warehouses above; 2 House; 3 House; 4 Twenty-five warehouses; 5 'Airy' [area=open?]; 6 Twelve warehouses; 7 Cartway with twelve warehouses above it; 8 Thames Key or Botolph Wharf; 9 Part of a crane house (half on Hammond's Quay); 10 Two crane houses

[151] LMA, Comptroller's Deeds Box 52, no.5.
[152] Roseveare 1996, 139, note 42.
[153] Will and codicil dated 8 and 11 September 1727, proved 18 June 1728, TNA, PROB 11/622, fos. 275–6. He left £6,000 of South Sea stock and cash bequests of over £3,000. His coachman received £500. Botolph Wharf is not mentioned.
[154] Ashton papers, TNA, C 110/140, 'Instructions to draw Bill'.

Lord Castlemaine' to his son Robert.[155] His probate inventory includes two rooms and a kitchen at Botolph Wharf, near the waterside, with a bedstead, mattress, Delft shaving basin, eight-day clock and two writing desks. They sound as if they were for occasional use. One oddity was a 'leopard skin' valued at £2 10s at 'Mr Searle's house'. Perhaps this was too distinctive to leave lying about.[156]

The Ashton papers end with Henry's death and it is not known if the family continued at Botolph Wharf. But the Child family now ceased to be involved in either Botolph Wharf or Hammond's Key, having failed to agree terms for renewal with either the City or the Vintners' Company when their head leases expired. The problem was the poor state of the wharves. The Childs wanted a long building lease; the City and the Vintners (who followed the City's lead) insisted until the last moment on 21 years only. In March 1731 the City had advertised the new lease of Botolph Wharf in the *London Gazette*, the site being described as

> *Botolph Wharf, with several warehouses built on part thereof, and two messuages in Thames Street adjoining to the gateway leading to the said wharf.*[157]

However almost immediately, on 20 April, surveyors condemned the structures at 'Botolph Wharf',

> *the cellars being all spring tides flowed 1 ft* [0.3m] *deep with water which renders the cellars useless, and the walls in every part of the foundation very ruinous, and all the boarding and joints and girders in all the floors of the warehouses very much decayed.*[158]

Repairs would cost as much as rebuilding and be less useful. The wharf itself, 'foot wharf', cranes and crane houses were also ruinous, needing at least £2,000. Hammond's Key was no better. In 1729 Henry Ashton had been sufficiently worried by its disrepair to ask the Vintners to discharge him from his sublease.[159]

There are no details of the Childs' failed negotiations with the City, but their unsuccessful dealings with the Vintners about Hammond's Key from December 1729 onwards suggest what happened. In essence, they never offered enough. They wanted 61 years, but the Vintners (following the City's lead) insisted on 21 years. On 16 June 1732 a builder named George Greaves also asked for 61 years but made a better offer, which included rebuilding Hammond's Key in brick to the same standard as he had just agreed with the City for Botolph Wharf. (The City had now agreed to a long lease.) Sir John Thompson then trumped this offer. He was granted a 61-year lease in return for a fine of £1,200, a rent of £25 pa and a promise to rebuild.[160]

By May 1732 the City had accepted the need for a long lease, and readvertised Botolph Wharf 'either for 21 years or for building'.[161] The new lease was to George Greaves, citizen and mason (the unsuccessful bidder for Hammond's Key). It was dated 1 December 1732, and was for 61 years at a fine of £5,000 and a rent of £100 pa.[162] Botolph Wharf was described as ground 'whereon several warehouses stood', suggesting that it had been cleared, and the accompanying plan was a simple outline with no buildings. There was also a 'platform projecting beyond the stone wharf', i.e. a jetty. Greaves undertook to spend £8,000 on new 'substantial brick buildings'.

Greaves was a serial redeveloper; some of his houses survive in Britton Street in Clerkenwell (Figure 68).[163] The City Lands Grant Book for 1729–32 contains a succession of leases to him, not just this one. The rest are all of sites in Moorfields, and he is described as 'of Clerkenwell, carpenter'.[164]

Greaves fulfilled his promise to rebuild Botolph Wharf in brick: in February 1733 Sir John Eyles agreed with the Child family to build on Lyons Key 'a substantial brick warehouse as good as those lately built at Botolph Wharf'.[165] Greaves' new brick buildings are probably those shown on the City's next lease of Botolph Wharf, on 22 May 1793. This was to George Sharp, citizen and girdler for 21 years at a fine of £5,000 and a rent of £165 pa, plus £1,000 on repairs.[166] The property was 'now in lease to George Greaves and in the occupation of Messrs Curlings & Co'. The need for repairs suggests that the buildings were not new.

The plan on this lease, by George Dance, shows the site in detail (Figure 69). Brick walls both internal and external are shown in red; uncoloured divisions were presumably wooden partitions. There are cranes everywhere, on the water's edge, on what appear to be sheds on the quayside, and on the warehouse buildings,

[155] Will dated 23 February 1731, proved 15 September 1731, TNA, PROB 11/646, fos. 216v–219v.
[156] Ashton papers, TNA, C 110/146, box 1.
[157] *London Gazette*, 16–20 March 1731; 27–30 March 1731.
[158] Ashton papers, TNA, C 110/181.
[159] Vintners' Company Court minutes, 25 September 1729, MS 15201/7, p273.
[160] Vintners' Court minutes, MS 15201/7, 11 Dec 1729; 17 April 1730; 4, 15, 26 March 1731; 2, 8, 30 April 1731; 6 May 1731; 9, 16, 23 June 1732.
[161] *London Gazette*, 27–30 May 1732.
[162] LMA, Comptroller's Deeds Box 28, no.22.
[163] Nos 31–32 are survivors of a range of five houses completed by July 1723; no.48 a survivor of a range of eight built in 1720; no.54 built in 1722, the least altered ('Britton Street', in SoL 46 (http://www.british-history.ac.uk/survey-london/vol46/164–81) [accessed 5 February 2023].
[164] LMA, CLA/008/EM/02/01/015, fos. 2–3, 5–7, 9, 24–5, 102.
[165] East India Co, Register of Charters and Deeds *c*. 1812, BL, IOR, L/L/2/1, p695.
[166] LMA, Comptroller's Deeds Box 153, no.9.



Figure 68 Right to left: 54–56 Britton Street, Clerkenwell, in 2004 (Helen Jones, Survey of London; SoL 46, Figure 218). No 54, built in 1722 by Greaves, has had its second-floor front rebuilt but is otherwise little altered. No 55 was originally built by Greaves but rebuilt in the early 19th century. No 56 is also probably of the 1720s, and may have been built by Greaves; the first-floor windows were later lowered and given Neoclassical iron balustrades

both along their south wall and in the light well of the alley to the wharf. The frontage on Thames Street east of the gateway, formerly two dwelling houses, appears now to be warehouses. This is confirmed by the 1778 plan of St Botolph's parish in the front of the vestry minute book (Figure 62). Horwood's map (1813 edition) shows only hatching east of the alley, again suggesting commercial use. Though no internal stairs are shown, Greaves's buildings must have been of several storeys. Their street frontage may have looked like that of the warehouse at Topping's Wharf across the river in Tooley Street, drawn by Buckler in 1827 (Figure 181 below); perhaps the two rooms at the north-east corner were shops or offices. They both had doorways to the yard behind.

The uses of Botolph Wharf

Botolph Wharf was a 'great wharf of trade'.[167] Details of goods handled there can be traced in various sources. In July 1687 John Peacock and his associated wharfingers at Botolph Wharf (presumably Joseph Ashton and Samuel Warburton) were charged £110 14s for 222 chintzes damaged in a hoy.[168] In summer 1691 soldiers embarked at Botolph Wharf for New York in the *Canterbury*.[169] In March 1696 Joseph Ashton and Samuel Warburton were sued in the Mayor's Court by Abraham de Peyster to recover two barrels of grain oil and sixty gallons of whale oil.[170]

In 1710 Joseph Ashton was providing lighterage and wharfage to unload the *Granville* from Barbados at Woolwich (13 hogsheads of sugar); the *George* from Maryland at Limehouse (313 hogsheads of tobacco); the *Baltimore* from Maryland at Deptford (706 hogsheads of tobacco and a chest of skins); and a galley, the *Harbert* from Leghorn (Livorno, Italy), which may have come right up to the wharf as no location is given (40 chests, and 4 pipes of wine).[171] In November 1719 Ashton was sued in the King's Bench over eight bunches of flax,

[167] Fire Judges' Decree, Josiah Child v Vintners' Company, 28 March 1671, LMA, CLA/039/01/007, fo. 146v.

[168] East India Co, Accountant General's records, Ledger H, 1682–94, BL, IOR, L/AG/1/1/9, fo. 169.

[169] Ashton papers, TNA, C 110/49, box 1, bundle 9.

[170] Mayor's Court records, LMA, CLA/024/10/098.

[171] Ashton papers, TNA, C 110/49, box 1, bundle 9.

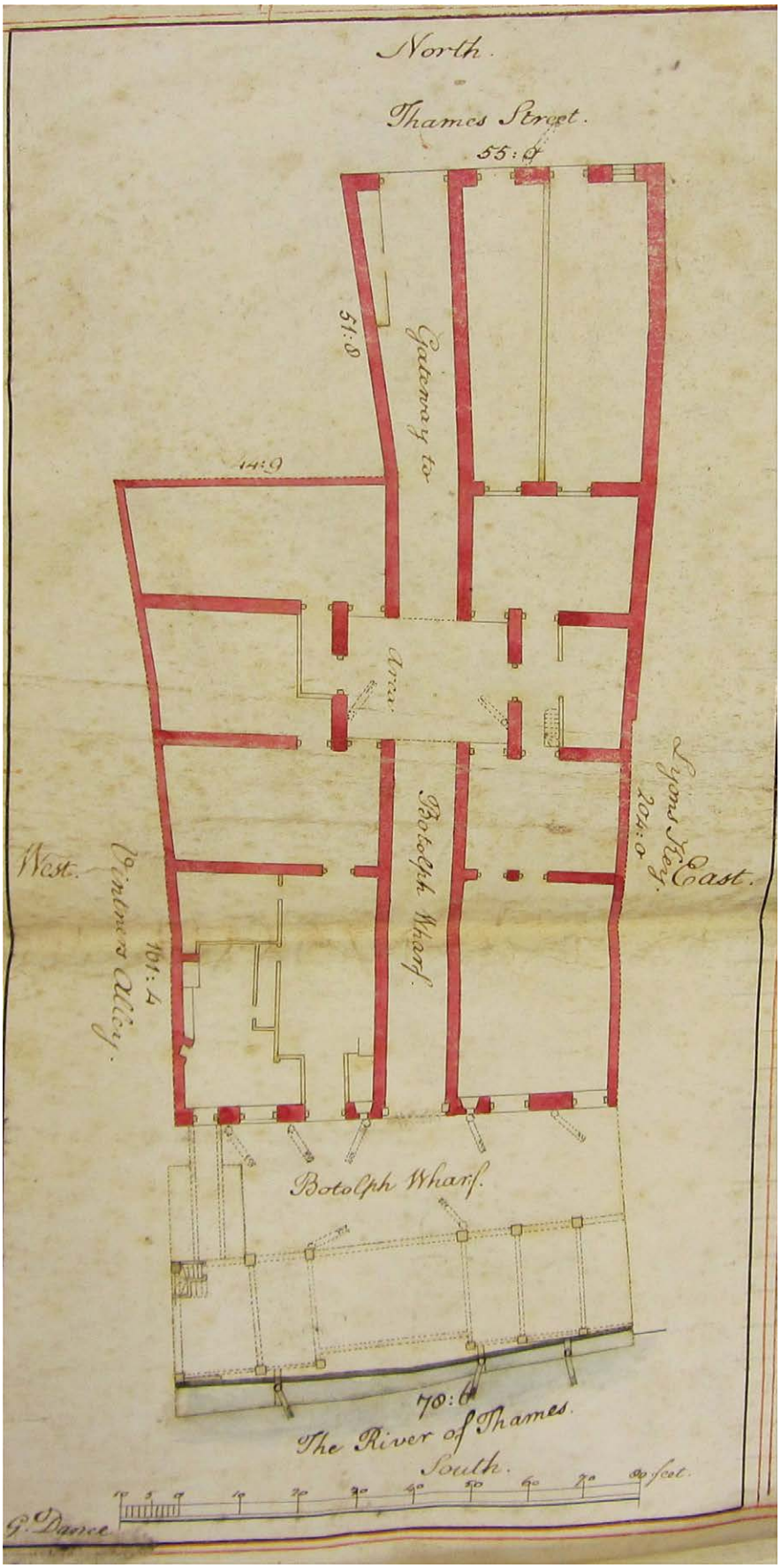


Figure 69 Plan of buildings on Botolph Wharf by George Dance, 1793 (LMA, Comptroller's Deeds Box 153 no.9) (Stephen Freeth)

each weighing over a hundredweight. These had gone missing between ship and wharf from the *Success*, which had arrived from St Petersburg.[172] These are just examples.

For several months in 1716 and 1717 the Ashton papers include five pocket notebooks kept by Joseph Ashton's supervisors on Botolph Wharf, James Bickham and Samuel Bullman. They record goods landed ('cleared') from ships and goods 'shipped' out, stating whether by lighter, hoy or wherry, and giving the names of those involved, the names of the ships, the warehouse numbers ('no.45', 'no.87', 'cellar no.8' etc) and details of the goods and their containers (such as hogsheads, casks, pipes, chests, hampers or bales). Identifying marks on goods are sometimes carefully copied. There are also notes showing which lightermen were employed aboard which ships. Countries of origin or destinations of goods are occasionally given.[173] The goods shipped or cleared were often sugar or turpentine, but also included wine, ginger, pitch, tobacco, wood, logwood, fruit, cheese and oil, and occasionally other items such as carpets, blankets, guns, ink and stationery. The East India Company both shipped and landed chests of 'treasure', and also shipped varied goods including cloth, brocade silk and soldiers' uniforms. There are occasional notes of accidents and repairs, such as a pair of slings lost in the river in January 1717, and 'a pair of new oars for the *May Day* lighter', 2 May 1717. A note of a debt in January 1717 is signed by John Phillips of the 'Outward Compting House'.[174]

In 1728 Joseph Ashton was succeeded as subtenant at Botolph Wharf by his nephew Henry Ashton. The letters and accounts of Henry's agent at the wharfside, James Davenport, clearly an educated man, provide lively details of how the wharf was used, and of competition from other wharves. For example on 16 August 1729 (see Figure 70) Davenport wrote to Ashton:

> *[I] transmit you a short account of what has happened since your departure from London. We now have five Indiamen at work, one of which is almost out* [unloaded]*, and the other four about one third out, and there are expected every day eight sail more from those parts of the world. We have also delivered four sail of Mr Pole's ships to satisfaction, one large rice ship, three tobacco ships, one large sugar ship of Mr Hudson's and a wine ship or two.*
>
> *There's a ship from Zant* [perhaps Zante, the island of Zakynthos off the west coast of mainland Greece] *belonging to Mr Laport now performing the quarantine. I did myself the honour to wait on him at her arrival. He received me with some coolness and told me he would not resolve on anything till the ship comes up, but withal [ie in addition] that he had other friends to oblige besides those at Botolph Wharf.*

And on 26 April 1731:

> *About 900 or 1000 butts of wine are already engaged to be discharged at Botolph Wharf, which will be discharged with all speed, with about 700 hogsheads sugar and 300 hogsheads tobacco.*[175]

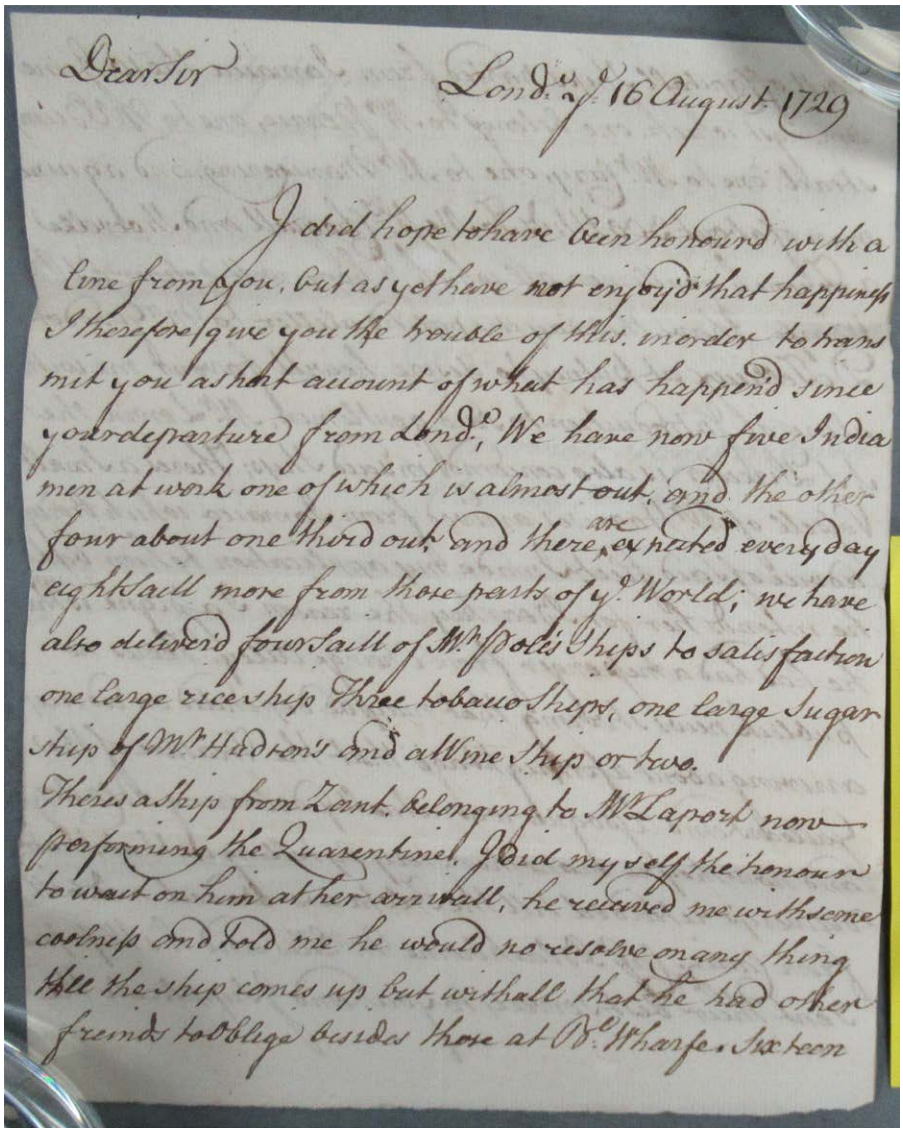
Other goods landed or warehoused at the wharf included pepper, tea, coffee, cloth, silk, raw silk, wine, arrack, quicksilver and china. More unusual goods included Nux Vomica (whether as a medicine or as rat poison is unclear), and 'elephants' teeth', i.e. ivory. Goods could be imported, exported or re-exported. Warehouse room was charged on a weekly basis, the rate depending on the cargo.

The Prize Office had a base at Botolph Wharf (actually on Hammond's Key), and its advertisements of prize auctions in the *London Gazette* provide further hints of the business there. In 1712 56 pieces of 'excellent French brandy', part of the cargo of the galley *Mariana*, were advertised for auction on 21 June at Lloyd's Coffee House. The brandy could be seen and tasted at Botolph Wharf 'in a warehouse up one pair of stairs fronting the Thames'. On 26 June 1712 arrack from the East Indies, 'the remaining part of the cargo of the *Oley* frigate' was to be sold at Garraway's Coffee House. It could be viewed at Botolph Wharf before the sale. On 13 August 1740 the cargo of the *St Joseph* was to be sold at the Custom House, including cocoa nuts, Spanish tobacco, lignum vitae, cow hides and a surgeon's chest. These too could be viewed at Botolph Wharf before the sale.[176]

The East India Company also had a base at Botolph Wharf, no doubt encouraged by Josiah Child who was either Deputy Governor or Governor from 1681 to 1690.[177] Its advertisements are also informative. In 1749 the Company announced in the *London General Advertiser* a sale of 'old metal ship equipment' at their warehouse on Botolph Wharf. The same newspaper around 1750 reported thefts and auction sales at the wharf of goods from across the globe, including tobacco and wine.[178]

In the late 1690s Joseph Ashton provided accommodation for the Company's Warehouse Keeper, Mr White.[179] In the early 1720s the Company was making regular payments to Ashton for wharfage and warehouse room (for example £500 in January 1722 and £326 9s in January

[172] LMA, 'Large [i.e. large format] suits', COL/CCS/SO/01/04/015.
[173] Ashton papers, TNA, C 110/48, box 1, bundle 2 (four notebooks); C 110/49, box 1, bundle 9 (one notebook).
[174] These references are all from C 110/48, box 1, bundle 2.
[175] Ashton papers, TNA, C 110/49, box 1, bundle 9.
[176] *London Gazette*, 17–20 May, 17–19 June 1712; 3–7 June 1740.
[177] See *ODNB*.
[178] Phillips 1951, 202.
[179] Ashton's Answer, Fleet v Ashton, TNA, C 9/377/9.



Dear Sir

Lond.n y.e 16 August 1729

I did hope to have been honourd with a line from you, but as yet have not enjoyd that happiness I therefore give you the trouble of this, in order to trans mit you a short account of what has happend since your departure from Lond.n, We have now five India men at work one of which is almost out, and the other four about one third out, and there are expected every day eight sail more from those parts of y.e World; we have also delivered four sail of M.r Dodds Ships to satisfaction one large rice ships Three tobacco Ships, one large Sugar ship of M.r Hadsons and all me Ship or two.

There's a Ship from Zant belonging to M.r Laporte now performing the Quarentine. I did my self the honour to wait on him at her arrivall, he received me with some coolness and told me he would no resolve on any thing till the ship comes up but withall that he had other freinds to oblige besides those at D.r Wharfe. Sixteen

Figure 70 Page from a letter from James Davenport to Henry Ashton, 16 August 1729 (TNA, C 110/49, box 1, bundle 9) (Stephen Freeth)

1723).[180] However the arrangement was informal; the Company did not own the wharf or the warehouses, and there was no lease. As early as 31 July 1723 the Directors were fussing about the expense of Botolph Wharf. In 1740 they debated whether to purchase or lease the wharf and decided against.[181] The names of some East India Company personnel at Botolph Wharf are known. Francis White ('Mr White') was Warehouse Keeper in the 1690s and was still there in 1722, when he was sharing the work with John Shore. By January 1741 Shore was in charge and William Younghusband resigned as his Assistant upon taking up new duties at Botolph Wharf as an Elder Porter in the place of Mr Webb, deceased. The Directors had agreed to his appointment on 29 August 1740. At the same time they retired John Cave as an Elder Porter because he was too old. On 17 September Cave was succeeded by Thomas Cotton. In December 1741 Mr Day was 'Husband and Warehouse Keeper' at the wharf and James Finlay was appointed as his Assistant. In 1769 Edmund Hopkins was Warehouse Keeper. These posts were responsible and well paid. Around £500 in cash was issued every month to the Warehouse Keepers to pay workmen and other charges at the waterside. James Finlay's salary in December 1741 as Assistant Warehouse Keeper was £100 pa, and he was required to provide security of £1,500. The status and calibre of these men is obvious from their surviving correspondence.[182]

The Warehouse Keepers were the Company's eyes and ears. They also had to manage the consequences of decisions taken higher up. In August 1719 Francis

[180] East India Co, Accountant General's records, Cash Journal 1720-8, BL, IOR, L/AG/1/5/12, pp78 and 138. The archives of the Company are huge, despite the destruction *c*.1860 of the records of the Warehouse Committee to save space. A thorough survey has not been attempted.

[181] East India Co, Court minutes, BL, IOR, B/57, 31 July 1723; B/66, 21 May, 8 and 29 August, 17 September 1740.

[182] Ashton's Answer dated 24 May 1707, Fleet v Ashton, TNA, C 9/377/9; East India Co, Court minutes, BL, IOR, B/66, 29 August and 17 September 1740, 2 Dec 1741; Home Correspondence, Misc Letters Received, BL, IOR, E/1/1 (1701–9), part 3, fo. 265; E/1/30 (1741), fo. 51; E/1/52 (1769), fo. 267; *London Gazette*, various issues, April–June 1722.

White was forced to ask for the Company's goods to be unloaded at other quays. The decision to switch the Company's saltpetre away from Botolph Wharf to the warehouses of 'Mr Thompson' had gone down very badly:

> *We have met with greater obstructions at Botolph Wharf in landing and shipping the Company's goods than before.. [we] have no command over those who should make way for the carts, or assist in mooring the craft that bring up the goods from the ships.*[183]

Saltpetre was a regular commodity at Botolph Wharf. In 1722 33 bags of saltpetre were stolen from the Company's warehouse there along with 53 bags of cowrie shells. The Directors placed advertisements in the *London Gazette* from April to June offering £50 for information leading to a conviction. This produced a predictable crop of anonymous letters. The Directors did not take the bait.[184]

The Company's staff at Botolph Wharf could also act as police. In early 1741 a major fraud was discovered whereby Private Trade goods were mislabelled and concealed. The Directors dismissed several men from the Private Trade warehouse and ordered that in future such goods could no longer be sealed at the houses of the private traders but only at Botolph Wharf under the eyes of the wharf staff, to be immediately shipped or stored. This produced a complaint from the dealers in coral. The Directors relented, and coral, coral beads, bugles [glass beads], emeralds and other precious stones were permitted to be sealed at East India House as before.[185]

Botolph Wharf and slavery

An early hint that Botolph Wharf was linked to the trade in enslaved people is the will dated 1690 of Robert Pallady, son of 'Robert Pallady of Botolph Wharf, citizen and weaver, deceased'. Robert Pallady junior made his will being 'by the permission of God intended for a voyage to Guinea'. It is hard to think of another reason for such a voyage at that date.[186]

Cowrie shells were a standard currency in the trade in enslaved people from West Africa. In 1722 the East India Company offered £50 for information leading to the conviction of those responsible for stealing saltpetre and 53 bags of cowrie shells from its warehouse at Botolph Wharf.[187]

Another link to this trade was through the Ashtons, subtenants of Botolph Wharf until 1731, who were involved with the South Sea Company. This had continued in existence after the Bubble of 1720. It had the sole right to supply 4,800 enslaved people a year to the Spanish Indies under the Treaty of Utrecht of 1713. The Royal African Company brought these from Africa; the South Sea Company provided assembly points for them in Jamaica and Barbados and transported them to where they were needed. The *Asiento* (contract), as it was called, also allowed one 500-ton ship per year (650-ton from 1716) into the Spanish Indies with mixed goods to be sold duty-free. This market was normally closed to the English. However there was scope for smuggling goods otherwise unavailable to the Spanish colonists. This annoyed the Spanish authorities.

Joseph Ashton, subtenant of Botolph Wharf until 1728, left £6,000 of South Sea stock in his will.[188] This may have been a passive investment. His nephew Henry Ashton, who succeeded him at Botolph Wharf, played a more active role. He was one of the 30 directors of the South Sea Company, elected for three-year terms in February 1724, February 1727 and February 1730.[189] The surviving records of the South Sea Company at the British Library do not include share registers, but Henry Ashton's investment in the company will have been substantial.

The Court of Directors met regularly, sometimes daily.[190] Henry Ashton was also a member at various times of several of its standing committees, as well as of *ad hoc* committees.[191] He must sometimes have been at South Sea House (the headquarters of the company in Bishopsgate Street) several times a week. He may have died unexpectedly; he was present at the Court of Directors on 6 August 1731 and buried on 4 September.[192]

Most of the South Sea Company's business took place abroad and there was comparatively little need for

[183] East India Co, Home Correspondence, Misc Letters Received, BL, IOR, E/1/10 (1719), fo. 272.
[184] *London Gazette*, April 24–8, May 29–June 2, June 2–5, June 5–9 1722; East India Co, Court minutes 1722–4, BL, IOR, B/57, pp65, 70, 86–7; Home Correspondence, Misc Letters Received, BL, IOR, E/1/13 (1722), fos. 267, 383, 414.
[185] East India Co, Court minutes, BL, IOR, B/66, 27 Feb, 6, 11, 13 March 1741; Home Correspondence, Misc Letters Received, BL, IOR, E/1/30, fo. 133.
[186] TNA, PROB 11/407, fos. 53, 53v, will dated 6 January 1689/90, proved 17 November 1691.
[187] *London Gazette*, April 24–8, May 29–June 2, June 2–5, June 5–9 1722; East India Co, Court minutes 1722–4, BL, IOR, B/57, pp65, 70, 86–7; Home Correspondence, Misc Letters Received, BL, IOR, E/1/13 (1722), fos. 267, 383, 414.
[188] Will and codicil dated 8 and 11 September 1727, proved 18 June 1728, TNA, PROB 11/622, fos. 275–6.
[189] South Sea Co, Minutes of General Courts, BL, Add MS 25544.
[190] For example in one month in 1730 the Court met on April 3, 10, 14, 15, 17 and 24, and again on May 1. Ashton was present every time. South Sea Co, Court minutes, BL, Add MS 25504.
[191] On 9 February 1727 he was appointed to the standing Committee for Correspondence (sometimes the Committee for Correspondence and Factories), and to a new committee for Lawsuits; and on 13 February 1730 to the standing committees for Treasury and Shipping, and again to a committee for Lawsuits, each time for three years. South Sea Co, Court minutes, BL, Add MSS 25503, 25504.
[192] St John at Hackney burial register, LMA, P79/JN1/025.



Figure 71 Two views of what may be intended to be the same ship, a snow (identified by her particular rigging), a transport or supply vessel for the Navy, by Charles Brooking, 1759 (© National Maritime Museum, Greenwich, London, BHC1021; Creative Commons Attribution CC BY-NC-ND). The background may be Tilbury Fort, in Essex opposite Gravesend

warehouses in the City. There was warehouse space beneath South Sea House, and space was also rented from the Merchant Taylors' Company.[193] In April 1730, soon after Henry Ashton had succeeded his uncle at Botolph Wharf, the Directors ordered that cochineal and indigo from the *Prince Frederick*, and all other goods imported into the City in future, should be landed at Botolph Wharf.[194]

Ashton himself never left England, but his distant relative Captain William Blackburne[195] began work for the company in March 1730.[196] He was put in command of one of the company's sloops, the brigantine ('snow'; for the type, Figure 71) the *Prince of Asturias* for a voyage to Jamaica. On this and later voyages he wrote back to Ashton personally, either at South Sea House or at Botolph Wharf. His letters are full of news about ships arriving and departing; the Spanish authorities; the English local agents; the weather; money sent back to London; changes in his officers and crew; and his cargo of enslaved people, including feeding them and the care of the sick. For example, on 21 June 1730 Blackburne wrote from Kingston, Jamaica to Ashton at Botolph Wharf:

> *This moment I am favered with yours per Captain Gibson.. who just now arived. I sailed two days before him out of the Downs, and I arived eight days soonar here. I have thought Mr Pratter* [the local agent] *would send me to the Havana* [Havana, Cuba], *but now I think we shall stay* [await] *the Cort's orders* [ie the orders of the Court of the Company], *wheather we shall be orderd to any perticular place or be left to Mr Pratter's direction to send us where their is the most demand for slaves..*

And on 24 March 1732, to Ashton at South Sea House:

[193] South Sea Co, Court minutes, BL, Add MS 25503, 23 November 1727, payment of warehouse rent to George North [Clerk of the Merchant Taylors' Company]; Add MS 25504, 3 April 1730.
[194] South Sea Co, Court minutes, BL, Add MS 25504, 14 April 1730.
[195] The Blackburne family seat was Orford Hall, Lancashire. Sarah Blackburne, a spinster member of the family, was a long-standing member of Henry Ashton's household in Clapton, apparently as a housekeeper or nanny. Henry Ashton may have been originally from Newton in Lancashire. See his will (dated 23 February 1731, proved 15 September 1731), TNA, PROB 11/646, fos. 216v–219v.
[196] Capt Blackburne's two sureties were approved on 25 March 1730. South Sea Co, Minutes of the Committee for Correspondence and Factories, BL, Add Ms 25553.

> *At sea. The 27 of February 1731* [ie 1732] *I arived at Porttobello* [Portobello, Panama] *haveing 26 days' passige from Jamaica. I met with bad weather and constant rains on that coast that caused the flux to fall upon the negers* [negroes]. *I buread* [buried] *five in my passige. Mr Tinker the South Sea Company's factor who was my passinger can advise the Honourable Coart that there was all due care taken to preserve them that was posable* [possible]..[197]

Blackburne did not know when he wrote this letter that Henry Ashton was already dead.

A wider discussion of the evidence for slavery or its effects in the City of London is in Chapter 6 below.

Billingsgate (site D): excavation[198]

John Schofield, with contributions by I M Betts, Jacqui Pearce and Alan Pipe

An extract from the Goad Insurance Survey map of 1887 explains the location and setting of the Billingsgate Lorry Park excavation (here often called just Billingsgate) in 1982–3 (Figure 72), and the watching brief on the larger construction site in 1983–4 which followed, though conditions on the latter did not allow for recording of post-Fire strata. The slight change in direction visible on the south side of Lower Thames Street east of St Magnus was of medieval origin, if not older.

The opening stage of excavation at Billingsgate in 1982 is shown in Figure 73.

The archaeological phases of building on the site from 1666 to about 1732 are all within period 17 of the excavation which recorded remains from the Roman period onwards. Periods 1 to 16 do not concern us here. Table 6, the barest summary, divides the excavation site into three parts from 1666: (i) the site of the former parish church of St Botolph Billingsgate, which occupied the north-west corner of the site and partly lies beneath the pavement of Thames Street; (ii) the alley which bisected the site, leading to the river, and the buildings on its east side; and (iii) the buildings along the west side of the alley south of the church site.

Table 7 lists the 14 construction 'Events' into which the strata have been divided, based on the stratigraphy,

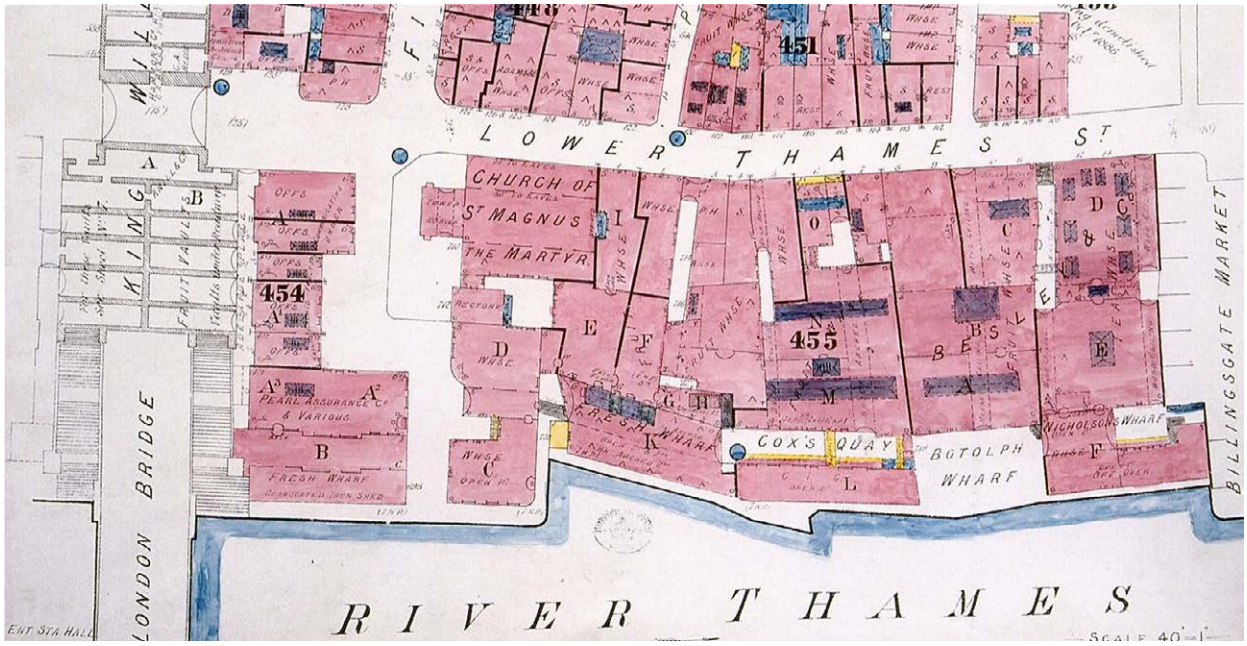


Figure 72 Lower Thames Street in 1887, from the Goad Insurance Plan of that year, vol iii, sheet 50 (LMA, London Picture Archive 34517). The New Fresh Wharf site of 1974–5 (site C) lay beneath the warehouses on New Fresh Wharf and Cox's Quay (which had by 1887 incorporated the historic Hammond's Quay), north of the number '455'; the excavation at Billingsgate in 1982–3 (site D) occupied the north-west quarter of Botolph Wharf, nos 8–10 Lower Thames Street (above the words 'BOTOLPH WHARF')

[197] Ashton papers, TNA, C 110/140. Blackburne's original spelling has been retained because it hints at his education and life experience. However the capitals and punctuation have been modernised.

[198] This part about the excavation at Billingsgate is based on the archive report produced by Steve Roskams in 1983; the text here is based on a first draft by Trevor Brigham.



Figure 73 The excavation at Billingsgate in early 1982, as the site was cleaned for excavation after removal of the rubble above by machines; looking north-east. The walls and foundations crossing the site from left to right formed the west side of the lane of Botolph Wharf south of Thames Street; the 17th-century and present riverfronts are off the photograph to the right. Point A marks the medieval undercroft which would be below the post-Fire house of Francis Minshull (in the excavation, D:Building 10)

THAMES STREET		
Tenement 15a **Site of St Botolph's church**	**A L L E Y**	**Tenement 15b**
New buildings but with east side cut back to make alley wider, 1667+; sublet to Francis Minshull 1674 D: Building 10 over and using the undercroft on south part of church; D:Building 11 on central part of church; Bdg 11 modified to include burial vaults 1678 and 1693		Two new houses on Thames Street (D:Building 9) by 1676 (Ogilby and Morgan); rebuilt or amended several times; demolished 1732 South of D:Building 9, D:Bdg 13 built late 1680s; modified twice up to demolition in 1732
Buildings on west side of alley, south of church site	**RIVER THAMES ↓**	
New D:Building 12; later modified; later major modification, probably rebuilding; demolished 1732		

Table 6 Summary outline of the building phases at Billingsgate (site D), 1666 to 1750

	Event	Suggested date of construction	Plans	period and phase
1	Post-Fire abandonment and a temporary lane surface	a few years after 1666	not illustrated but see Figure 74	17.16
2	Construction east of the lane: D:Building 9	between 1667 and 1676, since shown on Ogilby and Morgan's map; probably built in 1667–8 by Child	Figure 77	17.1–2
3	A new lane, and construction to the west: D:Buildings 10 (the undercroft) and 11, the house of Francis Minshull	probably mostly by 1678; occupied and adapted by Minshull from 1674	Figure 80	17.17–18
4	Construction west of the lane: D:Building 12	after 1667 when vestry demolished, built by 1676 (on Ogilby and Morgan's máap); presumably built by Child, 1667–8. Cowrie shells	Figure 83	17.21
5	Reconstruction and occupation of D:Building 9, and a new lane	artefacts 1680–1720	Figure 89	17.3, 17.7, 17.20
6	Construction east of the lane: D: Building 13, south of D:Building 9	by 1680, since it appears on the plan of that year	Figure 92	17.4–6
7	Modifications to D:Building 10	shortly after 1700		17.19
8	Modifications to D:Building 12	shortly after 1700	Figure 96	17.22
9	Modifications to D:Building 9	after 1672–9 [coin]; after Event 5, so probably after 1700	Figure 101	17.12
10	Further modifications to D:Building 12	around 1700	Figure 111	17.23
11	Modifications to D:Building 13	around 1700, after Event 6	Figure 113	17.8, 17.10
12	Final alterations to D:Building 9	perhaps documented rebuildings after 1699; Charles II farthing of 1675	see Figure 114	17.13–14
13	Final alterations to D:Building 12	after 1700, up to 1732	Figure 118	17.24–7
14	Final alterations to D:Building 13	after 1700, up to 1732	Figure 120	17.9, 17.11, 17.15

Table 7 The 14 building events on the Billingsgate site, 1666 to 1732, with dates from the documentary evidence

with their dates derived from the archaeological evidence and then documentary evidence.

The evidence for the proposed chronological order of Events 1 to 14 is laid out in the following section of text. Four site-wide plans (Figure 76; Figure 88; Figure 100; Figure 114) show the site at four consecutive points in its history. Each of these is an approximation of the contemporaneity of the buildings (which buildings were standing at the same time as which others), as it seemed to the excavators in their analysis immediately after the excavation. With further thought and the provision of detailed documentary evidence, the individual buildings may be prised apart. Some of them went through several phases of construction during their brief lives. Detailed parallels for the buildings, both within London and further afield, are discussed in the section of text which follows afterwards.

The pottery and other artefacts are reported for each phase. It is difficult to say if any of them were from the periods of active use of the buildings. Some cases will be examined by scrutiny of the layers in which they were found. It is more likely that some, perhaps a majority, of the artefacts, particularly the wall- and floor-tiles and pottery, were mixed in with general rubble laid down to raise cellar floor levels, and therefore they would be debris from previous buildings, presumably those on the site before the Great Fire. Many of the datable artefacts, for instance the tiles, were up to 100 years old when left in their final resting places. The research included here on the tiles and bricks is by I M Betts; that on the pottery is by Jacqui Pearce.

Event 1: post-Fire abandonment and a temporary lane surface

(D17.16)

1666–7

Following the destruction of the area by the Great Fire (at the end of period D16), there were evident signs of a temporary phase of abandonment (period D17.16). During this time, deposits of silt accumulated in the former lane, sweeping up against the church wall to the

west. These deposits included masonry, brick and tile fragments from the damaged structures in the vicinity. The trampled surface of the material suggests that the lane was still used as an access route, either to the wharf, or to the derelict sites lining the way. Masonry rubble was also dumped in the entrance to the 15th-century undercroft on the west side of the lane (D:Building 5, reported in the previous volume),[199] blocking the stairway. All these deposits were weathered, indicating some delay prior to reconstruction.

This event is not illustrated in plan here, but the excavated buildings are shown in a phase just before the Great Fire, from the report already published in 2018, in the first half of the 17th century (Figure 74). It is the landscape of buildings which stood in ruins after September 1666. The surfaces of Event 1 were similar to those over which Pepys and Evelyn gingerly walked in the weeks after the Fire, marvelling at the alleys blocked with debris and the fallen churches functioning as landmarks in the sea of rubble. In the days and weeks which followed the Fire, everybody must have been in bewildered shock. There was a danger that winds could revive the fire, until the embers were finally extinguished by rain in October.

The artefacts left in the layers include fragments of window glazing (lead cames) and glass. Pieces of carved stone are likely to have come from the church of St Botolph; several hundred were also incorporated in post-Fire walls on or near the site of the church, that is mostly in the walls of D:Buildings 10 and 11, but occasionally also elsewhere. Two pre-Great Fire delftware wall tiles showed mounted military figures

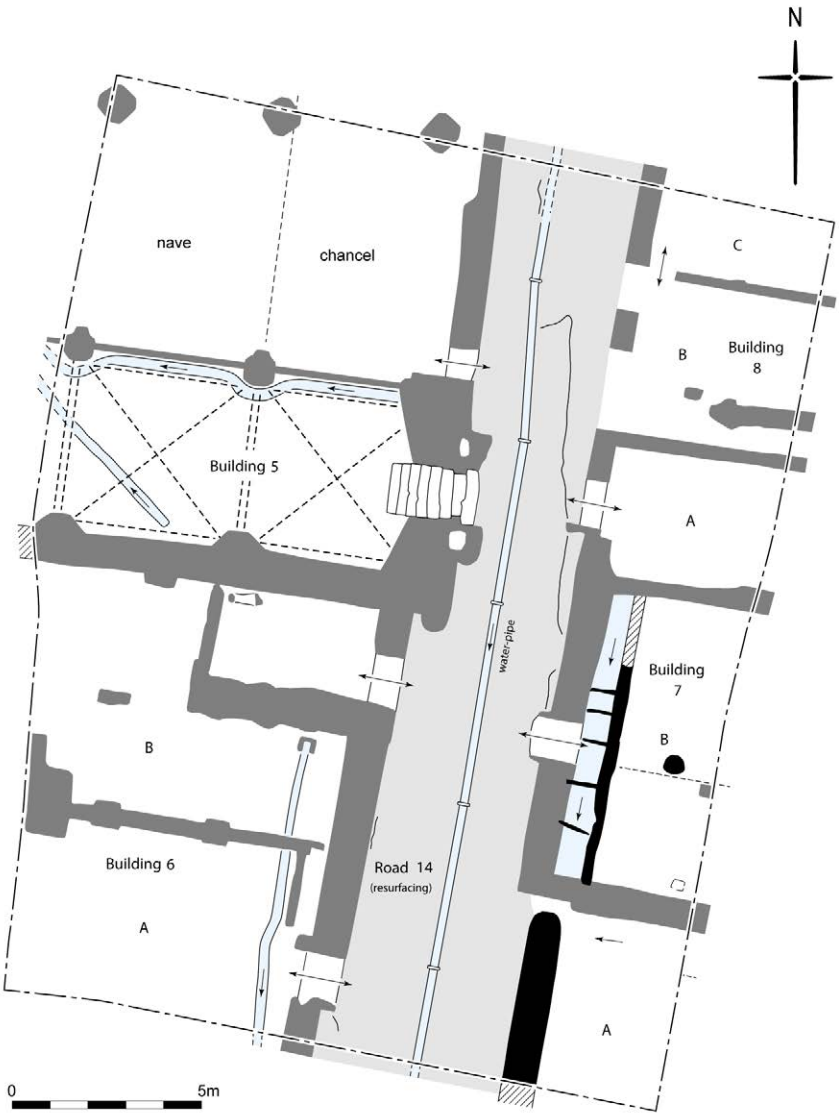


Figure 74 Billingsgate (site D) in the first half of the 17th century (periods D16.6–8) (1:200) (Schofield *et al.* 2018, Figure 213)

[199] Schofield *et al.* 2018, 260–5.

(B<482>, Figure 75 and B<483>). They have a matt pitted surface suggesting heat damage; they are Dutch tiles of around 1635–60.[200] Further examples were recovered from the underlying remains of Thomas Soane's buildings destroyed in the Great Fire, already published.[201] The tiles with mounted military figures found in post-Fire layers may well derive from Thomas Soane's buildings. Similar tiles, including a complete example, were recovered from 1666 destruction debris at a site in nearby Botolph Lane to the north.[202]

The immediate post-Fire deposits also included both plain lead-glazed and unglazed floor tiles (in [22]), the latter first introduced into London in the late 16th century. There is also an unusual tin-glazed floor tile with a plain black tin-glaze ([833]) and another showing the corner of a quarter-star, grape and fruit polychrome design.[203] This was probably made at the Pickleherring pothouse in London around 1618–50. A number of partly complete London-made peg roof tiles came from context [22].[204]

A small quantity of pottery (18 sherds, 18 ENV, 0.29 EVE, 503g) was recovered. Although it may represent material associated with the immediate pre-Fire period, none of the sherds show signs of burning, so deposition during the temporary phase of abandonment is also possible. Most of the sherds can be only broadly dated to *c.* 1580–1700 and consist of everyday, household coarsewares. These include London-area post-medieval red ware (PMR), with nine sherds from sugarloaf moulds and two from collecting jars used for molasses (from context [22]). These form part of a large collection of sugar-refining wares recovered during excavations on the site (discussed in more detail for period D17.24) and were probably derived from a sugar-house relatively nearby. Other forms in PMR include jars and a pipkin, and there is also part of a bowl in post-medieval fine red ware (PMFR), from kilns in the Harlow region of Essex, as well as a sherd from a drinking jug in Surrey-Hampshire border white ware with green glaze (BORDG). There is also part of a jug in Frechen stoneware, imported from the Rhineland *c.* 1550–1700. These wares were in use throughout the 17th century with little obvious change in form. The latest find (from context [15]) is part of a dish in tin-glazed earthenware with polychrome decoration based on oak leaves (TGW D). This can be broadly dated stylistically to *c.* 1630–80,[205] so could have been in use at the time of the Fire.

[200] Pluis 1997, 356, A.02.07.03.
[201] Schofield and Pearce 2009, 318–19, fig 24, nos 50–1.
[202] Betts and Weinstein 2010, 129, nos. 200–1; Schofield and Pearce 2009, 318, fig 24, no. 52.
[203] Betts and Weinstein 2010, 113, no. 117.
[204] These average 149mm in breadth by 15mm in thickness. They are of two round nail hole type with holes varying between 8mm and 15mm in diameter.
[205] See, for example, Archer 2013, D.26, dated to *c.* 1655–65.



Figure 75 Billingsgate: wall tile showing mounted military figure D[22] <482> (scale 1:3)

There were 25 fragments of glass (15 ENV, 85g), mostly consisting of window glass broadly datable to the 17th century. These include parts of two panes with grozed edges (in [15] and [22]). Three fragments of unidentifiable burnt glass could be manufacturing waste, although the effects of the Fire are more likely. A small droplet in [349] is more typical of glassworking waste.[206] Seven clay tobacco pipe bowls were recorded along with 20 stem fragments and one mouthpiece. The bowls are of types AO15 and AO18 in Atkinson and Oswald's London Typology,[207] all dating to *c.* 1660–80.

This phase or event comprises Great Fire debris, or part of it left unaffected by all the later building work; but the phase was only of a year or so in duration.

Event 2: construction east of the lane: D:Building 9

(D17.1–2)

probably built in 1667–8 by Josiah Child

A summary of Events 2–4 is shown in Figure 76.

To the east of the former lane, work began on the construction of a new structure, D:Building 9 (period D17.1, Figure 77). An east–west chalk and ragstone foundation was constructed on the pre-Fire alignment, immediately south of the earlier dividing wall between the destroyed D:Buildings 7 and 8. A raft of north–south timbers laid on the chalk formed the base for a brick and timber-laced second-stage foundation. It is likely that the superstructure was of brick. A series of mortar and rubble makeups were deposited to the north, and to the south, in the area of the pre-Fire D:Building 7, similar dumps containing chalk pieces like cobbles.

The rubble was cut by a 6.4m-long robber trench, which ran south from the west end of the new wall to remove the northern half of the frontage of D:Building 7; the upper infill of the trench lapped the new wall, demonstrating that reconstruction work had started before the site had been completely cleared. Further deposits of compensatory material infilled the drainage system which had been an important feature of the underlying pre-Fire building. South of the building was an open area, perhaps disused.

[206] Brain *et al.* 2020.
[207] Atkinson and Oswald 1969.

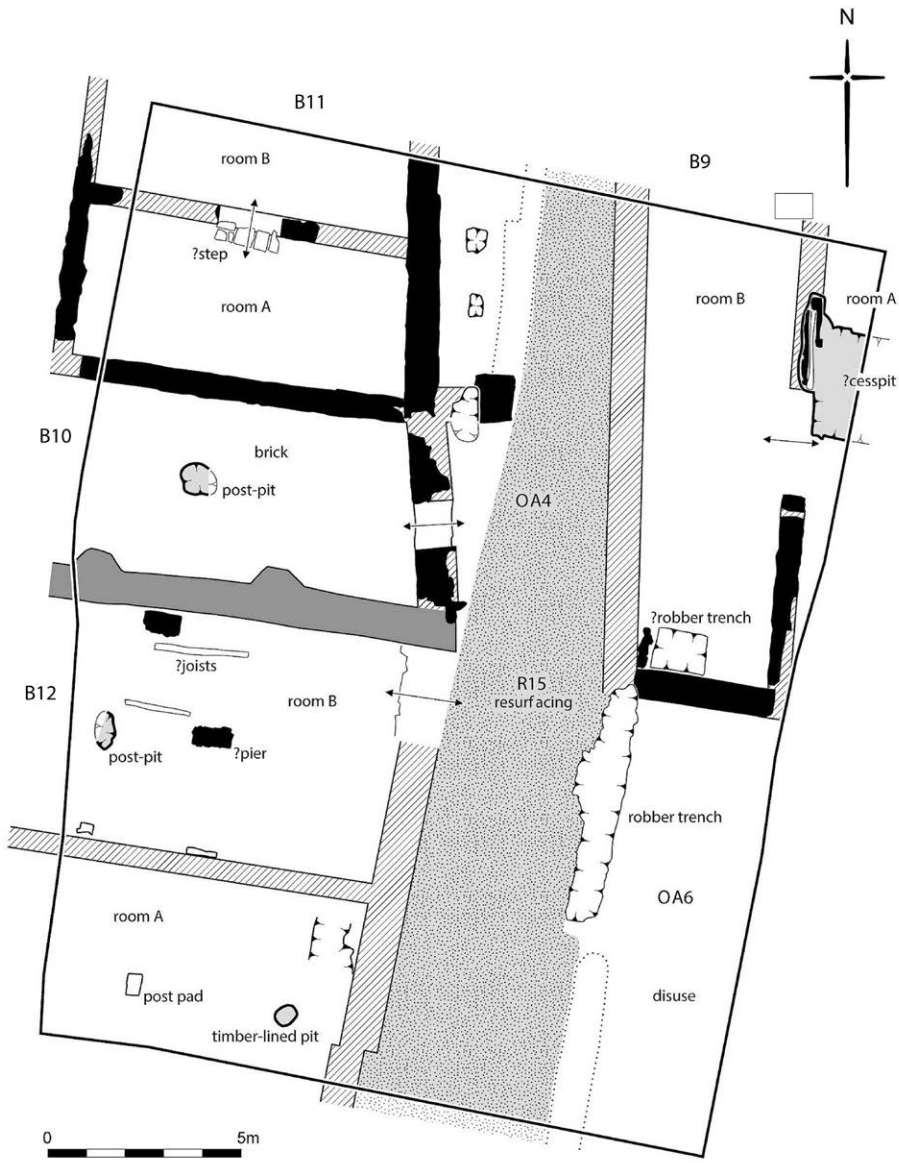


Figure 76 Billingsgate Events 2–4: D:Buildings 9 to 12 (1:200)

Eight delftware wall tiles from [931] comprise further pre-Great Fire examples showing mounted figures with ox-head corners (Figure 78, showing just the mounted figure). A slightly thinner part blacked fragment with a spider head corner from [691] may date to just before the Great Fire.

Also present are two earlier tin-glazed floor tiles which appear to have suffered heat damage in the Great Fire. One is worn and part blackened with an obscured central scene (<1586>). The blue and yellow medallion border suggests it was made at the Pickleherring pothouse around *c* 1618–50.[208] This has a trace of foliage present suggesting there was an animal or bird in the tile centre. The second tin-glazed floor tile (<2195>) has a slightly blackened flower vase pattern.[209] The latter may be an early Dutch import dating to the period 1570–1600.[210] A small quantity of roofing slate was also recovered from D17.1 ([691]) along with a worn medieval floor tile.

A sub-rectangular cut set against the north face of the period D17.1 wall may have robbed a pre-Fire feature of unknown function (period D17.2). Further east, a north–south brick return wall was constructed on a new alignment; no longer parallel to the earlier alley, the wall was angled more towards the north-west. There was, however, no sign of a west wall for the new building, although a small squarish chalk and ragstone

[208] Similar tiles are illustrated by Betts and Weinstein (2010, 101, nos 56–9).

[209] Betts 2018, 376, fig 251, bottom.

[210] Pluis 1997, 421, A.05.08.010.



Figure 78
Billingsgate: wall tile with mounted military figure D[931] <1207> (scale 1:3)

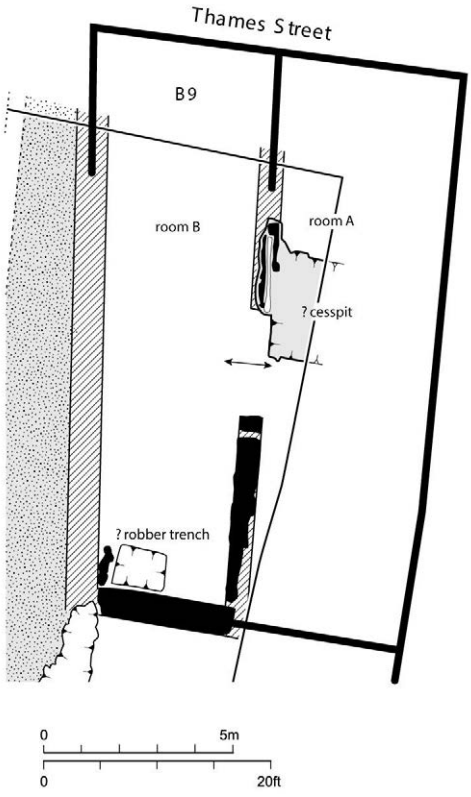


Figure 77 D:Building 9 (Event 2) with property boundaries from the plan of 1680 (1:200)

feature was presumably constructed to reinforce a junction with the east–west wall. It is probable that the west wall was constructed parallel to the new brick return, thereby encroaching on the former route of the lane, and that it was destroyed by the construction of a later wall in period D17.3.

Extensive mixed dumps and rough surfaces, chiefly of redeposited building materials, were spread within the new structure. These extended over the central section of the new east wall marking the location of a 3m-wide entrance between the two rooms of D:Building 9. This gave access into an eastern room, where a deep cesspit (D:Cesspit 1) with a brick and timber lining was constructed against the east face of the partition. The lack of surfaces associated with the pit, however, may imply that it was simply an initial stage of construction for a later similar feature (in period D17.7). It appeared to have no surviving deposits within it.

From this phase came three delftware wall tiles, one of which again has a mid-17th century mounted military figure (Figure 79, <1578>). The two others, probably of the same or a similar design, show a barred ox-head corner. Other material from D17.2 comprises a worn medieval floor tile ([490]), a medieval plain green glazed example ([628]), and a mid–late 14th-century decorated Penn floor tile (<1144>) with Hohler (1942) design P135.

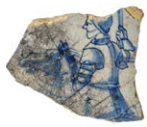


Figure 79
Billingsgate: wall tile showing mounted military figure D[940] <1578> (scale 1:3)

Much of the pottery associated with the construction of D:Building 9 (22 sherds, 20 ENV, 1.23 EVE, 410g) appears to have been redeposited as it is predominantly medieval in date (15 sherds). Sherds of London-type ware (LOND), Kingston-type ware (KING) and Surrey-Hampshire coarse border ware (CBW) date mostly from the late 13th to 14th centuries. The post-medieval pottery can only be broadly dated to *c.* 1550–1700, consisting of sherds of Surrey-Hampshire border white ware with green or clear glaze (BORDG, BORDY) and red ware (RBOR). There is also part of a jug in imported Raeren stoneware (RAER) in [628], with the latest find part of a tripod pipkin in London-area post-medieval red ware (PMR) in context [825], dated to *c.* 1580–1700.

A total of 16 small fragments of glass (15 ENV, 67g) is made up mostly of window glass in natural green metal. These include both cylinder or broad glass, and crown glass (in context [928]), an improved method of manufacture developed in the later 17th century.[211] The latest datable glass finds are fragments from a shaft and globe/onion bottle in green glass from context [928], dating to *c.* 1640–1740 (the fragment is too small to be certain of the form), and part of an onion bottle in [788], dating to *c.* 1680–1740. Three clay pipe bowls and 15 stem fragments were recovered, dating to *c.* 1660–80 (types AO15 and AO18).

The level of the floors of this building below the present level of Thames Street, and the lack of entrances to the excavated parts from the lane, make it clear that the excavated levels were in the basement of D:Building 9. In the immediately post-Fire period Thames Street at this point would have been raised by 4ft (1.2m). The new building therefore consisted of two long, narrow north–south rooms A (east) and B (west) (Figure 77). A general date in the latter half of the 17th century was obtained from pottery contained within the dumps, although much of the material was probably derived from pre-Fire contexts; for instance, pieces of wall-

[211] Noël Hume 1969, 234.

tiles were trampled into the surfaces. This double building is shown on the plans of 1680 and 1720 as two tenements fronting Thames Street. These were rebuilt by Josiah Child in or shortly after 1667, aligned with the new alignment of the entrance to the wharf. There is no documentary evidence about the occupants. The buildings lasted in this form until some substantial modifications perhaps in the 1680s (Event 5).

Event 3: a new lane, and reconstruction to the west: D:Buildings 10 and 11, the house of Francis Minshull

(D17.17–18)

probably mostly by 1678; occupied and adapted by Minshull from 1674

West of the former line of the lane to the wharf work began on the construction, over the former church of St Botolph and the medieval undercroft which formed its southernmost part, of two new structures, D:Buildings 10 and 11 (Figure 80). Both new buildings had their east walls pulled back a distance to the west, to widen the lane, by Child, in or shortly after 1667. The southern of the two new buildings, D:Building 10 on the site of the 15th-century undercroft, is described first.

Deposits of reused building materials were dumped over the floor of the former undercroft and its entrance stair (the bottom half, approximately, of the medieval jambs of the latter survived within this dumping, but above must have been removed) (period 17.17). Many of the stones used in the new construction were moulded, and had clearly been obtained from the pre-Fire church. An east wall on a new alignment, with a new entrance, formed the first stage in the construction. The former north wall of the undercroft was rebuilt (where it was not cut back at the east end) but the former south wall was retained to form the boundary between D:Building 10 and D:Building 12 to the south. In the centre of D:Building 10, a shallow circular cut 0.8m in diameter was inserted through the floor.

Four fragments of reused Reigate stone within the silt fill suggest that the cut held a substantial post supporting the floor above. This leads to speculation about the retention of the vaulting for which the medieval undercroft was notable. The undercroft, originally of 15th-century date, had evidently suffered from ingress of water from its proximity to the river. In the 1640s, it has been proposed, the tenant Thomas Soane had it rebuilt by lining the walls in brick and closing the two small windows to the lane.[212] He may well have removed the medieval stone vaulting, but this is uncertain. By the time of its rebuilding after 1667, with the east wall moved a short distance to the west, the undercroft can

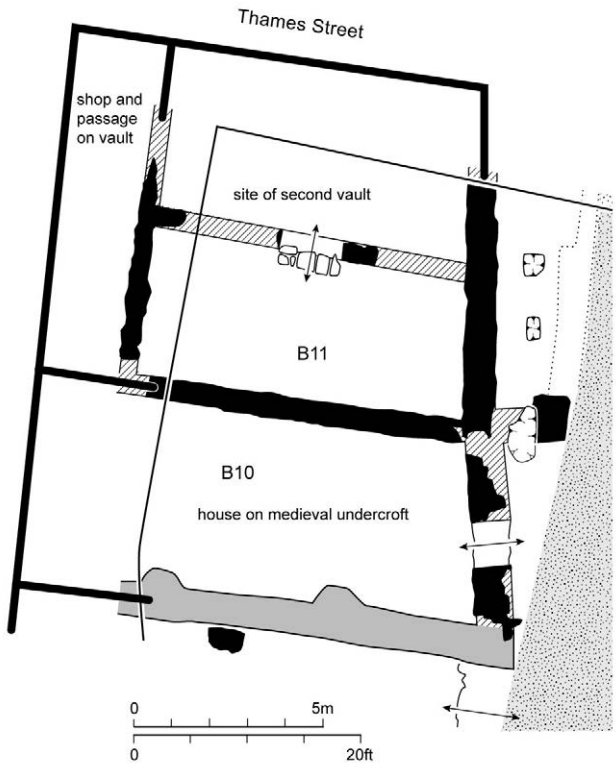


Figure 80 Billingsgate Event 3: D:Buildings 10 and 11, with suggested reconstruction of Minshull's house in 1700 as suggested by the documentary evidence (1:200)

no longer have retained any medieval vaulting, so was presumably ceiled with horizontal beams, supported by the central post just mentioned.

A large quantity of both plain lead-glazed and post-medieval unglazed floor tiles was recovered from this phase (contexts D[47], [494], [663], [693], [724]). Most of the lead-glazed tiles have yellow, dark green or brown coloured glaze. These would have been laid in a chequerboard pattern with the yellow tiles alternating with the green and brown glazed examples. A number of tiles also have mottled yellow/brown or yellow/green coloured glaze. Many lead-glazed tiles have nail holes indicating Low Countries manufacture. These floor tiles, particularly in context [494], occur in a variety of sizes and thicknesses indicating that they are a mixed jumble of medieval and early post-medieval material of varying dates. Of interest is the presence of a 13th–14th century nib tile ([494]) which are only very rarely found in London.[213] All tiles have a thickness of between 14–15mm. Nib tiles can often be distinguished by their knife-trimmed edges, a feature not normally found on other roof tile types in London. A total of 24 decorated medieval floor tiles were recovered ([43], [494], [663]), all of which are of Penn or probable Penn type.[214]

[212] Schofield *et al.* 2018, 260–5, fig 210.

[213] Betts 2018, 379, fig 254, <T27>.

[214] Betts 2018, 373, fig 249, <T5>. The definite Penn designs are Eames

A sample of 18 bricks was retained from the rebuilt brick floor in D:Building 10 (contexts [238]–[243]). These were in two red fabric types, 3032 and 3033.[215] Normally, fabric 3032 differs from 3033 in having the addition of frequent flint and ash inclusions and occasional small pebbles in the brick-clay. However, the quantity of inclusions added to the bricks in fabric 3032 is very small which makes their appearance little different from bricks in fabric 3033. It would seem very likely that both originated from the same brickyard or brickyards. This would explain the close similarity in size, with brick in fabric 3032 measuring on average 219 x 99 x 57mm, and those in fabric 3033 measuring 227 x 100 x 60mm.

Pottery from D:Building 10 (33 sherds, 30 ENV, 0.24 EVE, 573g) dates broadly to the 17th century, with three sherds of residual medieval fabrics. Everyday coarsewares are represented by sherds from cauldrons and pipkins in PMR, and from tripod pipkins, bowls, dishes, drinking jugs and a mug in Surrey-Hampshire border white wares, as well as a tripod pipkin in border red ware. A closer dating of *c.* 1630–80 for contexts [494] and [663] is based on the presence of sherds from dishes in tin-glazed ware with polychrome decoration typical of this period (TGW D). Imported pottery consists of jugs in Frechen stoneware (FREC), a jar in Langerwehe stoneware (LANG), both produced in the Rhineland, and part of a plate in Portuguese tin-glazed ware (POTG) from [494]. The Rhenish stonewares are common finds in London at this period, the Portuguese ware less so. It is noteworthy that much of the pottery from this feature is heavily burnt, clearly as a result of the Great Fire. The latest pottery associated with the building in this phase is dated to *c.* 1700–1800 (context [44]) by sherds from a bottle or jar and a possible bowl in English brown salt-glazed stoneware (ENGS), found with TGW D and RBOR, as well as Staffordshire-type mottled ware (STMO), current in London from *c.* 1650. It is possible that the stoneware was made at Fulham, in which case it could date from *c.* 1670+ although the sherds lack diagnostic features to connect them with a particular pothouse.

A quantity of glass was also recovered from D:Building 10 (142 fragments, 36 ENV, 1086g). This includes a high proportion of window glass in natural green metal, with fragments from diamond and hexagonal panes surviving with some grozed edges (in [494]). Part of a round item in natural green glass from the same context, 25 mm in diameter, does not appear to be a spectacle lens as it is perfectly flat, with no magnification. Its original function is uncertain. Fragments of shaft and globe bottles in green glass from contexts [663] and [494] date to *c.* 1640–90. There are also small fragments from pharmaceutical phials in natural green glass and another droplet with a long tail, indicative of glassworking, as in phase D17.16, together with a small lump of burnt, warped glass (both context [494]). The latest glass associated with this building comes from context [44], as does the latest pottery, dating to *c.* 1770–1840 on the basis of the neck from a green glass cylindrical wine bottle with a rim finish typical of this period.[216] Clay pipes from D:Building 10 (28 bowls, 84 stems, 2 mouthpieces) are all dated to *c.* 1660–80 (types AO15, AO18 and AO13). There are two stem fragments with rouletted decoration (<935> and <524>); otherwise, no pipes are marked or decorated. Most have milling around the top of the bowl (common for this period).

The east frontage of D:Building 11, next to the north, extended from the north-east corner of D:Building 10, (period D17.18). It was chiefly of reused moulded stones from the church, running across the cleared site of the pre-Fire church of St Botolph, more than 1m west of and inside the east wall of the former church, and built on the tiled floor of the former church (Figure 81). This is proposed to be the work of Josiah Child in 1667–8. The wall returned west in the form of a Reigate stone and chalk foundation constructed on a narrow chalk and brick underpinning layer laid across the period D17.17 makeups. This reinstated the line of the former north wall of the pre-Fire D:Building 5, separating the new D:Buildings 10 and 11. The south side of the wall was faced with reused blocks to a lower level than the north, due to the slightly lower ground level remaining in the former undercroft. Some deposition took place within the new structure, but this was limited to the vicinity of the south wall.

A north–south wall, mainly of randomly-coursed Reigate stone, was constructed at the western limit of excavation. This abutted the new wall between Buildings 10 and 11, and continued north. Immediately south of its northernmost point, a short spur on the east face was roughly aligned with a further section of Reigate stone wall constructed half way to the street frontage. These two fragments were probably the remains of a single east–west wall across the width of D:Building 11. A Reigate stone and chalk feature set in a rectangular cut abutted this wall, identified as the possible base of a step; if this interpretation is correct, a threshold must have existed at this point. As was the case with D:Building 9, it is notable that the east–west walls of the building followed the pre-Fire alignment, while both north–south walls were on the new alignment. No further activity was noted within the structure as the result of later truncation.

(1980) /Hohler (1942) design types: 1846? / P153?, 2074 / P92, 2343, 2391, 2535 / P88 and P135. There are also two designs not in either Eames or Hohler (Betts 2018, 373, fig 249, <T3>, <T4>).

[215] Betts 2018, 380.

[216] Dumbrell 1992, 92.



Figure 81 Billingsgate, period D17.18: the east wall of D:Building 11 on the left, built on top of the former tile floor of the east end of St Botolph Billingsgate church, the east wall of which is shown on the right; looking north (0.5m scale). The wall on the left represents the widened entrance to Botolph Wharf ordered by Child in 1667/8, when the alley was widened over the destroyed church. The new wall contained many stone fragments from the church

In the centre of the realigned lane, a substantial rectangular Reigate stone pier foundation edged with vertical tiles was constructed at the junction of D:Buildings 10 and 11. After the pier was completed, the realigned north end of the lane was remetalled, with a gravel surface laid over a mixed sub-base containing a high proportion of crushed chalk. The new surface at this stage extended up to, but not over, the former church wall, although traces of dark silts reflecting the use of the lane did accumulate against the frontage of D:Building 11. In this area, a line of three large postpits was cut along the western edge of the new lane, the southernmost being set against the west edge of the pier (one is clearly visible in Figure 81). The cuts were filled with silt and mortar packing material, and must have held substantial timbers which may either have served to delineate property adjoining D:Building 11, or supported oversailing upper floors, supplementing or replacing the masonry pier. It is likely that the posts were part of an external stair which climbed to the top of the pier and an upper entrance into the building.

A small quantity of plain post-medieval unglazed ([39], [263]) and a much larger quantity of plain lead-glazed ([5], [12], [38], [39], [42], [368], [435]) floor tiles was recovered from the building. Some of the plain glazed tiles are of Low Countries manufacture, although the nail holes on others may be obscured by mortar. Many floor tiles are heavily mortar-covered indicating reuse. Nine earlier medieval decorated floor tiles were recovered ([12], [38], [39]). Two are 'Westminster' type dated to 1250–1300, with production possibly extending into the early years of the 14th century. Present are Betts (2002) design types W33 and W127. The remainder comprise Penn tiles with Eames (1980) / Hohler (1942) designs 2535 (similar to P88), 2839 and P135, plus one probable Penn design.[217] There are five tin-glazed tiles ([41], [42], [385]), and four floor tiles including two with a late 16th–mid 17th century interlocking strapwork design.[218] This may be a product of the Pickleherring pothouse, or alternatively could be Dutch. Another has a flower in a diamond shaped border.[219] The flower tile was almost certainly made at the Rotherhithe pothouse and dated to around *c* 1638–50. The other floor tile is too small to determine the design. The delftware wall tiles comprise two blackish purple on white tiles (<459>) with an unusual diamond pattern.[220] This is a Dutch design dated to the period 1650–1700.[221] Other items include a part of a glazed drain from context [263], roofing slate from context [402] and a large piece of stone paving, probably Purbeck limestone from Dorset, from context [39]. Another fragment of paving in the same stone occurs in D17.21. From the same context as the stone paving came part of a circular brick pipe with a reddish-brown glaze on both internal and external surfaces.

A total of 117 sherds of pottery (55 ENV, 2.48 EVE, 2258g) was recorded in contexts associated with D:Building 11. These include 14 sherds of residual medieval pottery. As with D:Building 10, PMR, BORDY/G and RBOR are the main coarseware fabrics, used for bowls and dishes, tripod pipkins and jars. The rim of a sugarloaf mould in PMR was recorded in context [39], heavily encrusted with plaster, so likely incorporated into a building at some point. There are also sherds of post-medieval fine

[217] Betts 2018, 373, fig 249, <T5>.
[218] Betts and Weinstein 2010, 107, no. 85.
[219] Betts and Weinstein 2010, 117, no. 141.
[220] Illustrated in Betts and Weinstein 2010, 129, fig 208.
[221] Pluis 1997, 329, A.01.60.08.

red ware (PMFR) and Metropolitan slipware (METS), both of which were produced in the Harlow area of Essex.[222] Much of the pottery comes from contexts dated to *c.* 1630–80/1700, based on the presence of METS (first recorded in London in 1630) and TGW D and tin-glazed ware with plain white glaze (TGW C). Imported wares include FREC and Westerwald stoneware (WEST), as well as part of a Spanish olive jar (OLIV; in context [5]). Context [263] is dated to *c.* 1830–46 by sherds of English stoneware with Bristol glaze (ENGS BRST), which must be be intrusive. The same context also yielded sherds of ENGS, which may date after *c.* 1700, unless they are from the Fulham Pottery, in which case they could date to *c.* 1670+. The remaining pottery from the same context is typical of 17th-century fabrics and forms and includes the complete profile of a tripod pipkin in BORDY with external lid seating.[223] Context [377] yielded a sherd from a selzer bottle in German stoneware (GERST), which would otherwise suggest a date of *c.* 1750+ and is probably intrusive.

Glass from D:Building 11 (153 fragments, 48 ENV, 3424g) dates mostly to *c.* 1640–90, based on fragments of green glass shaft and globe bottles in several contexts. There are fewer fragments of window glass than in D17.17 and at least 24 wine bottles are represented overall. Part of the neck with bipartite rim finish from a cylindrical wine bottle in context [263] dates to *c.* 1800–20 so is intrusive. The remaining glass from the same context includes fragments from shaft and globe wine bottles and part of a wine glass in colourless glass (<4011>). A fragment from an onion bottle in green glass in context [403] dates to *c.* 1680–1740.

A total of 97 clay pipe bowls, 292 stems and 9 mouthpieces were associated with D:Building 11. Most date to *c.* 1660–80 (types AO15, AO18 and AO13) and most have milling round the top of the bowl. Context [263] is dated to *c.* 1680–1710 by two type AO20 bowls. There are also rouletted stem fragments but no other kind of decoration on any of the pipes from this phase. A much more unusual find is a pipe bowl of type AO18 with the initials FA carefully handwritten in red ink underneath the heel (Figure 82). There are also five short strokes in red ink, possibly forming a letter E, on the left-hand side of the stem, close to the bowl. These marks were clearly made after the pipe had been fired, probably by the owner since the usual method of marking pipes at this period involved forming the pipemaker's initials in the mould. Several examples of late 17th-/early 18th-century pipes with marks in red ink are known from London (see further notes in Chapter 10). A possible (incomplete) type AO20 pipe in context [435] may also suggest a dating of *c.* 1680–1710.



Figure 82 Billingsgate: D:Building 11, Phase D17.18 [263], clay pipe bowl of type AO18 (c. 1660–80), with handwritten letters in red ink on the heel (left) and stem (right) (<571>) (scale 2:1)

This phase or event is a case where the site of a parish church not rebuilt after the Fire became a secular property, though the secular freeholder was still the parish; 36 parish churches in the City were not rebuilt.[224] The new buildings on the church site reused the stones of the church. There are a large number of pieces of carved stone (also called moulded stone) clearly from St Botolph's, not reused in the new brick buildings across the lane, but mostly for the lower parts of walls of D:Buildings 10 and 11 on the church site. They were probably rendered over, and no antiquarian interest in their reuse at the time should be presumed.

The house of Francis and Elizabeth Minshull can be reconstructed above the archaeologically-observed remains, by use of the documentary evidence: leases and the inventory of Minshull taken at his death in 1704 (transcribed in Chapter 10) (Figure 80). D:Building 10, the medieval undercroft formerly beneath the south part of the church, was let to Joshua Green, vintner, from 1671 and occupied by Francis Minshull from 1674. Between 1678 and 1693 Minshull expanded his premises to occupy much of the reduced site of the church (D:Building 11), as detailed in the section on the documentary evidence for the site above. Francis Minshull or Minshall (1649–1704) was a vintner, apprenticed in 1657. He was a Common Councilman for Billingsgate Ward from 1688 to 1691, and described

[222] Davey and Walker 2009.
[223] See for example Pearce 1992, fig 28, nos 149–54.
[224] They are listed in RCHME 1929, 200.

as an orange merchant in 1693.[225] Another orange merchant was among his neighbours in Thames Street.

The archaeological remains can now be compared with the evidence from Minshull's inventory of 1704, to explore the house. The property was on three floors (or two floors and a garret), best proposed as forming a single range over the undercroft (D:Building 10). Two parish burial vaults, one or two shops, and the passage lay between this range and the street. There were three garrets, two with fireplaces and the middle one without, evidently smaller (its contents worth much less than either of the other two). The first floor below comprised at least two chambers, 'Over the Kitchen' and the Widow's Room. There were beds and a fireplace in each. The Widow's Room had four pairs of window curtains, so probably four windows. The Dining Room may have been either on the first floor or the ground floor, where the Little Parlour (apparently without a fireplace) and the well-appointed kitchen lay. The various fireplaces can be lined up to form two chimney stacks, perhaps both on the south side of the range. But how the rooms on the ground and first floor were arranged, and the location of a necessary staircase, are difficult to establish. It seems most probable that the kitchen lay at the west end, entered from the passage from Thames Street. It would have another door to the small yard. This would anchor the first floor room 'over the kitchen' at the west end, and the rest of the first floor was either a large widow's chamber or the dining room and the widow's chamber. If the dining room was on the first floor, the Little Parlour would be the only other chamber on the ground floor with the kitchen; and probably the staircase leading to all floors between the two.

Some time between 1704, when all the Minshull leases were renewed, and 1778, the buildings on the property were rebuilt. This greatly reduced the access to the vaults from Thames Street. The resulting narrow passage is shown by Horwood in 1813.

Event 4: construction west of the lane: D:Building 12

(D17.21)

presumably built by Child, 1667–8

In the south-west, a new D:Building 12 was reconstructed on the same lines as the pre-Fire D:Building 6 (period D17.21), additionally incorporating the area formerly occupied by the south-eastern extension of D:Building 5, the church vestry. It is assumed that the new building was divided into two rooms like its predecessor, reusing the pre-Fire central wall, although any evidence for this was destroyed by the base of a massive later rebuild (see period D17.24); the relevant figure therefore shows a conjectured wall. These rooms are called A (on the south) and B (on the north) (Figure 83).

In both rooms, the existing semi-basement level of the destroyed pre-Fire structure was raised by the extensive mixed deposits, sealing any stubs of former buildings. In room B, a burnt plank was probably redeposited from local reconstruction work, while two short planks laid near the dividing wall had a structural function, since they appear to have been respected for a time by later deposits. A plinth of bricks one course deep was constructed against the south wall of D:Building 10, and an earth surface laid in the area. An extensive deposit of clay silt covered the existing surface after the new foundation was built and probably represents the use of the area. This formed the base for a series of features, some of them insubstantial, including two bricks laid on bed near the western limit of excavation, and two decayed east–west planks nearby, while others were more clearly functional, notably a central plinth consisting of two rows of north–south bricks. The southernmost plank lay adjacent to the plinth, which was probably a postpad for a pillar supporting the floor above, in much the same way as the large post in the centre of D:Building 10. The threshold was also reconstructed, or resurfaced, with a layer of mortared tiles and ragstone. Many of these elements were partly sealed by further tread deposits, but were not wholly covered. Four isolated bricks laid on an outlier of these deposits in the south may have been the remains of a floor, but there was no evidence for it having extended

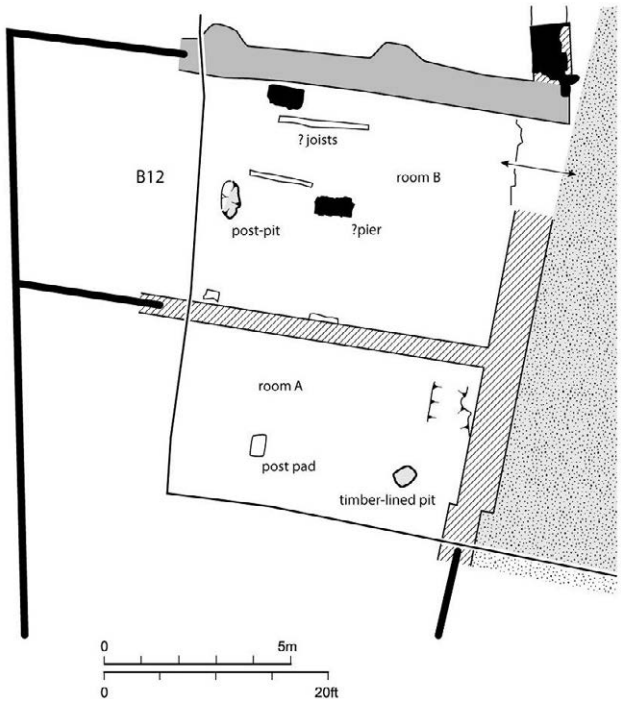


Figure 83 Billingsgate: D:Building 12 (Event 4) with property boundaries from the 1680 plan (1:200)

[225] Woodhead 1965, 116.



Figure 84 Billingsgate: tiles from D[721]: <965>, <993>, <997> <1311>, <1312> (scale 1:3)

any further. In the west, a large postpit containing a post packed with chalk lay roughly on the centreline of the room, together with the brick plinth further to the east. The two features were presumably related in function, although the post was a slightly later addition.

In room A, a similar sequence of events occurred, with the deposition of a series of mixed deposits incorporating a large proportion of building materials derived from the pre-Fire structure. These formed a rough surface, broadly level with that in the neighbouring room. Along the centreline of the room, a circular 0.7m-diameter timber-lined cut intruded into the new surface adjacent to a now-buried pre-Fire drain; this suggests that it was used as a soakaway, and that the drain was still capable of functioning. The fill was sealed by occupation layers, which implies that the soakaway was shortlived.

In the north-east corner of the room, an unusual shallow L-shaped feature cut the occupation horizon. The cut was backfilled with silt and brick fragments, which suggests that it may have been intended as a hardwearing surface inside a doorway leading either to the lane or room B to the north. Finally, a sub-rectangular cut was inserted along the centreline of the room. This contained a mortared ragstone slab which can only have functioned as a postpad. In this respect, the feature can be regarded as a counterpart to the post positions in the neighbouring room, and in D:Building 10.

There are 29 delftware wall tiles from period D17.21 (in D[721]). Although most are highly fragmentary, many seem to be of the same type: Dutch, conventionally dated to 1670–*c* 1700, with spider head corners showing figures set in a landscape scene mid-way up the tile (Figure 84, <965>, <993>, <997> <1311>, <1312>). The scene on the best-preserved example has been interpreted by Ray[226] as a religious scene showing 'The Prodigal Son' (Luke 15 v.16). Betts and Weinstein[227] have expressed doubts about this interpretation, saying it would appear to be a secular scene showing a shepherd. The kneeling figure has a tall stick typical of such scenes. Similar tiles from the same context would all seem to depict secular subjects. One of these is delightful, showing a young man holding a flower up to his sweetheart (<965>). Two, showing bare-breasted women, which are not uncommon on Dutch delftware tiles, would certainly appear not to be biblical. Another tile (<1312>) has the lower third of the tile surface blackened. This would appear to be heat damage when used in a fireplace or similar heated structure. A further wall tile, probably of pre-1666 date, has had its surface totally blackened. In this case, this may be due to the actions of the Great Fire.

Other delftware wall tiles from [721] include a plain black example and a small piece with what appears to be a mock-marble pattern in black and white <1435>, both probably Dutch. Period D17.21 also produced 14 fragments of tin-glazed floor tiles. These were listed in the publication of 2018, and several are illustrated either there or in the study by Weinstein and Betts of 2010.[228] They include part of an unusual blue and yellow rectangular tile (<1313>) made in Antwerp in the period 1575–1625. Others with a blue and purple multi-circular border were probably made at Aldgate in 1571–1615.[229]

A number of medieval lead-glazed (from [701], [721]) and post-medieval plain unglazed (from [701]) floor tiles were recovered. Some of the unglazed examples have nail holes and are clearly of Low Countries origin. Most of the floor tiles are broken and mortar covered indicating reuse. Context [721] produced a number of complete, and substantially complete peg tiles which measure on average 268 x 152 x 15mm. All have two round, or roundish nail holes, 12–14mm in diameter. From the same context came a small quantity of roofing slate. A small piece of shelly limestone stone paving was recovered from context [699].

[226] 1973, 126–7, no. 83.
[227] 2010, 166–165, no. 378.
[228] Betts 2018, 374–5, table 85.
[229] Betts 1999, 173–174; 2018, 374.

Given the large number of decorated and plain tiles recovered from this phase, D17.21, the question can be put: are they from the building, or just incorporated into layers of rubble which made up its construction? This example can stand for the other buildings also. Two layers within this phase contained significant finds: [701], 'a surface of tiles, incorporating ragstones at several points, and broken fragments of brick and tile packed to form the surface elsewhere, the whole set in sandy mortar and with a spill of ash and charcoal at its surface'; and [721], 'an extensive dump of brown silt and some variously sized brick and tile fragments containing flecks of mortar, tile, brick and charcoal'. Of the two, it seems likely that [701] was intended to be a rough floor within the building. The tiles used to make its surface were old and encrusted with mortar. The other layer was a dump of indeterminate character. The conclusion is that unless there is clear evidence otherwise, examples of medieval and 17th-century floor tiles and wall tiles on the Billingsgate site were incorporated usually by chance in layers of building rubble after 1666. A few were used to consolidate new floors.

Pottery from this phase, associated with the construction of D:Building 12 (219 sherds, 195 ENV, 2.79 EVE, 3230g) is dated at the latest to *c.* 1680–1720. Residual medieval sherds were recorded in six contexts, but the fabrics and forms are otherwise typical of 17th-century usage in London, with several contexts dated to *c.* 1630–80 by the presence of tin-glazed ware decorated in styles of the period. These are the most sensitive chronological indicators for pottery, far more so than everyday utilitarian wares, with potteries constantly responding to changes in public taste for more decorative ceramics.

Surrey-Hampshire border wares (both white and red – BORDG, BORDY, BORDO and RBOR) and London-area post-medieval red wares (PMR) remain the mainstay of household pottery for use in food preparation, cooking, storage and basic serving, as seen in other 17th-century phases on the site. The chief forms identified are bowls and dishes of various shapes and sizes, and tripod pipkins, with examples of chamber pots and a chafing dish also recorded. The medium-sized context [721] (*c.* 1680–90) also included six sherds from sugarloaf moulds in PMR, as well as part of a syrup collecting jar and a sturdily built industrial vessel with at least one hooded aperture (purpose unknown). There is no METS and little PMFR, both of which were in less frequent use in London by the later 17th century.

Imported pottery consists largely of Rhenish stonewares: Bartmann and plain jugs in Frechen stoneware (FREC), a jug in Langerwehe stoneware (LANG), drinking jugs in Raeren stoneware (RAER), which were by this date long out of everyday use, and jugs in Westerwald stoneware (WEST), which continued to be imported well into the 18th century. There are also sherds from bowls in north Italian marbled slipware (NIMS), part of a jar in Iberian micaceous ware (SPAM) and part of a bottle or jug in Portuguese tin-glazed ware (POTG; Figure 85). The decoration appears to be based on a Chinese landscape with a wide band of regular gadrooning below. Imported tin-glazed wares of this kind became much less common in London after the establishment of the local industry in the late 16th century and especially after the Navigation Acts of the 1650s and 1660s restricted the importation of foreign goods, including ceramics from the Continent. There are, however, examples of imported Chinese blue and white porcelain (CHPO BW) in the strata of D:Building 12, with three sherds from teabowls decorated in late Ming style (CHPO MING) in context [694], part of a plate in [702] and a saucer in [721]. These are part of the growing market for exotic oriental ceramics suitable for drinking hot liquors and for the dining table, although supply fell off during the middle decades of the 17th century as a result of civil war in China. What is curious is that the layers forming the floors of the warehouse, D:Building 12, should contain pieces of Chinese porcelain and Chinese teabowls.



Figure 85 Billingsgate: D:Building 12, Phase D17.21 [721], part of a bottle or jug in Portuguese tin-glazed ware (POTG), with Chinese-style decoration, 17th-century (scale 1:2)

The latest context is [721] (with 64 sherds) which includes a good range of imported wares (FREC, NIMS, CHPO, POTG and SPAM) and a wide range of London-made tin-glazed ware decorated in different styles. Wares with plain white glaze (TGW C) consist of a candlestick, a lid, ointment pot and vase, while wares decorated in blue on white or with polychrome decoration in mid 17th-century styles include dishes (one with a tulip pattern popular at the time) and cylindrical jars used for pharmaceutical preparations. There is also part of a plate decorated in a distinctive style popularly known as 'Chinamen among grasses' and inspired by imported Chinese porcelain (TGW F), as well as plates (both round and octagonal) with dark blue decoration on a very pale blue ground (TGW H) typical of the late 17th century. Comparable tin-glazed wares were also found in context [699], dated to *c.* 1680–1720.

A total of 151 fragments of glass (38 ENV, 363g) were recovered, and have mostly been dated broadly to the 16th/17th century, with tiny fragments of window glass predominant and not datable more closely. The presence of identifiable fragments of crown spun glass in contexts





Figure 86 D:Building 12, Phase D17.21, clay pipes, type AO17 (*c.* 1660-80) ([698] <7162>) (© Museum of London); Dutch (*c.* 1655–85) ([840] <1265>) (scale 1:1)

[584], [721] and [901] gives a date after *c.* 1600. Part of a diamond pane was recorded in [721] with grozed edges from individual panes present in several contexts. Part of a globular phial in natural green glass (<3857>) in context [694] dates to *c.* 1650–1700, with fragments from other pharmaceutical phials in the same context, and part of a cylindrical phial in [901] (*c.* 1600–1800). Green glass wine bottles provide closer dating for contexts [721], which include part of a shaft and globe bottle and a shaft and globe/onion bottle (*c.* 1640–90), and an onion bottle in [699] (*c.* 1680–1740). Clay pipes (42 bowls, 122 stems and 5 mouthpieces) are dated mostly to *c.* 1660–80 by bowls of types AO13, AO15 and AO18, as well as one example of AO17 (Figure 86). These are mostly rouletted to some extent but not decorated or marked. The latest contexts are [721] (*c.* 1700–10) and [761] (*c.* 1700–70), both of which include pipes of type AO25. One marked pipe bowl was found (<1265>), in context [840]. This is a Dutch pipe datable to *c*.1655–85 with the initials AI stamped incuse on the heel (Figure 86).[230] There are also stem fragments from Dutch pipes with roll stamped decoration (contexts [721] and [840]).

D:Building 12 comprised two warehouses, their walls largely conjectured (Figure 83). They reused the lines of their pre-Fire predecessors. They date from after 1667 when the vestry was demolished. The building, like its neighbours, is shown in outline on Ogilby and Morgan's map of 1676, but the lines indicating divisions between buildings on this side of the lane are faint.

This phase, D17.21, contained the first clear examples of cowrie shells in post-Fire layers: in [642], a layer of silt and brick fragments, and [684], described as 'two bricks laid on bed'. These and surfaces around them are interpreted as floor levels within the new building, though as noted above, the distinction between layers laid down during construction and those functioning during the building's life is not clear. But the shells were within D:Building 12, west of the lane and south of the former church site.

Cowrie shells were found in several layers within several of the Billingsgate buildings, but the list of cowries and discussion of them is brought together here in one place. A total of 534 cowrie shells was recovered from strata mainly of D:Buildings 12 and 13, that is the utilitarian and probably warehouse buildings behind the houses on Thames Street (Table 8). The earliest (apart from an occurrence in a pre-Fire layer) were in phase D17.21, in D:Building 12, not accurately dated but between 1667 and probably the end of the century. Several species were represented: money cowrie (48 shells), gold ring cowrie, also known as ring cowrie or ringtop cowrie (449 shells), gold ring dark variation cowrie (33 shells) and Lamarck's cowrie (four shells) (for examples, Figure 87). A detailed report by Alan Pipe is in Chapter 10, pp. 251–252.

The earliest examples are from layer D[471], which is in period D16.5, but this is a phase of burials in the pre-Fire church. Documentary sources indicate that English merchants were acquiring cowrie shells from the 1630s;[231] but this occurrence in the church seems out of place. The probable warehouses D:Buildings 12 and 13 were evidently used for storing cowrie shells, no doubt among many other commodities, in the immediately post-Fire decades. There were a small number of shells in the layers within D:Building 9 also.

[230] Atkinson and Oswald 1972, fig 78, nos 17–19.

[231] Hogendorn and Johnson 1986, 41.

contexts [all site D]	period and date	building	documentary evidence and notes
427, 471	16.5	pre-Fire; see note below	
642, 684	17.21, 2nd half 17th century	Building 12, west of lane, Event 4	Presumably built by Child, 1667–8
972	17.4, after 1667, before 1676	Building 13, east of lane, Event 6	Rebuilt by Child, occupied by Ashton and Warburton
271, 864	17.5, by 1680	Building 13, Event 6	
897	17.6, by 1680	Building 13, Event 6	
194	17.7, shortly after 1700	Building 9, east of lane, Event 5	Rebuilt by Child
528, 540, 568	17.22, shortly after 1700	Modifications to Building 12, Event 8	Tenants Ashton, Peacock and Warburton from 1685
527, 616	17.8, around 1700	Modifications to Building 13, Event 11	Another modification by Ashton or his colleagues; D[602] contained the largest number of cowrie shells
473, 602	17.10, around 1700	Modifications to Building 13, Event 11	
430, 441, 504, 510	17.23, around 1700	Further modifications to Building 12, Event 10	Presumably by Ashton
363	17.24, 1700–32	Final alterations to Building 12, Event 13	A major rebuilding, presumably by Ashton and his colleagues
269, 288	17.26, 1700–32	Final alterations to Building 12, Event 13	
577, 613, 644	17.11, 1700–32	Final alterations to Building 13, Event 14	Presumably by Ashton
336, 400	17.15, 1700–32	Final alterations to Building 13, Event 14	

Table 8 Occurrences of cowrie shells in deposits of periods 16.5 and 17 at Billingsgate



Figure 87 Selected cowries from Billingsgate (Site D): top row, dorsal view, bottom row, ventral view. From left to right Gold ring cowrie *Moneta annulus*; Gold ring cowrie *M.annulus* (dark version); Money cowrie *Monetaria moneta*; Lamarck's cowrie *Naria lamarckii*; Lamarck's cowrie *Naria lamarckii* (worn example) (scale 1:1)

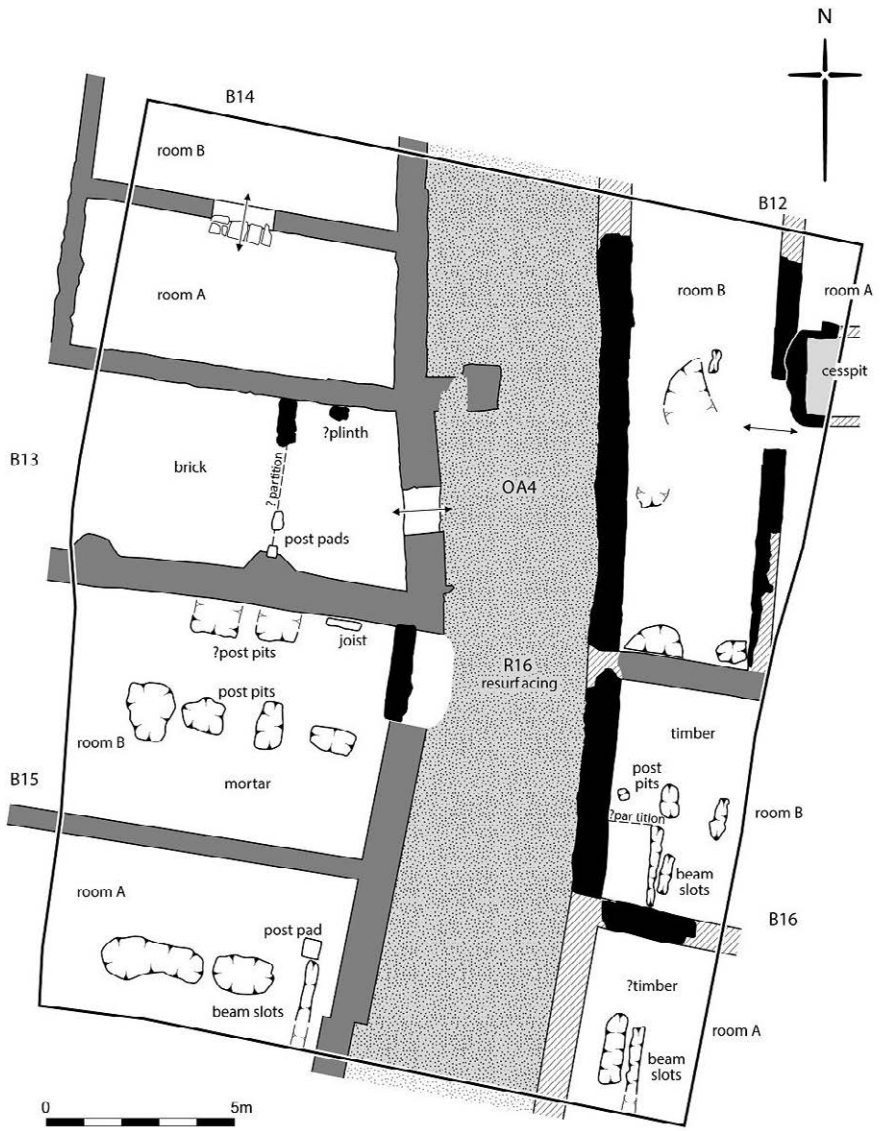


Figure 88 Billingsgate, Events 5–8: D:Buildings 9 to 13 (1:200)

Cowrie shells, from around the Maldive Islands near Sri Lanka or from the Philippines, had long been used as a currency in areas of west Africa before the Europeans arrived; they become more common in African archaeological contexts from the 15th century, and the first major import of cowries into West Africa by Europeans was by the Portuguese into Benin in 1515.[232] They have been found on several sites in 17th- and 18th-century Virginia (USA), concentrated in colonial ports that served the slavery trade. These shells may have been used in the colony as currency in an economy short of coin.[233] Though consumer goods were increasingly sent to Africa, cowries were still being used in the 19th century.[234] For the Europeans, cowries had added virtues of being useful as ballast in empty ships and they did not rot during long voyages.

Event 5: reconstruction and occupation of D:Building 9, and a new lane

(D17.3, 7, 20)

1680–1720 from artefacts

A summary plan of Events 5 to 8 is shown in Figure 88.

The north–south internal wall of D:Building 9 was reconstructed chiefly in brick on a rubble base cut into the old wall (period D17.3; Figure 89). The superstructure appears to have included a wide doorway in the same position as its predecessor (that is connecting the two rooms which are grouped here as D:Building 9). At the south end, the new wall abutted the south wall of the building, which remained in use. The frontage to the lane was reconstructed as well, replacing a presumed

[232] It has been estimated that at least 30 billion cowries were shipped to West Africa from the early 16th century to the third quarter of the 19th century. Cowries are ubiquitous artefacts on African sites, and are widely used as chronological indicators for dating strata: Ogundiran 2002.
[233] Heath 2016.
[234] Inikori 2011 describes the use of cowries in west Africa from the 15th century to the 19th.

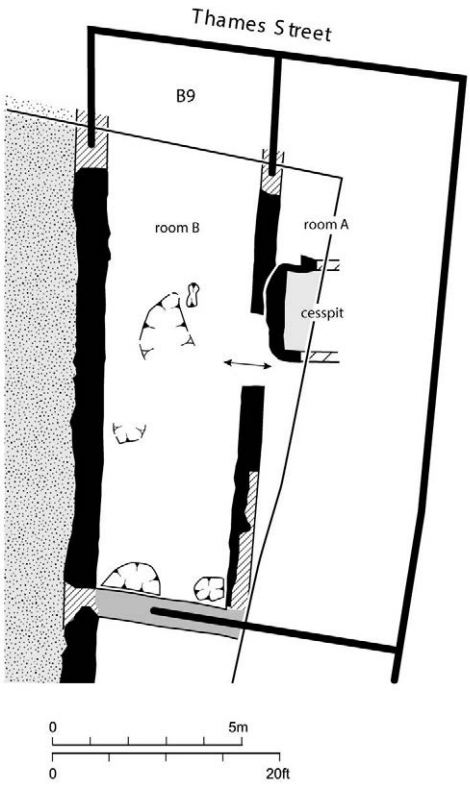


Figure 89 Billingsgate: D:Building 9 as modified in Event 5, with property boundaries from the plan of 1680 (1:200)

earlier wall in the same location. Deposits included a decorated floor tile (in [789]) of mid–late 14th century Penn type, decorated with what may be Eames (1980) design 1845.

With the completion of the initial stages of reconstruction work, internal activity was resumed in room B (period D17.7) with the deposition of silty sand layers in the south of the area. These were cut in the south-east by a small pit abutting the east wall, while further north near the west wall, a small, probably circular cut intruded into deposits of period D17.2. Both features were filled with similar silts, sealed by an extensive makeup deposit, which was in turn cut by a third feature in the south-west corner of the room against the south wall. This semicircular cut was more substantial than the others, being 0.79m deep, although the fill was similar. None of the three cuts was associated with a proper surface, and it seems possible that they were connected with building works; for scaffolding, inspection pits or similar. One layer contained cowrie shells.

The next phase of activity involved the deposition of dumps containing large fragments of building materials, including general rubble, chalk, brick and mortar, over most of the building area, some of which crossed the threshold into room A. The uppermost deposits were cut in the centre of room B by two further features; a small north–south slot, and immediately to the west, a larger cut or channel, which broadened out out the south. Once again, their purpose is unclear, although the small slot may have been structural. A decayed timber at the extreme west side of the room (not shown) may have been the last surviving element of a wooden floor.

Two decorated tin-glazed tiles from this phase are illustrated (Figure 90). One has a Pickleherring pothouse design with a repeating geometric strapwork pattern dating to *c.* 1618–50 (<1035>).[235] The other, which has a flower design on what appears to be a floor tile, may be from the Rotherhithe pothouse dating to *c.* 1638–1650 (<1452>). The same flower design is on a tile from D17.18. Other building material comprises a plain medieval green on white slip Low Countries floor tile and a number of roofing slates; and a carefully carved brick moulding from a decorative feature such as a string course (Figure 91, <5064>). The brick has two cut side faces resulting in a breadth of only 49–52mm. It is a London-made brick of probably late 16th–17th century date. Like the tin-glazed tiles, this may have come from a pre-Fire building, presumably on the site.



Figure 90 Tin-glazed floor tiles from D[531], <1452> and <1035> (scale 1:3)



Figure 91 Brick moulding D[193] <5064>) (scale 1:3)

In room A, the existing cesspit (D:Cesspit 1) was recut and lined with brick facings, and a cobbled surface laid, additionally forming a threshold into room B. Deposits of ashy mortar in the area to the north appear to have been a contemporary surfacing of the room away from the threshold; the mortar held an edging of vertical tiles in place against the dividing wall. The initial organic fills of the cesspit were eventually sealed

[235] Betts and Weinstein 2010, 105, nos 83–4.

by chalk rubble, which also overlapped occupation deposits accumulating on the mortar surface. The rubble suggests that the cesspit ceased to function during this phase. The lane was resurfaced, at least in the north (period D17.20). Finds included pieces of coal and copper slag; a plain medieval yellow glazed floor tile and two tin-glazed floor tiles. One tin-glazed floor tile has a black surface, whilst the other, which is very worn, shows a fragmentary colour scheme in white, blue, and brown. A layer [4] produced a token minted by George Shelton from his premises at St Mary Overy stairs (across the river in Southwark).

There are 64 sherds of pottery (60 ENV, 0.92 EVE, 833g) associated with the construction of D:Building 9. Much of this seems to represent dumped material that includes redeposited, residual medieval wares (22 sherds) dating to the 13th to 15th centuries. These were mixed in with 17th-century pottery in the same range of fabrics and forms found in earlier phases of post-Fire construction. Surrey-Hampshire border wares (red and white) and London-area red wares are found with PMFR and imported FREC, SPAM and POTG (part of a plate in [438]). A sherd from a sugarloaf mould in PMR was recorded in context [531]. Tin-glazed ware provides a dating of *c.* 1630–1700 for context [4], and the latest pottery comes from context [725] in phase D17.7, which is dated to *c.* 1700–40 by part of a cylindrical mug in English brown salt-glazed stoneware (ENGS), found with RBOR and TGW C.

Twenty-three fragments of glass (13 ENV, 284g) were also recorded. Apart from small fragments of window glass dated broadly to *c.* 1500–1800, the best dating evidence is provided by green glass wine bottles. Fragments from shaft and globe/onion bottles in contexts [4], [436] and [438] suggest a date of *c.* 1640–1740, although they are too fragmentary to allow closer dating. The bottle from context [4] is heavily burnt and distorted, probably as a result of the Great Fire. The complete necks from two onion bottles were recorded in contexts [470] and [725], giving a date of *c.* 1680–1740. Fragments of a cylindrical phial in natural green glass from [482] are dated to *c.* 1650–1800 and part of a goblet in colourless glass from the same context has decorative rigaree trailing around the base of the bowl.[236] There are 14 clay pipe bowls (72 stems, 1 mouthpiece) in contexts associated with this phase of D:Building 9, and most date to *c.* 1660–80 (types AO15 and AO18). The latest pipes are of type AO22 (*c.* 1680–1710) in contexts [4] and [470]. Most pipes are milled around the top of the bowl, and there are no decorated or marked pipes.

A date in the period 1680–1720 is suggested for the construction forming Event 5 from the artefacts, but some of the layers may be from its period of use. D:Building 9 was part of the collection of properties leased by Josiah Child to Joseph Ashton in 1699, but apparently not before. In 1699 the western of the pair was the Hare, lately occupied by Edward Leaver (a 'pitch and tar man'); the other house was occupied by Richard Hopkins, an orange merchant like Minshull.

The buildings of this phase were probably in part domestic, as shown by the cesspit.

Event 6: construction east of the lane: D: Building 13, south of D:Building 9

(D17.4–6)

by 1680, since it appears on the plan of that year

East of the lane work began on the construction of a new structure with brick walls, D:Building 13 (Figure 92). This activity was contemporary with the reconstruction of the adjoining D:Building 9 to the north, against the street. Deposits incorporating a high proportion of demolition debris were used to raise and level the ground area within the new structure (period 17.4). A number of London-made red and orange bricks were retained from the west wall ([707]). All are very similar in size, averaging 230 x 108 x 60mm.

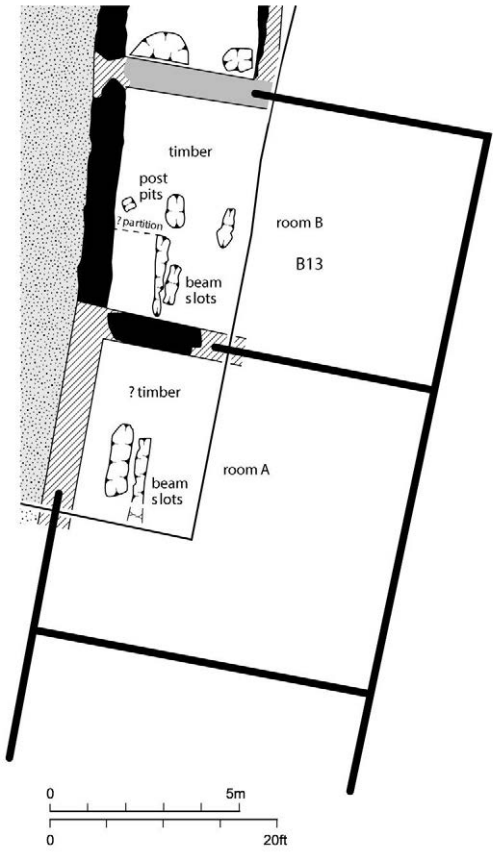


Figure 92 Billingsgate: D:Building 13 in Event 6, with property boundaries from the plan of 1680 (1:200)

[236] For example, Willmott 2002, fig 60, late 16th/17th century.

In the excavated part of room B of D:Building 13 (period D17.6) there was some grading, the larger debris being toward the base of the deposits. An irregular cut at the eastern edge of the dumps appears to have been sealed immediately by further dumps. These later dumps were themselves cut by a series of features, which included a large postpit in the centre of the room to the west of the earlier cut, and immediately to the south two north–south beam slots still containing decayed beams. The eastern slot contained cowrie shells in the backfill (D[897]). At the west edge of the room, opposite the central postpit, a much smaller cut may have contained a subsidiary post. The fact that the beam slots were confined to the south-west may imply a purely local feature; the uppermost makeup deposit in the area occupied the same area, and had a distinct northern limit opposite the end of the western slot, which may therefore have marked the position of a partition. Alternatively, they may be the remains of a wooden floor or platform.

Artefacts included three fragments of blue on white tin-glazed tiles, two of which have part of a flower vase design (<998> (Figure 93), <1261>). This was a common design made at both the Pickleherring and Rotherhithe pothouses *c.* 1618–60.[237] These flower vase tiles seem to have been employed as both flooring and walling, with the latter practice possibly being of post-Great Fire date. The other design has the very edge of what may be a tile with a Tudor rose and strapwork pattern, another popular design used in the interior of London buildings during the 17th century.[238]



Figure 93 Tin-glazed tile with part of a flower vase design, D[unknown context] (<998>) (scale 1:3)

In the western part of room A to the south, some initial deposition was cut by two north–south slots which occupied the central area (period D17.5). The eastern slot appeared to have a post position at the south end, otherwise, both probably held horizontal beams. Like the similar features in room B, they may be interpreted as the remains of a wooden floor or platform, since a spread of organic silt between the western slot and the alley wall supported the remains of planks ([864]; this layer contained over 100 sherds). Alternatively, the slots may simply be part of an internal screen or the base of a staircase, since they were not necessarily contemporary; further localised mixed deposits incorporating building debris sealed the western beam, but not the eastern, which was not sealed until later. The one may therefore replace the other. This phase produced some cowrie shells from two layers.

A large quantity of pottery (400 sherds, 243 ENV, 4.65 EVE, 3779g) was recovered from contexts associated with the demolition debris used for levelling the ground. Many of the sherds are small, coming from long-lived, widely available fabrics and are only broadly datable through lack of diagnostic detail. Much of the pottery comes from small contexts dated to *c.* 1550/80–1700, with Surrey-Hampshire border white and red wares predominant. These are found with PMR and PMFR, both of which are less frequent in these phases. The main identifiable forms are bowls and dishes, including flared and flanged shapes, as well as tripod pipkins and chamber pots. The complete profile of a tripod pipkin in BORDY from [961] is notable for having had at least one of its feet sawn off. The form was designed with three feet, specifically to raise it above direct contact with the heat source used for cooking.[239] This particular vessel has no evidence for sooting so appears not to have been used in this way, which is perhaps why the feet were removed. Little tin-glazed ware was recorded in this phase of construction, with sherds of TGW D and METS providing a dating of *c.* 1630–80/1700 for no more than five contexts, including the large context [864] (with 150 sherds). The pottery from this context consists mostly of Surrey-Hampshire border wares with only one sherd from a dish in TGW D. The latest contexts are [767], dated to *c.* 1680–1740 by part of a plate in TGW H, and [858], which yielded the base of a cylindrical mug in Westerwald stoneware (WEST) with part of a medallion depicting Queen Mary (Figure 94). This comes from a primary floor in D:Building 13; further sherds from the same vessel were found in [527], a later floor level in the same building (Event 11); and in [429], the decline of the building (Event 14). A partial inscription survives: MARIA.D.G.MAG.[B]RIT.FRANC... This gives an overall date of 1689–1702 during the reign of King William, although the mug was probably made to commemorate the coronation.[240] There are few other imported wares, although the complete base and neck of a Bartmann jug in Frechen stoneware from context [1081] are unusual in having a small round hole drilled through the centre of the base post-firing (also Figure 94). The purpose of this is uncertain, although it would have been unsuitable for storing and serving any kind of liquids in the usual manner. The only other imported wares are mugs in Raeren stoneware and part of a dish in Beauvais sgraffito ware (BEAU), as well as one small sherd of Chinese porcelain.

There are about 300 fragments of glass (27 ENV, 497g) associated with this event. Contexts [972], [630] and

[237] A complete tile with the same design is illustrated by Betts and Weinstein 2010, 121, no. 162.
[238] Betts and Weinstein 2010, 111, no. 111.
[239] Pearce 1992, 18–20.
[240] Reineking von Bock 1986, no. 578.



Figure 94 D:Building 9, Phase D17.5 (with D17.8 and D17.15), Westerwald stoneware (WEST) cylindrical mug with royal inscription for Mary, 1689–1702 ([858] <1007>, [527] <765>, [429] <862>) (scale 2:1); Phase D17.6 [1081], Frechen stoneware (FREC) Bartmann jug with perforation in base, 17th-century (scale 1:2)

[845] are all dated to *c.* 1640–1740 by fragments of shaft and globe/onion bottles in green glass. It is not possible to date them more closely as they are too small and fall between the two forms. There are also fragments of shaft and globe bottles in [893] and [896], which can be more closely dated to *c.* 1640–90. The very high fragment count comes from the remains of what appears to have been a single cylindrical phial in natural green glass from context [819]; this has shattered into at least 250 minute fragments. There are fragments of phials in other contexts, as well as window glass, which can generally suggest a wide date range of *c.* 1500–1800. Part of the folded foot of a goblet in colourless glass from context [864] (<3899>) has light optic-blown vertical ribs and may date to the 16th or 17th century.[241]

Clay pipes (37 bowls, 162 stems, 9 mouthpieces) date chiefly to *c.* 1660–80 (types AO13, AO15 and AO18). There is one earlier pipe, a type AO10 (*c.* 1640–60), recorded with a type AO15 in [394]. The latest pipes are of types AO20 and AO22, dating to *c.* 1680–1710, in contexts [893], [896] and [913]. Most pipes have milling around the rim of the bowl to some extent and there are also two examples of milled decoration on stems, one of them situated 9 cm from the bowl, which is of type AO13 ([913]). Only one pipe is marked, a type AO13 in context [864]. This has the letters S within a V stamped incuse on top of the stem, behind the bowl. Marks of this kind are known on mid to late 17th-century pipes from London and other parts of the country and do not appear to represent the work of any one maker with the initials SV. It has been suggested by Adrian Oswald that the letters stand for 'Smoke Virginia' and were a means of advertising tobacco imported from the colony.[242]

One object from D:Building 13 in period D17.6, a copper-alloy pen [896] <903>, was published in Egan's *Medieval household* catalogue of medieval objects, but he noted its post-medieval context and suggested that it might be a post-medieval object.[243] This pen for writing on parchment or paper, which would have held ink in the grooves of its nib, is illustrated in Figure 95.

Phases D17.4 to D17.6 comprise the construction of D:Building 13 on the east side of the alley. The decades of use of the building, as opposed to its construction, are represented by excavated periods D17.8 and D17.10 below. The precise period of use of the interesting pen therefore remains uncertain, and it is probably best to consider it a piece from Great Fire debris.

[241] Willmott 2002, figs 77, 59.

[242] Oswald 1984; Le Cheminant 2008.

[243] Egan 1998, 271, cat no 898.

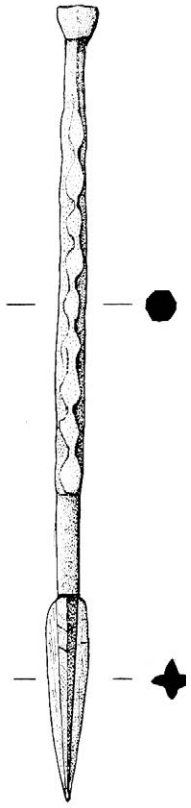


Figure 95 Billingsgate, copper-alloy pen D[896] <903> (as drawn in Egan 1998, Figure 209, no 898) (scale 1:1)

This building was presumably part of the wharf buildings let by Child to Joseph Ashton, John Peacock and Samuel Warburton in December 1685. It would be attractive to suggest that the pen belonged to one of the wharfingers, perhaps even Ashton himself. But the excavation report says it came from layer D[896], 'dark brown silt and a little coarse sand and clay containing ragstone, sandstone, brick, tile and flint cobbles and large fragments of tile and brick' forming the top of dumping, presumably during construction, of the northern room B.

Event 7: modifications to D:Building 10

(D17.19)

shortly after 1700

In D:Building 10, west of the lane, a north–south foundation of brick and ragstone for a brick stub wall was constructed against the north wall, cutting into the existing brick floor (period D17.19, shown in Figure 88). Two mortared ragstone postpads were also constructed to the south of the new foundation, continuing its line to the opposite wall. Together these must have marked a structural division within the former undercroft; the difference in character of the two parts of the partition may indicate the presence of a doorway between the two areas. In the newly subdivided area to the east, a small ragstone feature set against the north wall may represent a plinth or further postpad. Fragments of brick floor, set east–west to form north–south lines, survived in the east of the room, suggesting that the new room was resurfaced, or the original floor repaired; the mortar used was similar to that employed in the stub wall.

A number of brick samples were taken. From a brick floor [195] are two bricks, a dark red one in fabric 3032 and a yellow one in fabric 3035. The brick in fabric 3032 measures 220 x 100 x 64mm, which is very similar to that in fabric 3035 which has a size of 216 x 103 x 60mm. The yellow brick in fabric 3035 is characterised by a frog in the base. Inside the frog, at either end, are circular depressions 26mm in diameter. This is a London stock brick, made predominantly along the Thames Estuary in north Kent, which were first used in London around 1725–50 and continued in use into the mid-20th century.[244] London-made dark red bricks in fabric 3032 were introduced after the Great Fire. The bricks used as part of a partition in the building ([245]) are in fabric 3032; one has mortar on its broken edge indicating possible reuse. They measure more or less the same as those in the floor, 220 x 99 x 63mm.

Three sherds of pottery (2 ENV, 2g) were recorded in context [255]. These consist of one small sherd of bone china (BONE), giving a latest date of 1794–1900 and clearly intrusive, as well as one small sherd from a bottle or jar in ENGS, which could date as early as the end of the 17th century but has no diagnostic features. There are also two small fragments (2 ENV, 3g) from bottles of uncertain form in green glass, dating to *c.* 1540–1800, and one clay pipe stem (*c.* 1580–1910).

These are presumably modifications to the use of the old undercroft by Minshull's widow Elizabeth after the death of Francis Minshull in 1704. The floor was laid with red and yellow bricks, the latter of a style normally dated to 1725–50, but perhaps a little earlier here.

Event 8: modifications to D:Building 12

(D17.22)

shortly after 1700

In D:Building 12, next to the south, a new mortar surface was laid in room B, cut soon afterwards by a series of six features (Figure 96). These included four large subrectangular postpits arranged along the centreline of the room, and aligned alternately north–south and east–west; the significance of this is unclear. The two eastern cuts contained the remains of posts, and the two western cuts contained planks, presumably functioning as postpads. The resulting line of timbers, set approximately 2m apart, would have supported

[244] T Smith, pers comm.

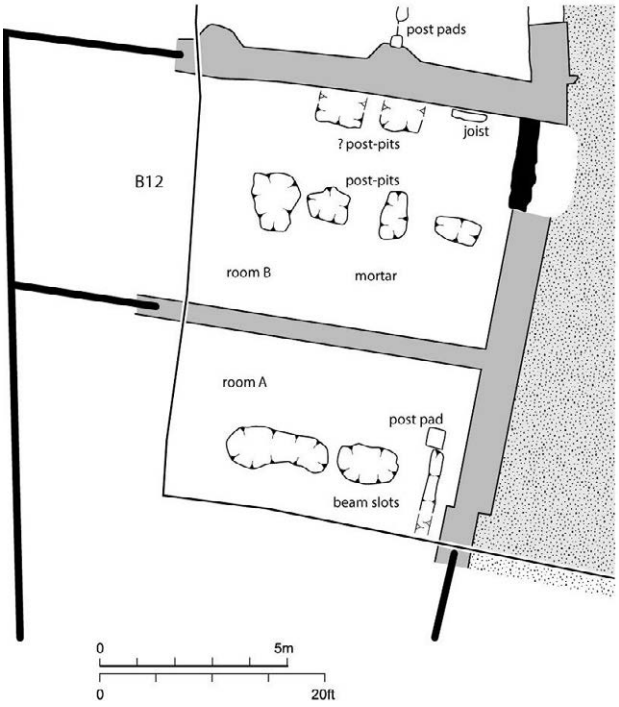


Figure 96 Billingsgate: D:Building 12, as amended in Event 8, with property boundaries from the plan of 1680 (1:200)

the floor above, thereby replacing the period D17.21 features, in one case directly: the D17.21 brick pier was reused to underpin the planking. Occupation silts accumulated on the mortar surface after the backfilling of the postpits, which suggests that all of the features were contemporary.

The final two cuts were again rectangular, and set against the north wall. Their purpose is unclear; although they may have contained buttressing posts, their fills were unlike those of the main sequence, and they are not therefore necessarily related. As part of the general modifications, the doorway leading out into the lane was apparently blocked by a new coursed brick and ragstone wall. This may simply have been a raised threshold for the existing doorway, since there was no evidence for access being effected elsewhere. A trodden surface of silt [535] lay adjacent; it contained over 100 sherds.

In room A near the street frontage was a 0.4m-square reused ragstone block. A mortise in its upper face may have been related to an earlier use, but equally, may have supported a tenoned post in this phase. A series of mixed deposits in the area represent occupation after the block was inserted, although there was no mortar floor to balance that in room B. One of these layers, of sandy silt flecked with chalk and charcoal, contained a gold *memento mori* finger ring (Figure 97)[245] and a coin,



Figure 97 Billingsgate, gold ring, D[549] <710> (© Museum of London)

illegible but probably a farthing of 1672–99 (D<762>). There were over 100 sherds in this layer [549].

Three features were then cut into these deposits. One, a north–south slot, ran south from the block; it contained a decayed beam, associated with several nails, which may have been the base of a screen or wide doorway leading into the room. The block would then have held a supporting post or jamb. To the west, two larger irregular cuts occupied the centreline of the room. Aligned east–west, these contained the remains of similarly-orientated beams, the larger western feature apparently containing two set end-to-end. It can be suggested that these were a counterpart to the posts in room B, possibly baseplates for a series of similar upright elements, replacing the period D17.21 post. The artefacts from this phase include glass beads and fragments of tobacco pipes.

Four definite wall tiles present in these layers include two plain fragments which, based on thickness (10-11mm), probably belong to the pre-Great Fire mounted military figure series. The later blue on white mounted military series is represented by a fragmentary tile showing what may be a hand holding a sword, and a spider head corner (Figure 98 <1194>). The fourth tile has a further spider head corner motif. The thickness (9mm) of all four suggests a mid–late 16th century date.

Showing traces of blackening, perhaps heat damage from the Great Fire or possibly a firing fault, is part of a tin-glazed floor or wall tile with a flower design. This is illustrated in the 2018 account of the pre-Fire buildings[246] but in what is now known to be an incorrect

[245] Hazel Forsyth writes: 'Do not speak like a death's head, do not bid me remember my end' , 2 Henry IV, II, iv.255. Rings were often exchanged as a memento mori, a symbol of remembrance, gratitude and affection. They also underlined the ultimate vanity of wealth and the transience of life. Designs with drawings of skulls (as here), coffins, skeletons and other symbols of mortality were often combined with memorial inscriptions such as 'DYE TO LYVE' or 'BEHOWLDE THY END' to encourage the wearer to place their trust and hope in God and 'future life with Christ'. Londoners often left specific bequests in their wills for different qualities of memorial ring which were graded according to the recipients' relationship with the deceased. Shakespeare left the sum of £20 to buy seven rings valued at 26s 8d each which were presented to friends, fellow dramatists and actors.

[246] Betts 2018, 377, <T14>.



Figure 98 Tile with a corner showing a military figure D[620] <1194> (scale 1:3)

orientation, so is reproduced again here (Figure 99) (<991>). Another more complete tile painted in a similar style was found in an excavation at Bevis Marks north of Aldgate in 1980, and is illustrated by Betts and Weinstein.[247] Both have unusual dot decoration along the flower head.



Figure 99 Tile with flower decoration D[540] <991> (scale 1:3)

A small number of residual 14th century medieval Penn floor tiles were recovered ([535], [601]). These comprise two decorated tiles with Eames (1980) /Hohler (1942) design types 2027 and 2394 / P62 together with a worn plain glazed example. Both decorated tiles have a badly pitted and vitrified *upper* glazed surface which can only have been caused by intense heat. It would seem likely that these tiles were badly burnt in the Great Fire of 1666. Two bricks were sampled from the brick and ragstone wall blocking the lane frontage doorway ([645]). One is in fabric 3032 (near 3033) and measures 230 x 115 x 47mm, and the other is in fabric 3033 which measures ? x 115 x 55mm. Their thickness would suggest they are probably reused pre-Great Fire bricks dating to the late 15th–17th century.

Pottery associated with modifications to D:Building 12 (879 sherds, 665 ENV, 3.08 EVE, 3364g) dates principally to the mid to late 17th century. Surrey-Hampshire border wares (BORDG, BORDY and RBOR) are again predominant, almost entirely in the form of bowls and dishes of various shapes and sizes, but also with sherds from a fuming pot and a money box. There is noticeably less PMR by comparison, with bowls, dishes and cauldrons/pipkins the only forms identified, and no PMFR or METS representing the products of the Harlow industry. There are also relatively few imports: FREC and WEST from the Rhineland, Iberian red micaceous ware (SPAM) and Portuguese tin-glazed ware (part of a plate in [549]), as well as a sherd from a plate in CHPO BW in [540]. The best dating evidence comes from London-made tin-glazed ware, with plain white ware (TGW C) and mid 17th-century decorated ware (TGW D) giving a date of deposition after *c.* 1630 for some of the later contexts. The latest pottery comes from context [540], which is dated to *c.* 1670–80 by part of a plate decorated with 'Chinamen among grasses' (TGW F).

[247] 2010, 119, no 156.

A total of 29 fragments of glass (14 ENV, 175g) were recorded. The latest finds come from context [535], which is dated to *c.* 1680–1740 by part of an onion bottle in green glass, found with fragments from a phial in natural green glass, as well as window glass. Shaft and globe/onion bottle fragments in [549] suggest a date of *c.* 1640–1740, while the remains of a shaft and globe bottle in [601] are dated to *c.* 1640–90. A 'pull' found in context [540] is typical of glassworking waste but is an isolated find in this phase. Clay pipes (45 bowls, 312 stems, 4 mouthpieces) provide useful chronological refinement, due to their relatively short lifespan and ready disposability. To a large extent dating coincides with that of the pottery and glass, focusing on the period *c.* 1660–80 (types AO13, AO15, AO18). There are also pipes of types AO19 and AO22, dating to *c.* 1680/90–1710, while the latest example, from context [540], is a type AO25, providing a date of deposition of *c.* 1700–10. No marked or decorated pipes were identified.

We propose that the warehouses west of the lane and south of the church site were all tenanted by Ashton, Peacock and Warburton from 1685, and that the strata and finds from D:Building 12 are from the period of its use as a warehouse from the 1680s to shortly after 1700. The modifications of this phase are therefore of the wharfingers, and the gold *memento* ring may have been lost by one of them, a workman or a visitor.

Event 9: modifications to D:Building 9

(D17.12)

after Event 5, so probably after 1700

A summary plan of Events 9 to 11 is shown in Figure 100.

Until this phase, access was available between rooms A and B of D:Building 9 on the east side of the lane, suggesting that they were part of the same property. A brick wall was now constructed in the communicating doorway, blocking access between the rooms (period D17.12, Figure 101).

In room B, the existing features were sealed by a series of deposits which together formed a new surface; one well-defined area formed a narrow strip alongside the east wall (see below), which may have been the base for an internal installation. The floor showed signs of use before it was cut by a large intrusion made for the construction of a new bricklined cesspit alongside the lane frontage (D:Cesspit 2; the details which follow here are not shown on the plan). A timber baseplate supporting a post was sealed behind the brickwork on the west side of the cut, which undercut the room's west wall. Gaps in the brickwork near the top of the north and south walls marked the position of three

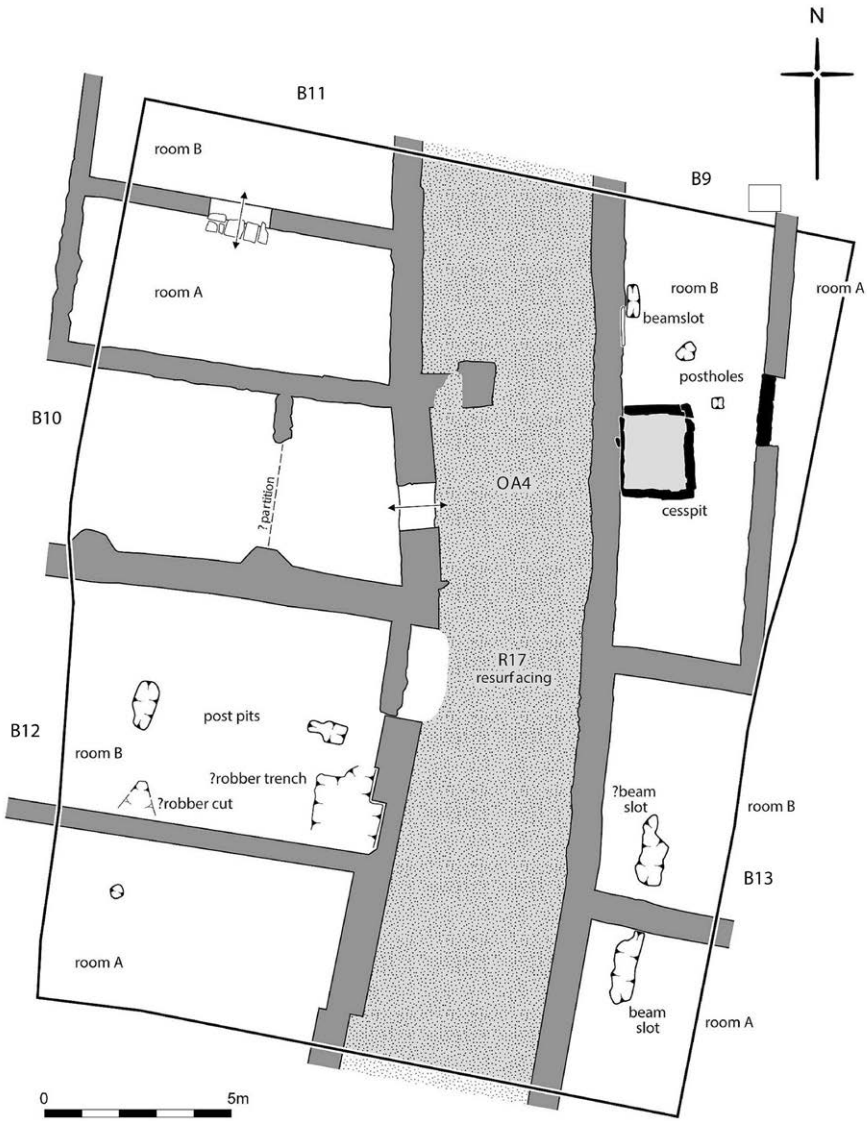


Figure 100 Billingsgate: Events 9–11, D:Buildings 9–13 (1:200)

joists, which supported transverse planking. The ends of the planks were supported in the east by a projecting string course of headers, and in the west by the top of the lining, which stopped at the same level. The isolated post may therefore have had a related function, such as supporting a chute in the north-west corner; the cesspit and its chute remained within the structure of the building (as was normal in London). A second post was inserted into a posthole cut into the backfill of the cesspit's construction trench at its north-east corner, possibly as a reinforcement, although an alternative solution is given below. The cesspit had a floor of north–south planking. There was abundant evidence for the use of the pit, sealed by the collapse of the upper floor.

Slightly to the east, a contemporary postpit was cut into the occupation level opposite the north edge of D:Cesspit 2 and the centre of the newly-blocked doorway. The cut still held a post socket formed from five stone slabs, four walls and a floor; these would have held a 0.3m square post, substantial enough to act as a floor support. This, possibly together with the post at the north-east corner of the cesspit, and the line marked by the cesspit itself, may have formed an east–west room division, coinciding with the northern limit of the strip of floor noted above, although the significance of this is unclear. To the north, a north–south slot containing what appeared to be pitch supporting a plank was inserted alongside the west wall. The upper backfill of the cut extended southwards, and was sealed by a second plank set against the wall. These features are the only remains of an internal installation of unknown purpose. Finally, a postpit was cut into a series of later occupation deposits to the east of the installation, near the centreline of the room. This may have held a post which either supported the floor above or a partition along the north–south axis, since the new occupation deposits were confined to the east of the cut. These

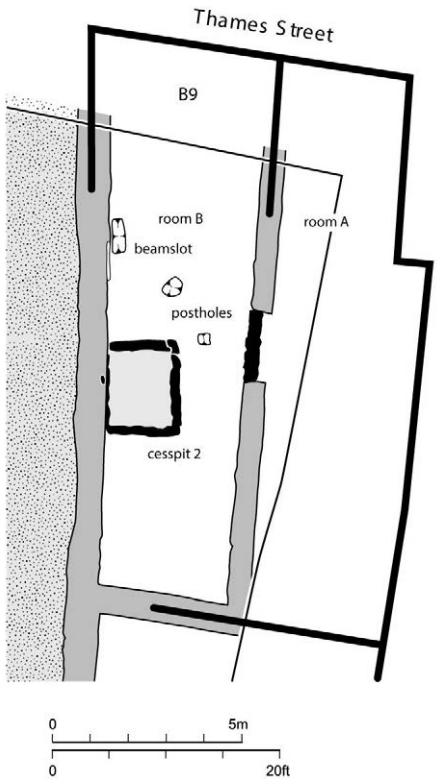


Figure 101 Billingsgate: D:Building 9 as modified in Event 9, with property boundaries from the plan of 1680 (1:200)

surfaces, indicating use of the room, produced coins from one layer [344]: a late 17th century copper-alloy coin, illegible <543> and a farthing of Charles II, 1672–9 <544>.

From this phase came two small fragments of blue on white tin-glazed wall tile of uncertain design. One has a barred ox-head corner, which may date to the 18th century. There is also a small piece of decorated Penn floor tile with what may be Eames (1980) / Hohler (1942) design 1827 / P73. Four bricks were retained from the lining of the cesspit ([391]). Two fabric types are present, 3032 and 3033, but their similarity in size suggests they are from the same brickyard. Those in fabric 3032 measure 226 x 102 x 66mm and those in 3033 225 x 104 x 61mm. Both are probably post-Great Fire.

The fill of the brick-lined Cesspit 2 (contexts [310] and [312]) is noteworthy, dating to *c.* 1730–50 on the basis of pottery, and to *c.* 1730–60 by the clay pipes. From their nature, both layers accumulated during the lifetime of the pit, and were not from debris of its destruction later. There are few coarsewares present, apart from part of a rounded bowl and possible jar in Surrey-Hampshire border red ware (RBOR). The pottery consists mostly of tin-glazed ware with plain white glaze (TGW C) or blue-painted decoration in styles typical of the late 17th/18th century (TGW H). There are sherds from chamber pots, part of an ointment pot and three porringers in TGW C. Two of these have a rounded profile and slightly everted rim, with one perforated handle surviving. A squat cylindrical drug jar has decoration current during the mid 17th century (TGW D), although the glaze is badly discoloured following burial. There are four vessels in TGW H, including part of a plate of the early flat-based form current from the last quarter of the 17th century and into the early 18th century.[248] The glaze is again discoloured and the decoration unclear. Six pottery fragments from [310] are illustrated here. A rounded bowl has floral decoration that is typical of the early to mid 18th century (Figure 102),[249] and there is part of a cup with flowers and a butterfly, which might date to the 1740s or 1750s, although too little survives to be certain (Figure 103). A teabowl is decorated with a Chinese-style river landscape (Figure 104) which also looks to date from the mid 18th century, a time when the influence of imported oriental porcelain was having a major impact on British pottery manufacturers as customers' appetite for exotic blue and white wares (or ceramics that resembled them) seemed insatiable. In addition to the tin-glazed wares, the cesspit fill also included a complete rounded jug in Frechen stoneware (FREC), with only the handle missing (Figure 105) and part of a rounded mug in Westerwald stoneware with blue and purple (manganese) decoration (Figure 106).[250] The rim of a teabowl in Chinese blue and white porcelain (Figure 107) is decorated with well-painted flowers and probably dates to the mid 18th century.[251]



Figure 102 Billingsgate D[310]: rounded bowl with floral decoration in tin-glazed ware (TGW H), mid 18th century (scale 1:2)

The pottery from the cesspit fill is weighted towards dining and drinking, with decorative wares prominent. These are representative of middle class taste and

[248] Britton 1987, App V, shape G.
[249] For example, see Archer 1997, B108, datable to *c.* 1715–25.
[250] For example, Reineking von Bock, no. 549 (late 17th century), no. 550 (beginning 18th century).
[251] Anton Gabszewicz pers. comm. [email, 22 September 2022].



Figure 103 Billingsgate D[310]: cup with flowers and butterfly in tin-glazed ware (TGW H), mid 18th century (scale 1:2)



Figure 104 Billingsgate D[310]: tea-bowl with Chinese-style river landscape in tin-glazed ware (TGW H), mid 18th century (scale 1:2)



Figure 105 Billingsgate D[310]: Frechen (FREC) stoneware jug, 17th century (scale 1:2)



Figure 106 Billingsgate D[310]: Westerwald (WEST) stoneware mug, mid 17th to early 18th century (scale 1:2)



Figure 107 Billingsgate D[310]: tea-bowl in Chinese blue and white porcelain (CHPO BW) (scale 1:2)

means, and the scale of the deposit is in keeping with a moderate level of discard (probably of old and/or damaged pieces at a time when the cesspit went out of use) rather than a wholesale clearance of household possessions.

When the glass finds are taken into consideration, however, something of a different picture emerges. A total of 209 fragments of glass were recorded from phase D17.12 (40 ENV, 2725g), most of which comes from the cesspit fill [310]. The remaining glass consists of fragments from shaft and globe/onion bottles in green glass, as well as two cylindrical phials in natural green glass, dating to *c.* 1650–1740. The glass from [310] is exceptional, including two cylindrical phials, one of them complete, with cork, and 14 small globular flasks in natural green/blue glass. These have a long straight-sided neck and mirror the form of the shaft and globe wine bottle, although they are much smaller and not in green glass. Seven are complete, one with cork remaining in place, and one bottle is almost complete. They have a single string rim and high pointed kick in the base (Figure 108). Shaft and globe bottles were made from the 1630s through to the 1680s,[252] and miniature forms of the same shape are a 'very rare variation' (*c.* 100mm in height) found occasionally in London.[253] The Billingsgate flasks are larger than this, although noticeably smaller than wine bottles. Noël Hume suggests a dating towards the end of the 17th and into the early 18th century and proposes that they

[252] Dumbrell 1992, 44–55.
[253] Willmott 2002, fig 114b.

were used for oils or vinegar.[254] An alternative use as apothecary bottles was suggested by Castillo Cardenas, who dates these forms to *c.* 1680–1730, in line with onion wine bottles.[255] It is this function that has been clearly demonstrated by a programme of chemical analysis carried out on three samples from the assemblage (a globular flask and the two cylindrical phials).[256] The flask was shown to have contained tincture of camphor and a resin, one of the phials held tartar emetic and the other phial a magnesium sulphate system, possibly Epsom Salts. Tinctures are medications mixed in alcohol, and camphor was popular in many 18th-century medications for a wide range of illnesses (such as scarlet fever, tetanus, cholera, puerperal fever) for which it was usually applied externally. It has been suggested that the discovery of antimony tartrate in one of the samples provides one of the earliest examples of true chemical medicines, as opposed to natural herbal remedies.[257] The contents of the remaining glass vessels are unknown, but it seems highly likely that they all held pharmaceutical preparations of one kind or another. This was doubtless true of the complete cylindrical phial, with cork intact, found in the same context (also Figure 108). The reasons for their being discarded, apparently intact, with some at least still corked, are unknown.

A single fan stick made of bone was found in context D[310] (<596>). It is in poor condition and appears to be perfectly plain, 235mm long, and 6mm wide at one end, with no form of carved decoration visible. It would have come from a folding fan, which is believed to have originated in Japan in the 5th century, and to have been introduced into Spain and Portugal in the 16th century through the Iberian trade connections with Asia. Spain remained the only country in Europe producing folding fans until the 17th century, and they came into general use across the rest of Europe later in the century.[258] The fan stick comes from a pleated fan, one of two types of folding fan in use at this period. It has narrower sticks than the other form, the brisé fan, connected at the base by a pin and covered over the upper three-quarters of their length by a pliable material, pleated to allow the fan to be folded.[259] Fan sticks could be decorated where visible, but otherwise left plain. A variety of materials were employed to cover the sticks, including paper, cloth, vellum and lace, although there is no indication on the Billingsgate example of what this might have been. It is not possible to identify where the fan was made or to reconstruct its original appearance based on the surviving fragment.



Figure 108 Billingsgate: D:Building 9, phase D17.12, [310], globular flasks in natural green glass (top two images) *c.* 1680–1730; bottom, cylindrical phial in natural green glass, with cork intact, late 17th/18th century. The top flask and the flask at the back of the group are 125mm high; the phial at the bottom is 113mm high

[254] Noël Hume 1969, 75.
[255] Castillo Cardenas 2014, 314, fig 5.
[256] Gibson and Evans 1985.
[257] *Ibid.*, 153–4.
[258] Deagan 2002, 216; Marschner 1984, 111.
[259] Deagan 2002, 217.

A second item in the same context (<598>), originally recorded as part of a fan, turned out on further investigation to be a well-preserved palm leaf (identification by Kew Gardens). Its survival in reasonable condition is in itself a matter of some interest, and it can be speculated that the leaf reached Billingsgate as part of a cargo of goods from a country where palm trees are among the native flora.



Figure 109 Billingsgate: block wooden brush D[310] <743> (scale 1:2) (Robin Locker; © Museum of London)

Small fragments of textile were recorded in contexts [310] (<967>) and [312] (<961>) but are in poor condition and now unidentifiable. Two cork stoppers were also recovered, both from [310] (<1994>, <1993>), and of a kind used for a variety of different forms of bottles and jars. They have a maximum diameter of 18mm and 15mm respectively, and surviving length of 25mm and 20mm. Both the stoppers from context [310] are most likely to have been used with glass pharmaceutical phials of the kind recorded in the same context. This is based on their small size, accounting for shrinkage over time. Similar stoppers were found *in situ* in the necks of two glass bottles from the Barber-Surgeon's chest on the Mary Rose, with larger cork stoppers in the necks of Raeren stoneware jugs, representing a break from the practice of using wooden stoppers in the 15th century, and providing a tighter seal for the contents.[260]

There were several items of wood. A block wooden brush, minus the bristles, also came from [310] (<743>) (Figure 109). The complete brush is 175mm long and 65mm maximum width, sub-rectangular in shape with the shorter ends cut at an angle of 45 degrees and rounded. It would have been used as a hand brush for cleaning and scrubbing, or possibly grooming. There are 32 evenly spaced round holes for bristles on one surface; these are drilled through so also visible on the other side, although not so pronounced. The bristles appear to have been fixed with copper-alloy. A similar brush was recovered from the wreck of the *Mary Rose*, although shaped for holding.[261] Another item of wood from the same context (<1628>) is part of a thin circular disc, 46mm in diameter and 2mm thick, which could have formed part of a small wooden box or canister, similar to examples recovered from the Barber-Surgeon's chest on the *Mary Rose*, and used to hold personal items.[262] A single wooden strake from context [312] (<5880>), 405mm long and 50mm maximum width, has the remains of three copper-alloy nails or rivets along its length, one at each end and one roughly midway. It does not appear to be shaped, as might be expected for an element from a cask or bucket, but obviously forms part of a composite item, probably a container of some kind.

The filling of the cesspit with this domestic debris is dated archaeologically therefore to the second quarter of the 18th century. The documentary evidence suggests that the cesspit was probably filled in when the houses above were demolished in or shortly after 1732 by Greaves.

Clay pipes from D:Building 9 help to confirm the broad dating derived from pottery and glass. A total of 23 pipe bowls, 90 stems and 5 mouthpieces were recorded for phase D17.12. The presence of bowls of type AO13, AO15 and AO18 give a dating of *c.* 1660–80 for contexts other than the cesspit fill [310], which is dated to *c.* 1730–60 by pipes of types OS11 and OS12, found with the slightly earlier OS10. This includes four pipes marked with maker's initials moulded in relief on the sides of the heel. One of these, a type OS10, has the initials RM, which stand for Richard Manby (1), recorded in Whitechapel in 1701–23 (Figure 110).[263] A type OS12 pipe is marked WM (<943>), standing for William Manby (3), recorded in Limehouse in 1719–46, or William Manby (4), recorded in Green Dragon Alley in 1740–70.[264] The products of this important and long-lived family of pipemakers in London's East End are well known in excavated contexts from this part of the capital. The only other marked pipes from the cellar fill carry the initials ?IH and IB, which cannot be identified with any certainty.

A total of 174 sherds of pottery (92 ENV, 5.47 EVE, 3887g) were recovered from contexts associated with modifications to D:Building 9. One context ([389]) is

[260] Gardiner and Allen 2005, 193, fig 4.12.
[261] Gardiner and Allen 2005, 354, fig 8.51
[262] Gardiner and Allen 2005, 398, fig 10.21.
[263] Oswald 1975, 144; Pearce 2013, fig 1.
[264] Ibid. fig 1.



Figure 110 Billingsgate: D:Building 9, phase D17.12, [310], clay pipe of type OS10, *c.* 1700–40, marked with the initials RM, for Richard Manby, <944> (scale 2:1)

seemingly dated to *c.* 1240–70 by fabrics and forms typical of this period in London. This is clearly residual, as is other late 13th-/mid 14th-century pottery from phase D17.12, amounting to 82 sherds, 61 ENV, 0.78 EVE, 1120g in all, presumably resulting from building work to modify D:Building 9. Apart from sherds in the cesspit fill, the remaining pottery from the phase dates mainly to the late 16th/17th century, with a latest date of *c.* 1680–1750 for context [344], based on part of a plate in TGW H, found with a plain white chamber pot in TGW C and sherds from an imported Spanish olive jar (OLIV), as well as residual medieval pottery. Otherwise, Surrey-Hampshire border wares and London-area red wares are the main fabrics recorded.

The main feature of this phase D17.12 therefore was that the two rooms forming D:Building 9 were divided or disunited, by filling in access between them, and a new cesspit (Cesspit 2) dug in the floor of the now separate tenancy represented by room B. Small fragments of

tin-glazed wall tile may have come from one of these houses. The digging and use of Cesspit 2 suggests the western building was a house, no doubt with a shop or a work room against Thames Street. The broken pottery in the cesspit indicates dining and drinking, but the glass suggests use of medicines. This is further discussed in Chapter 8.

Event 10: further modifications to D:Building 12

(D17.23)

around 1700

There was a modification to D:Building 12, the warehouse building south of the former church (Figure 111) (D17.23). In room A, the southern of its two rooms, a new surface incorporating brick and tile fragments was deposited over the entire area, although it was broken up into smaller areas by wear, particularly in the east. Some repairwork was carried out in that area. One of these layers, of silt, brick rubble and mortar D[441] contained over 100 sherds. A single posthole packed with flint and a tile intruded into the northern part of the surface.

An identical surface was deposited in room B, the room to the north; once again the east end was apparently repaired. In the south-east corner of the room, a large irregular cut appears to have had a structural function; a deeper square area in its north-west corner could have held a pier, subsequently robbed. On the centreline of the room, marked previously by a line of postpits, two further cuts intruded into the new surface. These are best seen as replacements for the existing alignment. Finally, a small trapezoidal cut near the suggested south wall of the room contained large brick fragments, and some mercury, which may have seeped from a higher level. The cut presumably held a structural feature, such as a pier or buttress.

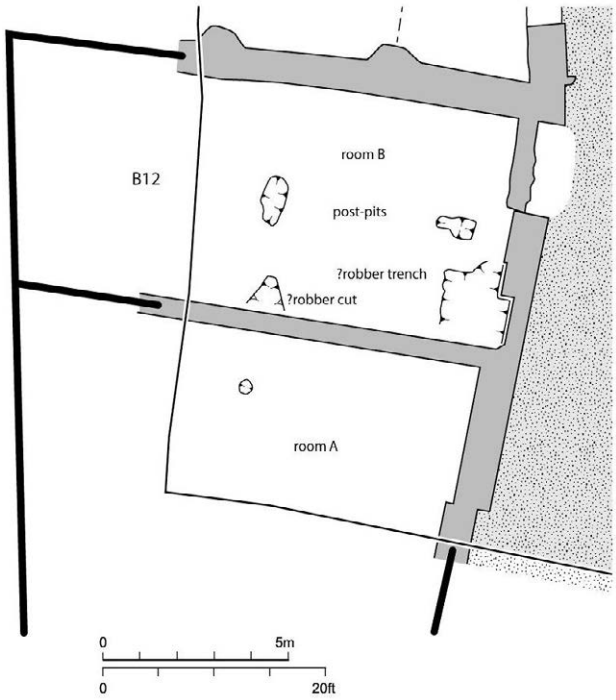


Figure 111 Billingsgate: D:Building 12 as modified in Event 10, with property boundaries from the plan of 1680 (1:200)

The artefacts from period D17.23 include small miscellaneous fragments of Dutch tile. The best-preserved shows the back of a mounted figure with spider head corners (<960>, Figure 112), which probably dates to the late 17th century or perhaps a little later. There are also bits of landscape scenes and a small part of what appears to be a scene with a mythological sea creature, although only the sea area survives. This does, however, match more complete tiles with such scenes found elsewhere in London, such as from Newgate Street and Norfolk House.[265]



Figure 112 Billingsgate: tile showing back of mounted figure D[496] <960> (scale 1:2)

Event 10 yielded 277 sherds of pottery (162 ENV, 5.89 EVE, 3171g). Much of this consists of fabrics and forms typical of the mid to late 17th century, with Surrey-Hampshire border white and red wares predominant, as well as London-area red ware. It is notable that the main forms identified in all these fabrics are bowls and dishes of various shapes and sizes, with only one cooking vessel recorded (part of a pipkin in PMR), and three sherds from sugarloaf moulds also in PMR (from [504]). A mid/late 17th-century dating is derived from sherds of tin-glazed ware decorated in styles of this period, consisting of dishes and cylindrical drug jars in TGW D, and a porringer with plain white glaze (TGW C). Imports include Frechen stoneware (FREC) Bartmann jugs, Langerwehe stoneware (LANG), part of a costrel in north Italian marbled slipware (NIMS), a jar in PEN ware, from the Iberian Peninsula, and Chinese blue and white porcelain (CHPO BW). A latest date of *c.* 1700–50 comes from sherds from two teabowls in Chinese porcelain, Batavian ware, with its distinctive brown exterior surfaces (CHPO BATV), found in contexts [496] and [442].

[265] Betts and Weinstein 2010, 169, nos 388–90.

A total of 38 fragments of glass (7 ENV, 56g) were recorded in contexts associated with the phase D17.23 modifications. The latest contexts ([441], [492] and [583]) are dated to *c.* 1640–1740 by fragments from green glass wine bottles of shaft and globe/onion form, with part of a shaft and globe bottle in context [442] dated to *c.* 1640–90. Small fragments of window glass in various contexts can only be broadly dated to *c.* 1500–1800. There are 23 clay pipe bowls (120 stems, 3 mouthpieces) associated with the building modifications. These give a latest date of *c.* 1680/90–1710 (types AO19, AO20 and AO22) for five contexts, with the earlier types AO13, AO15 and AO18 also present. There is part of one rouletted stem in context [523] but no other decorated pipes. Only one marked pipe was recorded, consisting of part of the heel and stem and so of uncertain form although probably dating to *c.* 1680–1710. It has the maker's initials MW moulded in relief on the sides of the heel, possibly for Mark Webb, who signed the Oath of Allegiance in 1696.[266]

D:Building 12, south of the church site, was part of the site developed by Child and occupied by Ashton. The documentary sources tell of repairs and building work by both Child and Ashton in the years after 1686. The modifications forming this Event were probably around 1700. They comprise holes in the floor presumably from internal fixtures, later removed.

Event 11: modifications to D:Building 13 during its period of use

(D17.8, 17.10)

around 1700, after Event 6

In room A of D:Building 13, on the east side of the lane and behind D:Building 9, a localised silt deposit in the north of the room was cut by a 2m north–south irregular intrusion (period D17.8, Figure 113). The north end of the cut abutted the dividing wall of the building. The base of the cut and the east edge was packed in the north with a bedding of mixed building material fragments, suggesting levelling for a wooden beam. The beam may have been the base of a wall screening off part of the room, in this case the north-west corner. A series of mixed deposits were confined to the area immediately to the east of the slot, supporting the idea of subdivision. Two layers contained cowrie shells.

In room B to the north, a series of deposits and repaired surfaces show continuity of occupation (period D17.10). The earliest of these, of sand and silt flecked with chalk and charcoal [602], contained over 100 sherds of pottery. The final surface showed a series of rectangular impressions, which may indicate the presence of a

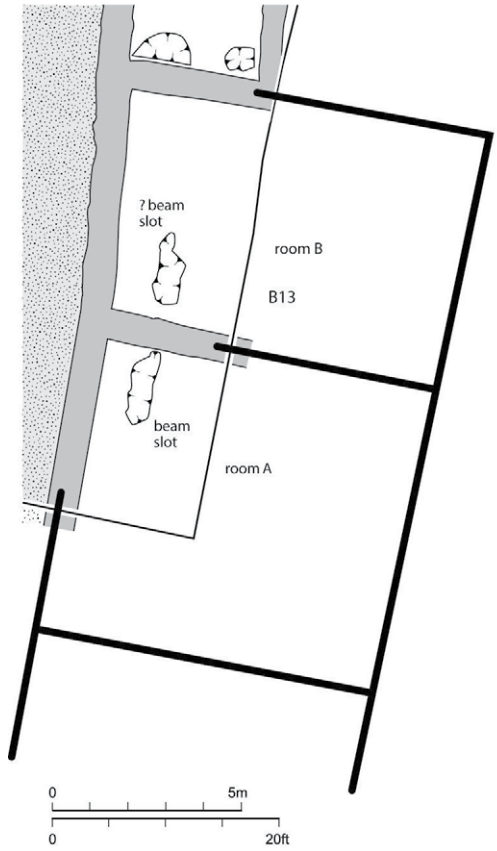


Figure 113 Billingsgate: D:Building 13 as amended in Event 11, with property boundaries from the plan of 1680 (1:200)

brick floor, although there were no bricks remaining. This was cut in the south by a 1.9m north–south slot similar to the example next door. This irregular feature may be the result of subsidence or of the robbing of an existing feature, although its position directly opposite the trench in room A could imply some form of structural relationship crossing from one room to another. These could be slots left by timbers forming the bases of stairs up the adjacent wall, for both rooms A and B. This would be unusual inside a warehouse, and would indicate communication with the ground floor storey above. There are three small pieces of decorated tin-glazed wall tile, two with a blue on white design, the other with part of a powdered purple background. The latter is almost certainly 18th century.

A similar range of pottery was recovered from contexts associated with the modifications of both rooms A and B, largely typical of the mid to late 17th century. It was to a large extent fragmented into small sherds, with few reconstructable vessel profiles and probably includes redeposited waste that had accumulated during the period of use. Room A (phase D17.8), yielded 126 sherds (66 ENV, 0.64 EVE, 675g), consisting mainly of various bowls and dishes in BORDG, BORDY and RBOR, as well as PMR. No other forms were identified in these fabrics, which is unusual for excavated contexts from London,

[266] Oswald 1975, 148.

although there seems to be a marked emphasis on these vessels in some of the post-Fire buildings here. Sherds from three dishes in Metropolitan slipware (METS) and TGW D provide a date of *c.* 1630–1700 for modifications in this room. There is, however, a sherd from a cylindrical mug in Westerwald stoneware (WEST) decorated with a portrait of Queen Mary (Figure 94). Further sherds from the same vessel were recovered from contexts in phases D17.5 and D17.15, both associated with D:Building 13 (see above).

A total of 341 sherds (177 ENV, 2.73 EVE, 2500g) were recovered from modification levels in room B (phase D17.10), including one large context with 184 sherds ([602]). These are from a similar range of fabrics and forms to those recorded in room A, with a marked emphasis on bowls and dishes in Surrey-Hampshire border wares. The only other forms identified in these wares are part of a chamber pot and tripod pipkin (one of each). There is no PMR, but the complete profile of a dish in METS was reconstructed from 24 sherds in context [602], which also included part of a cylindrical jar in TGW D, giving a date of *c.* 1630–80 for this context. The presence of sherds from teabowls in CHPO BW and CHPO BATV give a dating of *c.* 1700–50 for context [687]; these are the latest sherds in this phase.

Sixteen fragments of glass (8 ENV, 79g) were recovered from levels in Room A (D17.8). These consist mostly of small fragments from shaft and globe/onion bottles in green glass, dating to *c.* 1640–1740. There is part of the neck and rim with single string finish from a shaft and globe bottle in [581], dating to *c.* 1650–90, as well as part of a phial in natural green glass from [616] and the complete base from a jar in context [527].

A larger quantity of glass was recovered from modifications to room B (D17.10): 122 fragments, 27 ENV, 2642 g. As in room A, these consist mostly of fragments from shaft and globe/onion bottles dating to *c.* 1640–1740. The latest glass comes from context [784] – part of an onion bottle in green glass dating to *c.* 1680–1740. Fragments of window glass were also recovered, including one that appears to have engraved lines, although any intended design is unclear (context [602]). Clay pipes from room A (18 bowls, 92 stems) are dated at the latest to *c.* 1690–1710 by a type AO19 bowl in context [581]. There are also pipe bowls of types AO22 and AO20, both similarly dated, as well as earlier types AO15 and AO18. A similar pattern is found in pipes from room B (35 bowls, 160 stems, 4 mouthpieces), with the latest context ([602]) dated to *c.* 1700–10 by a pipe of type OS10, together with types AO15, AO18 and AO22. None of the pipes in either room is decorated or marked.

Event 11 followed Event 6, which was sometime in the 1680s; so Event 11 was around 1700, another modification by Ashton or his colleagues. The archaeological evidence is of trenches in which beams for fixtures were been laid, later removed.

Event 12: final alterations to D:Building 9

(D17.13–14)

perhaps documented rebuildings after 1699; Charles II farthing of 1675

A summary plan of Events 12 to 14 is shown in Figure 114.

A series of makeups was deposited in both rooms of D:Building 9, culminating in the laying of brick floors (period D17.13, Figure 115; not illustrated in plan, the rooms as in Figure 114). The floor in room B on the west side consisted of bricks laid east–west, with a single line of north–south bricks forming a west edge and a central string course aligned with the eastern side of the earlier cesspit. The floor was scorched in the east, apparently in a major fire, which also affected the neighbouring room. All the earlier features within the room were superseded, with the exception of the cesspit, which seems to have been retained, at least initially. A strip along the east side was clear of bricks, suggesting that there may have been a timber fitting such as shelves or staging for merchandise here, which would not require the bricks to extend beneath. It reproduced a similar area in the immediately preceding floor.

There are four tin-glazed wall tiles, three of them decorated. The best-preserved decorated tile shows a figure kneeling next to a standing robed figure (<1257>, Figure 116). This is probably a biblical scene dating to the 18th century. It is not exactly certain which biblical scene is represented, but the position of the figures is markedly similar to that on a London-made tile which shows The Return of the Prodigal Son (Luke 15 v. 20), dated to 1720–50 by Horne.[267] It is therefore evidence for the use of such wall-tiles in the post-Fire buildings, presumably in D:Building 9 though this cannot be certain. Two other decorated fragments may show landscape scenes whilst the fourth tile appears to be plain white.

A plain green medieval floor tile was recovered from context [276], whilst a plain yellow example was recovered from context [307]. Three London-made bricks were retained from the floor in the western room of D:Building 9 (context [234]). They seem to represent two different batches of brick. There are two in fabric 3032 which measure 222 x 99 x 64mm, whilst the third is in fabric 3033 and is larger, measuring 233 x 113 x 58mm.

[267] 1989, 101, no. 595.

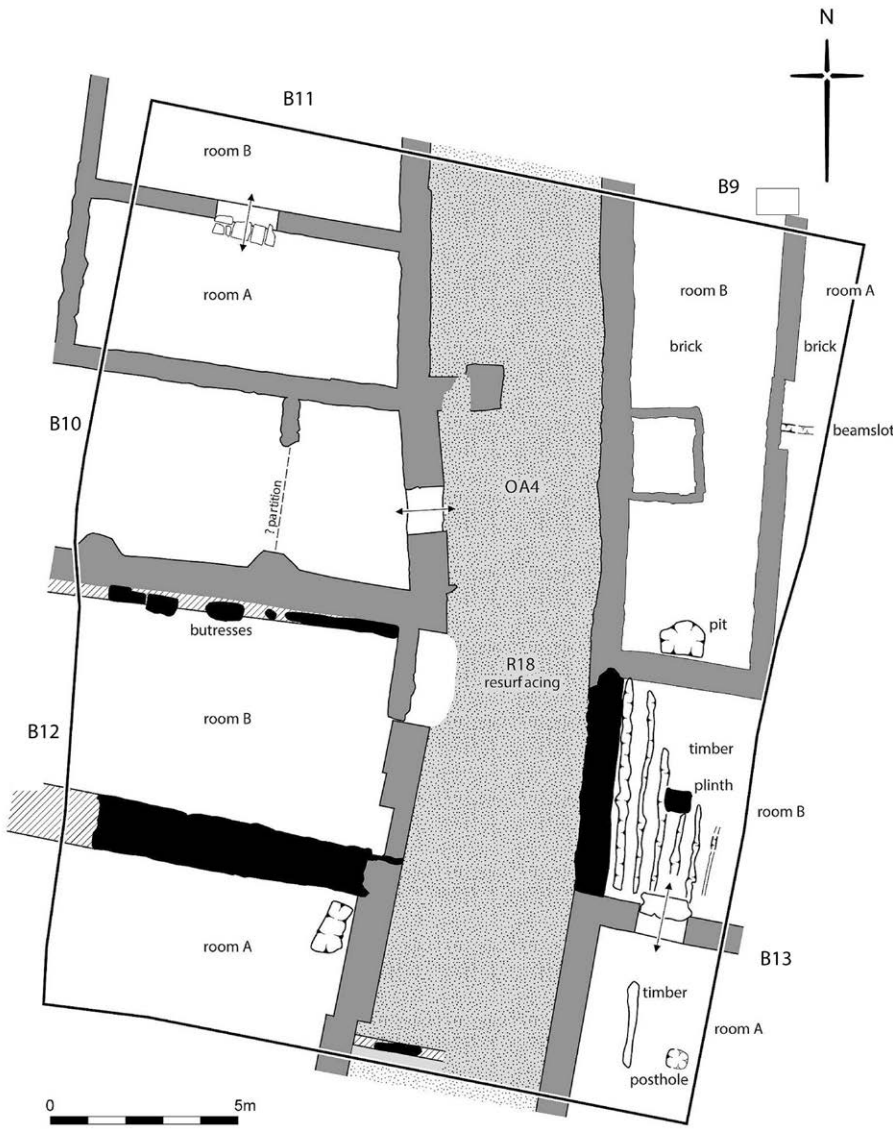


Figure 114 Billingsgate:Events 12–14: D:Buildings 9 to 13 (1:200)

In room A an east–west beam slot divided the brick floor opposite the centre of the doorway blocked in period D17.12. The beam was probably the base of a partition, approximately half way along the building when the lost area on the street side is taken into consideration. Subsequently, a north–south brick and masonry foundation was cut into the east edge of the floor in room B (period D17.14; not illustrated), presumably replacing the dividing wall between the two rooms; it may have been simply an addition, but the resulting wall would have been unnecessarily large. The brick floor continued to function, and the two otherwise distinct phases are therefore shown on the same plan. A broadly rectangular pit alongside the south wall may be interpreted as a robber cut. These were the final surviving surfaces in the building. The cesspit was eventually backfilled with silts, mortar and loose bricks, the latter derived from the floor, and reflecting the collapse of whatever flooring overlay the pit. A layer of this phase [279] contained a Charles II farthing of 1675, <520>.

A total of 69 sherds of pottery (42 ENV, 0.12 EVE, 1420g) were recovered from makeup levels for the flooring in the final alterations to D:Building 9; only two of these sherds came from phase D17.14. The finds include a relatively high proportion of redeposited medieval sherds (23%) across seven contexts. The latest pottery comes from context [278], which is dated to *c.* 1650–1700 by part of a bowl in Staffordshire-type mottled ware (STMO). Otherwise the latest contexts are dated to *c.* 1630–80/1700 by sherds of TGW C chamber pots and TGW D dishes. Apart from these, the main fabrics, as in other phases, are Surrey-Hampshire border wares (both white wares and red wares) and London-area red ware, occurring in a range of forms including bowls and dishes, porringers, chamber pots, a costrel and jugs. A limited range of imported pottery includes Spanish olive jars (OLIV), Dutch red earthenware (DUTR) and Chinese blue and white porcelain (CHPO BW).

In all, 71 fragments of glass (30 ENV, 863g) were recorded, with the latest context dating to *c.* 1680–1740 ([309]). This



Figure 115 Billingsgate, period D17.13, looking south (1m scale). In the foreground is room B of D:Building 9; room A is to the left, of which only the common wall is shown. The square hole in the middle of the picture is D:Cesspit 2, which may still have been in use. The rectangular area free of bricks on the east side (alongside the wall on the left) may represent an area beneath fittings such as shelves or wooden staging with its own timber floor, against which the floor bricks were laid (the long rectangular area did not require bricks, or a wooden structure was already in place when the floor was laid)



Figure 116 Billingsgate: tile showing biblical scene D[309] <1257> (scale 1:2)



Figure 117 Billingsgate: D:Building 9, Phase D17.13, [309], stem from a goblet in colourless glass, with applied seal, probably made by Ravenscroft, 1677+, <1004> (scale 1:1)

is based on the presence of fragments from onion wine bottles in green glass, found with shaft and globe/onion bottles in this as well as in other contexts. There are also fragments (in [278]) from two (possibly three) globular flasks of the same form as those recovered from contexts associated with earlier modifications to D:Building 9 (phase D17.12, Event 9). One of the flasks is almost complete and they presumably served the same function in containing medicinal preparations. Fragments from at least four phials of cylindrical and globular form were also recorded, again with a medicinal function. A more unusual find is the short stem from a goblet in colourless glass with an applied seal that may have been made by Ravenscroft (Figure 117). The glass is crizzled (a fine network of surface cracks), which was a problem encountered by Ravenscroft as he developed lead crystal glass towards the end of the 17th century. His first patent was granted in 1674 and in 1677 he signed an agreement with the Glass Sellers to put a raven's head seal on all his glasses as a guarantee of their quality.[268] In spite of this the problem with crizzling continued to some extent, and if made by Ravenscroft the Billingsgate glass can be seen as post-dating 1677. The seal, however, is plain, without the characteristic raven's head, although such examples are known. Twenty-one clay pipe bowls (67 stems and one mouthpiece) come mostly from contexts dating to *c.* 1680–1710 at the latest. There is, however, one anomalous context ([192]) that yielded one each of type AO27 and AO28 pipe bowls and is therefore dated to *c.* 1820–40. Otherwise, the main types present are AO20 and AO22 (*c.* 1680–1710), found with the slightly earlier types AO15 and AO18 (*c.* 1660–80). None of the pipes are decorated or marked.

The changes in period D17.13–14 comprised the laying of new brick floors and new partitions in the cellars of D:Building 9. This work, which followed that in Event 9, seems to be from after 1700, and would still be attributable to Ashton.

Event 13: final alterations to D:Building 12

(D17.24–27)

after 1700, up to 1732

The last recorded stages of occupation in D:Building 12 south of the former church site show evidence of major rebuilding work (D17.24, Figure 118). In the centre of the structure, along the line of the dividing wall between the building's two rooms, a substantial cut 1.6m wide straddled the line of the wall, removing any earlier period 17 alterations. The trench was at least 0.5m deep, and contained three north–south timbers, followed by mortar and silt deposits, forming the base layer for a roughly-coursed foundation of ragstone blocks; voids within the structure suggest the presence of further beams. The superstructure was faced with brick headers and there was some use of ragstone in the lower courses, particularly in the west. A major alteration to the building and its roofline is implied, involving the abandonment of the use of internal rows of wooden posts.

Occupation resumed in both rooms, with the deposition of both organic occupation layers and building materials, the latter possibly connected with

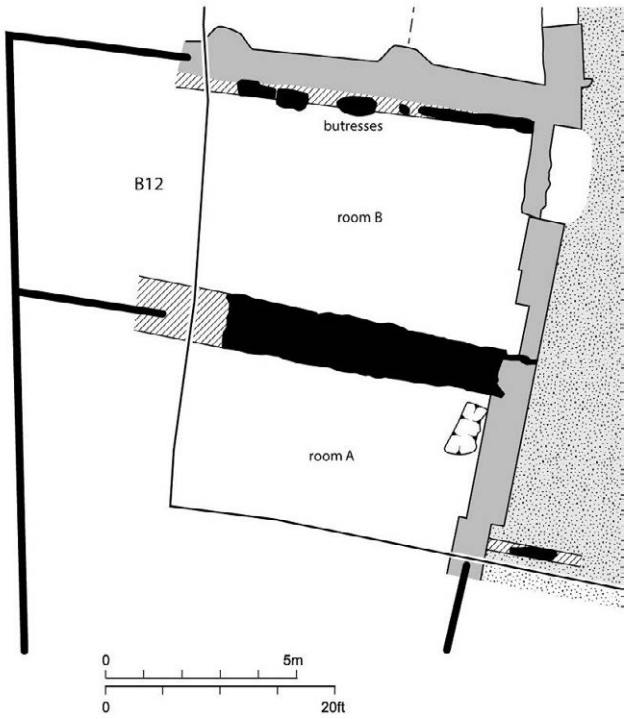


Figure 118 Billingsgate: D:Building 12, as rebuilt in Event 13, with property boundaries from the plan of 1680 (1:200)

[268] Elville 1960, 39–49; Willmott 2005, 117–18, fig 73.

the reconstruction. An apparent cut feature in room B, and a second in the centre of the room were caused by subsidence into an underlying period 17.22 post pit and beamslot respectively. Immediately to the south-east of the second feature, a postpit (not illustrated) was probably a temporary installation connected to the rebuilding works, since it, and most of both room areas, were subsequently sealed by a final series of rubble makeups, culminating in a metalled surface. Although the metalling was much disturbed by later activity, it had almost certainly covered the whole of both rooms. Two layers, D[308] and D[268], produced sherds of sugar-loaf mould.[269]

In the north-east corner of room A, a shallow, broadly rectangular timber-lined pit was cut into the metalled area (period D17.25). The lining only survived along the west edge, although nails both there and along the north side indicated that it had originally been fully planked. The lower fill was mixed, but the upper portion of the cut consisted largely of flints, which may have been an attempt at restoring the metalling; this hypothesis is strengthened by the deposition of further metalling immediately to the west. The purpose of the cut is unclear, although it may have been some kind of sump, possibly functioning in the same way as the earlier period D17.21 feature further south.

In room B, an east–west cut was inserted the full length of the north wall of the building (period D17.26), possibly to cut back the facing, since the silt backfill contained some rubble. The fill was sealed by an extensive area of mortary silt containing horizontally-bedded roofing tiles, mortar and in the south-west, ash, which appears to have been used as compensation over the earlier central post positions. Further material along the wall acted as a bedding for a new facing of brick, Reigate stone, ragstone and chalk, a single course of which survived. Two brick buttresses were set against the face of the wall at the same time, approximately opposite the centre of the room. These appear to have replaced two period 17.22 post positions immediately to the east, which were truncated by the initial trench. It seems reasonable to assume that this activity took place as part of the same scheme of reconstruction as period 17.24, although the metalled surfaces intervened.

A series of mixed deposits, including fragments of a possible mortar floor makeup, were deposited in room B; some of these were concentrated in the east, where they were used to compensate for a depression. These mark the final phases of occupation within D:Building 12. Three layers produced cowrie shells.

Immediately outside the east wall of the structure, at the south end of the lane, a brick-lined cesspit (D:Cesspit 3) was set into the western half of the metalling (period D17.27); only the north wall was recorded, the remainder lying beyond the limit of excavation, but its west wall must have been in close proximity to D:Building 12, if not actually adjoining. The cesspit may belong to a later period, but its resemblance to examples constructed in D:Building 9 suggests that it was constructed at broadly the same date, and presumably covered over by brick vaulting or stone slabs to prevent the lane from being blocked. In that case, it could have been used via a chute from D:Building 12, with which it was clearly associated, and emptied from the lane.

There are six small fragments of delftware wall tile, one of which has a spider head corner and another with what looks like horse hooves. They may therefore be part of the later series of mounted military figures dating to the late 17th or early 18th century. There is also a solitary unglazed floor tile ([308]), probably of late 17th or, more probably of 18th-century date.

Pottery from phase D17.24 amounts to 222 sherds (151 ENV, 4.82 EVE, 11650g), associated with final alterations to room A, dated at the latest to *c.* 1700–10 by the medium-sized context [401] and the smaller [363]. The main fabrics and forms date to the mid to late 17th century, dominated by Surrey-Hampshire border wares (dishes and bowls, mugs and a tripod pipkin) and London-area red ware (PMR), which is more frequent than in some earlier phases. This includes sherds from storage jars, bowls and dishes, but, more significantly, from numerous sugarloaf moulds (70 sherds from at least 31 vessels), as well as sherds from at least eight syrup collecting jars. These are concentrated in context [308], which includes 14 rim sherds from different vessels and four nipple ends. As is usual with the sugarloaf mould form, many sherds have a coating of thin white slip smeared across their inner surfaces. Sugar refining wares were made in the 17th century, and no doubt beyond, at the Woolwich kilns,[270] as well as at Deptford.[271] This is the main concentration of sugar refining pottery recorded at the Billingsgate site, although there is also evidence from other post-Fire buildings (discussed further in Chapter 10). Other pottery includes sherds from chamber pots in TGW C, cylindrical jars in TGW D , an unidentified form decorated with the so-called 'Chinamen among grasses' pattern (TGW G, dating to *c.* 1670–90) and part of a lid in TGW H, post-dating *c.* 1680. Chinese blue and white porcelain is also present as plates and teabowls and the head of a female figure in Chinese *blanc de chine* porcelain was recorded in context [363] (<551>), not a common find archaeologically.

[269] Brooks 1983, fig 2, nos 15 and 16.

[270] Pryor & Blockley 1978, 65, fig 13, no. 64.

[271] Jarrett 2004, fig 75, nos 5–13, fig 76.

Glass from phase D17.24 (room A) amounts to 131 fragments, 57 ENV, 896 g and is dated at the latest to *c.* 1680–1740 by fragments from onion bottles in contexts [407], [308] and [420]. There are also fragments from green glass shaft and globe/onion bottles in other contexts, as well as small pieces of window glass. The complete neck of a spa bottle, used for mineral water, in green glass was found in context [390], a form that was most common *c.* 1720–80 although in production from the mid 17th century. The neck and base of a globular flask of the kind recorded in the same building in phase D17.12 were found in context [308], and there were also fragments from various pharmaceutical phials in natural green glass. Part of a wine glass from [337] has an inverted cinquefoil baluster stem and probably dates between *c.* 1665 and *c.* 1680 (Figure 119).[272]A fragment from a goblet with applied thickened trails was recorded in [363], but a more unusual find in the same context is part of a pestle in natural blue glass (also Figure 119).This could well have been used in making medicinal preparations, perhaps with a small glass mortar.[273] Given the large number of globular flasks used for medicines from the same building, this is a significant find.

Clay pipes from room A (phase D17.24: 43 bowls, 328 stems, 7 mouthpieces) are dated at the latest to *c.* 1730–60 by types OS11 and OS12 in contexts [308] and [401]. These were found with types AO22 (*c.* 1680–1710) and AO25 (*c.* 1700–70), as well as earlier types AO15 and AO18 (*c.* 1660–80). The only decorated examples are three joining stem fragments from [363] (<599>) which are rouletted and come from a Dutch-made pipe. Two pipes are marked. One is a type AO25 with the initials TM moulded in relief on the sides of the heel (maker unidentified), and the other pipe is a type OS11 with moulded crowned harps on the sides of the heel (Figure 119).

The deposits in room B (D17.26) contained two more copper coins [257] <509> and [269] <539>. The bricks forming the cesspit lining ([686]) are in fabric 3032. All are broken, indicating they have been reused from another structure, and measure on average ? x 104 x 62mm. One of the small scraps of delftware tile from 17.26 shows part of a landscape scene, whilst another has an unusual plain blackish-purple glaze. Also present are two plain white delftware wall tiles and a thicker (13–14mm) plain white tin-glazed tile. Although the latter is not worn, this may be a floor tile. Also recovered was a medieval Low Countries plain brown floor tile, a small amount of roofing slate and three partly-complete peg roof tiles with an average breadth of 151mm and average thickness of 15mm.

A smaller amount of pottery was recorded from contexts associated with room B (phase D17.26): 49 sherds, 28 ENV, 0.4 EVE, 595g). These are dated at the latest to *c.* 1680–1700 (context [294]), based on part of a dish with floral decoration in TGW H, found with sherds of TGW D and TGW C, as well as from a dish and porringer in Staffordshire-type combed slipware (STSL) and part of a bowl in STMO. Otherwise, the finds are similar to those from Room A, but with only two sherds from sugarloaf moulds, and no Chinese porcelain. A sherd from a bottle in London stoneware (LONS) in [269] is dated to *c.* 1670–1730.

A smaller quantity of glass from room B (phase D17.26, 42 fragments, 21 ENV, 150g) includes fragments from shaft and globe/onion bottles, phials and window glass, as in Room A. There are also two wine glasses, giving a date of *c.* 1700–40 for context [294] and *c.* 1720–40 for [292]. The first of these is represented by a moulded, six-sided, teared pedestal stem (Figure 119).[274] The second is a small, nondescript rim fragment. Part of a mirror with degraded silvering was recorded in context [338] (<1465>). The clay pipes from phase D17.26 (27 bowls, 90 stems, 2 mouthpieces) are also dated to *c.* 1730–60 by type OS11 bowls in [292] and [338], found with types AO15, AO25 and OS10. Five examples have maker's marks moulded in relief on the sides of the heel. The initials WM on a type AO25 from [252] (<769>) probably stand for William Manby (3), recorded in Limehouse in 1719–46.[275] A type AO25 pipe from [292] marked WL was likely made by William Lamb, recorded in 1698–1721 and 1730 at St Giles Cripplegate.[276] There are two pipes (a type AO25 and type OS11) are marked IL (<1771> and <1041>), possibly by John Langley, of St Luke's, 1721–35.[277] A type OS11 pipe from [338] has a single dot on the left side of the heel, which cannot be associated with any particular maker (Figure 119).

This was a major rebuilding of D:Building 12. The thickness of the new spine wall may indicate the building was rebuilt higher. This Event (13) followed Event 10 which is dated to around 1700; but would have preceded the clearance of the site in 1732. The rebuilding can be attributed to Ashton and his colleagues, but the context or reasons are not known.

Event 14: final alterations to D:Building 13

(D17.9, 17.11, 17.15)

after 1700, up to 1732

A new mortar surface was laid in room A of D:Building 13, which respected the east side of the earlier beam

[272] Thorpe 1969, pl XXXVI, no. 5; Bickerton 1971, pl 4.

[273] For a 17th-century pestle and mortar in façon de Venise glass see: https://collection.sciencemuseumgroup.org.uk/objects/co128537/glass-pestle-and-mortar-europe-1601-1700-mortar-pestle [accessed 5 October 2022].

[274] See Bickerton 1971, pl 197, *c.* 1720.

[275] Pearce 2013, fig 1.

[276] Hammond 2004, 19; Oswald 1975, 141.

[277] Oswald 1975, 140.



Figure 119 Billingsgate: D:Building 12, phase D17.24, [337], part of wine glass with inverted cinquefoil baluster stem, *c.* 1665–*c.* 1680, <602>; [363], part of pestle in natural blue glass, <561>; phase D17.26, [294], six-sided pedestal stem from wine glass, 18th century, <593> (all glass scale 1:2); right, phase D17.24, [308], clay tobacco pipe of type OS11 (*c.*1730–60), with moulded crowned harps on the sides of the heel, <948> (left); phase D17.26, [338], type OS11 clay pipe with dot on left side of heel, <947> (right)

or partition constructed in period D17.8 (period D17.9, Figure 120) . Successive repairs to the southern portion showed that that area was heavily used. To the west of the 'partition', a series of mixed rubble makeups may have been laid down for an outlying section of the floor. With the completion of the floor, a probable post pit was inserted in the east, while a new north–south beam slot was laid out immediately to the south-east of its period D17.8 predecessor, which it presumably replaced. Nails were found along the length of the beam itself, and it can be suggested that these had retained the studs of a partition. The earlier feature was sealed by mainly organic silts, which appear to have collected following the decay of the beam. A worn glazed medieval tile was found in D17.9.

Further mixed rubble makeups were deposited in room B of the building (period D17.11), activity punctuated only by the cutting of a north–south slot (not illustrated), possibly for a beam. The west wall of the room appears to have been truncated at this juncture, as a number of north–south timbers set in mortar were laid on top. This feature had a chalk edging, and it may have been simply the base for a new brick or masonry superstructure, since timber-framed walls were not generally constructed after the Great Fire.

Within the room, several beam slots were cut into the new makeups, marking the position of at least six north–south floor joists set at 0.3–0.5m intervals (Figure 120). The joists abutted the south wall, but only the western three reached as far as, or near to the north wall. The other examples stopped opposite a mortared brick and tile plinth inset into the approximate centre of the room, presumably supporting a pier or post; if the plinth was a central feature, it is possible that the east wall of the room was a southward continuation of the dividing wall in D:Building 9. No joists appear to have been laid in the north-eastern quarter of the room, where a series of makeups and a thin occupation horizon took the place of the wooden floor. The joists were packed with a mixture of mortar and organic silts, which in the south supported a mortar threshold,

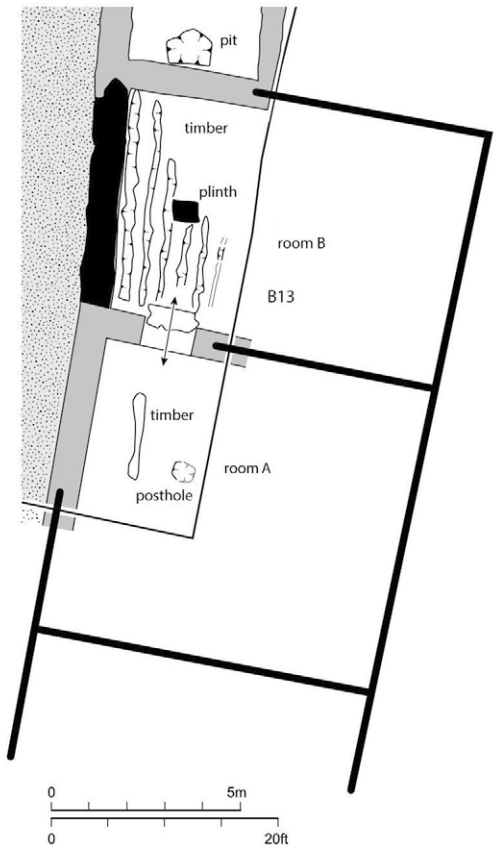


Figure 120 Billingsgate: D:Building 13, as amended in Event 14, with property boundaries from the plan of 1680 (1:200)

presumably marking an entrance into room A opposite the plinth. A trample layer crossed the threshold, followed by a deposit of mortar and tile, which seems to mark a repair. Three layers produced cowrie shells. Finally, substantial deposits of silts and building rubble were deposited in both rooms (period D17.15), covering the latest timber floors and sealing the west wall in the north; clearly D:Building 13 had been abandoned prior to redevelopment.

This phase 17.11 produced the only purple on white decorated delftware tile. This has part of a horse (Figure 121 <1264>), suggesting that the whole scene would again have shown a mounted military figure. The tile is probably Dutch of 18th-century date, so another likely to have been part of a post-Fire building. The other decorated examples found here are blue on white. These have a landscape scene and at least two have spider head corners. Other tiles are plain white. Also from 17.11 is a small amount of roofing slate (contexts [331], [346]) and a fragment of plain yellow medieval tile.

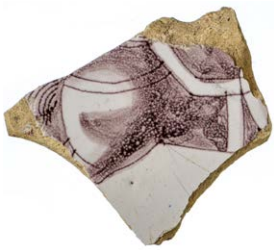


Figure 121 Billingsgate: delftware tile showing part of a horse D[570] <1264> (scale 1:2)

A total of 71 sherds of pottery (32 ENV, 0.05 EVE, 965g) was recorded in room A (phase D17.9), mostly small fragments datable to the late 16th/17th century, with few diagnostic features to allow closer dating. These consist mainly of everyday household forms in Surrey-Hampshire border wares and London-area red wares, with the latest context ([561]) dated to *c.* 1700–50 by part of a saucer in Chinese porcelain, Batavian ware (CHPO BATV). Sherds from a dish in TGW D in [497] date to *c.* 1630–80 and there is also part of a teabowl in CHPO BW in [768].

A larger number of sherds from room B (phase D17.11) occur in a similar range of fabrics and forms (125 sherds, 79 ENV, 2.3 EVE, 1295g). There are more reconstructable profiles and larger sherds, with the latest dates assigned to contexts [570] and [577], deposited *c.* 1700–50. This is based on sherds from a plate with floral decoration in TGW H and part of a teabowl with Chinese-style decoration, found with sherds from a dish in TGW D and from a porringer and plate in TGW C. There are also sherds of biscuit tin-glazed ware (TGW BISC), although it is uncertain which pothouse produced these. In addition to a range of dishes and bowls in Surrey-Hampshire border ware, part of a lid with a loop handle on the flat top in BORDB was probably made for a tripod pipkin (Figure 122). There are also sherds form a saucer candlestick in RBOR in [644]. Imported wares include FREC, WEST, RAER, SPAM and CHPO BW.

Twenty-eight sherds (24 ENV, 0.4 EVE, 392g) were recorded in phase D17.15, dating at the latest to 1704–12, based on part of a cylindrical mug in London stoneware (LONS) with an impressed AR excise mark near the rim. Such marks originated in 1700 in an Act of Parliament aimed at standardising capacities in the tavern trade of beer and ale. The WR mark of William III became standard after Queen Anne's brief reign, which is represented by the example from context [282]. A further sherd from the Westerwald stoneware mug with the portrait of Queen Mary, recorded in earlier contexts from D:Building 13, was also recovered. Other sherds from mugs in LONS were also recovered in [197] and [270], dating after *c.* 1670 and the establishment of the Fulham Pottery, the first successful producer of stoneware in Britain. There are also sherds of TGW H, dating after *c.* 1680, together with a range of fabrics and forms comparable with finds from earlier phases, as might be expected with the disuse of this building.



Figure 122 Billingsgate: D:Building 13, Phase D17.11, [570], Surrey-Hampshire border ware with brown glaze (BORDB) lid, 17th century (scale 1:2); part of wine glass with inverted baluster stem and funnel bowl, early 18th century, <915> (scale 1:1); clay pipe of type OS10, *c.*1700–40, marked with the initials AA, probably for Anthony Andrews, <1043>

Three fragments of glass from phase D17.9 (3 ENV, 16g) are dated to *c.* 1680–1740 by part of an onion bottle in green glass in [557], with fragments from shaft and globe/onion bottles as well. There are 79 sherds (43 ENV, 470g) of glass associated with phase D17.11. These include fragment from six cylindrical phials in natural green glass, fragments of window glass, and from shaft and globe/onion and square bottles, as well as part of a wine glass with funnel bowl, inverted baluster stem and folded foot (Figure 122, D<G8>), dating to the early 18th century. Part of an onion bottle in [694] dates to *c.* 1680–1740. A similar range of forms was recorded in phase D17.15 (53 fragments, 44 ENV, 105g), dated at the latest to *c.* 1700–50 by a rim fragment from a wine glass in [400]. An inverted baluster stem from another wine glass (in [429]) may have been a product of Ravenscroft's glasshouse, with the absence of crizzling suggesting a date after 1677.

Five clay pipe bowls and 33 stems were recorded in phase D17.9, dated to *c.* 1690–1710 by a type AO19 bowl in [794]. Other pipes include type AO22 (*c.* 1680–1710) and the earlier type AO18. There are 38 pipe bowls (150 stems, 5 mouthpieces) in phase D17.11. The latest contexts ([570], [534] and [476]) are dated to *c.* 1730–40/60 by pipes of type OS11. Other forms include type AO25 (*c.* 1700–70), as well as types AO21 and AO22, and pipes current *c.* 1660–80. Seven examples are marked with their makers' initials moulded in relief on the sides of the heel. Three type OS10 pipes are marked with the initials AA (Figure 122), and may have been made by Anthony Andrews, recorded in 1694–1716.[278] A type OS11 pipe marked WM (<1252>) was probably made by William Manby (3) of Limehouse.[279] A type OS11 bowl (<774>) is marked ID, although the maker has not been identified. Eight pipe bowls, 70 stems and two mouthpieces were recorded in phase D17.15, with a type OS11 bowl from context [282] the latest example, found with type AO25 and earlier pipes. Four pipes have maker's marks moulded in relief on the sides of the heel. One of these has crowned harps (<781>). There is also a type OS11 bowl with the initials TB (<572>) and a type AO25 pipes marked HC (<786>), the latter possibly made by Henry Corderoy, recorded in 1713.[280]

Event 14 comprises the laying of a timber floor within D:Building 13 in the period 1700–32. The building was demolished for the redevelopment of most of the Wharf by Greaves in the 1730s.

The properties between St Magnus and Billingsgate are shown on Rocque's map of the City of 1747 (Figure 123). This can be taken to be a general view of the properties at the end of the excavated Billingsgate sequence. Individual buildings are not differentiated. The redevelopment by Greaves on Botolph Wharf was comprehensive, while not being allowed to envelope the parish property of the former church site. The rebuilding of 1732 demonstrates that warehousing on a larger scale than before was being contemplated and carried out. At the same time, as the map shows, the alleys followed the medieval boundaries of the pre-Fire properties.

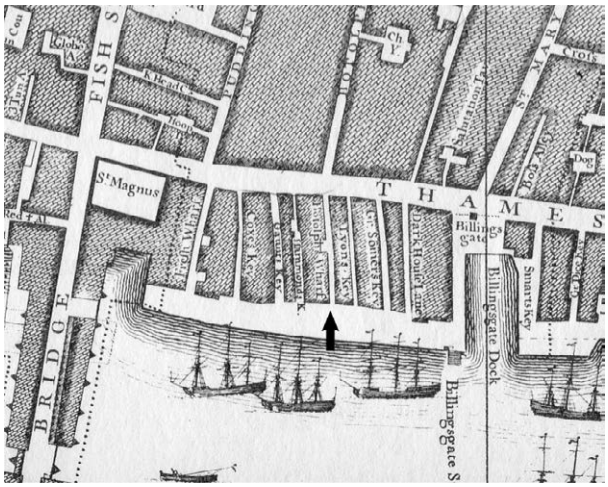


Figure 123 Properties between St Magnus and Billingsgate, on the map by John Rocque of 1747 (Hyde 1982). The Billingsgate (site D) excavation lay in the north part of Botolph Wharf, on both sides of the lane which bisected it (arrowed). This simplified map does not include the sheds and cranes on the wharf

The 14 construction events at post-Fire Botolph Wharf, the people involved, and the use of rooms and spaces

Table 9 lists the 14 construction events, their proposed links with the documentary evidence, and what can be deduced about the function of each building from the finds in it.

A summary of the history and archaeology of Botolph Wharf in 1666–1732 may now be attempted. The site was divided before the Fire into two unequal parts, the former site of St Botolph's church and the rest, a division retained until at least the late 19th century. The site of the church, a small part at the north-west corner became, in stages, a house built over two parish burial vaults. The tenant was Francis Minshull. Its east side along the alley or lane to the waterside was pulled back westwards, thus making it smaller, at the insistence of Josiah Child, who met the surveyor Robert Hooke measuring in Thames Street one day in 1667. Child thereby widened the gateway to the warehouses which formed the second, much larger portion of the Wharf as a whole. Child built or rebuilt all these warehouses, along with two houses on the east side of the lane and fronting onto Thames Street. Child's subtenant for the

[278] Oswald 1975, 130.
[279] Pearce 2013, fig 1.
[280] Oswald 1975, 133.

	Event	Archaeological date and map evidence	Documentary evidence and interpretation
1	Post-Fire abandonment and a temporary lane surface	1666–7; pottery 1580–1700	Post-Fire abandonment and a temporary lane surface, 1666–7
2	Construction east of the lane: D:Building 9, rooms A and B	between 1667 and 1676, since on Ogilby and Morgan's map; pottery 1550–1700	Built by Josiah Child 1667; tenants unknown. Probably domestic; a probable cesspit in room A. Rebuilt in Event 5.
3	A new lane, and construction to the west: D:Buildings 10 (the undercroft) and 11 (both on church site)	after 1666, probably mostly by 1678; pottery 17th-century	Retained by the parish, occupied from 1671 by Joshua Green, vintner, and adapted by Francis Minshull from 1674; an example of a parish church site rebuilt as rentable premises, here including burial vaults for the parish. D:Building 10 altered in Event 7.
4	Construction west of the lane: D:Building 12, south of D:Building 10	after 1667 when vestry demolished; by 1676, since on Ogilby and Morgan's map; pottery 1680–1720	Part of Botolph Wharf leased to Joseph Ashton and others by Child in 1685. Probably a warehouse; this phase the first examples of cowrie shells (in D17.21). Altered in Event 8.
5	Reconstruction and occupation of D:Building 9, and a new lane	1680–1720, latest pottery 1700–40; glass 1640–1740 (from occupation layers)	Rebuilt by John Olley and others in the late 1680s. Leased by Child to Joseph Ashton and associates in 1699, when the western house was the Hare, lately occupied by Edward Leaver, and the eastern was occupied by Richard Hopkins, orange merchant. Cowrie shells (in D17.7).
6	Construction east of the lane: D: Building 13, south of D:Building 9	1680–1720; pottery 1550–1700; glass 1640–1740; pipes 1660–80	Part of Botolph Wharf leased to Joseph Ashton and others by Child in 1685. Presumably a warehouse; many cowrie shells (in D17.4–6).
7	Modifications to D:Building 10	shortly after 1700; no diagnostic artefacts	Presumably modifications to the use of the old undercroft by Minshull's widow Elizabeth after the death of Francis Minshull in 1704.
8	Modifications to D:Building 12	shortly after 1700; memento ring; coin probably 1672–99; pottery mid to late 17th century; pipes 1660–1710	Large timber structures erected in both rooms; presumably the building continued as a warehouse. Would be further modified in Events 10 and 13. Presumably by Joseph Ashton and colleagues. Cowrie shells (in D17.22).
9	Modifications to D:Building 9	after Event 5, so probably after 1700; pottery 1730–50; glass 1650–1740, including phials holding chemicals	Communicating doorway in the basement blocked up; a cesspit (2) dug in room B. The two parts of D:Building 9 continued as houses, probably incorporating shops, fronting onto Thames Street. To be followed by Event 12.
10	Further modifications to D:Building 12	around 1700; pottery mid to late 17th century; glass 1640–1740; pipes 1680–1710	Further modification to the timber structures in the basement of D:Building 12. Presumably its function as a warehouse continued. Cowrie shells (in D17.23). To be followed by Event 13. Presumably by Joseph Ashton and colleagues.

	Event	Archaeological date and map evidence	Documentary evidence and interpretation
11	Modifications to D:Building 13	after Event 6; pottery 1700–50; glass 1640–1740	Another modification by Ashton and his colleagues, following Event 6: beams laid in the floors of both rooms, presumably at the same moment for similar internal structures. Cowrie shells (in D17.8 and 17.10). To be followed by Event 14.
12	Final alterations to D:Building 9	perhaps documented rebuildings after 1699; Charles II farthing of 1675; pottery 1650–1700; glass 1680–1740; pipes 1680–1710	New brick floors and partitions in both parts of D:Building 9 (so while being separate structures, they were refurbished at the same time). Since Event 12 follows Event 9, the former is likely to be after 1700.
13	Final alterations to D:Building 12, new thicker spine wall between rooms	after 1700, up to 1732; pottery 1680–1740 includes many sugarloaf moulds and syrup collecting jars; glass 1680–1740; pipes 1730–60	A major alteration or rebuilding of the warehouse building. Presumably by Joseph or Henry Ashton. Cowrie shells (in D17.24 and 17.26).
14	Final alterations to D:Building 13, including period of abandonment at end	after 1700, up to 1732; pottery 1630–1750; glass 1680–1740; pipes 1680–1713	A wooden floor laid in room B, and some new timber structure in room A. Presumably by Joseph Ashton or Henry Ashton. Cowrie shells (in D17.11 and 17.15)

Table 9 Summary of the 14 construction events at Billingsgate

Wharf was Joseph Ashton, first known in the late 1680s, and author with others of a wharfingers' cartel to direct the lucrative business of the wharves in 1695. Minshull and Ashton were not friendly neighbours. Ashton tried to squeeze a small two-horse stable into the lane opposite Minshull's vault, and the latter complained and had it removed or amended; this is perhaps why it does not figure in the archaeological record.

After about 1680 further modifications to the houses and warehouses continued with some frequency up to a demolition of all of them in 1732 for a new configuration of warehouses by George Greaves. In this, the new warehouses replaced or absorbed the two dwelling houses on Thames Street east of the lane, and now comprised all the site except for the former church area. Here stood the house which because of its history was a strange mixture of the walls of a medieval undercroft, shops and burial vaults. The date of the demise of this house is not known with accuracy, but would have been some time during the middle or later 18th century. The subsequent warehouses of the 19th century enveloped it.

The interlocking sequence of constructions and occupation from 1666 to about 1732 is shown diagrammatically in Figure 124. This shows that D:Building 9 and D:Building 12 both went through four phases of building and alteration; D:Building 13 had three phases. This matrix or chart may be useful in the future for study of artefacts, which can be followed as types through the sequence. Table 27 in Chapter 10 details the pottery from each of the 14 events. D:Building 9, evidently a pair of houses fronting onto Thames Street, had a relatively high number of sherds of continental imports in Event 5, and of tin-glazed ware in Event 9. In approximate chronological order of events, cowrie shells were found in Events 4 (first phase of D:Building 12), 6 (D:Building 13), 8 (second phase of D:Building 12), 5 (second phase of D:Building 9), 10 (third phase of D:Building 12), 11 (second phase of D:Building 13), 13 (fourth phase of D:Building 12) and 14 (third phase of D:Building 13). Thus the shells were found in strata comprising Buildings 9, 12 and 13. The first was probably domestic throughout all its phases; the second and third were warehouses.

D:Building 9, on the east side of the alley and against Thames Street, has the best set of evidence for its use. It was originally built by Josiah Child in 1667. It probably contained domestic rooms (Event 2). It was rebuilt by John Olley and others in the late 1680s (Event 5). When leased by Child to Joseph Ashton and associates in 1699, the western house was the Hare, lately occupied by Edward Leaver. Two phases of alterations to the house followed. Probably after 1700 an intercommunicating

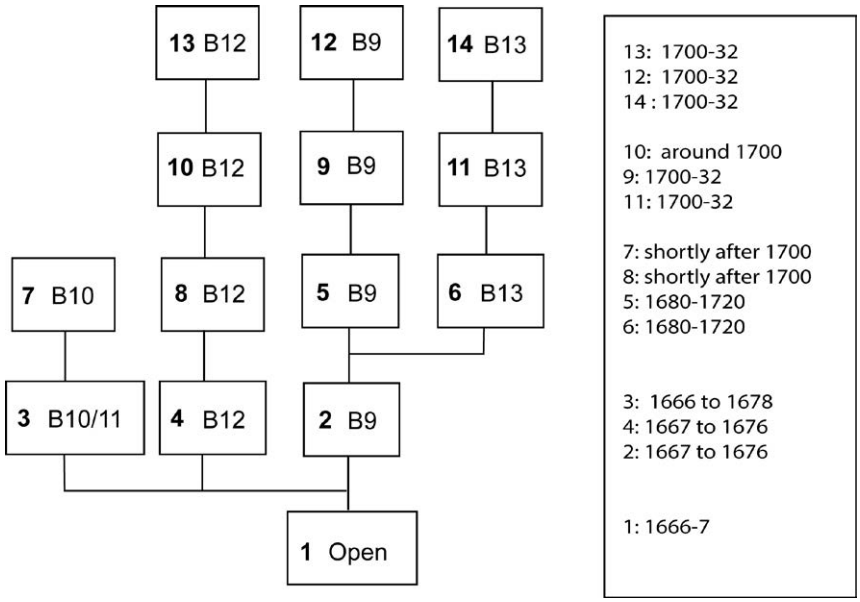


Figure 124 Diagram of the succession of buildings at Billingsgate and their relationships; numbers=Events, the buildings shown by their numbers (B9=D:Building 9). The simplified date of each event is shown on the right

doorway between the cellar of the house and that of its neighbour to the east was blocked up, and a cesspit (Cesspit 2) dug in the floor (Event 9). Sometime after this but before the general demolition of 1732 new brick floors were laid in both houses, probably at the same time (Event 12).

Cesspit 2 contained three layers which the excavators identified as the primary fill of the cesspit, that is excrement and refuse. There was a wide variety of pottery from a range of domestic uses: sherds of chamber pots, an ointment pot, porringers, bowls, cups and plates; Chinese and imitation Chinese tea bowls, and a jug in Frechen stoneware. There was also a large group of glass fragments: two phials and 14 globular flasks, seven complete. Two vessels still had their corks. Three contained chemicals, possibly being 'one of the earliest examples of true chemical medicines, as opposed to natural herbal remedies'. The filling of the cesspit can be dated to between about 1700 and 1730, when the site was redeveloped; possibly the pottery and glass was thrown into the pit during the demolition in the early 1730s. The occurrence of 14 flasks in the cesspit may indicate more than the disposal of a single household's medicinal arrangements. Consideration of the pottery and artefacts from the layers comprising the buildings may further illuminate their use, though the majority were utilitarian buildings, that is warehouses, and not much variety in artefacts is to be expected.

4 Living and working in London, 1666 to 1750

This chapter presents two topics which together comprise the setting for the findings just described. First, there is a survey of the rest of London's waterfront on both banks of the river, upstream and especially downstream as far as Deptford, to show how the archaeology of the reported sites fits into a wider view of archaeology along the Thames. Second, we return to the City and think about the material culture of the waterfront area compared to that to be found in the areas away from the waterfront and further, outside the area of the Great Fire. This chapter concentrates on the period up to about 1750; great changes of the decades after 1750 are the subject of the next chapter.

Settlements and buildings along the Thames

This survey of geographical context is arranged in three parts: first, both banks of the river upstream of London Bridge to Blackfriars; second, east of the City on the north bank, at Shadwell, Ratcliffe (also sometimes spelt Ratcliff) and Limehouse; and third, the south bank east of London Bridge to Rotherhithe (its name sometimes rendered as Redriff) and round the bend in the Thames as far as Deptford. Although many industries, usually in small-scale premises or conducted from homes, were spread all over London, there were a few where a riverside location was appropriate, necessary or convenient: dyers on both sides of the Thames; tanning and other leather-finishing trades in Bermondsey (using the open spaces and many streams there); and maritime industries and services east of the City, on both banks. These maritime interests included shipbuilding; servicing of ships and their crews; docks, and warehousing. The eastern suburbs on both sides of the river had a particular character which scholars have occasionally called 'sailortown'.

Both banks of the Thames upstream of London Bridge, to Blackfriars

The waterfront of the City of London in 1750 is shown in the map of John Rocque published in 1747 and surveyed in the years since 1739.[1] The central part of the waterfront displayed many of its important characteristics (Figure 125).

Since the reclaimed land had not been substantially increased in area after the Fire, or only in a very few corners, the area south of Thames Street from Blackfriars to the Tower in 1747 was the waterfront of the former medieval city, rewritten in brick. Some of the alleys which were the skeleton of the land south of Thames Street still had their 13th- and 14th-century names, such as Three Cranes Stairs, Dowgate, Steelyard and Old Swan Stairs in the central part, and others in the parts to west and east. Thames Street and the lanes to north and south of it had been raised immediately after the Fire by reusing Fire rubble. The street was widened along most of its length, in sections (sometimes on the north side, sometimes on the south). Only one new street was constructed, King Street and its continuation [New] Queen Street, which led from Guildhall Yard to the wharf (the riverside end of the street is shown in Figure 125).

In this central part were eleven livery company halls: in the streets and lanes immediately north of Thames Street, from west to east, the Painters, Cutlers, Skinners, Tallow Chandlers, Dyers, Innholders and Plumbers; south of the street, the Vintners, Joiners, Watermen and Fishmongers.[2] Apart from the Vintners, they were either tucked away down alleys or were screened from the street by subsidiary buildings. Most of them were on their medieval sites. As Rocque's map shows, the area around Dowgate Hill was the site of eight livery company halls; if the group of halls provided a tone to the district in 1700, it was a tone held over from the pre-Fire period.

Although in several cases the medieval and post-Fire halls have been destroyed since 1750, others remain as valuable islands of strata for future investigation within the surrounding sea of present-day office buildings. Investigation at the time of repairs of Innholders' Hall in College Street in 1989 indicated that some of the larger roof timbers in the hall were charred, and they may have been salvaged from the medieval hall.[3] One of the most valuable will be Skinners' Hall in Dowgate (Figure 125 no. 3), being refurbished at the time of writing, where many phases of growth from the medieval period to the 19th century are being recorded. Next door to the north, Tallow Chandlers' Hall (Figure 125 no. 2) is 'perhaps the best-preserved post-Fire livery hall'[4] (Figure 126). These halls are companions for the sequence of post-Fire strata on the archaeological sites south of Thames Street, as they provide historic strata above ground.

[1] Hyde 1982.

[2] The Fruiterers had a hall at the great house of Worcester Place next to Vintners' Hall and on the riverside in the time of John Stow (i, 242); but not after the Fire.

[3] Schofield with Maloney 1998, 293 (site IHA89).

[4] Bradley and Pevsner 1997, 407–9.



Figure 125 Extract from Rocque's map of 1747, showing the central part of Thames Street from the east side of Queenhithe Dock to London Bridge (Hyde 1982)

Key: 1 Cutlers' Hall; 2 Tallow Chandlers' Hall; 3 Skinners' Hall; 4 Dyers' Hall; 5 Innholders' Hall; 6 Plumbers' Hall; 7 Vintners' Hall; 8 Joiners' Hall; 9 Steelyard; 10 All Hallows the Great church; 11 Watermen's Hall; 12 Previous site of Dyers' Hall (until 1681); 13 Swan Lane (site A); 14 Seal House (site B) (Darvoll's houses); 15 Fishmongers' houses on Thames Street; 16 Fishmongers' Hall; 17 London Bridge

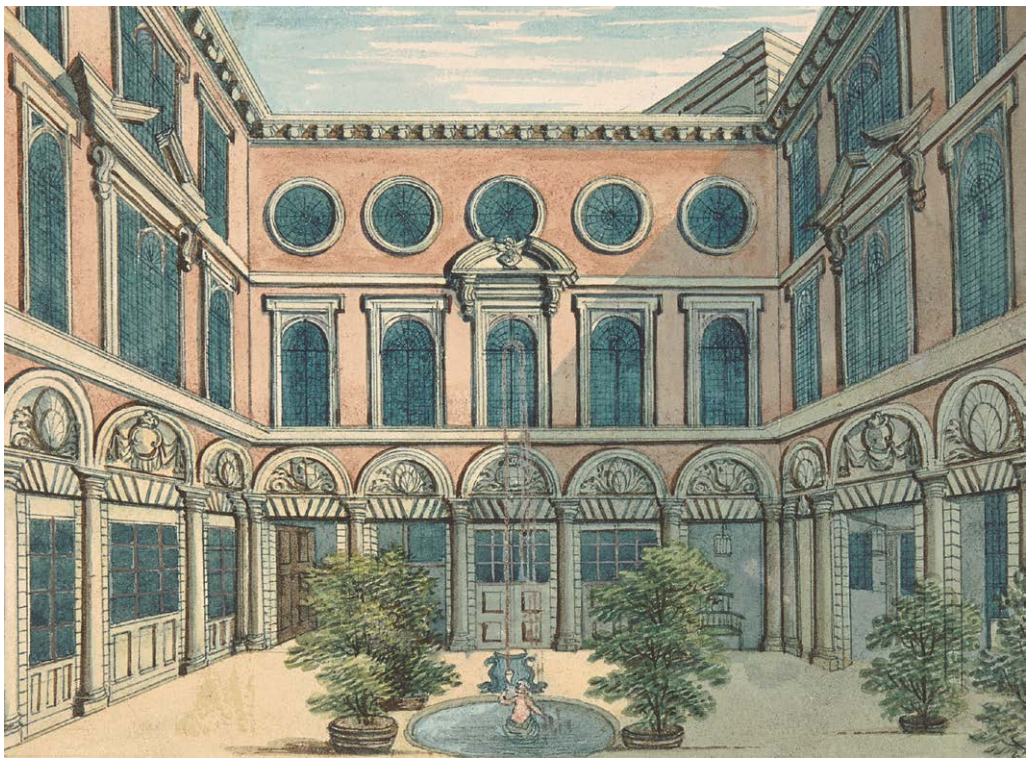


Figure 126 The courtyard of Tallow Chandlers' Hall by Samuel Ireland, between 1794 and 1800 (Yale Center for British Art, Paul Mellon Collection, B1977.14.9480). The hall was built in 1671–3 by the master bricklayer Captain John Caine, and is very like Brewers' Hall in Addle Street which he also built (destroyed in World War II)

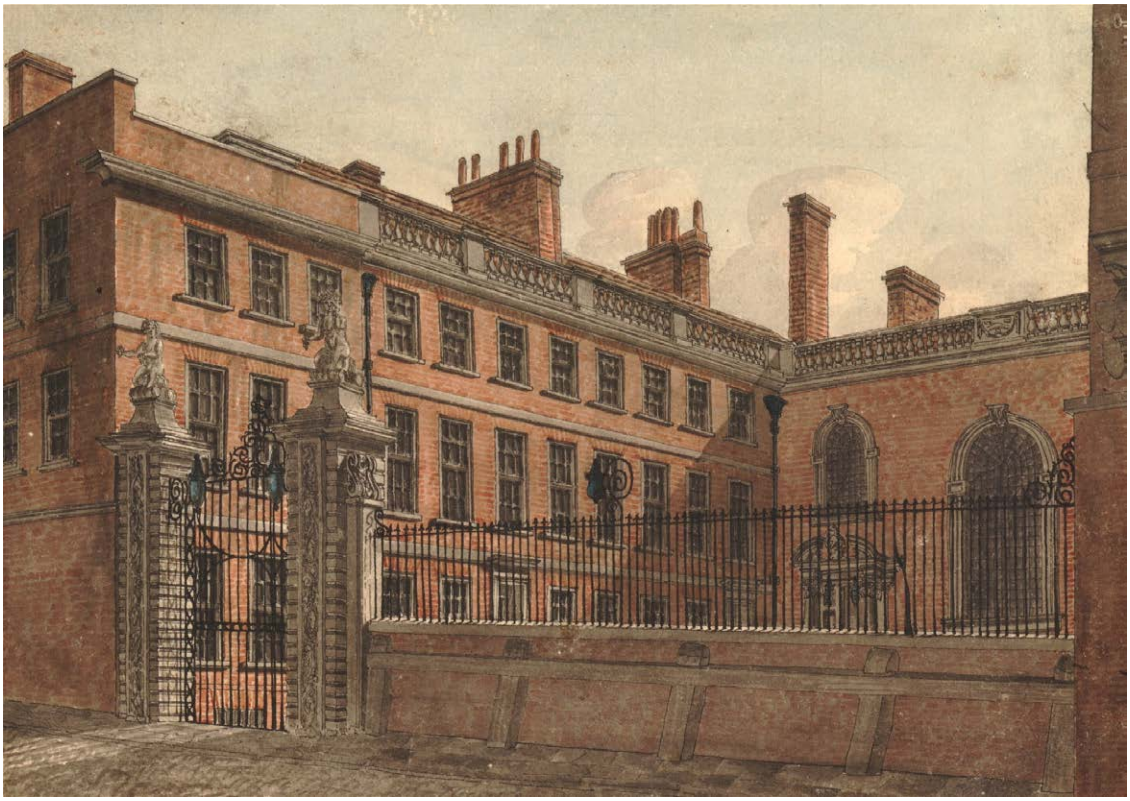


Figure 127 Vintners' Hall, Upper Thames Street, around 1800 by an artist known only as 'Wilson' (BM, 1880,1113.5729). The two putti on the gateposts were both of Bacchus holding a bunch of grapes in each hand; the sculptor is unknown. Since 1800 rebuildings have removed the range on the left and filled in the courtyard

The main secular survival from the immediately post-Fire period in Upper Thames Street itself is part of Vintners' Hall, including its fine staircase. The Hall was built in 1671–5, the architect possibly Edward Jerman, but documentary evidence is lacking and it would have been to his designs, since he died in 1668; he had designed Fishmongers' Hall and several others.[5] Its open aspect to the street may have been unique for a livery company hall in the City (Figure 127). It kept two aspects of the medieval complex: the situation and layout of the central hall across the property, and unusually for a site south of Thames Street, a garden, shown in a plan of 1808.[6] The high quality of the interior was captured in 1887 by Edward Hull (Figure 128). At this level of refinement, the furnishings of livery company halls were in the same class as those of country houses, and London joiners worked on buildings of both groups.

The river bank adjacent to Vintners' Hall is shown by the Buck brothers in their panorama of 1749, an extract of which is Figure 129. It shows the lack of large buildings, or of buildings of three or more storeys, along much of this long length of waterfront. The medieval points of access to the river are still there, marked by public stairs.

The panorama also shows another notable feature of the post-Fire City, the number and prominence of the steeples of the new parish churches, all built by about 1700. Today the survivors are dwarfed by the City's secular buildings, but when built they were generally larger and higher than their neighbours, symbolising the force of religion in contemporary society.

On the north bank, for this purpose, we note some excavations west of Queenhithe. Riverside buildings, including traces of wooden vats which had an unspecified industrial purpose perhaps in the post-Fire decades, were recorded at the Trig Lane site, now beneath the north end of the Millennium Bridge.[7] The north bank of the Thames west of the Fleet is not considered in detail here; after 1650 the row of riverside mansions of courtiers alonmg the Strand was being broken up into residential developments.[8] One site has produced a glimpse of new work extending the pre-Fire alignment of the river's edge, just west of the Fleet at a site excavated in Tudor Street in 1986.[9]

[5] RCHM 1929, 192–3; Colvin 1995, 545; Bradley and Pevsner 1997, 409–10.
[6] LMA, CLC/L/VA/G/027/MS15432/001.
[7] Ayre and Wroe-Brown 2002, 58–63.
[8] For the medieval and Tudor Strand palaces, Guerci 2021; for the streets and main buildings of the riverside around 1750, Phillips 1951, 75–117. For the work of Nicholas Barbon in this area in the 1670s, Kelsall and Walker 2022.
[9] Milne 1992, 76–7.



Figure 128 Doorway of the Court Room of Vintners' Hall, in a view by Edward Hull, 1887 (Bishopsgate Institute). The panelling and doorcase are thought to be by John Symes; these survive. Beyond is a glimpse of the 17th-century stair

In contrast to the City, Southwark had a number of houses and fragments of late 17th-century inns which survived to be recorded just after World War II.[10] Fronting the river upstream of London Bridge, a few buildings of the period survive (much restored) or have been recorded: the Anchor pub, 1 Bankside, originally of 1770–5 but much rebuilt (the location of which is shown in an extract from Horwood's map of 1813, Figure 169 below); 49 Bankside (Cardinal's Wharf, with late 17th-century parts); 50–52 Bankside, early 18th century (formerly with a rain-water head inscribed 1712); and 74 Bankside (demolished, but recorded in 1950), also of the early 18th century.[11] Other similar small houses have been recorded in Sumner Street, now beneath Tate Modern.[12] Apart from the pub, they are or were dwelling houses of two storeys with garrets, so a whole storey less than the houses in Thames Street on the other bank.

Excavations and associated documentary research have elucidated this period on the south bank. The large area of the London residence usually called the palace of the bishops of Winchester (its location shown on Figure 5), west of Southwark Cathedral, became by 1750 a zone of warehouses (including for hops), brewhouses, glasshouses, dyehouses, stables and small tenements which incorporated some of the major walls of the 14th-century palace, including the rose window which remains in Clink Street. An impressive ashlar waterfront wall, probably originally of the late 16th century, formed the edge of the quay until the 19th century.[13]

To the west, at the south end of the Millennium Bridge, masonry river walls dating to the second half of the 17th century have been recorded.[14] They replaced timber structures. Bankside had several glass houses in the 17th century, and several iron foundries in the 18th century; some have been located. Trial work and excavations of 1999–2002 took place in several adjacent buildings on the west side of Southwark Bridge Road and bordering the river. A series of brick buildings and flues (one reusing foundations of the Hope theatre, disused in 1656) from one or more glasshouses from the 1670s to the 1740s were recorded, overlaid by foundations of later warehouses.[15] The locations of these excavations are shown with later details from the area on Figure 169 below. One building of note, even further west, was the Falcon Inn, later 79 Bankside (Figure 130) which was built about 1690 by John Hayward, haberdasher, and his son Henry, a carpenter.[16] As the front range apparently survived in good condition for 120 years, it was probably of brick.

West of the mouth of the Fleet river at Blackfriars (where Blackfriars railway station is today) the north bank of the Thames was a different world, a succession of grand mansions which were mentally part of Westminster to the west. The south bank upstream of Blackfriars was less developed than the part in Southwark or Bermondsey, but it was still industrial like them, at least along the river's edge. Pottery and kiln debris has been recorded on many sites in Lambeth, such as a delftware kiln and its products of the 1680s to at least the 1730s at Norfolk House near the bank;[17] and beyond at Vauxhall, some distance beyond Westminster, a short-lived glasshouse operating between sometime in 1663–81 and 1704 has been excavated.[18]

[10] For the inns, Rendle and Norman 1888.
[11] SoL 22, 59–61; 61–3; 63–4 respectively.
[12] Burton and Guillery 2006, 50–1.
[13] Seeley *et al.* 2006, 101–17, with some corrections to the account in SoL 22, 49–55.
[14] Ayre and Wroe-Brown 2002, 66–71.
[15] Mackinder *et al.* 2013.
[16] SoL 22, 58.
[17] Bloice 1971.
[18] Tyler and Wilmott 2005.

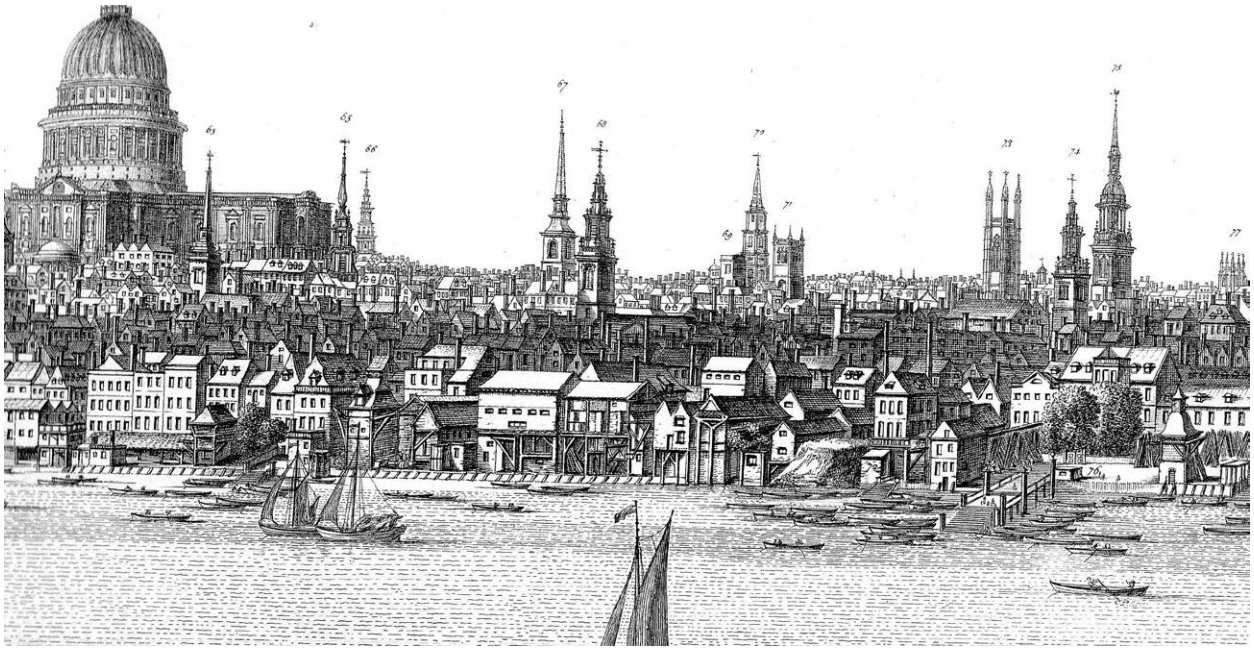


Figure 129 The north bank south-east of St Paul's in 1749, from the panorama by the Buck brothers (Hyde 1994, pl 43). The numbers for individual stairs are given but small: from left to right, 64 Three Crane Stairs (above the two small sailing vessels); 72 Dowgate Stairs; 76 Steelyard Stairs



Figure 130 The frontage of the Falcon Tavern on Bankside, engraving of 1811 by William Wise from a drawing of 1805 by Frederick Nash (Yale Center for British Art, Paul Mellon Collection, B1976.1.473). This faced south, away from the wharf; it was a street frontage, and the river lay behind



Figure 131 The riverside at Limehouse; hand-coloured engraving by John Boydell, 1751 (Yale Center for British Art, Paul Mellon Collection, B1977.14.18539). The houses behind the river wall are along Narrow Street and probably include buildings at Victoria Wharf, excavated 1996; excavation in 2000 was of houses on the other side of the street, facing them

East of the City on the north bank of the Thames, and the beginning of sailortown

London east of the City was composed of many villages and hamlets; some of those on the north bank have been studied.[19] Along the major street of Ratcliffe Highway were timber-framed houses of 3½ storeys in the 1630s or 1640s, as fine as in any City street.[20] The large formerly rural parish of St Dunstan Stepney was the scene of much development from the 16th century, and the church's capacity improved with a gallery; here many seamen lived.[21] Immediately east of the City, Shadwell was open country in 1600 but was quickly built up with a network of streets during the 17th century. Most of the houses were of medium size for the time, of two storeys and a garret; but there were also larger houses of brick, and some of them fronted the River Thames. There were small-scale industries here too, in the area from the Thames right up to Aldgate. One investigated on several archaeological sites has been the production of clay tobacco pipes in small kilns, sometimes inside buildings. At least one maker of clay pipes, William Manby, was exporting pipes to North America from 1681.[22]

By 1700 the districts of Wapping, Shadwell and Ratcliffe east of the Tower were largely occupied by maritime trades;[23] unusually for an area of artisans, few worked from home, so houses could be just houses.[24] Two early 18th-century examples survive as 108–110 Wapping High Street, in this case probably containing chandlers' shops.[25] A site near the Tower in Wapping, on the north side of Hermitage Dock, has produced evidence of the Hermitage Pothouse, a tin-glaze (delft) manufactory in production from *c.* 1665 to *c.* 1773. After 1781 it became a foundry.[26]

Next to the east beyond Ratcliffe is Limehouse, 3.5km (2.2 miles) east of London Bridge. In the 18th century its waterfront was remarkable for a high masonry wall (Figure 131).

Running along the bank is Narrow Street, like Thames Street in the City. Here two excavations of note have taken place. The first, of 1996, was at Victoria Wharf, fronting the river; the site is described as 'a microcosm of Tudor and Stuart Limehouse.' The foreshore between Narrow Street and the river was reclaimed probably between 1584 and 1602, with timber landfill units filled with contemporary refuse. Finds included Spanish

[19] For the 17th-century history of Shoreditch, Stepney and Ratcliffe, Marriott 2011, 27–69.
[20] Power 1972; 1978; for Ratcliffe Highway, Guillery 2004, 46–7, fig 25.
[21] Brett-James 1935, 191–4.
[22] Pearce and Banikov 2019 for discussion of pipe-making in the Aldgate area, and the excavation of a kiln on the north side of Rosemary Lane (now Royal Mint Street).
[23] Morris and Cozens 2014.
[24] Guillery 2004, 21.
[25] Cherry *et al.* 2005, 507.
[26] Tyler 1999.

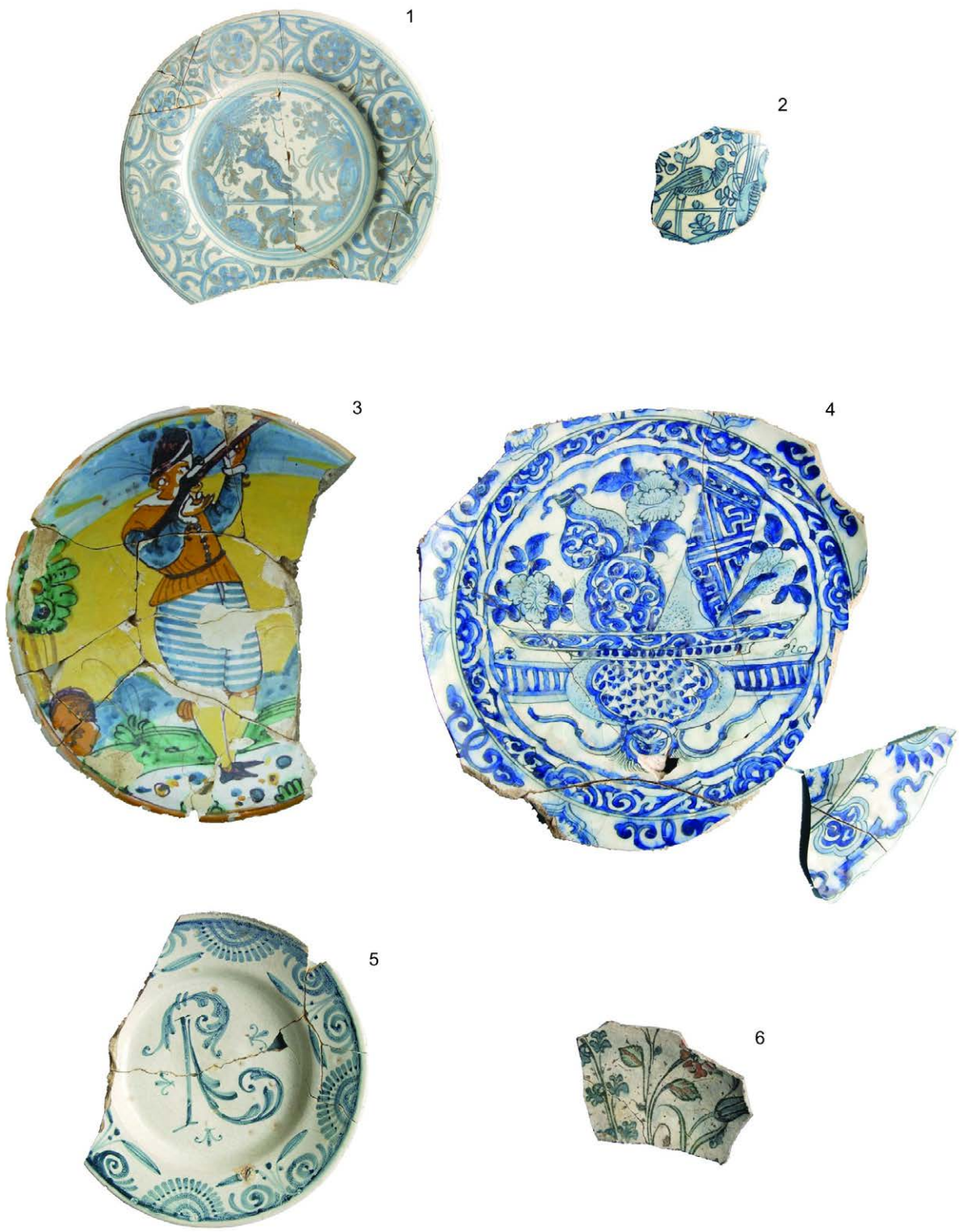


Figure 132 Imported 17th-century pottery from 43–53 Narrow Street, Limehouse. 1. Italian Ligurian calligrafico naturalistico dish with a canine design; 2. Italian Ligurian calligrafico naturalistico dish with a bird design; 3. Montelupo tin-glazed ware dish with a 'cavalier' design; 4. Persian blue-black ware porcelain dish with Chinoiserie design; 5. Portuguese faience plate with a lace and scroll border and a central baroque 'R' design; 6. Iznik-type ware bowl or dish, possibly from a Levant source, with a floral design (scale *c.* 1:3) (photographs and caption by Chris Jarrett)

or Spanish-American coins, some used in Mexico or Cuba, and seeds of exotic New World plants; jettons from Nuremberg and coin weights from Antwerp. Much of the pottery was foreign in origin, the largest portion Spanish. Limehouse was a point of departure and return for Elizabethan explorers of the world, so this rich range of material came back with them. Above were probably contemporary brick buildings. Ships

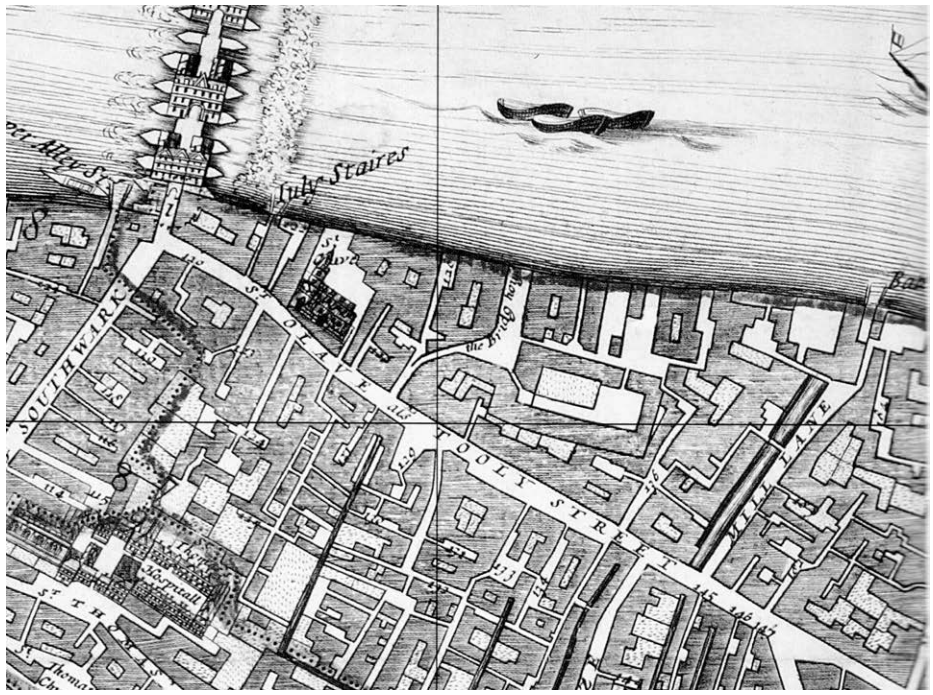


Figure 133 The Southwark bank north of Tooley Street, on Morgan's map of 1682 (Barber and Hyde 2013)

were built at Limehouse from the 16th century, and the site produced rare pieces of a ship-building scaffold.[27]

An excavation of 2000 on the north side of Narrow Street similarly found timber buildings of the late 16th century giving way to more substantial brick houses in the 17th century. Like their neighbours across the street at Victoria Wharf, the occupants enjoyed many different kinds of colourful and exotic foreign pottery, from China, south-east Asia, Turkey, Italy, Portugal and the Caribbean (Figure 132). This may even have been the lifestyle of piracy; it was certainly impressive luxury.[28] These are rather more exotic tastes than are shown by the range of pottery wares on the excavated sites in Thames Street in the City.

These riverside settlements east of the City have sometimes been called 'sailortown' when the 19th century is being considered. 'Sailortown was the place where the seafarer came ashore, where the maritime and urban worlds collided... for a few decades, from the 1840s to the 1910s, sailortown districts with similar (and already partly mythic) characteristics could be found in major ports worldwide'.[29] It was a phenomenon of the age of sail, and especially of the second half of the 19th century as trading systems became global. But these areas were distinctive much earlier. In 1776 Sir John Fielding wrote that going into Wapping or Rotherhithe was like being in another country.[30] For some Victorian writers, these localities were notorious and dangerous dens of vice.[31] It would be useful not only to chart the extent of London's sailortown, but also to investigate if other social groups in the port had similar distinct districts where they congregated. One transitory group for instance were the *lascars* or sailors and soldiers from the Indian subcontinent, south-east Asia and the Arab world, employed on European ships from the 16th century.[32] Whether they, like black immigrants in London, gradually formed neighbourhoods for mutual support is not yet researched.[33]

The south bank east of London Bridge to Deptford

Rapid development of Southwark, particularly to the south and east along the riverside, was in full swing by 1650.[34] Among the industries here tide mills, tanneries, ropeworks and breweries were prominent.[35] The tangle of lanes between Tooley Street, east of the bridge, and the waterfront north of it is shown on William Morgan's map of 1682 (Figure 133). Buildings, presumably including many warehouses, lined the south bank from London Bridge to St Saviour's Dock, a distance of a mile.

The topographical development of this waterfront zone was clearly different in character from the concentrated expansion of properties along Thames Street on the north bank. From the 12th century, the scores of properties comprising the latter expanded

[27] Tyler 2001.
[28] Killock and Meddens 2005; the pottery analysis later modified by Jarrett and Blackmore 2015.
[29] Milne 2016, 1.
[30] Fielding 1776, xiii.
[31] Beaven 2016 describes the Victorian sailortown of Ratcliffe Highway in detail.
[32] Fisher 2004.
[33] LMA, London Picture Archive 35113 is a view in about 1857 of The Strangers' Home, Stepney, a hostel for sailors from these lands. It closed in 1937.
[34] Boulton 1987.
[35] Gerhold 2016, 152–4.

into the river at roughly the same rate, so the edge of the bank was usually uniform and straight, though with local indentations as reclamation on one property lagged behind a neighbour. The south bank in this area grew more spasmodically over the centuries with larger units of reclamation. Some of the development was of large houses which were later submerged, along with their moats, in 16th-century and later housing and industrial works. The straggling, indented river front was straightened out; timber structures of the 17th century lining the streams or reinforcing the river bank have been recorded. The old moat of the Tudor Fastolf Place, between Tooley Street and the river, was largely filled in.[36] Some buildings of the period before 1750 in these alleys are known from drawings by 19th-century antiquaries. The buildings were mostly small houses, of brick or timber framing; but one large late 17th-century brick house of note stood in Stoney Lane, as good as anything in the City; part of a brewery when it was drawn by Buckler in 1827.[37] Excavations opposite Billingsgate between Morgan's Lane and the site of the former London City Hall have found widespread evidence of the long-lived pottery production industry in Southwark, remarkably close to the City itself but downwind of it. This will be reviewed in the section of text on riverside industries below.

A large archaeological project in 2009–13 associated with the new Thameslink Borough Viaduct and rebuilding at London Bridge Station has produced a substantial amount of information about the topographical development and character of Southwark, though interpretation was limited by the small size of many of the investigations. A notable product of this study has been the first proposed map of the extent of a large fire in central Southwark in 1676.[38] Domestic and industrial buildings found in the excavations (including several clay tobacco pipe kilns) were generally small scale and probably mean in appearance, but the area was not all so. In the smaller streets on the south side of Tooley Street by 1700 were fine houses in a style found throughout the eastern and southern suburbs, of three or four storeys built of timber and clothed in timber boards (Figure 134).[39] Clearly many of the houses which were swept away as insanitary by the railway and London Bridge Station in the 1840s were quite respectable when first built just before 1700.

By the 17th century the east part of Southwark merged into the riverside settlement called Bermondsey, which in turn merged into Rotherhithe. Very little of either in its 18th-century form remains above ground, though much does beneath the surface. The character

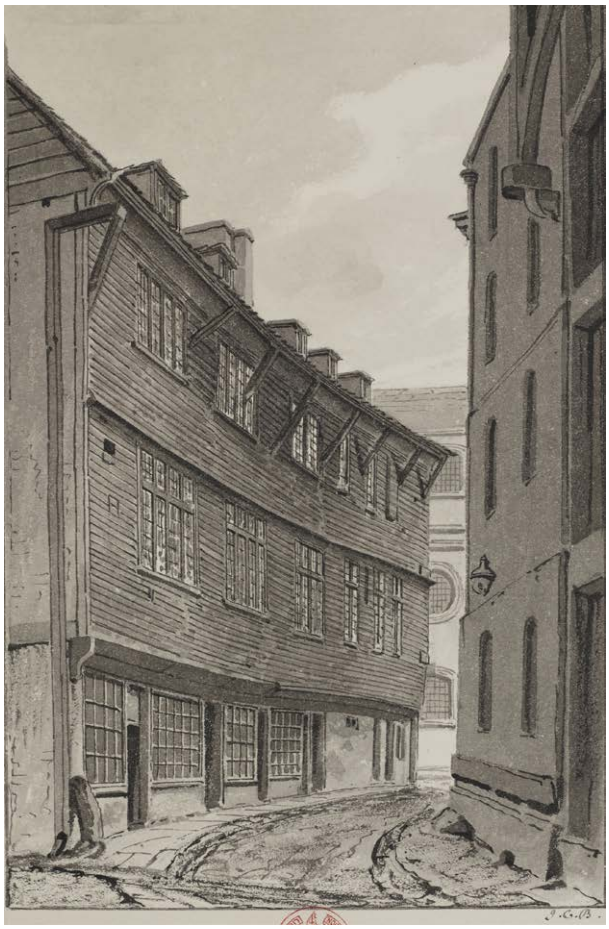


Figure 134 Houses in Joiner Street, Tooley Street, Southwark, probably of the second half of the 17th century, drawn about 1826 by J C Buckler (LMA, London Picture Archive 24093). The view looks north with St Olave Tooley Street visible. This row of houses, unusual in its length and of three and a half storeys, presumably reflects pressure on space near the north end of Borough High Street and the south end of London Bridge, which was nearby; the houses were grander here. The coving under the edge of the roof is unusual[40]

of Bermondsey has been explored in recent years by publication of plans of houses and wharves[41] and by excavation of the waterfront, which was as complicated and rewarding as any on the City side. At Adlards Wharf, Bermondsey, about 200m east of St Saviour's Dock, excavation in 1996–7 found timber wharves forming extensions to properties from the medieval period onwards, with six phases dating from the late 17th century to the 19th century, and a late 18th-century slipway, which suggests boatbuilding or repair. Several units of reclamation were revetted with timber structures including many pieces from 17th-century boats.[42] A few metres away at the north end of George

[36] Blatherwick and Bluer 2009.
[37] Blatherwick and Bluer 2009, 142, figs 116–17; LMA, London Picture Archive 24153.
[38] Fairman *et al.* 2020. The suggested map of the fire is fig 7.7.
[39] For these houses across London, Guillery 2004, 127–59, 214.
[40] John Walker writes: the tiebeam in the picture clearly extends beyond the front wall, and the rafters must finish outside the wall on a flying wallplate. The braces appear to be later supports for the failed wallplate (pers comm 2023).
[41] Guillery 2004, 127–32; Gerhold 2016, 151–2 and 132–4.
[42] Divers 2002. Many reused pieces of ships and boats of the 16th to



Figure 135 Nelson Dock House, Rotherhithe (Stephen Richards, Wikipedia Creative Commons). The belvedere is the cone-shaped roof between the chimney stacks

Row, a pair of houses with a fine shell-hooded doorway dated 1706 had been recorded before demolition in the 1940s after war damage. They were built back to back to form a square in plan, and the front house had curved gables besides the doorway.[43] Noting it in 1983, Cherry and Pevsner called the block 'delightfully wealthy'.[44] In East Lane, a short distance to the east, other good houses, perhaps for sea captains, were constructed in a development of the late 17th century; a survey of them in 1711 survives.[45]

Further east, early 18th-century Rotherhithe also had respectable houses, among its streets of small brick houses interspersed with timber-framed houses covered with boards.[46] The maritime associations of the place are commemorated in the parish church of St Mary, rebuilt from 1714 onwards, where the monument of Anthony Wood (d 1625) is a relief of a three-masted merchant ship, and the slightly earlier burial of Christopher Jones, master of the *Mayflower*, is remembered by a statue of 1965 in the churchyard. The waterfront of Rotherhithe has been investigated on several sites in recent years. Backfill in a ditch just behind the waterfront on a site at Bombay Wharf included a large dump of 17th-century pottery, with a wide range of imported pieces from various places in the Mediterranean and north-west Europe, again indicatory of overseas connections of the residents here. The waterfront north of Rotherhithe Street, which formed the ancient river bank, was investigated on four contiguous sites in 1995–2000. Recording at Bellamy's Wharf in Rotherhithe found that land reclamation for a new dock was reinforced by timbers from large naval vessels of the mid 17th-century Dutch wars, including two stems and a beakhead.[47] At Pacific Wharf several phases of reclamation from the river and consolidation of the wharf, probably for boats or barges, in the mid 17th century and 18th century; adaptation in the early 19th century to be a shipbreaker's yard, where the *Fighting Temeraire* ended its days in 1838; and many fragments of timber structures from land and from ships.[48] Nearby in Rotherhithe Street, the late 18th century Grice's Granary has wooden knee braces which must have come from local shipbreaking yards.[49]

Several of the 18th-century buildings in the centre of Rotherhithe were lost in its mid 20th-century transformation, though the church remains.[50] Like Deptford, it retained a clear identity within the London conurbation.[51] The names Bombay Wharf and Pacific Wharf are eloquent. One notable house survives: the

19th centuries have also been recorded on excavations in Southwark, from the widespread ship-breaking trade. They were used on sites south of Tooley Street, a short distance from the river (Goodburn 2020).

[43] O'Neil 1952; the plan is redrawn in Burton and Guillery 2006, 27.

[44] Cherry and Pevsner 1983, 607n.

[45] Gerhold 2016, 132–3.

[46] Cherry and Pevsner 1983, 610n; Davies 2009, 264–7, photographs of 1911–14.

[47] Saxby and Goodburn 1998.

[48] Heard with Goodburn 2003. The other published site from this group of four is Bellamy's Wharf: Saxby and Goodburn 1998.

[49] Williamson and Pevsner 1998, 32.

[50] Cherry and Pevsner 1983, 600, 610–11.

[51] Not taken further here, but see Humphrey 2004.

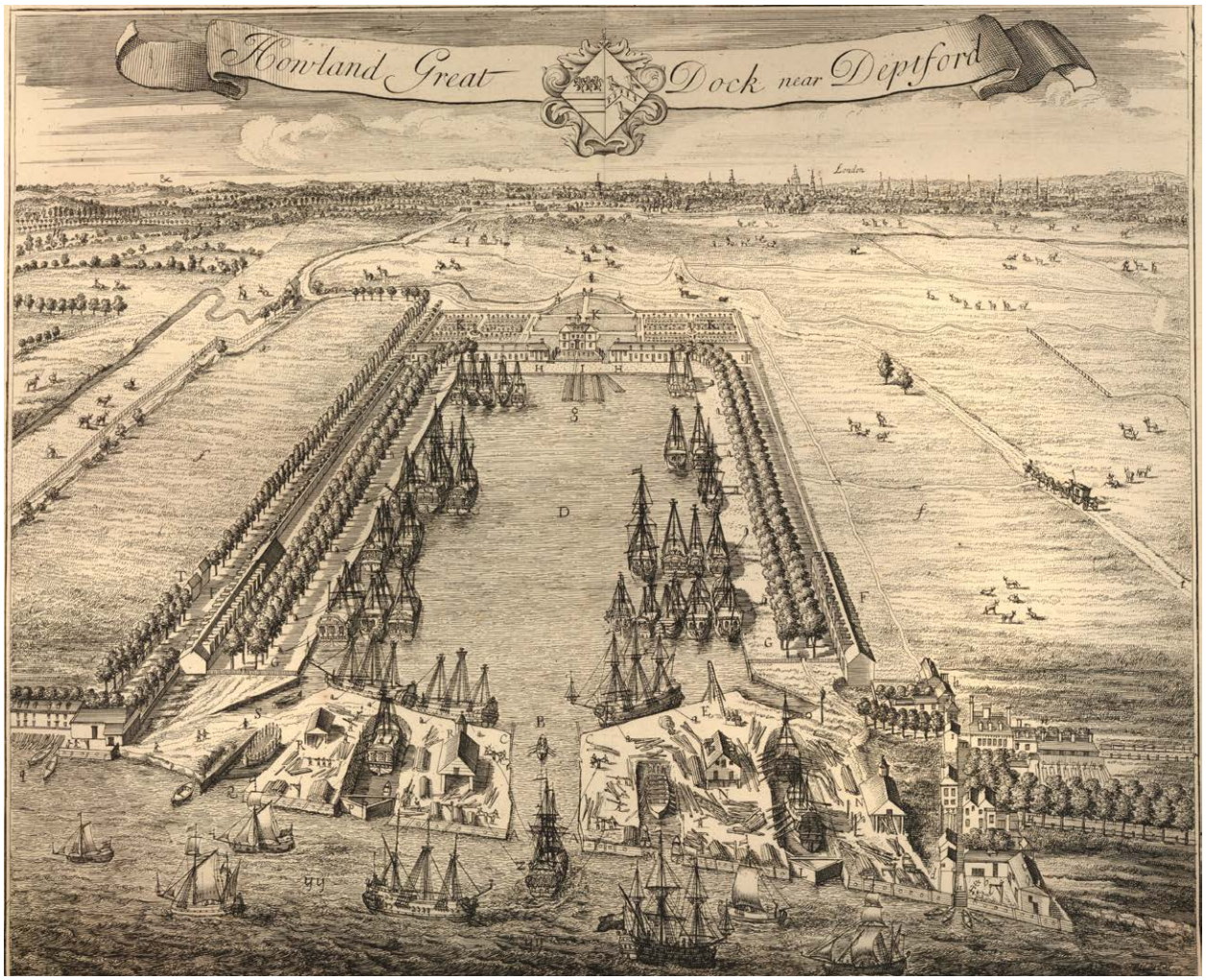


Figure 136 Howland Great Wet Dock by Jan Kip, a view conventionally dated to 1717 (BM 1880,1113.1731). There were small shipyards on either side of the entrance. The double line of trees was a windbreak. At the far, inner end is Greenland Dock House, of about 1700, built by the Dock's constructor, John Wells. The view looks west, with London in the background

Nelson Dock House, perhaps a shipbuilder's residence, of about 1740 (Figure 135). It faces south, onto the main riverside street, and may have functioned with small shipyards behind on its river side. A feature is a roof-top belvedere to see ships coming up and down the river, a unique survival of its kind in London, but known to have been present on larger houses on or near the waterfront.

John Rocque's map of London in 1747 shows that downstream of the hamlet of Rotherhithe there were large expanses of fields, with only a ribbon of buildings along the riverside, chiefly timber wharves and yards of shipwrights all the way round the curve of the river as it turned south. Before going further, definitions of the two types of docks for ships in the late 17th century need to be provided. A *dry dock* can be drained of water to allow the inspection and repair of a ship's hull; a *wet dock* is one in which water is maintained at a level at which a ship is able to float. Ships could still be refitted or repaired while floating. The first wet dock in London was constructed around 1660 at Blackwall, when Henry Johnson bought and refurbished the former East India Company dock; he used it for the East India ships but also built a good number of new civilian and military ships.[52] Samuel Pepys viewed it with approval in January 1661.

The Thames turned south, and here between 1697 and 1700 the Howland Great Wet Dock was built by the Bedford estate on the west bank (Figure 136). The designer was John Wells.[53] There was already a new dry dock here, funded by the widowed Elizabeth Howland who was the daughter of Josiah Child. The Dock had no warehouses; a place for laying up and repairing ships, it was used by the East India Company. Perhaps it was sited in the countryside at some distance east of the City because the proprietors had an eye on working with businesses in nearby Deptford. The dock was used

[52] SoL 43–44, 553–65.
[53] Jackson 1983, 43–4; a comprehensive account now Ellmers 2018.



Figure 137 Launching at Deptford, by John Clevely the elder, *c.* 1757 (Yale Center for British Art, Paul Mellon Collection, B1981.25.108). The buildings and installations of the Dockyard have been recently excavated (Francis 2017)

by the whaling trade from the 1720s, and buildings for holding large coppers to boil blubber and oil were added; one was excavated in 1996. Now known as the Greenland Dock, it had a monopoly on such activities until the 1790s, when boiling facilities were set up in Blackwall. It largely disappeared in rebuildings and further construction of docks in the 19th century. These were badly damaged in World War II and are now largely filled in since closure in 1969, their sites redeveloped.[54]

Deptford, a small town on the south bank next to the royal centre of Greenwich, has an array of post-medieval archaeology to compare with that in the City upstream. A royal dockyard was established at Deptford by Henry VIII in 1513, and grew to be the most important dockyard in Tudor and Stuart England (Figure 137). Its many stages of development and eventual decline have been charted by excavations and historical research of 2000–12.[55] This was one of the largest archaeological excavations of our period on the banks of the Thames, and the remarkable block of information it represents (often of vivid extent: Figure 138) is a counterweight, at the other end of the study area, to the information from Billingsgate. Immediately further downstream was the dockyard of the East India Company, which was building ships here in 1608–9. Excavation in 1997 found several phases of development of the dockyard from the early 17th century to the late 19th century, with slipways, revetments of wood (incorporating many ships' timbers) and brick buildings.[56]

In the town itself a number of late 17th-century and 18th-century houses survive on both sides of the High Street; and research on them by Peter Guillery published in 2004[57] allows comparison with those in the City. The Deptford houses are similar in their range of plans, their heights and materials to the houses of the same period now known from Spitalfields near Bishopsgate. This is not a surprising conclusion. A further local perspective is produced by finds from excavation of part of a street of buildings on the east side and outside the royal dockyard as part of the recent investigations there. Here domestic cesspits, pits and a well produced an array of pottery and artefacts of the 18th and early 19th centuries. These are a good group of artefacts to compare eventually with those from the central sites studied here. The rich variety of the pottery, in particular, which includes several European pieces and the largest single collection of Chinese porcelain excavated in London, indicates that areas associated with sailors such as Deptford, usually considered to

[54] Cherry and Pevsner 1983, 604; for the excavation, Douglas 1999. A shallow lake has been created on the site of the Canada Dock and a forest laid out on the site of the Russia Dock: now the Russia Dock Woodland.
[55] Francis 2017.
[56] Divers 2004.
[57] Guillery 2004, 203–33.

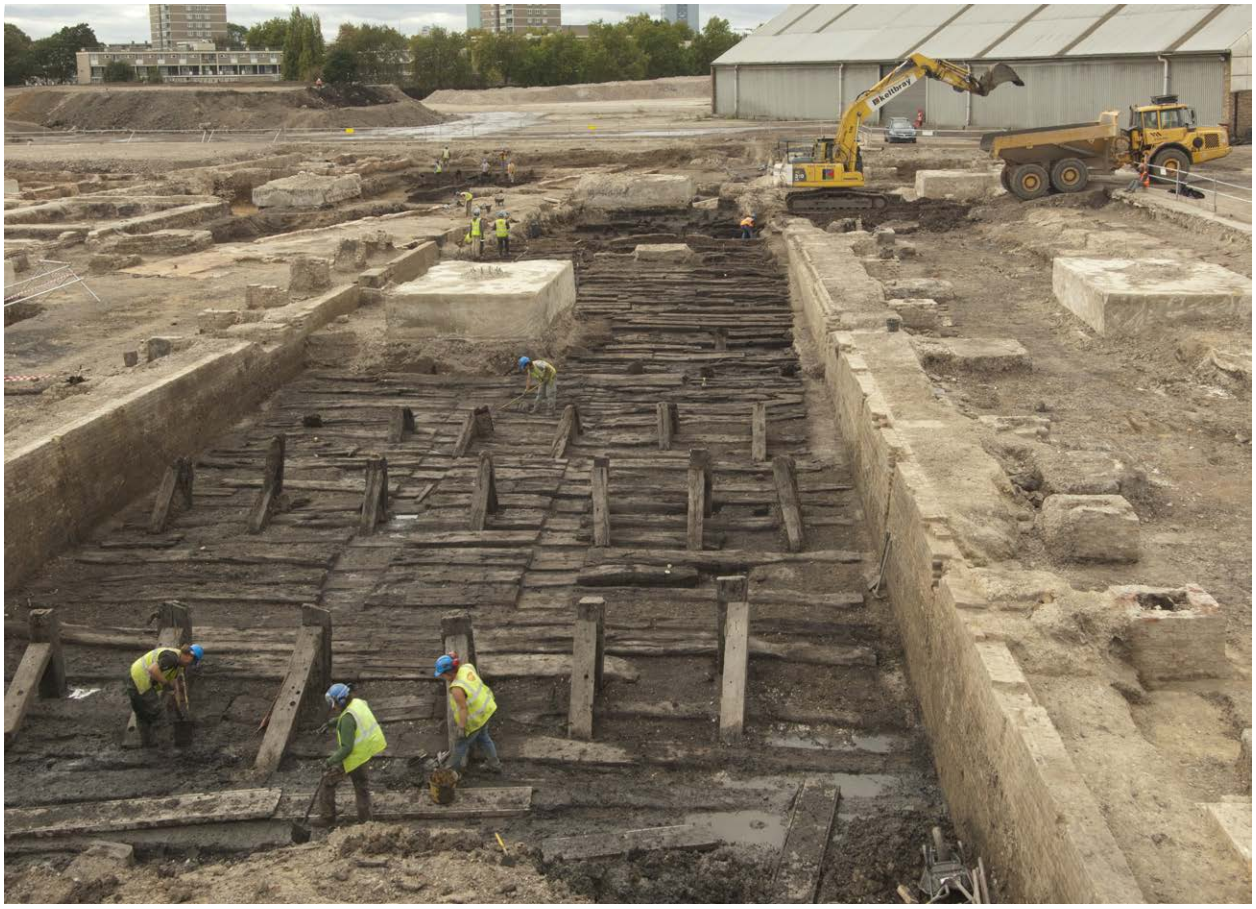


Figure 138 Slipway no.5, of 1753–74 in the Deptford dockyard (Francis 2017, Figure 88). The view looks south away from the river. The oak beams, some from ships, forming the floor of the slipway would have had one or more layers of planks above to form a work surface

be low down on the social scale, 'had ready access to a constant flow of goods from overseas.'[58]

The present monograph argues that the early modern development of both banks of the Thames should be studied as a single area of interest, from the City to Deptford. Commercial links betwen the two places are illustrated by the accomplishments of Ambrose Crowley, originally from Stourbridge, 'the effective founder of the north east's nail trade in the 1680s.' He had nail-making factories at Sunderland and in the Tyne valley, and a large warehouse at Deptford, along with (in 1728) stock in six warehouses in the City.[59] Presumably these were the sources of nails for the many hundreds of new buildings.

One subject for future study would be the small towns along the Thames estuary which may have had subsidiary functions within the system of London's maritime trade. One, for instance, was Erith in Kent, about 12 miles east of the City. Its one street led to the river. Here, according to Hasted's *History of Kent*, the Indiamen ships often stopped to unload some of their cargo so they could proceed up the river in greater safety. East India goods thus spread around the locality without ever reaching London, and they may be found there on archaeological sites in the future. Erith had wharves for the transport of large amounts of timber from the extensive woodland around, and made fishing vessels.[60]

Some industries in London, and those in the waterfront areas

As a large city, London had always produced many things, or had finished objects which were half-made elsewhere. Much manufacturing was small-scale and carried out in the home.[61] A 'Compendious View' of all the trades and professions in London of 1747, intended for the information of parents and instruction of youth, listed over 400 trades or professions in the capital, 91 of which were incorporated into companies (trade

[58] Francis 2017, 178–205; the comment by Jacqui Pearce (p 204–5).
[59] Evans and Rydén 2007, 194–7.
[60] Hasted 1797, ii, 228–9.
[61] Dorothy George studied three meticulously-organised London trades and their social conditions: watchmaking, silk-weaving and shoe-making: George 1966 [1925], 158–212.

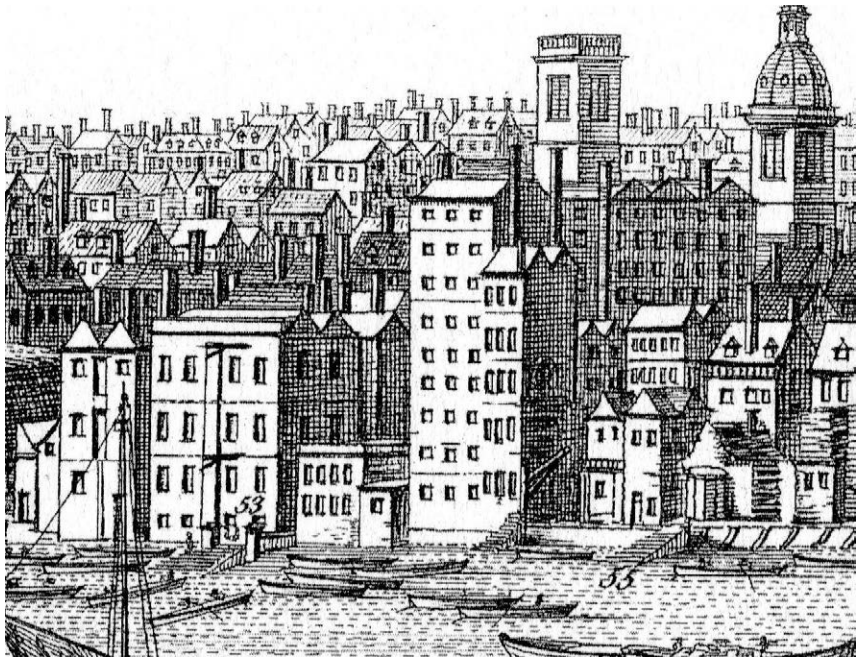


Figure 139 The north bank between Paul's Wharf (marked 53) and Trig Lane stairs (55) in 1749 from the panorama of the Buck brothers (Hyde 1994, pl 43), showing a nine-storey building on the waterfront perhaps at Black Boy Alley

associations). Besides the well-known trades, this survey lists such specialities as the bird-cage maker, breeches maker, cart wheeler, cork cutter, hour-glass maker, mop maker, painter of floor-cloths, rivetter of saddles, thong maker, tweezer maker and tyre-woman (hairdresser).[62] To the north-east of the city, Spitalfields became the centre for silk-weaving, mostly by Huguenot immigrants after 1685; in the early 18th century there were said to be 10,000 looms in London.[63] A recent archaeological attempt to ascertain the character of the immigrant French community in general has however found that 'the majority of refugees do not appear to have expressed their group identity through their domestic material culture.'[64]

According to one historian London was the greatest manufacturing centre in Europe, and something like 40 per cent of the labour force were engaged in production.[65] In the period 1666 to 1800 there were locations around the City producing ceramics of many kinds, glass, bricks, chemicals, dyestuffs, pharmaceuticals, explosives, soap and working in metals, especially pewter and bells.[66] Waste from manufacturing is found, occasionally in unexpected places such as the glass waste dumped in the New Churchyard burial ground at Liverpool Street, just outside the northern stretch of the city wall.[67] Industries requiring furnaces were unwelcome in the City itself, though a list in 1696 mentions 24 glasshouses around the City and in Southwark (not all of which were functioning at that time).[68] A second exception to the general exclusion were works for the manufacture of sugar. On Ogilby and Morgan's map of the City in 1676 are fourteen alleys or courts with names including the words Sugar Loaf or Sugar Baker, and they are all over the City, including the north-west at Saffron Hill. A survey in 1686 by William Leybourn describes the setting of a 'sugar house' (a building designed for the refining of sugar from the colonies)within a domestic property (albeit larger than average) in Billiter Lane, which is shown below in Figure 157. In 1692 the City of London poll tax returns listed nineteen sugar bakers, twelve of whom were in the three waterfront wards of Castle Baynard, Queenhithe and Dowgate. With their constant use of coal, they no doubt contributed to the atmosphere of the waterfront.[69] A sugar house has not yet been excavated in the City, though one of the late 17th century has at Battersea, and fragments of others have been recorded at Ratcliffe and Mortlake.[70] Sherds of sugar-baking vessels from the Billingsgate site have been compared with other examples in York, Bristol and other towns.[71]

Although the low-scale, almost small-town nature of the waterfront upstream of the bridge has been emphasised, there is one building on the Buck panorama of 1749 which seems precocious for the 1740s, in that it was fully nine storeys high. This apparently stood on the water's edge between Paul's Wharf and Trig Lane (Figure 139). It must have been built after 1682, since it is not shown on Morgan's map of that year. The river

[62] Campbell 1747.
[63] Brett-James 1935, 417–19; for houses of the period at Spitalfields and Bethnal Green, Guillery 2004, 79–115.
[64] Parker 2013.
[65] Earle 1989, 18–19.
[66] The bibliography of studies in Creaton 1994, 221–47, contains 952 printed references for 'industry', 'engineering' and 'manufacturing.' in the London area up to 1939, mostly after 1500.
[67] Brain *et al.* 2020.
[68] Brain *et al.* 2020, Appendix 1.
[69] Zahedieh 2010, 218–19.
[70] Douglas *et al.* 2019, with references to the other sites.
[71] Brooks 1983.

stair on its east side may be at the end of the alley called Black Boy Alley on Ogilby and Morgan's map of 1676. We propose that this was probably a sugar house; and it may be the sugar house which is mentioned in September 1753, when sugar refiner James Dandridge was released from his part of a lease of a sugar house at Paul's Wharf.[72] Sugar houses could resemble other work places when they were created by small-scale adaptation of existing buildings (as possibly at Billiter Lane), but there were also distinctively high examples in which the elaborate machinery used gravity. Examples of the higher form are known in other ports such as and Hull, where a similar 9-storey sugar refining house of 1731 on the waterfront in Lime Street is shown in the corner of a plan of the town of 1751;[73] another is known at Dundee in 1766.[74]

Along the south bank of the Thames, on both sides of the City as well as in the central area facing it, there were many industrial premises. In the 1750s, to Canaletto, some of the processes were undertaken on the foreshore of the river, spilling out from the buildings behind (Figure 18 above). Some workplaces grouped together to form industrial districts, such as the tanneries in Bermondsey, and others were loosely grouped but spread out probably because they required significant amounts of space, such as the ropewalks. Scattered throughout the area immediately around London but always near river transport were pottery kilns, close to their customers.

The pottery produced was of several kinds over the period, reflecting (or perhaps prompting) changes in fashion and consumer demand. Tin-glazed pottery was produced at Aldgate from 1571, and waster sherds have been found in an excavation of 1979; apparently within the buildings of the former Holy Trinity Priory.[75] During the 17th century several more sites were established to the east and south. The first was at Montague Close in Southwark in 1612, similarly placed in ex-monastic stone buildings. A site at or near Pickleherring Stairs on the south bank a short instance to the east was operational by 1618, surviving until 1723 (one of its products, Figure 140);[76] other sites were at Rotherhithe, Lambeth and Putney, and numerous sites in the London area are known.[77] Pottery-making continued to be a major activity; during the 18th century London was the centre and root of the English porcelain industry, and manufactories have been recorded at Isleworth, Chelsea, Vauxhall, Limehouse and Bow. All these places were on or close to the Thames or one of its tributaries; the Lea, in the case of Bow.[78]



Figure 140 A dish made at Pickleherring, dated 1668, showing Charles II (BM 1855, 1201.116)

Shipbuilding and repair, along with provision of equipment and personnel for ships, was a widespread concern along both banks of the river downstream of the City for all of the period of this volume.The Thames was also the largest producer of new ships in Britain, though there were other places in south-east England which produced ships, some large, such as Ipswich (Figure 141), Yarmouth and Lynn.[79]

There is a remote prospect of wrecks being found in situ in the present course of the river, perhaps on the margins where dredging has not been thorough: a lighter which had foundered in the river next to Paul's Wharf, an occurrence dated from artefacts in it to 1660–80, was recorded in 1969; it had a cargo of bricks evidently for the post-Fire City.[80] More commonly, fragments of large and small vessels, mostly from broken-up ships or boats have been found reused in revetments for a moat at Fulham Palace[81] and for creeks or as river walls for land reclamation at waterfront sites on the south bank in Southwark and Bermondsey (for instance at Adlards Wharf).[82] Several sites in Rotherhithe which have produced parts of boats or ships have been described

[72] LMA, CLC/522/MS06829.
[73] Neave and Neave 2017b, 95, fig 4.6; Allison 1969, 189, 460. I am grateful to D H Evans for these references.
[74] Perry 2013–14.
[75] Schofield and Lea 2005.
[76] For a detailed inventory of stock and furnishings of the house of the potter John Robins here in 1699, Britton 1990. There are forms mentioned in this inventory which are not represented in excavated groups from London, so they were probably for export out of London (Roy Stephenson, pers comm).
[77] Bloice 1971 with topographical survey identifying 13 pothouse sites in Southwark and Lambeth by Rhoda Edwards; Dawson 2010, 9–10. As representatives of a large field of research, Archer 1997; Britton 1987, 1990; Dawson 1971; Dawson and Edwards 1974. For the Rotherhithe pothouse, Pearce 2018; and for a site in Wapping, Tyler 1999. For a summary of 29 delftware producing sites in the area, Gordon 2011/2012.
[78] Pearce in prep for an overview.
[79] Scammell 1999.
[80] Marsden 1996.
[81] Killock *et al.* 2020.
[82] Divers 2002 (work by P Marsden).



Figure 141 An East India ship (the 'Orwell') being built in the yard of Mr Bayley at Ipswich in 1817 (R Pollard; Yale Center for British Art, Paul Mellon Collection, B1977.14.13051)[83]

above. Ship fragments reused in revetment structures in the East India Company dockyard at Deptford in the 18th century were recorded in 1997. They included parts of ship frames, a fragment of an elm capstan, the barrel of an elm windlass, and parts of three rudders, one complete and 6.88m long.[84] The surviving 18th-century houses at Deptford also furnish probable examples of the documented practice of ships' carpenters being allowed to take home unwanted or surplus timber; this is suggested by an unusual style of timber-framing in house partitions.[85] Five early 19th-century lighters have been found incorporated into reclamation for a new river wall of that date at Erith, 12 miles east of the City. [86] Study of recovered fragments of ships from this period has its own international aspect from the earliest decades: by the 1680s, London merchants began to commission the building of ships in the colonies, and on the eve of the American revolution, about one third of British-registered tonnage known to Lloyd's had been built in north America.[87]

Thus the City of London, at this period, was surrounded on all sides by districts, some specialising in the industries required in a metropolis and a major port, especially the construction, repair and recycling of ships and boats. There were also many other industries or localities making things, and among these pottery, increasingly decorated and fine for metropolitan tastes and export, was prominent.

Buildings, material culture and lifestyle in post-Fire London

In studying the lifestyle of post-Fire Londoners, a clear and important distinction must be made between the area destroyed by the Great Fire of 1666 and the much larger area outside it on all sides which survived intact. In these two zones, the buildings along even major streets in 1700 or even in 1790 would have looked very different: only brick buildings within the Fire area, and a mixture of brick and timber-framed buildings of Tudor and even medieval date within the other area, often on the same street. We must try to find out if life was different in these two cities, one within the other.[88]

[83] Information on the ship and its launching in 1817 is given in the catalogue entry of an engraving of the view, Royal Museums Greenwich. For the Bayley family who built it, snr.org.uk/the-shipbuilding-bayleys, accessed 11 April 2023.
[84] Divers 2004, 62–78 (work by D Goodburn).
[85] Guillery 2004, 216–17.
[86] Dawkes *et al.* 2009.
[87] Zahedieh 2010, 158; Price 1998, 83.

[88] Some of this chapter, with further examples of Leybourn plans, has been published in Schofield 2022.

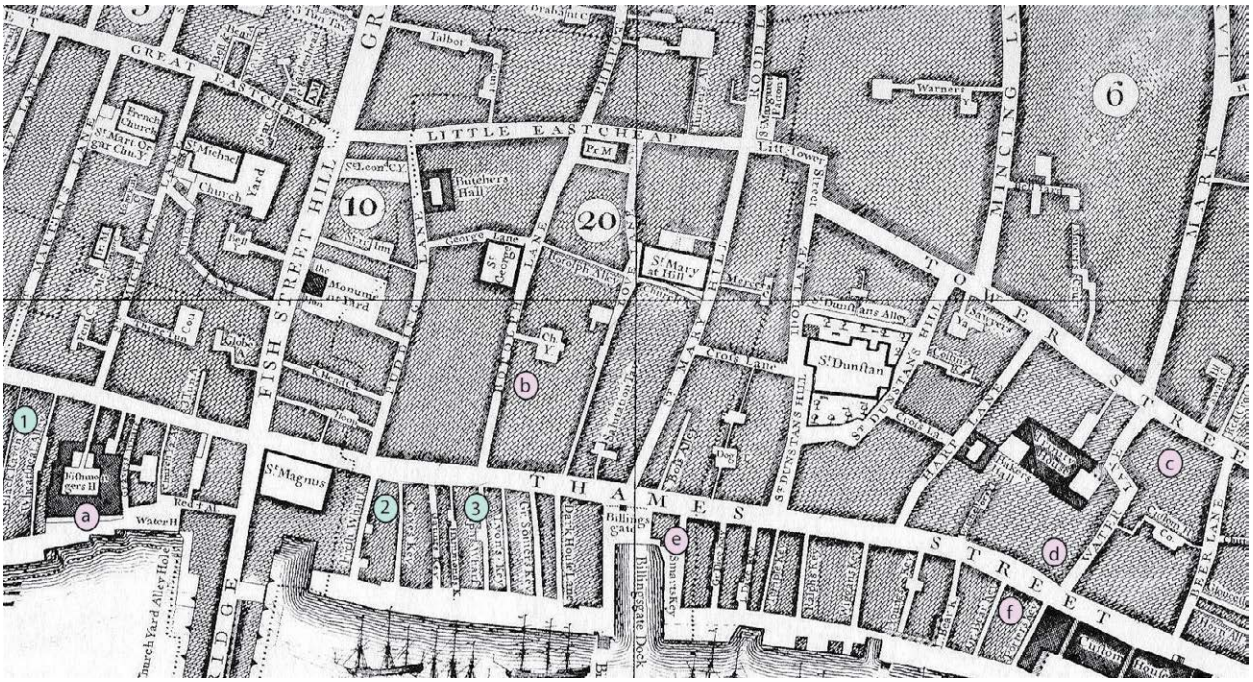


Figure 142 Extract from Rocque's map of 1747 (Hyde 1982), showing the general area of study. Three of the four study sites are numbered: 1, Seal House; 2, New Fresh Wharf; 3, Billingsgate. Other buildings mentioned in the text are given letters: a, Fishmongers' Hall; b, 32 Botolph Lane; c, Richard Beckford's house; d, the coffee house surveyed by Leybourn in 1686; e, Thomas Beckford's house; f, Porter's Quay

Changes and reuse of structures after the Great Fire

The eastern part of the waterfront area studied in this volume is shown in an extract of the map by John Rocque of 1747 (Figure 142). Marked on this map are three of the archaeological sites and the locations of other prominent sites or houses described especially in this chapter.

The staking-out of the frontages of newly-widened streets or alleys caused some discussion, or could sometimes be contentious. At Fish Street Hill, a widening of 12ft (3.7m) gravely reduced the area of shops and vaults on the frontage; elsewhere in the same street, a fishmonger said he had lost three-sevenths of his ground to the street widening. A block of four houses at Ludgate Hill was affected by the widening of the street, but the solution was to add another plot and four new houses could then be built. At the opening of Ram Alley into Fleet Street, the amount of ground staked out for the widening of the alley meant that the remaining part of a tenancy was not large enough for a new house at all. Some took advantage of the situation: Henry Heathersoll, vintner, succeeded in adding a back entrance to his large property also in Fleet Street, so that he could bring in wine from Shoe Lane.[89]

Many buildings were honeycombs of several often interlocking tenancies. A house in Gracechurch Street was a tangle of tenancies, but one tenant wanted his rooms as before the Fire, and this was granted in the rebuilding. But elsewhere there was an urge for a new unity. At St Swithun's Lane ('Sweethings Lane'), a tenant surrendered his lease because 'the rooms were so intermixed with rooms of other houses belonging to the petitioner [the landlord] that they could conveniently be rebuilt only in one fabric.' A similar solution for three adjoining properties in Fleet Street was to unite them in a single building which would thereby ornament the street.[90]

The consequences of jetties of timber-framed buildings formerly on site could be a problem. In the case of two shops in the precinct of St Martin-le-Grand, the jetties had extended 5ft (1.5m) beyond the foundation of the former house, and to build upright would cause financial loss; a solution was arranged by adjustment of the leases. Similar agreements were made over a house in Gracechurch Street which had jetties of 4ft (1.2m). At a house in Cheapside, it was claimed that the former jetties comprised a valuable quarter of the floorspace, and when the new building was erected without them, new compensating space at the back was demanded.[91]

Sometimes the buildings within a property after the Fire might be fewer or more than before, or their individual

[89] Jones 1966, 29; Doolittle and Jones 2020, 164; Jones 1966, 53, 20, 82.

[90] Jones 1966, 79, 87; Jones 1970, 38.

[91] Jones 1966, 233–4; Jones 1970, 278, 29.

sizes and orientation changed; but the outer boundaries of the property usually remained fixed, though there might be small adjustments. Alternatively, but probably rarely, there was no basic change: a large establishment such as the King's Arms near Holborn Bridge, where about 40 rooms had allegedly been destroyed, was to be rebuilt with its internal buildings exactly as they were, at least in their outlines.[92]

Surviving fragments of masonry influenced the rebuilding: a wall of stone from the former Whitefriars friary, 4ft 6in (1.37m) thick, was allowed to stay for reuse.[93] Sometimes there were subdivisions within a longer property, old and well-established by the time of the Fire, which were reused or new walls laid along them, as found at the Billingsgate site. There are several cases in the City of the survival of a stout pre-Fire stone undercroft, often of great age, into the post-Fire centuries and in at least two cases up to the present; the medieval cellar was dug out and reused as the lower part and stable foundation of the new building. A striking example is furnished by a house in Leadenhall Street, outside the area of the Fire of 1666 but damaged in another local fire of 1765; here a substantial fragment of a 13th-century stone building was retained inside the brick-fronted house of 1766, and recorded.[94] This no longer survives. A still-surviving example within the Fire area is at 7–8 Philpot Lane, where a building of about 1700 stands on a 15th-century undercroft of brick with stone ribs.[95] This is a parallel for Minshull's house at Botolph Wharf, where he reused the medieval undercroft D:Building 10. Two bays of a 14th-century undercroft, originally longer, survive at Merchant Taylors' Hall in Threadneedle Street; here the Hall was only singed by the Fire, so rebuilding did not have to be radical. Medieval stone undercrofts survive within 18th-century buildings in other towns, for instance beneath the Angel Hotel, Bury St Edmunds (Suffolk), and in numerous other places. These medieval undercrofts could be beneath houses or shops.

The situation at Botolph Wharf was slightly different, in that Josiah Child aggressively improved the access from Thames Street by invading the site of St Botolph's church and moving the west side of the entry from the street westwards. But otherwise the north–south property boundaries were retained. We would expect this to be the case; there was no reason to do otherwise.

Houses and shops

The post-Fire plans of houses surveyed in 1686 by William Leybourn for the Fishmongers' Company[96] show that the most common, almost ubiquitous form of house plan on both north and south sides of Thames Street was of two rooms on the ground floor, sometimes thrown into one to make a larger shop (Figure 143). The walls would be of brick; their building dates would be 1668–76 in general (since they all appear in outline on Ogilby and Morgan's map of 1676), with some details perhaps of 1676–86. Some had separate kitchens in the pre-Fire manner. The property boundaries would be on their pre-Fire alignments, newly staked out; though the raising of the ground surface, especially along the Thames Street frontage, would mean that pre-Fire buildings usually did not survive to influence the rebuilding inside the property boundaries. The simple, long rectangular plan had been widely used for the smaller, standard City house since the late 14th century,[97] and is found several times in surveys of post-Fire buildings in other streets, so was not peculiar to Thames Street.[98]

The buildings fronting Thames Street on the Billingsgate site probably had four floors above their basements (three storeys and garrets), like the front house on Tenement 7 on site B in 1686 (Figure 37) or other houses in Thames Street such as those in front of Fishmongers' Hall or the block of eight houses at Porter's Key (also Fishmongers' Company property), all surveyed in the same year (Figure 143, Figure 149 below).[99] All the houses fronting Thames Street shown in Figure 143 had cellars in 1686. The Billingsgate houses were also on cellars, which were the structures excavated. The Victorian warehouses eventually constructed on the site removed previous walls and floors down to the cellar floors of 1700, but then left them intact, since no further excavation was required. We do not know what the fronts of the post-Fire houses to Thames Street looked like; perhaps they resembled those which George Greaves built in Britton Street, Clerkenwell, described earlier (Figure 68). In 1756 Alexander Brander undertook to reface the former Minshull house with grey stock bricks.

Leybourn's plans show the functions of rooms and external spaces on the ground floors of many houses. There were two kinds of shop when a house had two rooms on the ground floor; a shop on the street side, with a kitchen behind in the same range; and in front of Fishmongers' Hall, six examples of the larger shop, where the two rooms of the ground floor were thrown

[92] Jones 1970, 195; Jones 1966, 201–3.
[93] Jones 1970, 184.
[94] Schofield 2003, 196–8 and fig 232(b).
[95] Schofield 2003, 208 and fig 91; cf 200 and fig 160.
[96] To be discussed in Schofield in prep. .
[97] Dated examples are in Gerhold 2016, eg 122–3, fig 131 (pre-Fire); 164, fig 187 (?1652). Medieval plans in this form are given in Schofield 2003, based on the houses surveyed by Treswell in 1610–12 (Schofield 1987).
[98] Gerhold 2016, 92–3 (built 1669–70).
[99] The original Leybourn plans are published in Gerhold 2016, 188, fig 220; 143, fig 160. The Thames Street elevation of the houses in front of Fishmongers' Hall is shown in an early 19th-century view by T H Shepherd as only of three storeys and garrets, at variance with Leybourn's description (LMA, London Picture Archive 3194).

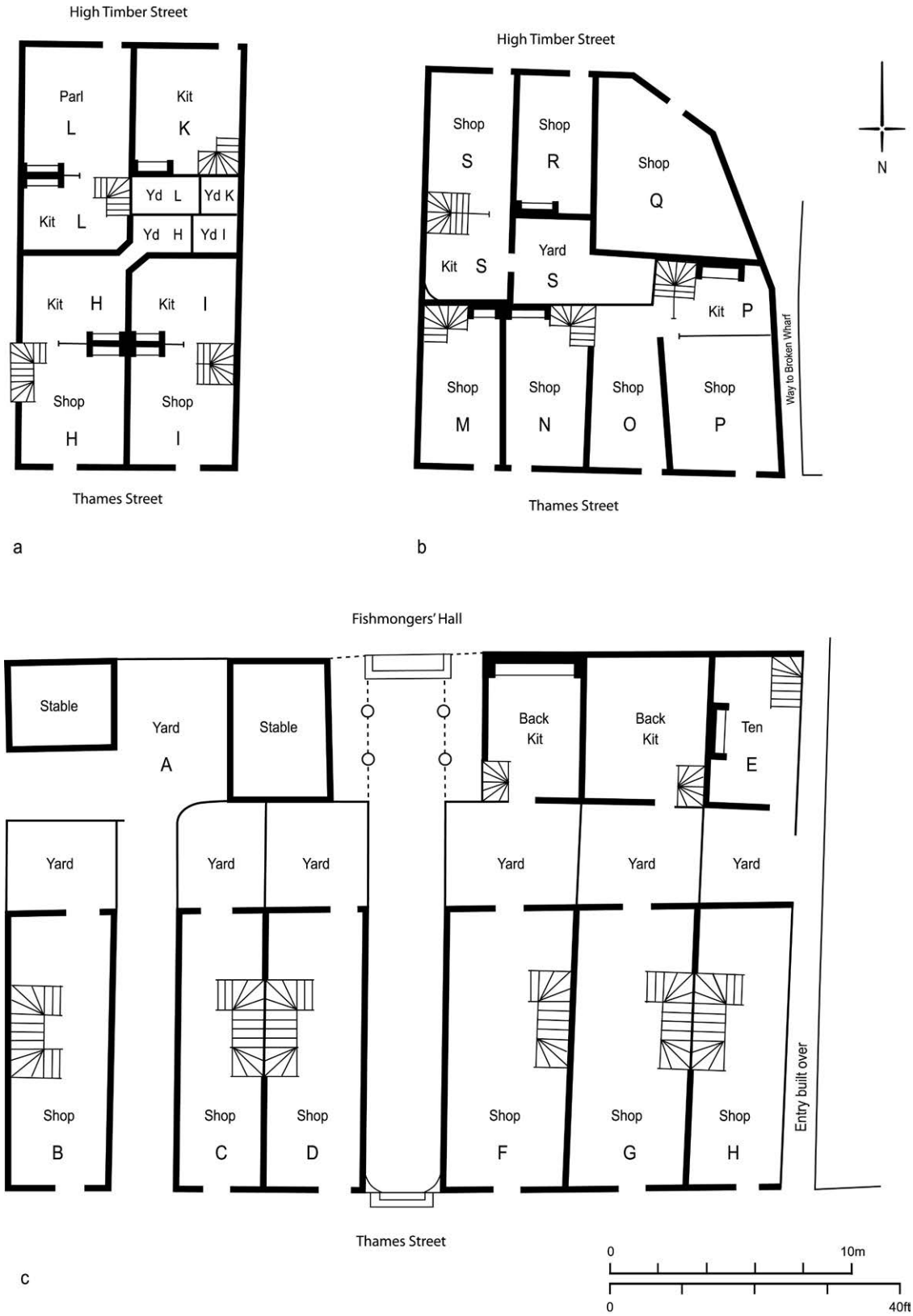


Figure 143 Three blocks of property on the south side of Thames Street which belonged to the Fishmongers' Company, surveyed in 1686 by William Leybourn (Fishmongers' Company, Plan Book, f7 (a and b) and f1 (c); redrawn by Sue Cawood). The upper two blocks (a and b) backed onto High Timber Street, at Queenhithe; the third (c) lay between Thames Street and Fishmongers' Hall, with the Hall behind

Key to letters and abbreviations: Initial letters (A, B, etc) are individual tenancies; Kit Kitchen; Parl Parlour; Ten Tenement; Yd Yard

together, with the kitchen being a separate building across a small rear yard. In this larger shop the stair to the upper floors would have been a prominent feature, and was no doubt a substantial piece of joinery. Several different forms of the stair are shown. Leybourn hardly ever shows privies (and not in any of the plans used in this study), though they must have been present, usually on the ground floor perhaps in the back yard.

Treswell's London surveys of blocks of property in 1607–12 show several varieties of a smaller medieval and Tudor house plan of one room, sometimes with a separated access entry along one side.[100] This one-room plan continued to be common after the Fire on the Thames Street frontage (for instance Figure 143b, Figure 149 below) and down alleys, such as the Seal House houses of 1671. The one-room plan house, sometimes in short rows, is also found in other towns during the second half of the 17th century, such as Frome (Somerset) and Bristol.[101] This was therefore a medieval form redone in brick; though often with a timber front at the ground floor as in many of the London examples. Various arrangements of the entry, the chimney and the staircase were possible, as shown by recorded examples all over London; they could be, and often were, three and a half storeys over cellars.[102] Some survive at Spitalfields, with evidence of doorcases, moulded panelling and fine fireplaces.[103]

Among the houses of one-room plan, the six houses built by William Darvoll in Black Raven Alley in 1671 stand out as unusual (Figure 37). For houses of one-room plan, they were deeper (or longer) than usual. For each pair, the doorways were to the side of the elevation, left and right. Each pair shared an axial stack. The most unusual feature was the placing of a prominent staircase at the rear, beyond the stack. This planform is very rare in London.

Next, the question of height and number of storeys. Did buildings after the Fire generally have more storeys than before, and were they higher? There was clearly a range of heights and numbers of storeys in pre-Fire buildings, and London houses could be impressively high by the 16th century. Probably in 1590 a group of three houses on the south side of Leadenhall Street were built four and a half storeys high; they escaped the Fire, to be surveyed by William Leybourn in 1686 and delineated by antiquaries in the 1830s.[104] One small house in New Fish Street (later Fish Street Hill) surveyed by Ralph Treswell in 1611 was five and a half storeys high.[105] Houses of great height were found on principal streets after the Fire: in Cheapside, as shortly to be described, and in Poultry, the extension of Cheapside to the east, there were houses of five full storeys by the 1680s (Figure 148). These formed the City's main street.

Before the Fire, buildings on street corners could occasionally be higher than their neighbours.[106] This practice of accentuating corners continued after the Fire. The view of Billingsgate dock in 1736 shows the buildings to Thames Street at both northern corners (Figure 144; Figure 145). Thomas Beckford's house on the east was of four storeys, and the range at the west corner was of five storeys. This was presumably prominent because it was on the corner of the public quay (the west range of Billingsgate).

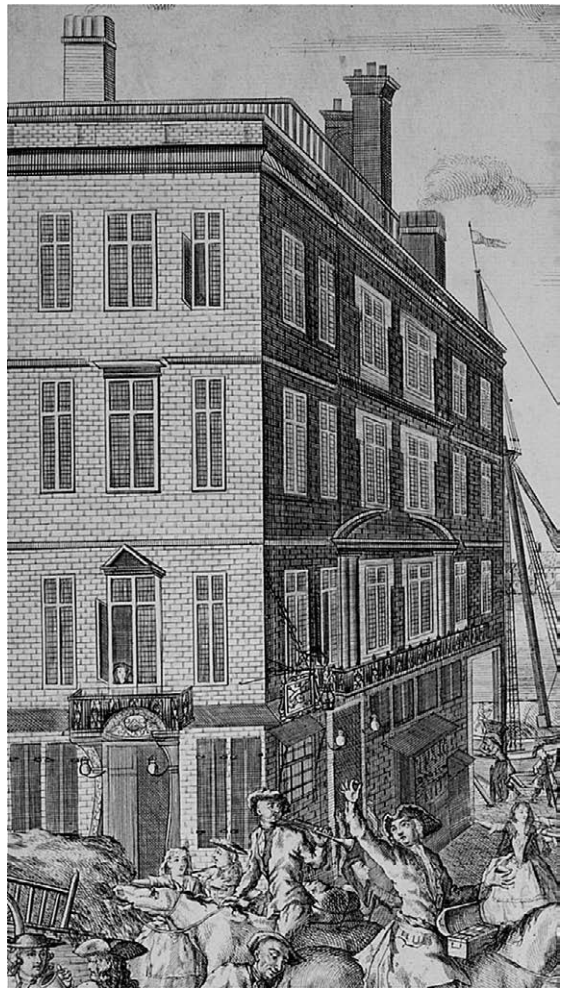


Figure 144 Extract from Figure 20 showing the buildings on the east side of Billingsgate, 1736. The arms of the Vintners' Company (a chevron between three barrels) above the door indicate that the house was by then occupied by a freeman of the Company (or somebody claiming to be) who sold wine, perhaps as well as beer and ale

[100] Schofield 1987.
[101] Leech 1981; Leech 2014, 180–90.
[102] Guillery 2004; Burton and Guillery 2006, 30–1 (Cock Lane); many examples in Gerhold 2016, eg 110–11 (Primrose Alley, Bishopsgate, by 1692) or Staining Lane near Guildhall, also by 1692 (p112); for three and a half storeys, Windmill Alley off Old Jewry, 1679, p.97.
[103] Guillery 2004, 96–107; Burton and Guillery 2006, 60–1 (of about 1724).
[104] Gerhold 2016, 100–2.
[105] Schofield 1987, 115.
[106] One example was a house of 4½ storeys at the corner of Chancery Lane and Fleet Street, drawn by several antiquaries around 1800 including J T Smith: LMA, London Picture Archive 320843.

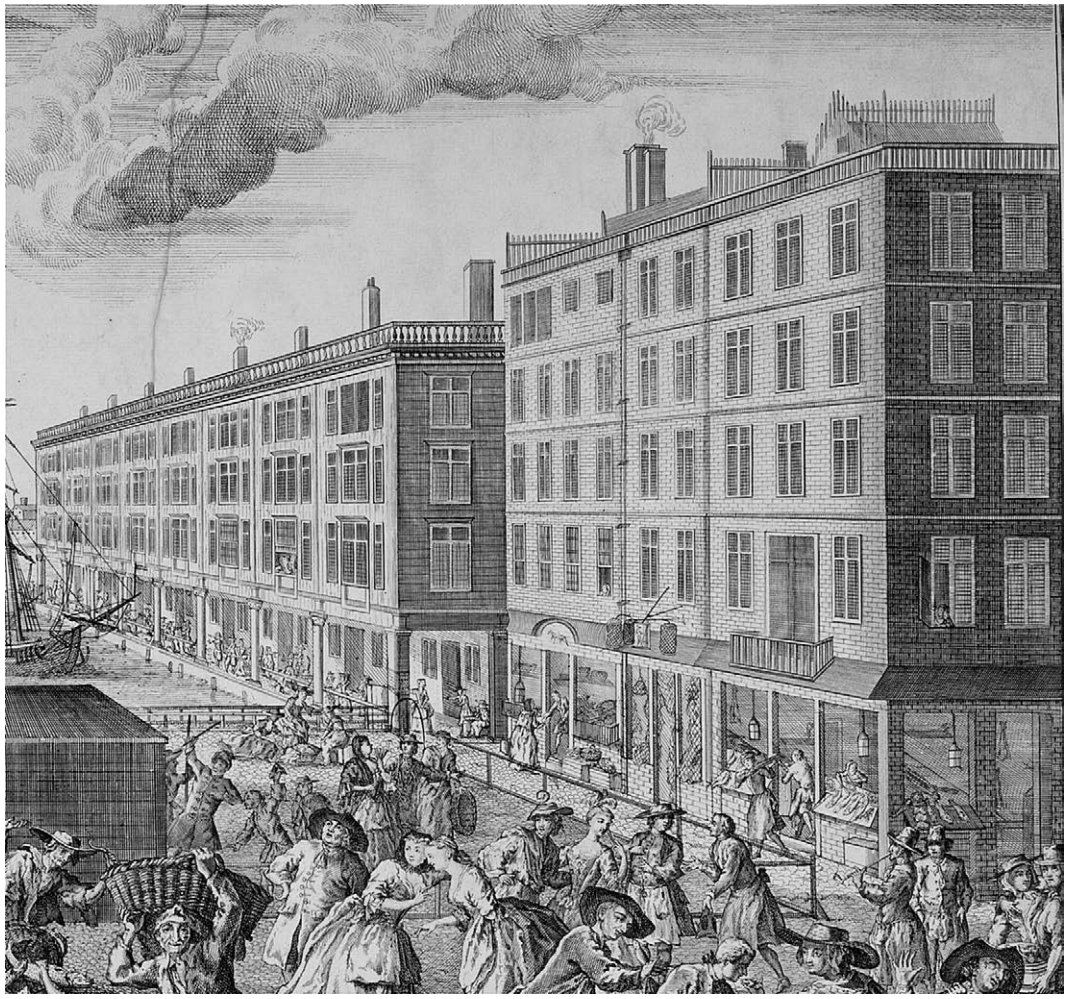


Figure 145 Extract from Figure 20 showing the buildings on the west side of Billingsgate, 1736

The streets and lanes above the waterfront contained grander dwellings, in the same general frequency as other streets throughout the City. Two houses of courtyard plan in the neighbourhood above Billingsgate and Custom House have been recorded and are noted here, at Botolph Lane and on the south side of Tower Street in the same general position north of Thames Street. These two houses of about the same date provide architectural detail and context. Both houses are now lost.

Number 32 Botolph Lane was built in 1670, from a date in a plaster soffit on the staircase, and survived until the first decade of the 20th century. Its stair and panelling have been recorded several times, and a detailed study of the house and site was published in 2006. [107] It was probably built by a Dutch merchant family named Becke or Beake. The site was excavated in 1998, though the excavation was only in the area of the courtyard, finding extensive evidence of the Great Fire and medieval buildings, not within the footprint of the post-Fire house.[108]

The 2006 study of the Botolph Lane property publishes the ground plan of the house, a hall with the elegant rear stair and two rooms on either side; being of the 1670s, it is an early example of a plan which would thereafter be widespread in town and country, and exported to North America. The house contained a ground-floor room in which the panelling had been painted with exotic scenes in 1696 by Robert Robinson (1651–1706); they are now at Sir John Cass School (renamed the Aldgate School in 2020) in Mitre Street. The paintings include an accurate representation of a tobacco plant and a view of El Dorado with architecture reminiscent of Wren's public buildings.[109] The tenant in 1701 was John Cary, a tobacco merchant with family ties in Virginia, where he lived between 1663 and 1671. His inventory of May 1701 lists many rooms including separate chambers for

[107] Alcock and Galinou 2006. John Crowther's view of the courtyard and house front in 1886 is fig 1, the original LMA, London Picture Archive 17970; and his view of the stair is fig 8, the original London Picture Archive 17969.

[108] Blair and Sankey 2007.

[109] Ganz 2004.

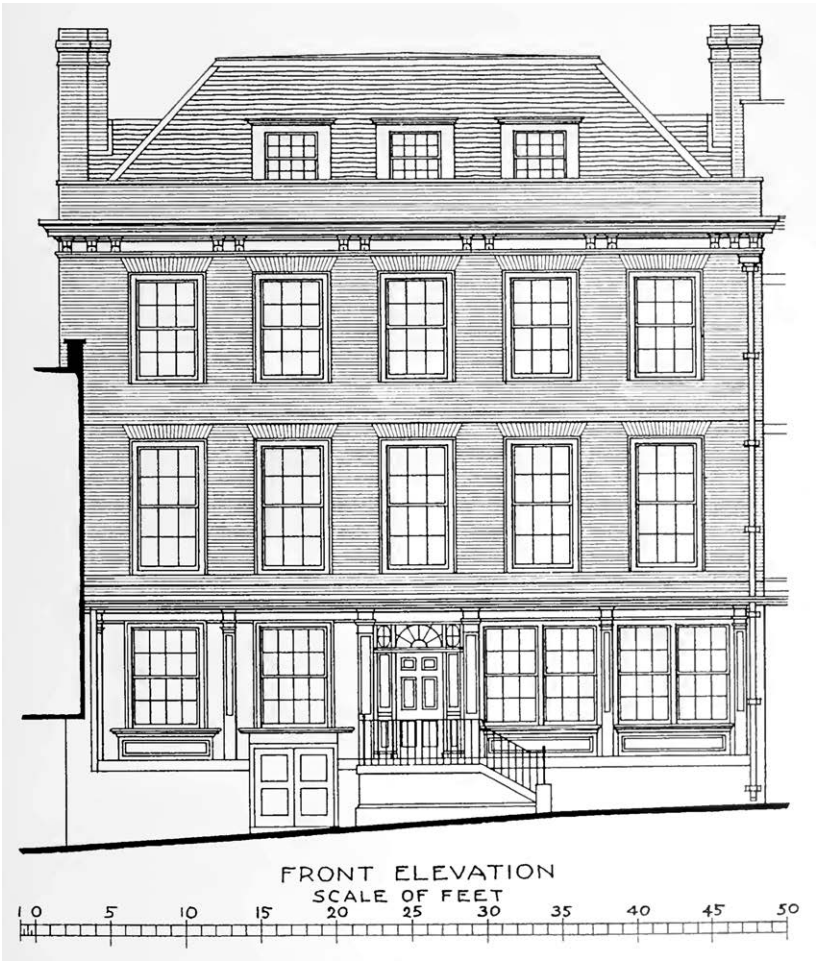


Figure 146 The north (front) elevation of 34 Great Tower Street in 1934 (SoL 15, pl 42; drawn by A E Gurney). Originally the generous windows would have been of the transom form, like those at Fishmongers' Hall (Figure 58), and probably of timber; here they have been replaced

men and maids, a nursery, a billiard room and a 'Mohair room' with mohair hangings and pictures. His wife's chamber contained, besides the bed, seven chairs, a glass case with 60 books, a walnut close stool and a repeating clock; there was a landscape painting over the chimney.[110] The house is noted again below in the discussion of room use after the Fire.

A second example of a courtyard house was at 34 Great Tower Street, built by Richard Beckford (the brother of Thomas Beckford, encountered at Billingsgate) in 1668 or shortly after; it was meticulously recorded for the *Survey of London* volume about the parish of All Hallows Barking in 1934, a few years before destruction in World War II (Figure 146).[111]

Beckford apparently built the house for his own occupation. The main range, at the rear of the court entered from Great Tower Street, was of three storeys and attics with dormers. The ground floor had been refurbished in Georgian times, and the two lower flights of the main stair also replaced. The ground-floor room next to the entrance and west of the central corridor may have been a counting-house, but its furnishings were later. Rooms on the first floor retained their 17th-century panelling and ceilings. The original stair survived at second-floor level; its twisted balusters were in the newest fashion. This suggests that the second floor chambers, whatever their use, were just as stately or well-appointed as those on the first floor.

Richard Beckford had invested in the new colony of Jamaica before the Restoration, and although an absentee landlord, 'his investment in the island's commerce was critical to the early development of the island and increased the likelihood that Jamaica might transform itself into as successful a commercial enterprise as Barbados.'[112] In London, he was Master of the Clothworkers' Company in 1670 (his brother Thomas became Master in 1679) and he bequeathed a sum to the Company with which in 1680 they bought two silver flagons, which survive (Figure 147).

Beckford made his will shortly before his death in 1679. He bequeathed to his wife Frances his houses in Greenwich for her life, with his coach and horses, lands in Sussex, and a house called the Mermaid in Candlewick (Cannon) Street. There were bequests to children, including two daughters by a previous wife.

[110] Alcock and Galinou 2006, 87–94.
[111] SoL 15, 23–30.
[112] Gauci 2013, 13.



Figure 147 Pair of silver gilt flagons, each standing on a circular skirt foot, with a scrolled handle and a low domed cover with a pierced thumb-piece. Engraved with the arms of the Clothworkers' Company on the cover, the arms of the donor, and an inscription on the front reading: 'The Gift of Richard Beckford Esqr to the Worshipfull Company of Clothworkers'. They are 36.25cm and 35.6cm high (Clothworkers' Company)

Other bequests concerned property in the parish of St Botolph Aldgate, in Sweedland Court (northeast of the Tower), and the poor of Maidenhead and Bray (Berks). He also bequeathed 'all my houses and lands ware houses wharfes and cranes that I have att poynt Cagway now called Poynt Ryall [Port Royal] in the Iland of Jamaica to him [his son George] and his heires', along with his plantation in St Catherine's parish on the island.[113] Another Beckford, Peter (Richard's nephew) had acquired property in Thames Street in Port Royal, on the south coast of Jamaica, in 1659. This he extended to form a wharf in 1673.[114] Connections between London and Port Royal are further explored in Chapter 8.

Because he had underage children, an inventory was made of his assets for the Court of Orphans of the Corporation; this is largely of furnishings of his house, and is transcribed in Chapter 10. As is normal in City inventories, the location of the house is not mentioned directly, but a substantial lease enables us to say that this is the same as the house in Tower Street. It had a hall with a counting house, a parlour with two closets, a kitchen, and (no doubt on the first floor) a dining room with tapestries and 24 turkey-work chairs. This room had three windows. Next to it was a withdrawing room with hangings of gilt leather. There was also a gallery containing tables and chairs, but no curtains; and what may have been a turret. Other chambers and garrets had beds, and the services included a coachman's room, two warehouses and a cellar. We have not attempted to match the rooms in the inventory of 1697 to the plan of the house in 1934, recorded by the Survey of London, because the internal walls and partitions had been re-arranged to an unknown extent over the years.

Shops and warehouses

Billingsgate had a row of fishmongers' shops along one side. One particular characteristic of post-Fire shops, as shown in the Leybourn surveys, is that their doorway was often in the middle of the streetside facade (Figure 143). This is in contrast to the pre-Fire shops shown in the Treswell surveys of 1607–12, where all the shops had doorways to one side, at the corner, and in engravings of pre-Fire buildings in the 18th century.[115] The central doorway, between two stalls or windows when the elevation is known, was the standard form in major shopping streets such as Cheapside after the Fire (Figure 148). Perhaps the design became more employed in London just before the Fire; there are examples in Amsterdam.[116] Open fronts, still seen in shops in Bishopsgate in the 1730s (Figure 155), would generally be replaced by glazed windows after about 1750. In a major shopping street like Poultry, the eastern extension of Cheapside, this had already happened by 1738.

[113] TNA, PROB 11/361/432.

[114] Pawson and Buisseret 1975, 85. Peter Beckford died rich in 1710: he owned about 20 estates and 1200 slaves (DNB, accessed 25 March 2021).

[115] Shops with central doorways are shown on Treswell's simplified map of St Michael-le-Querne and its surroundings at the west end of Cheapside in 1586, but these are diagrammatic and not related to the actual buildings there. At least one shop with a central doorway is shown on the 1549 painting of the coronation procession of Edward VI, also in Cheapside. There were probably some on pre-Fire streets. More accurate surveyed plans do not furnish examples before the Fire.

[116] In engravings of 1663, showing earlier houses: Meischke *et al.* 1995, 41–2.



Figure 148 Shops on the south side of Cheapside, on both sides of St Mary le Bow; a detail from a view of the 1680s by Nicholas Yeates and John Collins after Robert Thacker (Yale Center for British Art, Paul Mellon Collection, B1977.14.15990). The buildings have first-floor balconies and rooftop balustrades, though these may have been only ornamental. The buildings on the right are of five full storeys. This view omits projecting signs above the shop doorways which are seen in other engravings

Like almost every other development in London's buildings described in this study, shopping was not a post-Fire invention. In a study of 2006, Derek Keene provided the longer view:

> 'The shops and shopping culture of 16th-, 17th- and 18th-century London, out of which their counterparts in the metropolis of today have so clearly developed, were themselves far from new. [...] Many of the trading practices, ... many of the social practices associated with shopping, and the moral issues that those pratices raised were already well established during the 13th century, if not before. Significant changes in the evolution of shopping in London are to be explained less by cultural innovation than by the steady accumulation of the institutional frameworks that supported trade and by changes in the social distribution of wealth.'[117]

One development which might be called a framework was that of the widespread appearance of warehouses, first as rooms attached to shops during the 15th century. By 1600, as shown in the Treswell surveys, warehouses were common. The pre-Fire East India House in Leadenhall Street was based on the mansion of a Lord Mayor in 1602–3, which contained several warehouses.[118] K N Chaudhuri noted that 'during the Great Fire of 1666 the Company had lost great quantities of goods, particularly pepper, left in its warehouses in London'; the total quantity of burnt pepper was over 550,000 lb (249476kg).[119] These warehouses are said to have been the cellars under the Royal Exchange.[120] They would have to be voluminous for that amount of pepper.

An important stage in the development of the port of London was that during the second half of the century, London became a hub for re-exporting some of its imports, so that it rivalled Amsterdam in this business by 1700.[121] One historian asserts that the re-export trade was the main reason for calling the commercial changes of the late 17th century a 'commercial revolution'; nine-tenths of the pepper coming into London in the 1670s ended up in Europe, as did most of the coffee and two-thirds of the imported tobacco, a third of the sugar, and two-thirds of East Indian calicos by 1700.[122]

Warehouses were numerous among the buildings on the waterfront by the 1680s, but at first they were

[117] Keene 2006, 149.

[118] Foster 1924, 20–4; for a schedule of fittings of the house in 1607, Schofield 2003, 233–5.
[119] Chaudhuri 1978, 418 and n28.
[120] Foster 1924, 65.
[121] Clay 1984, ii, 171.
[122] Holmes 1993, 65.

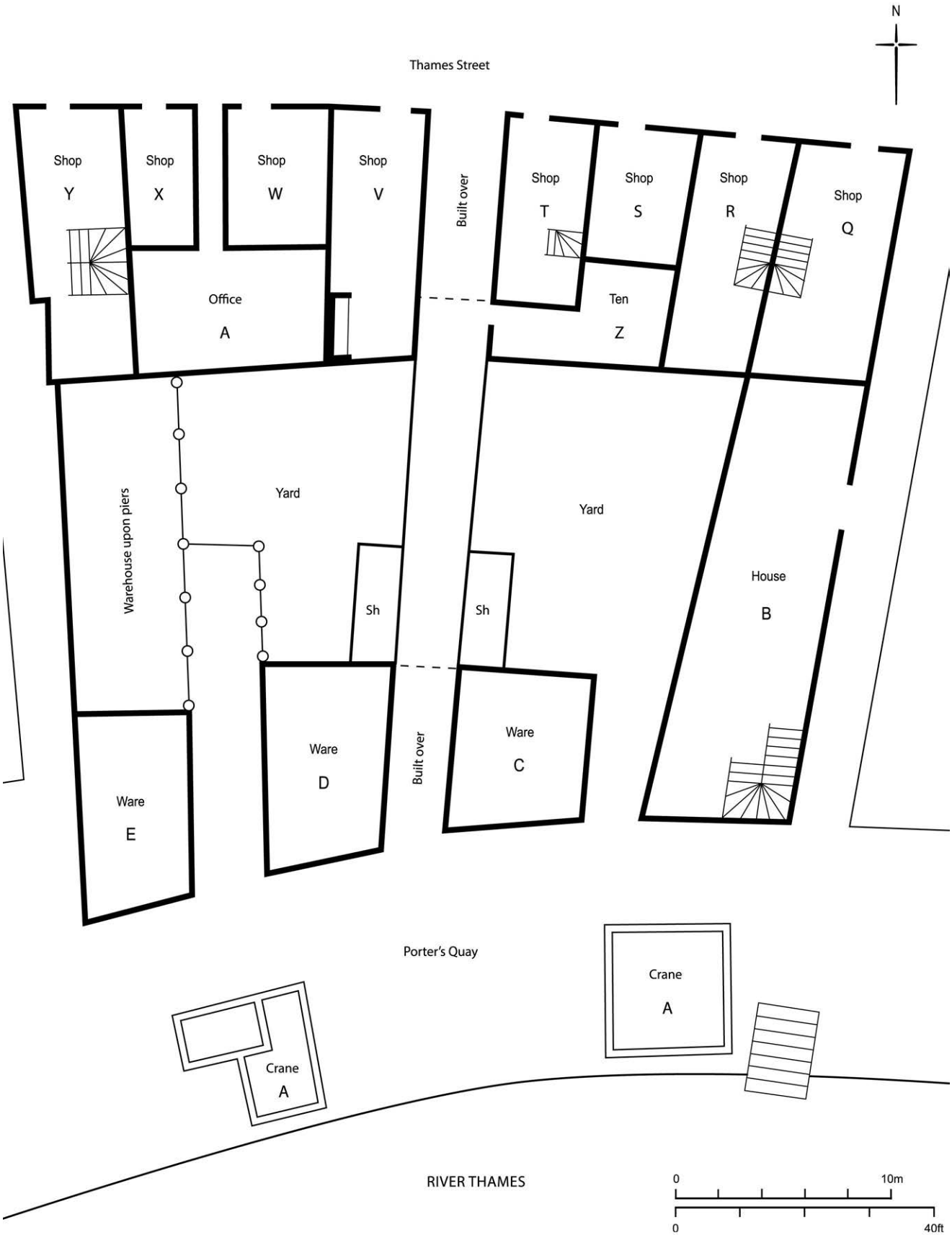


Figure 149 Porter's Quay, Thames Street, in 1686 (William Leybourn, Fishmongers' Plan Book, f3; redrawn by Sue Cawood). The initial letters indicate tenancies; Ware=Warehouse. The eight tenements at the front, Tenement Z and the Office A had four floors and cellars; Warehouses C, D and E had vaults beneath

behind the houses and smaller commercial buildings which fronted onto Thames Street. Leybourn's plan of Fishmongers' Company property at Porter's Key, immediately west of the Custom House, in 1686 (Figure 149) is a detailed plan of shops, warehouses, yards and cranes.[123] On the Thames Street frontage, some small shops were separate units with no stairs to upper chambers; but others were the larger shop form, with internal stairs to the domestic accommodation above. This mixture of planforms was probably the norm in many streets.

The buildings at Porter's Key were erected by the principal tenant, Mary Saintloe, against the wishes of the Fishmongers' Company which wanted to rebuild the wharf itself, and make it 'one of the noblest publique places in the City';[124] so Thames Street might have had some statelier buildings, and a wharf was not considered just a utilitarian asset. The dispute between Saintloe and the Fishmongers had come before the judges of the Fire Court in December 1668. The court decreed that widow Saintloe should spend £5000 on the rebuilding, so this was no doubt a development of some grandeur. Two aspects of the buildings shown by Leybourn could be remarked: first, all the range fronting Thames Street, divided into eight shops and a central gateway, shared a straight back wall about 40ft (12.2m) from the street. This would have been notable for its length in a waterfront context, 130ft (39.7m) long. Second, there was only one fireplace on the whole ground floor, at the back of the shop in tenancy V. All the other ground-floor rooms were not heated. No doubt the upper storeys, being more domestic, were heated, from fireplaces and chimneys which must have hung on the brick walls. One other detail of interest was supplied by the Commissioners for setting out lawful keys and wharves, a royal body, which had no objection to wharves remaining in private hands so long as the wharves would not be enclosed, each wharf being divided from its neighbours with stones or marks on the ground. The open wharf at Porter's Quay, as shown by Leybourn, was 40ft wide.

Seventeenth- and 18th-century plans show that warehouses formed parts of larger houses all over the City, even north of St Paul's.[125] Several medieval and Tudor grand houses, now under new ownership, were easily adapted in their large halls for storage or repacking goods for transport out into the country. Warehouses were commonly part of domestic complexes, and therefore quite small, as illustrated by plans of houses in Mincing Lane, north of Great Tower Street, in 1701 and 1721.[126] Until well into the 18th century, the term 'warehouse' signified a room within a building, not a whole building. On sites away from the waterfront, warehouses usually lay in the front yard near the street, with one entrance and usually no internal stairs to other chambers; all arrangements well known before the Fire.

Coffee houses, taverns and inns

The alleys and lanes opposite the Custom House held buildings which served the large business there. A glimpse is provided by another plan of Fishmongers' Company property in 1686 by William Leybourn at the junction of Thames Street and Water Lane (Figure 150). Here were three shops of the standard post-Fire form (two without heating) and behind down an alley a coffee house; no doubt a satellite of the business at Custom House a few yards away.[127] This appears to be the earliest surviving plan of the internal arrangement of a London coffee house, in this case with individual booths, not a single table for customers as shown in some contemporary illustrations. The whole structure appears to be of timber. Fronting onto Water Lane was a Tackle House with three storeys over it, but also according to the survey containing a 'Cupilo', a viewing space of some kind, presumably on the roof. The property had been erected by William Sherrington in 1670; unfortunately it burned down in the fire of 1714 which demolished Wren's Custom House on the other side of Thames Street.[128]

Nearby higher up Water Lane, the Ship Tavern advertised itself with a prominent doorway topped by a shell hood with a large ship on it (Figure 151). Though the illustration is later, the style of the doorway and hood suggests the Tavern was here by 1700. There would have been other taverns in Thames Street, particularly round the places of public resort. For example, the Salutation Tavern is shown on the other side of the street at Billingsgate by Rocque on his map of 1747 (Figure 142); it lay in Salutation Court which is documented before the Fire,[129] so the tavern may also have been pre-Fire.

Samuel Pepys patronised well over 100 drinking- and eating-houses in Westminster and the rest of London in the years before the Great Fire, but only one in Thames Street, the (Golden) Hoop at the foot of Fish Street Hill, entered from Thames Street opposite St

[123] The original plan is reproduced in Gerhold 2016, 143–4, fig 160.
[124] The case came before the Fire Court: Doolittle and Jones 2020, 130–2; Gerhold 2016, 144.
[125] Gerhold 2016, 215, fig 257; 226, fig 276 (Little Britain).
[126] Gerhold 2016, 229–30.
[127] Another area of business was around the west end of St Paul's Cathedral, where in 1662 there were two coffee houses among the buildings on the site of the bishop's palace, one called the Sultane's Head: Jones 1970, 136, 138. For the history of the coffee house, Markman 2004. Estimates of the number of coffee houses in London by about 1700 differ wildly: Habermas (1989, 32) uses a figure of 3000, which is far too large. There were about 500 coffee houses in London in the reign of Queen Anne (Latham 1995, 70–2).
[128] SoL 15, 41.
[129] Harben 1918, 517.

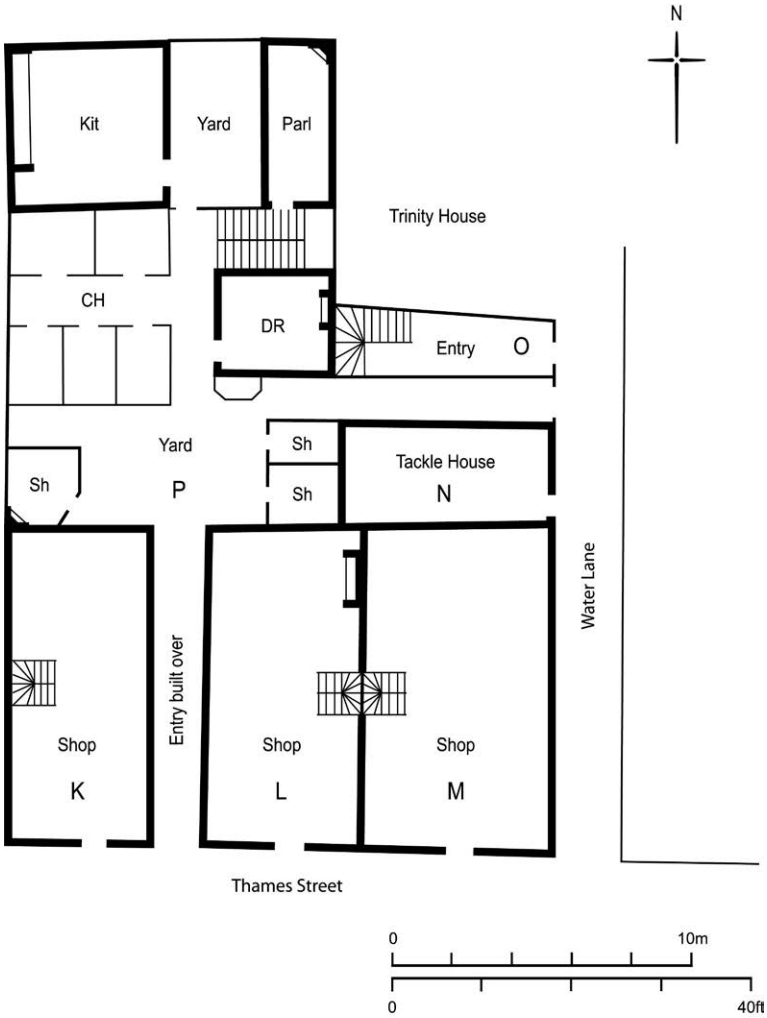


Figure 150 Fishmongers' Company property on the north side of Thames Street next to Water Lane, 1686, (William Leybourn, Fishmongers' Plan Book, f.2; redrawn by Sue Cawood). Initial letters indicate tenancies. Shops K to M had four floors and cellars, and a rooftop lead platform. Most of the other buildings also had cellars.

Key to abbreviations: CH Coffee House; DR Dining Room; Kit Kitchen; Parl Parlour; Sh Shed

Magnus' church.[130] There were several others along the street after the Fire. For wider study of the tavern, Gerhold provides plans of four London taverns or alehouses surveyed in the period 1692–1719. The largest of these, the Horn in Fleet Street, was down an alley and had drinking rooms probably on more than one floor: it provided dinner for about 200 members of the Goldsmiths' Company in 1721.[131] At the other end of the scale, an alehouse (of which there were many) usually had only a handful of drinking rooms of various sizes, sometimes accompanied by a principal drinking room for gatherings.[132] There is now also a growing archaeological literature on artefacts from taverns in the City and Southwark, though not from Thames Street.[133]

There was at least one extensive inn near the waterfront, the Star in Fish Street Hill on the north side of the Monument, presumably capitalising on the many traders and visitors who came into the City across London Bridge a few dozen yards to the south. The inn was the property of the Fishmongers' Company before the Fire, and William Leybourn surveyed it in 1686; it comprised many buildings, in 1686 usually of three, four or in one case four and a half storeys above cellars, stretching from Fish Street Hill eastwards to Pudding Lane.[134] A number of inns were up the hill on Gracechurch Street or its continuation leading out of the City, Bishopsgate. But no extensive inns in Thames Street itself have so far been identified, and semi-public functions were probably undertaken by taverns or coffee houses.

Details of the houses

The waterfront area furnishes examples of details of post-Fire houses which can be compared with others known from surviving buildings or past records.

Two houses with ornate doorways (Figure 152) stand at 1–2 Laurence Pountney Hill, south of Cannon Street, fronting 'the finest early C18 houses remaining in the City, if not in London'.[135] Now they are painted cream or ivory, but when drawn by Philip Norman in or before 1896 they were golden-brown.[136] Built in 1703, they are comparable in quality of detail with other surviving houses in Queen Anne's Gate in Westminster. Examples of such doorways survive or have been recorded in engravings or watercolours across the City and the suburbs; they would have been a feature of richer houses from the earliest post-Fire decades.[137] In this case the two houses, apparently forming a single property, were the result of a rebuilding less than 40 years after the Fire, showing that there could be a rapid turnover of development even in the domestic sphere.[138]

[130] Latham 1995, 416–28. This alehouse was therefore on the east corner of Fish Street Hill and Thames Street.
[131] Gerhold 2016, 179–80.
[132] Gerhold 2016, 181.
[133] Watson and Pearce 2010; Pearce 2016.
[134] Gerhold 2016, 172–6, figs 200–2.
[135] Bradley and Pevsner 1997, 528.
[136] VA D90-1896.
[137] Some are measured and illustrated in Amery 1978.
[138] Holder and Philpotts 2010.



Figure 151 The Ship Tavern in Water Lane, by T H Shepherd, 1857 (BM 1880,1113.3435). By this date all the upper windows had been replaced with sashes



Figure 152 Doorways at 1–2 Laurence Pountney Hill, 2022 (John Schofield)

The standard window in post-Fire secular buildings was a timber frame of mullion and transom, with the lower larger panes capable of being opened; predictably, none have survived. The elevation of Fishmongers' Hall shown above in Figure 58 is an example. Windows of this type are shown in the engraving in 1736 of Billingsgate given above with its details, Figure 144 and Figure 145; along with several examples of the new form of sash windows in the range along the west side of the dock. The sash window seems to have spread from royal and noble examples. Engravings show that sash windows were present at Montagu House Bloomsbury of 1675–82 and on the west side of Lincoln's Inn Fields in 1689.[139] Wren's Chapter House at St Paul's of 1714 probably originally had sashes. Hopefully future excavations in London will find examples of pulleys from the windows.

Smaller windows comprised diamond panes in lead cames, in wooden frames which did not open. Many broken fragments of window glass were recovered from the Billingsgate site (site D); as with the majority of finds from the levels on the site, they could be part of the widespread rubble from houses destroyed in the Great Fire. They include both diamond-shaped and hexagonal panes. A relevant detail from a house north of Thames Street can be reported. In the winter

[139] The topic studied in detail by Louw and Crayford 1998 and 1999, only for 'pre-Georgian sash-windows' but with many details of the frames and glazing-bars.



Figure 153 Window found in situ in a house in Lovat Lane, 1981–2 (John Schofield)

of 1981–2 a late 17th-century window was revealed on the west side of Lovat Lane, and the window was removed into the care of the Museum of London (Figure 153). It had survived because the next-door property, presumably built a little later, had totally obstructed it. The window may have lit a stair, and thus its loss by being obscured was not thought grave. Unfortunately there are no records concerned with the finding or recovery of the window (which survives, at the Museum), so the precise location is unknown.

The interiors and amenities of immediately post-Fire London houses are in general little researched; there is so far no overall synthesis to compare with the rich information on rooms in 17th- and 18th-century houses in Bristol, looking one way, or Paris, looking the other way.[140] Some post-Fire panelling survives at livery company halls, such as in the Court Room at Skinners' Hall, Dowgate Hill, also called the Cedar Room from its panelling of red cedar, said to be 'Bermudian'; if so, another sign of trade across the Atlantic.[141] There are examples of 18th-century panelling in surviving houses in the City and surrounding boroughs,[142] and others salvaged from buildings are now in museum collections; there are also some unpublished drawings of London interiors.[143] In the study area, panelling on all three floors of Richard Beckford's house in Great Tower Street was fortunately recorded in proper detail; this enables us to say that the panelling and fireplaces of the second-floor rooms were less ornate than those in the first-floor rooms.[144] The general picture is that after the Restoration the previous fashion of small square panels was replaced by another design, 'in which the wall surface is divided by the dado-rail into two unequal compartments with a single range of tall panels above, and a smaller range below the moulding.'[145] The distribution of panelling and other decorative features in the Thames Street houses, though not probably in the warehouses behind, may have been similar to that of houses recorded in Deptford, where the ground-floor rooms were relatively crudely finished, while the private spaces upstairs were embellished with classical mouldings, especially on fireplaces.[146] Wallpaper was an alternative by 1720, when Abraham Price's Blue-Paper Warehouse in Aldermanbury sold paper hangings in pieces 12 yards long, some in imitation of marble, others imitating panelling, 'fit for the hangings of parlours, dining rooms and staircases.'[147] Wallpaper was another new fashion made mainly only in London until the early 19th century.[148] No examples in the City have yet been recorded.

By 1745, water was being supplied by pipes along Thames Street and its lanes, including New Fresh Wharf and Cox's Quay, and probably Black Raven Alley next to Darvoll's small houses, though the supply was only for a few hours a day.[149] We do not know if pipes went into the cisterns in individual houses on the study sites, as they did to houses elsewhere in the conurbation.[150] There must have been pumps at the ends of the pipes in the alleys, though they cannot have impeded the all-important carts. There does not seem to have been a pipe down Botolph Wharf in the 18th century, and this may have been because all the buildings here were warehouses. The houses fronting Thames Street

[140] Bristol: Leech 2014, 294–316. The study of Paris houses from inventories of 1600–1790 by Pardhailhé-Galabrun (1988, 247–401) includes detailed treatments of rooms on all floors of houses, furniture, provision of heat, light and water, and decorative furnishings such as pictures and mirrors.

[141] Bradley and Pevsner 1997, 405.

[142] For a summary with several London examples, Cruickshank and Burton 1990, 150–62.

[143] For instance, the interior of 26 Hatton Garden, of about 1730, is described in 31 photographs and survey drawings in Amery 1978, pl 114 to 145; and the panelling of one room was saved for the Victoria and Albert Museum. The building itself does not survive. For 19th-century drawings of rooms in other houses, LMA, London Picture Archive 104, 116 (Aldersgate Street), 2349–51 (Fleet Street).

[144] SoL 15, plates 47–58.

[145] A W Clapham in RCHME 1930, xlviii.

[146] Burton and Guillery 2006, 66 (Tanners Hill Deptford).

[147] Nurse 2017, fig 25, Price's trade card. Early sellers of wallpaper in London such as Price are discussed in Taylor 2018.

[148] Taylor 2018, 38.

[149] LMA ACC/2558/MW/C/15/102, p 99–100, 108–11; Tomory 2017, fig 5.6.

[150] Cruickshank and Burton 1990, 84–9.

may have been serviced by the pipe in the street, but not directly. The hygienic standard of water used for drinking and making beer on both sides of the river left much to be desired well into the 19th century: William Rendle, writing in 1888, recalled that he had once filled a tumbler with water as it came into his household butt in Southwark: 'the deposit [in it] was of brown earth about an inch of the full depth, and small fish frequently passed in.'[151]

Building materials and building standards; regulations

Research by I M Betts on the examples of building materials from the present sites, mainly wall- and floor-tiles and bricks, has been incorporated into the site narratives above. This research can be placed in the context of post-Fire building practices; though on the two sites studied, Seal House and Billingsgate, the recorded remains were only of cellars, so the occurrence of decorative elements *in situ* was unlikely.

T F Reddaway estimated that 'the bulk of private rebuilding [in the Fire-damaged area] was nearing completion by the end of 1670'.[152] This should mean that there is a widespread archaeological horizon across a large part of the intramural city, comprising foundations, walls and floors of the narrow range of 1666 to 1676, the date of the map by Ogilby and Morgan. This horizon would be of great use to archaeologists if they could identify it. But this has proved very difficult to do; there are very few instances where excavations have recorded such immediately post-Fire house foundations and, as a bonus, associated floor or yard levels. The common finding is that the period after 1666 is represented by isolated brick cellars, cesspits and wells which punctuated the pre-Fire strata from a higher level; any foundations which went with them have usually been removed by the ubiquitous 19th-century basements and bank vaults. A typical plan of the period, from excavation in 1997–2003 of a large area on the north side of Tower Street between Rood Lane and Mincing Lane, comprises fragments of walling, and 'a few brick-lined wells and cesspits.'[153] An excavation at the west end of Cheapside has found more.[154]

The buildings recorded on the Seal House and Billingsgate (Botolph Wharf) sites had little or sometimes no foundations. None of the usual methods of building walls in the reclamation zone south of Thames Street from the pre-Fire period – thick walls, arches, piles or other timber reinforcements, or the laying of a layer of sterile material over much of a site to build upon – were employed. Speed seemed to be the priority. This resulted in weak buildings, such as the wall between houses B:Building 8 and B:Building 9 at Seal House, two of the houses built by Darvoll by 1671, which subsided by 40mm during its life of about 100 years.

Many of the delftware wall tile fragments in the debris of the post-Fire buildings, particularly their construction layers, would also have come from pre-Fire buildings on the site. No complete examples were found. The deposits included both plain lead-glazed and unglazed floor tiles, the latter first introduced into London in the late 16th century. Some were clearly damaged in the Great Fire. At Seal House a cellar floor was laid with plain or glazed tiles with yellow, green and brown glazes arranged in chequerboard fashion, and larger 16th-century Flemish tiles incorporated (Figure 40). Other floors were of brick.

By 1500 brick was frequently used for foundations, walls of buildings or gardens and repairs to the wharf.[155] All the high-class developments west of the City in the 1630s and 1640s (Covent Garden, Great Queen Street, Lincoln's Inn Fields) were built of brick throughout, and by this time it must have been usual. A short distance north of Cripplegate, the Goldsmiths' Company laid out Jewin Street (now beneath the Barbican estate) in 1651. Here both sides of a whole street were lined with small brick houses of one-room plan, 3½ storeys high on cellars. A similar redevelopment by the company with brick houses on the west side of extramural Bishopsgate seems also to be of 1651, though surveyed in 1692.[156] Houses in these two developments were similar in plan and size to the small range put up by Darvoll in Black Raven Alley in 1671. In 1666, to adopt brick building as the only possible and only legal style of rebuilding must have seemed to be just common sense. The brick houses on Thames Street, occasionally embellished with carved brick details like that of Thomas Beckford at Billingsgate, were of a general kind widespread throughout the Fire-damaged area, as shown in a watercolour of 1887 of Basinghall Street north of Cheapside (Figure 154).

During the century after the Great Fire, building regulations evolved and affected the construction and appearance of houses, at least towards the street. In 1707 the prominent cornices of wood which were standard on secular buildings were abolished, and party walls required to be raised 18in (0.46m) above the roof, to provide extra protection against fire; in 1709 window frames (which were usually of timber) were to be set back 4in (0.1m) from the external plane of the wall.[157] One historian says the 1707 act was generally followed;

[151] Rendle and Norman 1888, 48.
[152] Reddaway 1951, 281.
[153] Pitt *et al.* 2013, 58–9, fig 40.
[154] Jeffries 2015.
[155] Schofield 2003, 150–2, 110–11.
[156] Gerhold 2016, 108–9, fig 113.
[157] Summerson 2003, 53.



Figure 154 68 Basinghall Street (on the right) in 1887, by J Emslie (LMA, London Picture Archive 1052). The date on the date panel is 1671. All the windows are later replacements, and the attic storey of both houses may be an 18th-century rebuilding of an original attic

another that these regulations were widely ignored.[158] They would have affected new buildings, but we do not know in much detail how quickly the houses and courts in Thames Street and the lanes to the north were rebuilt or replaced after their first construction in the 1670s. No doubt alterations and occasional rebuilding continued, and new fashions were indulged in. As the 18th century wore on, there would have been Georgian touches to the townscape in the area north of Thames Street.

Outside the area of the Great Fire

In 1670 much of London had not been damaged by the Great Fire, and the new streets of brick buildings, including Thames Street, need to be placed in a wider context. Well into the 18th century, a large number of London's domestic buildings outside the Fire-damaged area and in Southwark were a patchwork of styles and materials often with medieval parts; the large medieval religious precincts, of which the City had many, had only gradually changed their forms since the Reformation. On the site of the former Holy Trinity Priory Aldgate, just inside the City wall, a fire of 1800 revealed that houses on both sides of Mitre Street were based on the choir aisles of the priory church of the 1130s, their capitals still visible.[159] Whole streets, some of them major and inside the walls, remained timber-framed (eg at Bishopsgate, Figure 155[160], a view in 1736). The merchants of post-Fire London who lived in the east part of the intramural City inhabited these older buildings as much as any new ones. Indeed, they may have favoured this old-fashioned character. In 1763 over half London's merchants still lived in the eastern parishes.[161] What is striking is the longevity of timber-framed buildings (admittedly mostly the better-built larger houses or multi-storey ranges) in the wider area outside the Fire; they often persisted, and were maintained, until the end of the 18th century and occasionally beyond (Figure 156).[162] Though 'restored' into an appearance it never had, the street range of Staple Inn in Holborn of 1586 stands today. There were also mixtures of timber-framing and brick, as in a courtyard house on the south side of Hart Street, just west of St Olave's church, which had a street frontage of brick in 1632, rebuilt higher in 1688, and behind some evocative rooms of a mansion of 1609, demolished only in 1801.[163]

Buildings or parts of buildings in brick were mixed with timber houses throughout the area outside the Fire. Plans of houses and their ancillary buildings are also available. One of Leybourn's surveys in 1686 is of two properties in Billiter Lane (Figure 157). The arrangement of buildings reflected several adjustments and rebuildings of the 17th century, some before and

[158] Cruickshank and Burton 1990, 214; Guillery 2004, 67, 111.

[159] Schofield and Lea 2005, 36–9.

[160] Angel Court was built by Richard Hardmett, skinner, in 1657. A plan of 1697 by John Olley is reproduced in Gerhold 2016, fig 118. This shows that all the ground-floor rooms had walls of timber except for brick walls along most of the outer boundary of the property. Perhaps this was the London way of building on large sites in the middle of the 17th century; but the many plans by Leybourn in 1686 show ubiquitous brick walls three decades later.

[161] Gauci 2007, 28.

[162] Guillery 2004, on all the districts around the City. For illustrations of 16th- and 17th-century houses which survived to be recorded as late as the 1830s, Schofield 2003 *passim*.

[163] Gerhold 2017.

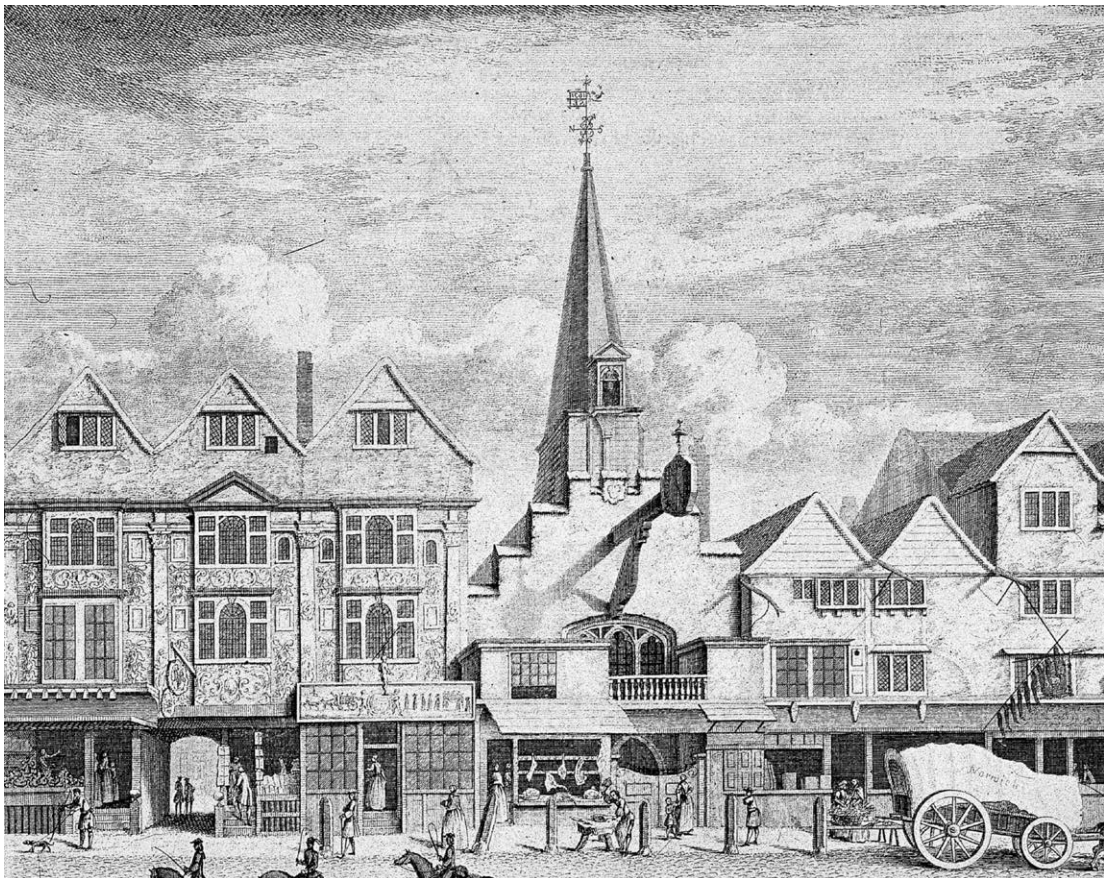


Figure 155 St Ethelburga's church and buildings in Bishopsgate in 1736 by Robert West and William Henry Toms (Alamy). The street range on the left, Angel Court, was built in 1657; its double-height pilasters are similar to those on houses at Great Queen Street (near Covent Garden) of 1639, but whereas those were of brick, this range was of timber, according to a plan of 1697 (Gerhold 2016, 114)

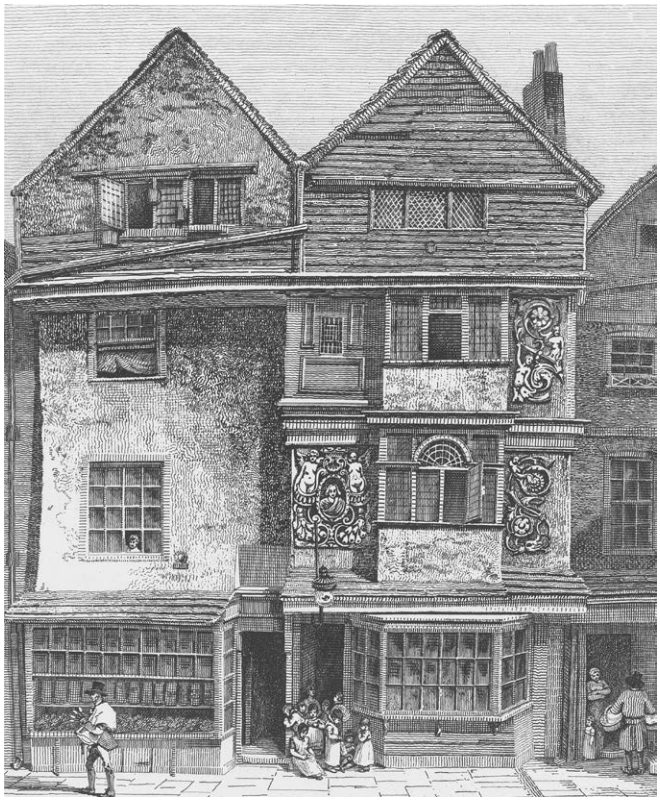


Figure 156 Houses in London Wall [street] in 1812, by J T Smith (Yale Center for British Art, Paul Mellon Collection B1977.14.17495). The bay windows and presumably the pargetting seem to date from the 1650s or 1660s. These were substantial houses, standing for at least 150 years

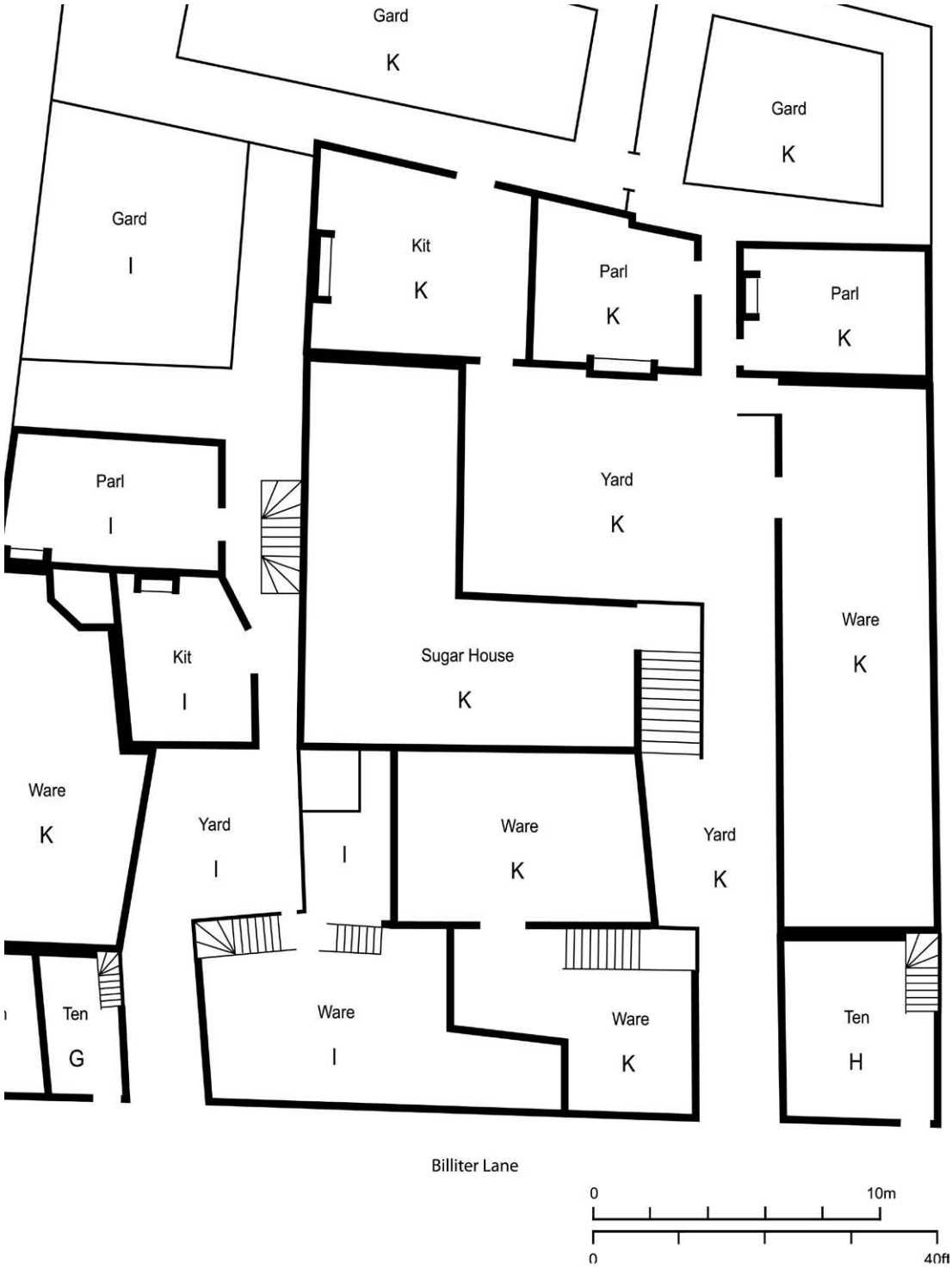


Figure 157 Property on the west side of Billiter Lane in 1686, (William Leybourn, Fishmongers' Plan Book, f12; redrawn by Sue Cawood). North is to the right. Initial letters indicate tenancies. Tenements F, G and H had three floors and cellars; most of the other buildings had two floors and cellars, 'promiscuously disposed'

Key to abbreviations: Gard Garden; Kit Kitchen; Parl Parlour; Sh Shed; Ten Tenement; Ware Warehouse

others after the Fire; as in all the Leybourn plans, he does not distinguish between brick and timber-framed walls. The main house had 14 hearths in about 1670.[164] Here all the warehouses were inward-facing, though those on the street frontage would have been of several storeys (as shown by their internal stairs) and probably had openings to the street at levels above the ground

[164] Gerhold 2016, 98–100.

floor. The warehouses not on the Lane frontage did not have internal stairs and were presumably of one storey only. The layout of buildings still had a medieval, pre-Fire character: three parlours (two on the larger of the two properties surveyed) were all next to the small gardens; but as usually in medieval parlours in London, the access to the garden was not in the flank alongside it. This side next to the garden would contain a window. These may have been medieval buildings still standing, though they would have been repaired.

Whole areas of smaller housing probably wholly in brick were built in the immediate suburbs, for instance north of Cripplegate or on both sides of Bishopsgate outside the gate, from the second half of the 16th century.[165] Some were the exploitation of empty backlands behind predominantly old timber-framed frontages, but others were substantial areas with new streets: as at the site of the former medieval hospital and its grounds at Spitalfields, east of Bishopsgate.[166] By 1650 this was becoming normal for new developments, large and small. A site excavated in 1974 south of Aldgate High Street recorded a block of brick houses with ground floors of two rooms in the former Harrow Alley, constructed in the 1670s. They were replaced by expansion of warehouses by the East India Company in about 1750, so they did not last long; but seven cesspits in and around them were productive of pottery and artefacts.[167]

The purpose of this section about streets and buildings outside the area of the Great Fire has been to show that this area, much larger than that devastated in the Fire, was very different in character. The buildings above ground went back in some cases hundreds of years. They were the angular, messy product of many generations of builders. Against this background, visible on every side, the houses in Thames Street proclaimed uniformity, or a limited vocabulary, in styles and materials. This uniformity was admired.

Uses of rooms and spaces in buildings; finds from cesspits

As regards the uses of rooms and spaces in post-Fire London houses, tradition and accustomed uses weighed heavily. The two adjacent properties in Billiter Lane, one containing what must have been a fairly new sugar house, had medieval elements, and the routes through the houses to their gardens must have been medieval in origin. Many City houses outside the area of the Fire must have looked like this, up to 1700 and perhaps beyond. Thus in properties in the unburnt area, the uses of rooms and external spaces, like so much else, did not change much after the Fire, or perhaps slowly, because there was no need.

The names of rooms at large merchant houses are sometimes listed: at the Beake house of the 1670s in Botolph Lane, the house of Beckford in Tower Street as described in his inventory of 1679, and that of Minshull at Botolph Wharf as described in his inventory of 1704 (both transcribed in Chapter 10). The first two were courtyard houses, and this plan form was not common. The Beake house indicates a new idea in its plan; if space allowed, a central hall could be flanked by pairs of chambers on either side. An inventory of the house in 1701 lists 20 rooms on three floors, and some must have been in annexes. The number of rooms had not increased in the post-Fire rebuilding: in 1642, the house contained 21 rooms.[168] In general, many rooms had the same names as those in pre-Fire houses: the parlour, the great chamber, the closet and so on. One subject worth further study is any observable development of specialisation of rooms or changing functions of rooms during the period. By the first, we mean if rooms developed particular and exclusive functions. A room specifically called the dining room is found in ordinary London houses from at least 1631, in pre-Fire Aldersgate Street, on the first floor of a house of only middling size.[169] Beckford's inventory of 1679 shows he had a dining room and a 'withdrawing room', no doubt adjacent. The dining room could accommodate 24 people at three tables; the withdrawing room had a sofa and eight chairs. It also had a picture, whereas the dining room did not. Rooms for polite entertainment were beginning to specialise, but this had started before the Fire.

Further down the social and building scale, in small and medium-sized London houses, the parlour was doing the hall's job as it was the only reception room.[170] The furniture in parlours changed as beds were moved out and chairs, tea tables and pictures moved in; but at different speeds round the country.[171] There is no evidence that the Great Fire made these changes any faster in London.

The room which changed appearance least was probably the kitchen. Minshull's well-appointed kitchen in 1704 would not have surprised a visitor from a hundred years before, though there was at least one new touch: he had three copper coffee pots. Both Minshull and Beckford had amounts of pewter. Because pewter vessels were traded in and melted down, they rarely survive in archaeological levels in London or elsewhere. In London, many of the pewter items

[165] Eg Howell 2016 (Finsbury Avenue Square); plans of other sites in Gerhold 2016, 107–12.
[166] Harward *et al.* 2015.
[167] Thompson *et al.* 1984.
[168] Alcock and Galinou 2006.
[169] Schofield 1987, 36–7.
[170] Schofield 1987, 18–19.
[171] Weatherill 1996, 10–13.

Site, summary	Date
Swan Lane (site A): cesspit	1650–80
Seal House (site B): houses and well	1671, material in well 1660–1700, capped later; houses demolished in 1776
Billingsgate (site D): 14 phases of buildings	1667 to about 1732; contents of Cesspit 2, around 1732

Table 10 Sites A, B and D, summary of occupation dates from finds

(largely for the table, but also including trinkets and medieval pilgrim badges) now in museum collections are from the Thames foreshore, thus partly filling the omission.[172] A large collection of pewter probably from London recovered from the seabed at Port Royal, Jamaica, briefly described in Chapter 8, is therefore of great importance.

Scholars have asked whether spaces in houses, in London and elsewhere, were used separately by men and women; perhaps 'favoured' would be a better term. A recent review of the subject for the late medieval period in Britain has concluded that 'increased spatial distinctions along gendered lines appeared in the 15th century' but that 'female and male spheres frequently overlapped in towns, and that their gendered space was more fluid in humbler dwellings than those of the wealthiest, where ideal male–female divisions were more often realised.'[173] Rooms and spaces within central London houses were unsegregated, at least in the decades immediately after 1666 and for a long time in the plain houses of tradespeople which are studied here.[174] At the end of our period, however, 'the architectural history of [house] interiors notes an increasing specialisation of spaces by sex, with the rise of the masculinised dining room and the feminised drawing room by 1820.'[175] In other words, in the 18th century as in the 15th, richer people had more space in which these gender differences might become apparent. Such changes may be looked for in the larger mansions in the post-Fire City, but perhaps not so profitably in the far more numerous ordinary houses.[176]

Are the objects left in the rooms, or mixed in with floor deposits, ever indicative of uses of those spaces? Large groups of artefacts caught in catastrophes or sudden invasions elsewhere in the world at several periods of history have been caught by archaeology.[177] Three studies of artefacts in or from buildings in the Great Fire have appeared, concerning sites in Pudding Lane, Botolph Lane and on the Billingsgate site itself (its immediately pre-Fire layers).[178] The pre-Fire Billingsgate study suggested that we could distinguish rooms given to domestic purposes or storage, at least when encapsulated in a disaster. The present study, being of buildings erected after the Fire, does not include a disaster.

The artefacts, in pottery, glass, wood, ivory and metals do illustrate the world of the occupants and users of the excavated buildings. They comprise individual finds; or groups of finds, usually pottery and glass, in the same archaeological context. There are some notable individual finds, but little can be made of them: the fragment of ivory comb from site B, the memento ring and the pen from site D. The pen was found in one of the warehouses managed by Joseph Ashton and his colleagues. Was it his pen? We can only guess, or wish. More interesting discussion concerns the notable groups of artefacts which are, from west to east, (1) the contents of a cesspit at Swan Lane; (2) pottery and other finds from Darvoll's houses of 1671 and the associated well in Black Raven Alley, excavated on the Seal House site, which span the years 1671 to 1776; and (3) finds in and around the buildings excavated at Billingsgate, with strata and a cesspit dating to the period from 1666 to about 1730. These are given in the simplest tabular form in Table 10, which shows how the groups of artefacts overlap each other in date.

The Swan Lane cesspit contained around 119 pottery vessels, substantially complete. The group was almost certainly used in the building of unknown character which lay above the cesspit, and it offers a good impression of the range of forms in use in the mid-later 17th century, in three general pottery types: Essex redwares, Surrey-Hampshire border wares, and tin-glazed wares. Non-local items included part of a large earthenware jar which may be from the Midlands or north-east England, a costrel probably from Seville, a fragment of a bowl or cup in north Italian marbled slipware and sherds from three Frechen stoneware jugs

[172] Hornsby *et al.* 1989: 'from the half century or so following the Great Fire come some of the finest surviving examples of London-made pewterware' (p14).
[173] Richardson 2018, 812.
[174] Work by J D Melville and Lorna Weatherill, summarised in Flather 2007, 44.
[175] Vickery 2009, 302–3.
[176] There is a dearth of studies of use of rooms by men and women in London houses of the 17th and 18th centuries; Schofield 1994 contains a few first remarks in a study of the Treswell house surveys of 1607–12. Theory is supplied by north American colleagues: Barile and Brandon 2004, Spencer-Wood 2013.
[177] For example the Roman city of Kourion on Cyprus, destroyed by an earthquake in AD 365 (Soren and James 1988); or the earthquake at Port Royal, Jamaica, in 1692, described in Chapter 8.
[178] Milne and Milne 1981; Blair and Sankey 2007; Schofield and Pearce 2009.

from near Cologne. A Portuguese tin-glazed plate with the arms of Portugal finds a parallel with a similar plate found at Martin's Hundred, Virginia. The whole group seems to have been a clearance from a house, but when? That is not clear. The absence of fire or smoke damage to the pots suggests the deposition of the group was not during the Fire or a direct consequence of clearing up after it.

The finds excavated at Seal House a couple of alleys away came from Darvoll's houses of 1671, and from a well which is associated with them (it may have been in one of the cellars of the range). These small houses were evidently occupied by poor folk. The silt in the well contained a fine group of pots in Surrey-Hampshire border ware and London area and Essex redwares: serving vessels and dishes, a pipkin and a colander. There was also a fragment of a Spanish jar with turquoise tin-glaze. The pots down the well would have been from a single household.

At Billingsgate, there was a high number of medieval sherds, transported and retained over time from earlier deposits on the site. Some of the floor levels in the warehouse buildings would have crunched underfoot. Over 1500 fragments of glass were recovered, but much was fragmentary window glass, with a small number of pieces perhaps heat-altered and warped, presumably by the Great Fire (and thus from buildings preceding those being excavated at that moment). Cesspit 2 in D:Building 9 at Billingsgate held an impressive array of pottery types and glass vessels, discarded in the decades 1700–30 or possibly during demolition of the building in 1732. The pottery included regional wares but also Frechen and Westerwald pieces and a piece of a Chinese porcelain teabowl, along with another produced locally in imitation.

The way forward is to group the artefacts by the activity they were most probably involved in: drink, hot beverages, food preparation and serving, dining, hygiene, smoking, writing, dress accessories, fixtures (window glass) and commerce (coins and jettons). When documentary evidence is available, the use of the cesspit can be associated with named individuals or families. Tastes, preferences and relative prosperity can be explored. This approach has been taken in several studies.[179]

Merchants and their tastes; cultural influences from other countries

Can the material culture from the excavated sites show cultural influences on London life from outside? The extent of the British empire made London a central place for the import and distribution of tropical products. According to Carole Shammas, 'probably the most striking development in consumer buying during the early modern period was the mass adoption by the English and colonials of certain non-European groceries'.[180] England's overseas trade in the three decades after 1660 stimulated and satisfied a range of domestic consumer habits, and 'brought an access of wealth to the merchant class the importance of which can hardly be over-estimated. Naturally much of this new wealth was concentrated in the city of London.'[181] A surging demand in England for Indian fabrics (calicoes, chintz, cotton and silk) was encouraged and fuelled by the East India Company.[182] The wealth of goods and luxuries in London from foreign parts was a source of pride for its residents. In *The Spectator* in 1711, Joseph Addison gushed

> Our Ships are laden with the Harvest of every Climate: Our Tables are stored with Spices, and Oils, and Wines; Our Rooms are filled with Pyramids of *China*, and adorned with the workmanship of *Japan*. Our Morning's-Draught comes to us from the remotest Corners of the Earth: We repair our Bodies by the Drugs of *America*, and repose ourselves under *Indian* canopies.[183]

Some houses on the excavated sites before the Fire probably had skirtings in rooms or fireplace surrounds in Dutch tiles. It seems probable that there was an Anglo-Dutch tone to some of the material culture by 1640. After the Fire, the Dutch aspect of Wren's Custom House has already been remarked. Twenty-five parish churches in post-Fire London have similarities with churches in Holland.[184] There are few traces today in the City of the reign of William and Mary in 1689–1704, though one which is overlooked is the large coat of arms of William (Mary having died in 1694) in the pediment of the north transept of St Paul's Cathedral, carved by Grinling Gibbons in 1698.[185] Our Billingsgate site played its part, in that a floor level in D:Building 13 contained the base of a mug in Westerwald stoneware with part of a medallion depicting Queen Mary (above, excavation narrative, Event 6). This Dutch influence did not last and was perhaps waning before the end of William's reign: Peter Thornton thought that the Dutch influence on England in the furnishings of houses waned around 1700 and the flow of culture came to be reversed.[186]

Apart from the massive involvement of the East India Company and other London associations (such as the Royal African Company, Hudson's Bay Company), the

[179] Jeffries *et al.* 2014, Pearce 2016, Hartle *et al.* 2021.

[180] Shammas 1993, 178.
[181] Holmes 1993, 66–7.
[182] Wills 1993, 136–7.
[183] *The Spectator* no 69, May 1711; transcribed in Saunders 1997, 206–7.
[184] Kuyper 1980.
[185] Schofield 2016b, 55 and figs 85–7.
[186] Thornton 1984, 50.

international trade of London was to a considerable extent in the hands of foreigners. In a survey of merchants in London in 1763, 77 per cent of mercantile firms (1013 out of 1316) in the City had names of foreign extraction.[187] Many of the merchants were Jewish, Huguenot, German or Dutch, and they tended to stick together as topographical groups.[188] These area groupings might be susceptible to archaeological tracing, in that artefacts typical of an ethnic group would be found on sites in certain streets. Huguenot merchants were numerous immigrants to London in the 1690s, though many went on to America. Between 1688 and 1700 the number of French refugee churches in London grew more than four times, from six to 26.[189] But the Huguenot presence in London is not reflected archaeologically, with little obvious evidence for French goods such as ceramics in known Huguenot areas such as Spitalfields;[190] the Dutch are also not yet evident. A group of ceramics dumped in a cesspit in the first half of the 18th century at Mitre Street at Aldgate, near the still functioning Synagogue of 1701 in Bevis Marks, included a Chinese teabowl of the Kangxi period (1662–1722), fifteen delftware vessels (plates, porringers, bowls, teabowls and coffee cups), and a delftware (Lambeth) plate on which before glazing an inscription of the Hebrew word for milk had been painted (Figure 158).[191] It is likely this group of pottery came from a Jewish household. Future research on the Jewish community hereabouts seems possible.



Figure 158 Delftware (Lambeth) plate on which before glazing the Hebrew word for milk has been painted, early 18th century, from a cesspit in Mitre Street, excavated 1988 (MOLA)

Did the merchants, Jewish or otherwise, have perceptible tastes in their house furnishings or possessions? One view of historians is that furniture and decoration in merchants' houses changed in line with general fashion, from bulkier to more graceful designs, but that 'merchants had a marginal interest in interior decoration and were less inclined [than gentry] to express their status through domestic artefacts. Their taste was usually conformist, functional and unrefined.'[192] The interiors of their houses might be opulent, but their exteriors were functional and dull. Concerning these interiors, Lorna Weatherill made a study of consumer behaviour and material culture in Britain in the decades 1660 to 1760, based on inventories from several regions; this included some London material, especially a sample of 300 inventories of the Court of Orphans of the City, inventories of richer men who died leaving child dependants. Weatherill found that goods associated with social, 'front-stage' activities increased in frequency in inventories after 1675, though the richer inventories of the Orphans had them already. Londoners had more books, clocks, looking glasses and pictures than people elsewhere. But they had easier access to these goods, which often came from abroad; so London was not different in kind, only in degree of possession of finer things. Professionals needed clocks and books. Commercial and professional people had more show-off things than the gentry did.[193] In London, richer merchants sponsored art and were collectors of fine objects; there may be some tastes we can associate with them.[194] They built or acquired mansions in the suburban countryside (a habit of rich London families since the 14th century), and many have survived or been recorded; but those which do stand today have been much changed by centuries of alteration, decay and rebuilding.[195]

In sum, there were some constants or near-constants usually of a structural nature such as the two-room plan for many houses and the absence of fireplaces within shops, permanent structural components of buildings which promoted habits or ingrained ways of doing things. These could be complemented over the decades by more transitory fittings and furniture as people came and went as tenants; in London, frequently. Post-Fire London, like contemporary Paris, was largely a city

[187] Chapman 1992, 23, table 1.2.
[188] Gauci 2001, 25–8, 38–42, table 1.1; 2007, 25, 32. The latter is a study of over 2000 merchants and trading firms from the 1690s to the 1760s.
[189] Ormrod 2008, 96–7.
[190] Jeffries 2001.
[191] Pearce 1998. An outline history of English delftware vessels (ie not wall tiles), including manufacture in London from 1570, is given in Dawson 2010, 9–11.
[192] Grassby 1995, 340–1.
[193] Weatherill 1996, 28–38, 50–1, 189–91.
[194] Galinou 2004.
[195] For a recent survey, including of their condition, Knight 2009.

of tenants.[196] A question then arises: what effect did this rapid turnover of tenants, with their probable aversion to investment in the buildings, have on the design and use of houses and other forms of secular building? To study this properly, plans of individual houses at regular intervals would be useful; but in general they do not exist. Design of a building may be understood by archaeology, but detailed knowledge of the interior requires digging also in the documentary sources.

Conclusions to this chapter

Two topics have been explored to provide setting for the excavated sites: the topography and archaeological character of both banks of the Thames to east and west; and the buildings and material culture of post-Fire London into which the excavated remains are to fit.

The first of these is important for understanding the extent of the Port of London. In 1600, the increasingly overcrowded wharves on the City side of the Thames faced a still rural landscape on the south side, punctuated only by the long ribbon of the high street of Southwark at right angles to the bank and occasional medieval strongholds (such as the palace of the bishops of Winchester, by then already in decay) on the bank itself. By 1750, the port had crystallised its built-up area along both banks and was spreading its approaches, like tentacles, along the river downstream. The material culture of people living or working in the City of London at this time was shared by their neighbours on both sides of the Thames for a considerable distance. Any conception of the Port of London at this time must include all the activities and constructions from Blackfriars Bridge to Deptford. This is one of the arguments of the present study.

As to the plans of buildings (houses, warehouses, shops) a clear and limited range of types should not be expected; the builders were not given a range of plans to choose from by the local authority, or chose from a catalogue. There were many different forms of houses (that is, ground plans) in the post-Fire City, and virtually all these forms were to be found in the pre-Fire streets; apart from the unusual plan of Darvoll's houses at Black Raven Alley, which may be simply because their medieval equivalent has not yet been found in documents or on the ground. The surveys of William Leybourn of 1686, and those of other post-Fire surveyors, provide a large sample of ground plans of new post-Fire buildings. The buildings in Thames Street should be placed in context among the older, surviving buildings in the large area of central London which was not subject to the Fire of 1666. When the whole City of London and its suburbs are the area of view, we can begin to study the use of rooms and spaces within buildings, as illustrated by inventories and archaeological artefacts. This may in the future provide outlines of identifiable groups of people within post-Fire London society.

There now follow four chapters which place the excavated sites and the waterfront of London in context, in time and geographically: the waterfront from 1750 to 1800 (Chapter 5); a note on London and slavery (Chapter 6); the factors leading up to the establishment of the first London docks around 1800, and the coming of steamships (Chapter 7); and a comparison of London with other ports around Britain, along the coast of continental Europe and across the Atlantic (Chapter 8).

[196] For Paris, Pardailhé-Galabrun 1988; for estimations of the number of houses in the City of London held by institutions of all kinds in 1666, Doolittle 2021.

5 The waterfront from 1750 to 1800, and the growth of large-scale warehousing

Custom House, London Bridge, Billingsgate and the Coal Exchange, 1750–1800

This chapter on the waterfront in the second half of the 18th century begins with the views of the architect and would-be townplanner John Gwynn, who in 1766 produced *London and Westminster Improved, Illustrated by Plans*, a small book of biting criticism of many buildings and features of the metropolis, from St Paul's Cathedral downwards. Gwynn is valuable in the present context for his view of the riverfront. London in the 1760s was 'as injudicious a disposition as can possibly be conceived for a city of trade and commerce situated on the borders of so noble a river as the Thames; the wharfs and quays on its banks are despicable and inconvenient beyond conception, and it is utterly impossible that a worse use could have been made of so beneficial as well as ornamental a part of this city', especially if the comparison was made with Grosvenor Square, the largest square in Mayfair, built in 1725–31. From Chelsea to Blackwall on the north bank, and from Battersea to Greenwich on the south, 'there is not one convenient, well-regulated spot.. either for business or elegance in that whole extent; and what is more, one half of the buildings on the banks of the river are in ruins, and the whole lot utterly lost to the publick.' Ripley's Custom House, 'in point of grandeur, magnificence and convenience [was] the worst contrived heap of absurdity and inconvenience that could possibly be put together, in a place where room might have been found to display every advantage the nature of such a building indispensibly required.'[1] Gwynn proposed a grandiose replanning of the area between the bridge and the Tower, in which Billingsgate dock would be filled in, and all the properties south of Thames Street levelled to make an enormous quay bordered by large buildings, rather like contemporary Bordeaux. This was impossible in the 1760s, though something like it would be seriously proposed by George Dance, the City's Surveyor, as part of the discussions in 1796 about relieving the congestion of the port area below the bridge. This also did not bear fruit, and the first London Docks were built downstream of the City instead.



Figure 159 'The imports of Great Britain from France', a satirical print by L P Boitard, published by John Bowles, 1757 (Yale Center for British Art, Paul Mellon Collection, B1977.14.15894). In the centre, a dark-skinned man with a turban and a small boy point to the excessive fashions of some visitors. The scene is Custom House Wharf, where the boat from France has just arrived

[1] Gwynn 1766, 1–8.

The most public part of the City waterfront, and the most spacious quay, was indeed that in front of the Custom House. Here, according to a satirical anti-French print of 1757, many foreigners were to be seen (Figure 159). Custom House Wharf may have been the prime point of entry for visitors from abroad. This picture also presents the idea that an international port was a spectacle; the waterfront of London, in this area, was a tourist attraction.

All buildings on the Bridge were removed between 1757 and 1761.[2] A new arch was built in the middle by 1759, and the Bridge widened and embellished by George Dance the elder, Clerk of Works to the City of London. The effect of the new arch was to increase the flow of water, which undermined all the starlings; in emergency measures, rubble from the recently removed gates at Aldgate, Cripplegate and Ludgate, which had been piled up in Moorfields, was dumped around the starlings of the arch. Every time low tide was reached, the force of the river against the restriction of the stone bridge was still evident, and that lasted until the Bridge was replaced in 1824–34. The west end of St Magnus' church was modified to form a pathway on the downstream side in 1763; the westernmost bay of both north and south aisles was removed, their end walls moved to the east, and perhaps some kind of modification made to the arches of the tower to improve access. Now the bridge was modified, but the medieval structure remained beneath its arches (Figure 160).



Figure 160 St Magnus and the two phases of London Bridge, by E W Cooke in 1831 (Yale Center for British Art, Paul Mellon Collection, B1977.14.15437). The projecting cutwaters and the ribs within the arch are parts of the medieval bridge, reused; the upper parts are by Dance

The effect of the new bridge would have been great. Gone were the tall houses along both sides which had hidden the view up and down the river. Now all was open, encouraging walks along the bridge. It had pedestrian pavements on both sides, and perhaps the downstream side was emphasised, overlooking the Pool. Though there were sidewalks and refuges with individual lanterns on both sides, the sidewalk on the downstream side seems to have been slightly wider.[3] This may have been intentional.

The upstream range at Billingsgate was also improved. In 1778 the Court of Common Council heard a report from the City surveyor George Dance junior 'for supporting the Buildings over the Piazzas at Billingsgate with Iron, instead of the present wooden columns'. This was agreed.[4] Views of 1808 and 1811 show the alteration, presumably of about 1780 (Figure 161, Figure 162).

Further, Dance built a 'Billingsgate Market House' in 1798.[5] This included a new 'Platform', that is an

[2] Home 1931, 266–306; Watson *et al.* 2000, 158–62; Gerhold 2019, 99–101.

[3] See drawing by J C Buckler in 1827, LMA, London Picture Archive 24068.

[4] LMA, COL/CC/01/01/065, Journal 67, f.153.

[5] Colvin 1995, 288–91.



Figure 161 Billingsgate by A C Pugin and T Rowlandson, in Ackermann 1808, i, pl opp p63 (Yale Center for British Art, Paul Mellon Collection B1977.14.15320). For the building on the west side of the dock (right), compare the earlier Figure 20



Figure 162 Billingsgate dock in 1814, showing the Market House by Dance (the one-storey building on the left) ; print by W B Cooke after Samuel Owen (Yale Center for British Art, Paul Mellon Collection, B1977.14.15316)

extension of the wharf into the river.[6] This Market House was an open shed of large area built in the new space at the riverwards end of the west range of the dock. It can be seen in the background in Figure 161, and in views from the river in 1814 and 1824 (Figure 162).[7]

Billingsgate was London's market for fish; but also the market place for coal, which came by ship from Newcastle. Coal was connected with Billingsgate from at least the 1440s, as shown by the appointment of a sea-coal meter or measuring official. But as there were never any designated places for storing or heaping coal at Billingsgate, this official was presumably concerned with paperwork (or its medieval equivalent) like his successors. In the 17th century a group of middlemen arose to act as brokers between the shippers and buyers (coal merchants). In 1638–9 the Corporation ordered that details of the ships should be entered at their office at Billingsgate before coal could be sold; a small office is shown on the plan of Billingsgate by John Olley in 1697 (Figure 19).[8]

In 1680–1 imports of coal to London were over ten times what they had been in 1591.[9] By the end of the 17th century the annual consumption of coal in the Thames valley, by estimation, was 455,000 tons. By this time the normal practice was for ships to lie in the Pool (which could be as far downstream as Rotherhithe). The coal was unloaded into lighters which took it to the wharves and stairs, as shown in a trade card of Philip Fruchard, coal merchant in All Hallows Lane immediately west of the study sites (Figure 163). Thus it seems that although coal was one of the most bulky of essential imports into London, there were never any dedicated coal wharves in the central part of the Thames from 1666 up to 1800; that is, places for large heaps of coal rather like the later coaling stations for the British fleet in the colonies. Even so, the tonnage of coal imported into London was 677,000 tons in 1750, and in 1791, it is said 200 ships from Newcastle arrived simultaneously into the port.[10] This is difficult to imagine, and the unloading of them must have been long.

There is archaeological evidence for a boat like the one shown in Figure 163. In 1969 part of a clinker-built river

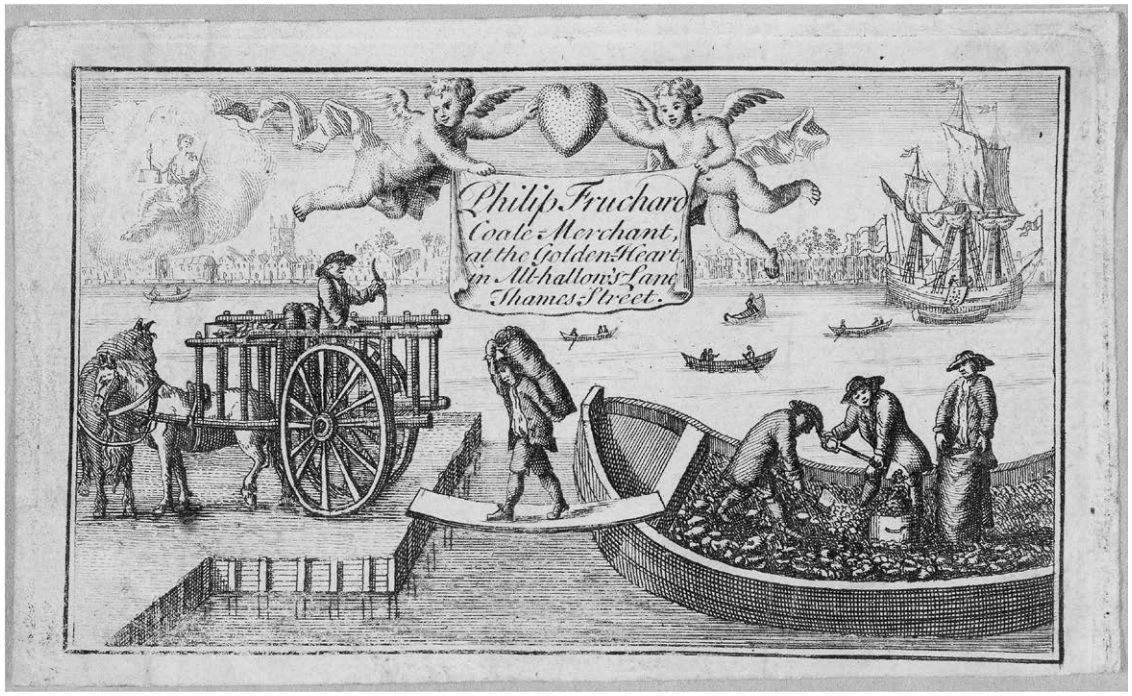


Figure 163 Trade card of Philip Fruchard, coal merchant in All Hallows Lane, Thames Street, between 1720 and 1760 (BM, Heal 44.15). Behind, a collier is being unloaded. This is an artistic licence, as a ship of this size could not have got through London Bridge. The scene is set above the Bridge, as shown by the tower of St Mary Overie (Southwark Cathedral) faintly in the left background

[6] LMA, COL/CC/01/01/076, Journal 78, f.140r, v.
[7] Also LMA, London Picture Archive 1205, of 1824. Stroud 1971, 149; pl 49a is an elevation of the office and new west stairs down to the foreshore.
[8] Smith 1961, 6, 20.
[9] Brimblecombe 1987, 34, table 2.2, based on the research of J U Nef.
[10] Barnett 1998, 137.



Figure 164 The interior of the Coal Exchange in 1808 by A C Pugin and T Rowlandson (LMA, London Picture Archive 1386). This was the predecessor of the celebrated 1849 building

vessel was found at Blackfriars; it had sunk about 1670 and was carrying a load of bricks, but small pieces of coal at one end of the vessel suggested it had previously been used to offload coal from larger ships.[11]

A market for coal traders was conducted on the space at the head of Billingsgate dock, the Romeland or Roomland; it is mentioned in 1681, but was by then no doubt ancient. Here also, as shown in the engraving of 1736 (Figure 20) many other activities jostled for space. In 1769 a group of 35 coal factors established an Exchange building by acquiring two plots on the north side of Thames Street, opposite the Romeland.[12] The architect of this building, which was finished by 1771, is unknown; its main feature was an elegant toplit hall surrounded by columns (Figure 164).[13] This building was replaced in 1849, and the institution of the Exchange survived until the Second World War. The equally fine building of 1849, with its three-tier structure of glass and iron 'the London parallel to the Bibliothèque Ste Geneviève in Paris', was demolished in 1962, to the outrage of those who knew architecture,[14] for the widening of Thames Street which was part of the post-War planning (in other words of the early 1950s).

The supply of coal from Newcastle had at least two overall consequences for London's townscape. First, after 1600, the import of coal removed a great need for woodland round the capital, so more land was available for cultivation and building; this may have assisted the lateral growth of London, where the houses were generally a storey or two lower than those in Paris. Second, the availability of coal meant that bricks could be made in their millions, and London could grow explosively. The colossal imports of coal into the port (or its downstream facilities) fuelled London's growth in both literal and indirect ways. [15]

Upstream of the Bridge 1750 to 1800

Upstream of London Bridge, the river sometimes looked like a lagoon; even after the medieval bridge was

[11] Blackfriars ship 2: Marsden 1971; 1996, 145–59.
[12] For the street elevation and other buildings on the north side of Thames Street in 1794, LMA, London Picture Archive 1394.
[13] Smith 1961, 79–81, 86–6. Plans of the exchange in 1804, in the 'City of London Record Office' (CLRO, now merged with LMA), are reproduced by Smith opp p131.
[14] 'One of London's most serious and futile recent losses' (Pevsner 1968, 15; also Pevsner 1976, 206). The cast-iron structure of the building could have been dismantled and re-erected elsewhere.
[15] Both these points are made by Keene 2001, 22, 28.



Figure 165 Detail from painting by Antonio Canaletto, The Thames and St Paul's Cathedral on Lord Mayor's Day, 1747–8, Roudnice Lobkowicz Collection (image by Richard Mortel, Wikimedia Creative Commons Attribution 2.0)

replaced by a new one in 1823–31, only barges could get through. In this stretch of the river the Buck brothers show people fishing from boats with rods and nets in their panorama of 1749. But both banks contained warehouses and industrial buildings. Two of the largest on the north bank are given here as examples.

A panorama of the north bank is provided by the painting by Antonio Canaletto of the procession on the river during the Lord Mayor's Day parade, just before 1750 (Figure 165); one building of note is shown here and in several other depictions of the riverside in the decades which followed. In Canaletto's view, a large building apparently of ten storeys is shown at Bull Wharf, immediately east of Queenhithe, on the right-hand side of the painting.

The Canaletto view should be compared with a drawing by Robert Barker from the roof of the Albion Mills at the south end of Blackfriars Bridge in 1792, which may include some fiction (Figure 166).[16]

Barker's view shows the same large building at Bull Wharf, next to Queenhithe; and that it was by then a complex of two north–south ranges, joined at the waterside by a lower one; this is seen in more detail in a painting of the 1820s by Thomas Miles Richardson (1784–1848) (Figure 167). On the river side was a bay window which can be seen but with different detail in the other representations; above it in Richardson's painting, with the same shape, was apparently an open balcony. The building survived a long time for one in Thames Street: it is shown in photographs of about 1870 and was only demolished about 1905.[17] The large complex comprised several high ranges around Bull Wharf Lane which ran from Thames Street down its middle. It must have been a major financial venture; it may have been part of a rebuilding of the site in 1747 or shortly before.[18]

Another industrial complex of note was the large brewery west of Swan Lane, immediately above the bridge. There had been brewers in this part of Thames Street from at least the 15th century, and the connection continued after the Fire. A large brewery on this site was run by Calvert and Company from the 1740s; it may have spread over part of the Steelyard, and in 1893 over the demolished site of All Hallows the Great church.[19] The brewery was amongst the first to use steam power, in 1785; generally, London brewers were amongst the earliest and largest users of steam.[20] In 1803 Malcolm unhelpfully wrote 'Calvert's great brewhouse is another instance of opulence, industry, and gain; but indescribable.'[21] Details of the basements of the complex were recorded in 2005–7.[22] The brewery, which covered more than two acres, had one unusual

[16] Published with notes by Hyde and Jackson 1988.

[17] Davies 2022, 80.
[18] Gerhold 2016, 212.
[19] Ellis 1945.
[20] Daunton 1995, 324.
[21] Malcolm 1803, i, 50.
[22] Fowler and Mackinder 2014, 43–7.



Figure 166 Detail from a preparatory drawing for a view by Robert Barker, taken from the roof of Albion Mills, showing the waterfront west of Queenhithe, 1792 (LMA, London Picture Archive 27651). A high building occupies Bull Wharf on the downstream side of Queenhithe, next to the boat with sails on the right. This and the building on the corresponding west corner of Queenhithe are shown in other views (eg Figure 167), but otherwise the waterfront west of Queenhithe cannot be easily related to maps of the time. The row of trees south of St Paul's is also a suspect detail



Figure 167 Detail of The City from Bankside by Thomas Miles Richardson, 1820s (Museum of London 95.185; © Museum of London). The Bull Wharf complex is on the right

detail, a long terrace with a pergola or canopy on the riverside, which is seen in several views (Figure 168).[23] Clearly, in the years around 1790, this stretch of the Thames was regarded as a spectacle worthy of extended watching from buildings on the north bank.

These are some of the buildings in this stretch of Thames Street from London Bridge westwards to Blackfriars. By the time of Horwood's map in 1813 the reclaimed land

[23] For a view along this terrace into the setting sun in 1810, LMA, London Picture Archive 6775.

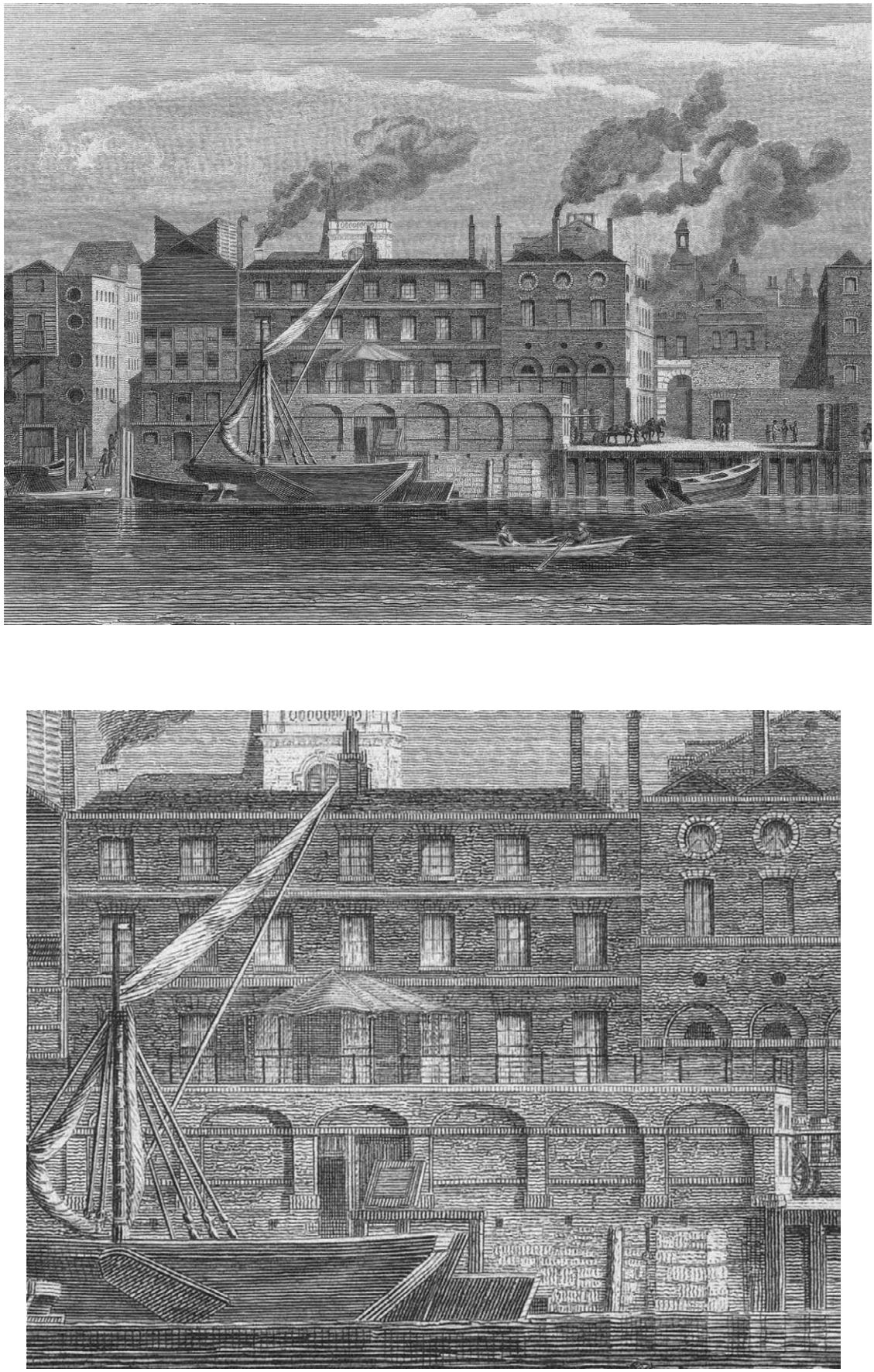


Figure 168 Calvert's brewery in Upper Thames Street from the river, by B Howlett after J C Schnebbelie, c 1790 (Yale Center for British Art, Paul Mellon Collection, B1977.14.16902b). The riverside terrace is indicated by the awning, detailed below

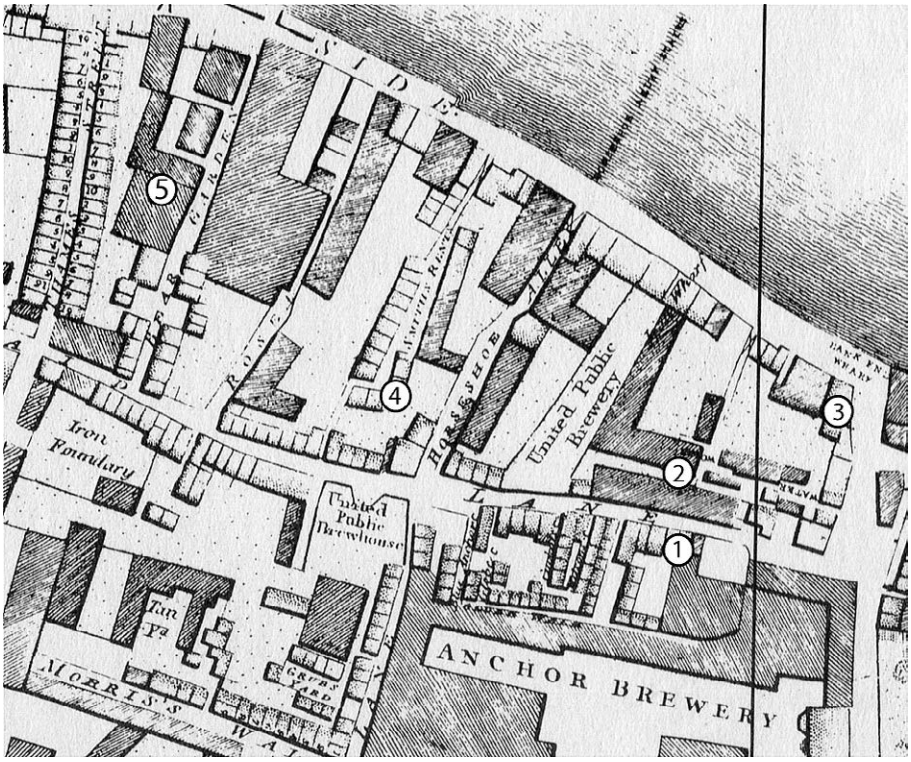


Figure 169 Extract from Horwood's map of 1813 (Laxton 1985), showing the north part of the Anchor Brewery, and lanes around it.

Key: 1, site of house of Mrs Thrale; 2, site of garden called Palmira; 3, surviving Anchor pub of late 18th century; 4, line of Southwark Bridge Road for approach to Southwark Bridge, 1819, which follows Smith's Rents; 5, glass houses on the site of the Hope theatre (Mackinder *et al.* 2013)

south of the street had crystallised into an array of high brick buildings on the primordial medieval property boundaries, still penetrated by the system of medieval alleys. They comprised wharves and warehouses with names (especially towards the western end) revealing their specialities: timber, copper and iron. Many of these large complexes fronted onto Thames Street, though they were still interspersed with small premises, no doubt of support trades, along the actual street frontage. This district would survive until World War II.

By 1800 the south bank above the bridge was densely occupied by large industrial premises, especially breweries, and timber yards; with occasional small streets of houses and quadrangles of almshouses. London did not participate much in the national Industrial Revolution, but there were fundamental changes in the brewing industry a generation before that, from the 1720s.[24] This is shown by the development of the Anchor Brewery on the east side of the present Southwark Bridge Road, the approach to Southwark Bridge which dates from 1814–19. A brewhouse had been on or near the site since 1616; there is evidence that it was bought by Josiah Child, who supplied the navy with beer, in 1666.[25] The brewhouse was extended in the 1720s and acquired by the Thrale family in the middle of the century. Its value at the death of Henry Thrale in 1781 prompted Samuel Johnson's description of it as 'the potentiality of wealth beyond the dreams of avarice'. It was then sold, making the widow Mrs Thrale a rich woman. A plan of the premises was made in 1792 by George Gwilt, presumably for the new owners Barclays.[26] The brewery was badly damaged by fire in 1832 and totally rebuilt; it was then perhaps the largest single place of manufacture in London, and for this was visited by foreigners.[27]

Gwilt's plan of 1792 shows a garden or open space lined with trees, bordering the river, called Palmira. The space was formerly houses, but was bought and then cleared by Henry Thrale, presumably in the 1770s, to create an open space and view in front of his house, which lay against the brewery on the south side of the street. Its name, according to Mrs Thrale, was suggested by her mother who saw it as 'a black heap of rubbish' and joked that it resembled the ruins of Palmyra.[28] This space was again built over by the time of Horwood's map of 1813 (Figure 169). This shows the local setting of the surviving Anchor pub on Bankside (no.3).

In the zone opposite the City, one significant building from the end of the period had a very brief life: Albion Mill or Mills, on the south bank immediately east of Blackfriars Bridge (which fully opened in 1769) (Figure

[24] Mathias 1959, 11 and *passim*.
[25] Rendle and Norman 1888, 64–5.
[26] SoL 22, 78–80; the Gwilt plan is pl 61. The plan has not been traced, and the photograph of it in SoL is too poor to be used for reconstruction. The clearest copy is in Mathias 1959, pl 2; at least there one can see the garden called Palmira (see next paragraph). The plan of the brewery is detailed and nothing like the buildings shown by Horwood in 1813.
[27] Timbs 1867, 60–1.
[28] SoL 22, 78, note c. Robert Wood's *Ruins of Palmyra*, with numerous engravings, had appeared in 1753.



Figure 170 Albion Mill or Mills from the river about 1790 by T Prattent after an unknown artist (Yale Center for British Art, Paul Mellon Collection, B1977.14.14868). The mill was presumably on the waterfront so that barges could be used, as shown here

170); it has figured in our narrative as a good viewing platform to survey the river and especially the north bank. The mill was built in 1783–6 to grind flour on a large scale by means of Watt's steam engines; it was the first mill to be designed from the start to be powered by steam. The building was designed by Samuel Wyatt (known for work on many country houses, and private and public buildings in London, most notably Trinity House, Tower Hill),[29] and a young John Rennie designed and fitted up the internal machinery. Two engines were principally for grinding, and all other mechanical needs were met by power: hoisting and lowering, loading and unloading barges, fanning and sifting. It was one of the greatest mechanical wonders of its time, and one modern scholar has called it 'outstandingly the most advanced industrial building of its day'.[30] While attracting many visitors for its modernity, the mill also caused great resentment among London bakers. In March 1791 the whole building was destroyed by fire, suspected as arson (Figure 171).[31] Its site now lies under the railway tracks into Blackfriars Station as they leave the south bank. Albion Mill was a new industrial site on the Southwark bank which might have had potential, but was seen by some as too modern. Inevitably, widespread adoption of steam engines in buildings along the riverside and elsewhere in London would follow in the next decades.[32]

In sum, around 1800, from Westminster Bridge to Rotherhithe, the south bank or the streets immediately behind it housed timber yards, coal wharves, breweries, barge builders, a turpentine factory, places for cooperage and mills. It has been suggested that the concentration of industries along the south bank of the Thames was because the land was cheap and the supply of water which some of them would need was available. More significantly, probably, many of these industries required the river to transport heavy materials. Whatever the case, South London had some distinct characteristics by the 19th century, and possibly before.[33] Chimneys became as frequent in the townscape as the spires in the City. In the 1840s George Dodd wrote that 'Southwark is distinguishable at a distance for its numerous tall chimneys and the shrouds of smoke emitted by them, as London is for its thickly-congregated church-spires.'[34]

[29] On Wyatt's career, Colvin 1995, 1124–8.
[30] Skempton 1971, 53.
[31] Wheatley and Cunningham 1891, i, 18–19.
[32] Eg in the factories concerned with brewing, snuff, paint and glass, and widely by timber merchants: Barnett 1998, 48, 49, 90, 103, 104, 136.
[33] Schwarz 1992, 31–3.
[34] Dodd 1843, 17; quoted in Barnett 1998, 38.



Figure 171 The destruction of the Albion Mill by fire in March 1791, by J W Edy, 1791 (Yale Center for British Art, Paul Mellon Collection, B1977.14.18786). The blackened ruins were a feature of the waterfront for at least a decade, and it is thought they suggested the image of 'dark satanic mills' to William Blake, who lived nearby in Lambeth

The development of both banks of the river upstream of the bridge after 1750 was however subtly different from that of the stretches downstream. The City side above the bridge contained livery company halls which were on their medieval sites. And on both sides there were domestic touches at the water's edge, which were absent from the quays downstream of the bridge.

The growth of large-scale warehousing in the City from 1730 to 1800

From the middle of the 18th century, London's prosperity as a port took a significant step forward. A crucial moment seems to have been the end of the Seven Years War in 1763, when Britain acquired Canada, the Floridas and additional Caribbean islands. In 1765 the East India Company was granted the revenues of the province of Bengal in India. References to a world-wide British empire begin in the 1740s, but are common after 1763.[35] One economic historian places the 'great leap forward' in the years immediately after cessation of hostilities in another war in 1748, stressing an increase in re-exports in the third quarter of the century.[36] Some historians argue that the the thirteen American colonies were responsible for most of the growth in British exports throughout the 18th century;[37] others, that European markets absorbed much of the increase in exports during an economic boom between 1783 and 1802.[38]

Two London matters are described here: a significant change in land use on three of the four excavation sites, from mixtures of small-scale housing and other buildings to large warehouses, with access both to the river and Thames Street; and a further new development affecting the City's topography, much larger complexes of warehouses of the East India Company in the second half of the 18th century, planned on a gigantic scale around courtyards. These were at a distance from the waterfront, and had to be totally serviced by wagons, not boats. The Company's goods from the east were landed at Blackwall and brought along Commercial Road to the City warehouses in armed processions.

On the study sites, the buildings changed. Rocque's map of 1747 is not detailed enough to show individual buildings in the waterfront lanes, but the time of Horwood's map in 1813 (surveyed in 1791–6) (Figure 172, Figure 173), there had been the same type of development on all four sites: they still had houses

[35] Marshall 1998a, 7–8. The year 1763 as a watershed is argued by Harlow 1952; but criticised in Cain and Hopkins 2016, 75.
[36] Davis 1962, repr in Minchinton 1969, 113.
[37] Crouzet 2006.
[38] O'Brien and Engerman 1991, 186.

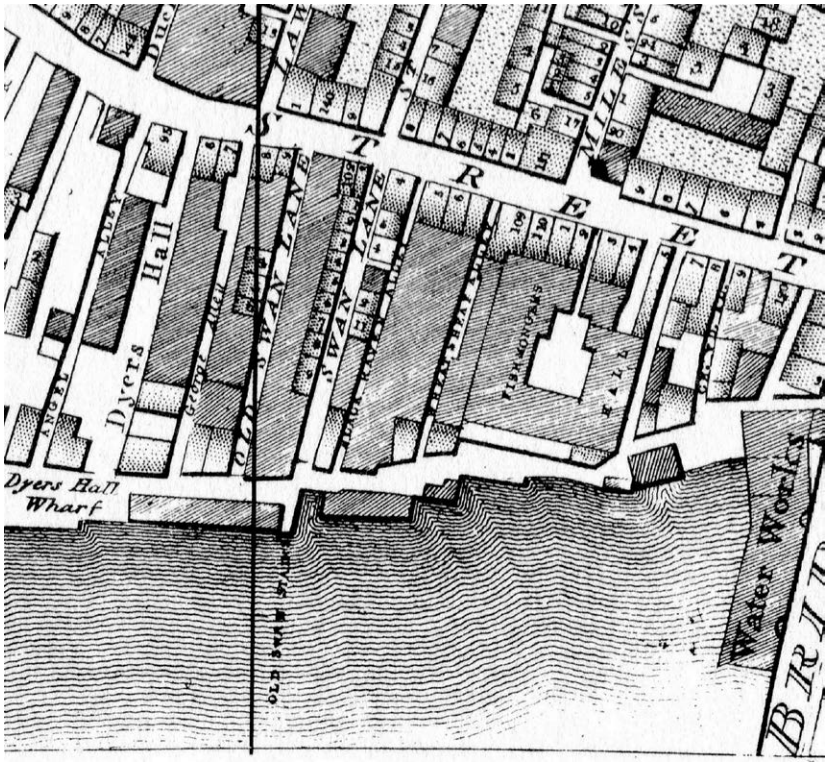


Figure 172 Fishmongers' Hall and the properties west of it, on Horwood's map of 1813 (Laxton 1985). The site of Darvoll's houses in Black Raven Alley is now a large building, probably one or more warehouses (below the letter R)

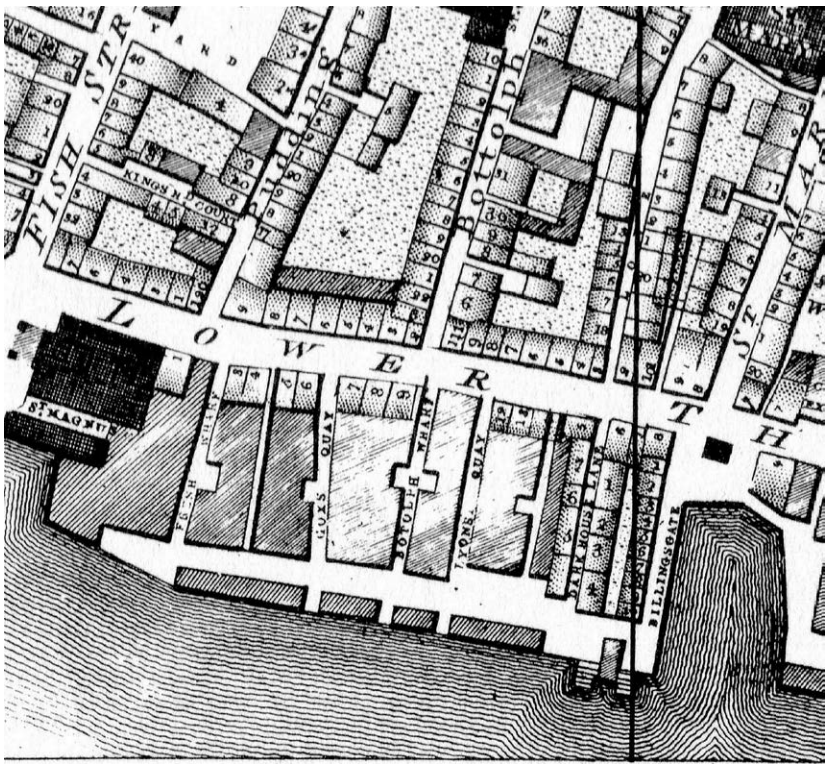


Figure 173 Properties south of Thames Street between St Magnus and Billingsgate, on Horwood's map of 1813 (Laxton 1985). This also shows the site of the Coal Exchange across the street from Billingsgate, its former location. The original survey was of 1791–6, so it does not show Dance's new Market House of 1798 at Billingsgate

(no doubt mostly containing shops) in a strip along Thames Street to the north, but behind was almost solid warehousing. Greaves's warehouses on Botolph Wharf were a development of 1732, and the skyscraper at Bull Wharf perhaps of the 1740s. In the stretch from Billingsgate downstream to Custom House, by 1800, the Legal Quays were largely covered with warehouses, but still confined by medieval property boundaries; in some cases the wharves still had their medieval names.[39]

There was an intensification of provision of warehousing on central waterfront sites from the

[39] An anonymous map of these wharves around 1800 in LMA is published by Harding 2021, fig 3.

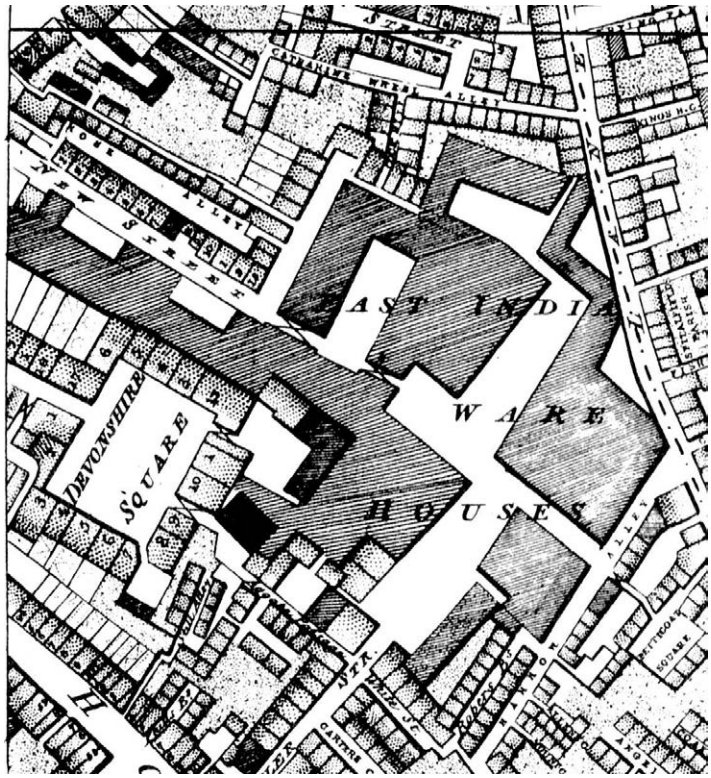


Figure 174 The East India Warehouses (now known as Cutler Street Warehouses) in their original form as surveyed by Horwood in 1813 (Laxton 1985). All the back part on the north side was demolished in 1978. Adjacent is Devonshire Square, centre of the merchants trading with Aleppo (Davis 1967b)

1730s (perhaps Greaves's rebuilding at Botolph Wharf was in the vanguard). This was developed 40 years later by a new form of buildings for trade in London: whole complexes of specialist warehouses for imports and for commodities being re-exported; the latter needed to be stored while deals and arrangements were made. Two large-scale warehouse developments date from 1769 and the years after. The earliest part of the partially-surviving warehouse complex of the East India Company at Cutler Street, now Cutlers' Gardens, is of 1769–71.[40] The complex was on the edge of the City towards the north-east, outside Bishopsgate; even though it was suburban, the large area was covered with alleys and their housing, which were sacrificed (Figure 174). The new development was impressive in scale: according to Malcolm in 1803, 'the great height of the buildings, the number of storeys, multitudes of windows, and the curious cranes for hoisting the goods, all create surprise and wonder.'[41] Suitable buildings for the empire had arrived. After the Port of London Authority stopped using them, the warehouses were partly demolished and partly incorporated in a new development of 1978–82, overall one of the greatest conservation failures of the 1970s.[42]

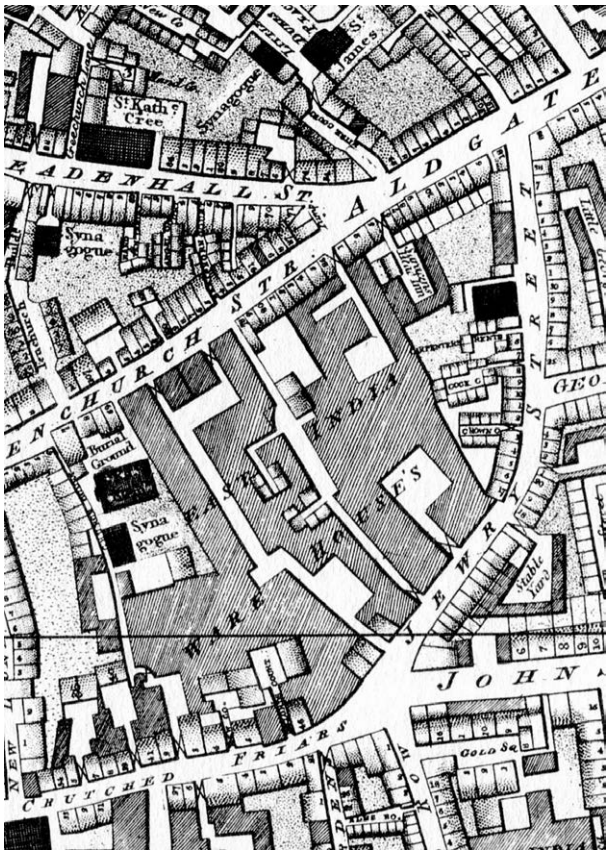


Figure 175 The East India Warehouses in Jewry Street and Crutched Friars, as surveyed by Horwood, 1813 (Laxton 1985). Around them life continued at the small scale in many courts and alleys; in this extract are shown three Jewish synagogues, and a fourth, the Great Synagogue, lay off the map immediately to the north

[40] For the present site and its surviving parts, Bradley and Pevsner 1997, 476–8. Malcolm (1803, i, 355) dates the construction to 1776 (specifically 26 May, perhaps a ceremony).
[41] Malcolm 1803, i, 355.
[42] Described in Bradley and Pevsner 1997, 476–8: the demolished block of 1799 was a 'serious loss'. Further work by Quinlan Terry in 1984 was better.



Figure 176 The Prince Albert, 11 Cooper's Row, and Cooper's [sic] Bonded Vaults and Tea Warehouses by T H Shepherd, about 1840 (Yale Center for British Art, Paul Mellon Collection, B1986.29.478)

The second large-scale development was a similarly ambitious complex of warehouses erected by the East India Company between Fenchurch Street and Jewry Street, designed by the Surveyor to the Company Richard Jupp and built in 1796–9 (Figure 175).[43] Jupp also built other, smaller courtyards of East India Company warehouses on either side of Seething Lane and between Aldgate High Street and Haydon Square; the latter on the site of houses of the 1670s in Harrow Alley which were excavated in 1974, as noted above.[44] These warehouse complexes must have required the removal of many people and their homes.

The only parallel within Europe to these large complexes of warehouses which comes to mind is the complex of warehouses built on Granary Island, Gdańsk (Poland), which partly survive. They were much increased in number during the 17th century. They occupied an island facing the city, and it was forbidden to settle there or to light fires.[45]

The smaller courtyards of warehouses of the East India Company, for instance south of Crutched Friars,[46] complemented the larger Company premises in ways not yet researched. These were the parallels of the private warehouses at Botolph Wharf. Part of the street facade of one in Cooper's Row, just north of the Tower, is shown here around 1840 (Figure 176, right hand side). The coat of arms is of the East India Company (an escutcheon of the royal arms in place of the City's sword). In this case the windows of all three upper

[43] Colvin 1995, 566–7. For a view of one of the warehouse courtyards in 1806, LMA, London Picture Archive 1966 (where the location is called Crutched Friars). The site was excavated during redevelopment in 1982, and a brick ice-house recorded; although it may have preceded the warehouses, it could have been beneath the floor of one of the ranges (Schofield with Maloney 1998, 187, site RAG82). For one photograph of this excavation, and a general archaeological survey of the East India Company in London, Evans 1990.

[44] Thompson *et al.* 1984.

[45] Cieślak and Biernat 1995, 117.

[46] Foundations of one in Seething Lane of about 1800 have been excavated: Capon and Chittock 2021.

storeys appear to be filled in and false. Horwood's map shows the courtyard of warehouses behind.

Thus by 1800 there were a number of East India Company warehouse complexes, of different sizes, at locations in the eastern part of the City. They were all inland, away from the waterfront, though the imported merchandise stored in them came by sea. They were a necessary feature of London's growing imperial power in the second half of the 18th century. Having such a group of complexes at a distance away from the waterfront is not a feature of other European ports, and seems to be unique to London. The City section of the waterfront, apart from a token presence at Botolph Wharf, was not required by the Company under these new, far more ambitious arrangements.



Figure 177 Extract from Figure 27, showing the Sufferance Wharves in 1751 in the view by Thomas Bowles (BM 1880,1113.1657).Unfortunately the distinctive warehouse buildings in the foreground cannot be attributed to any particular Wharf

The Sufferance Wharves and other wharves nearby

All the East India Company warehouses were built in the eastern part of the City. For the size of London's imports, however, they were not enough. The riverfront continued to change its character into a warehousing district, and the most striking area of this development during the 18th century was the Southwark bank.

The Sufferance Wharves to the south and east of the City, that is along the Southwark waterfront and to a lesser extent on the north side east of the Tower, were established or formalised in 1786; but there is evidence that wharves on the south bank with this name had been in existence since the opening years of the 18th century, 75 years before. In Joseph Ashton's protracted Chancery suit against his former colleagues, during the depositions heard in 1711–12, there was one from James Empson, mariner of Hull; he had been driven by what he considered excessive charges on the north bank to the sufferance wharves on the south bank, which were expensive and inconvenient.[47] The previous use of the Southwark riverside for tide mills was being suppressed by the need for more wharves; this may have happened by the 1730s, a generation before 1786.[48] A simplified view of the Wharves from the east in 1751, an extract from Figure 29 above, is shown in Figure 177.

In 1796 there were sixteen such wharves on the south bank (east from London Bridge, starting at Chamberlain's Wharf) and five on the north bank around St Katharine's immediately east of the Tower.[49] They were surveyed by W Fellows in 1796 (Figure 178), but he only draws the outlines of the extent of each wharf, and not individual warehouse buildings. The capacity of each wharf is given in a table published with the parliamentary report of 1796 which is described later in this chapter (Table 11); each wharf would be a complex of buildings and yards of various sizes and dates, incorporating fragments of medieval and 16th- or17th-century buildings on the site.

By 1796 the Sufferance Wharves contained 3676 feet of frontage to the river, whereas the Legal Quays opposite had only 1464 feet towards the water.[50] Reconstructing the arrangement of the buildings inside one of these wharves has proved difficult. The area between St Olave's church and Mill Lane (Battle Bridge Stairs) can be compared on the three detailed maps of the area used here: Morgan in 1682 (Figure 133), Rocque in 1747 (Figure 179), which is showing the same

[47] Roseveare 1996, 104.
[48] Gerhold 2016, 153.
[49] Parliamentary Report 1796, 80, 188.
[50] Parliamentary Report 1796, xxv.

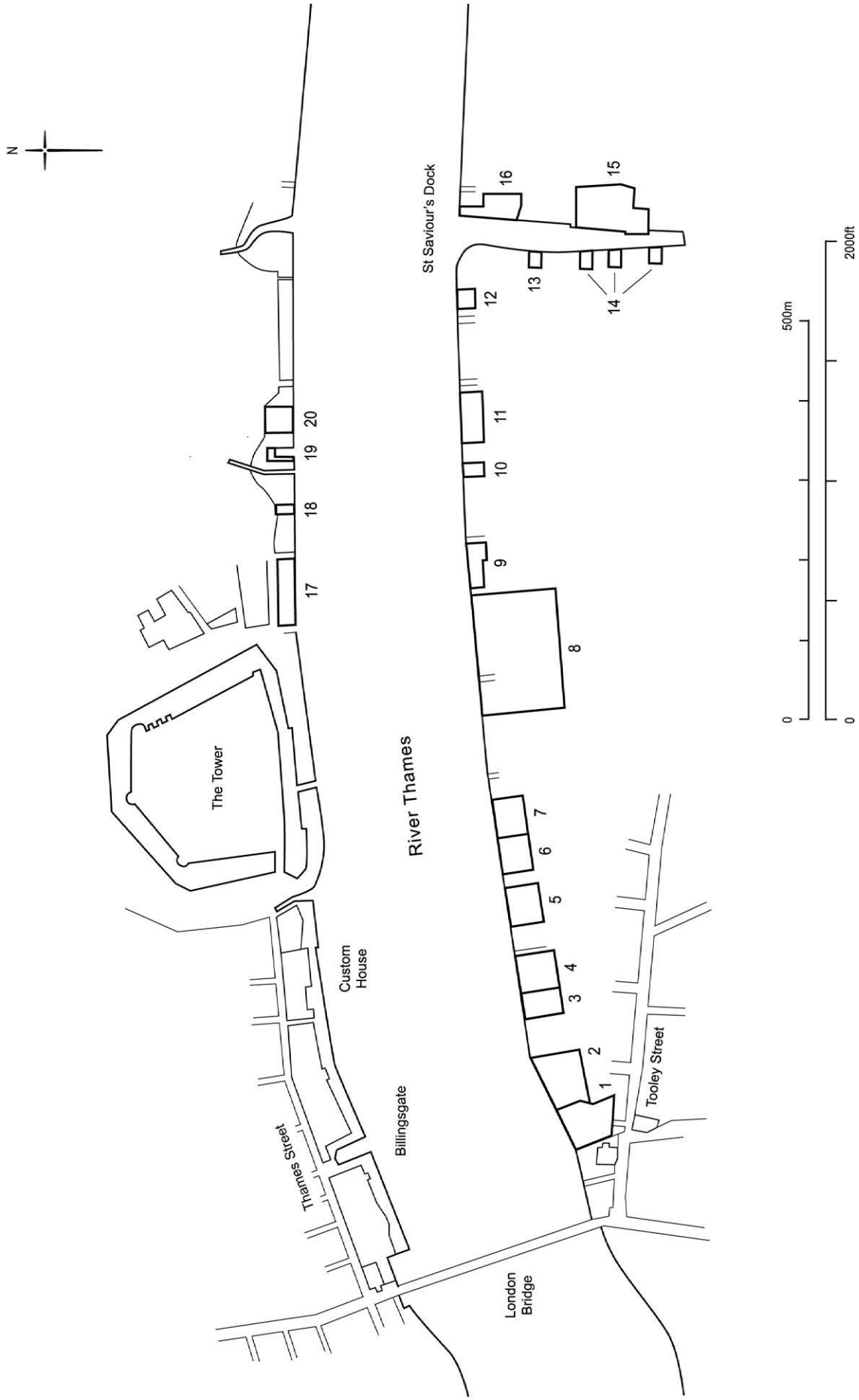


Figure 178 The Sufferance Wharves in 1796, from a survey by W Fellows (BL, Maps Crace XVIII.31; redrawn by Sue Cawood). For key to numbers, see Table 11. The scale is approximate

Number on map		Number of feet along the river	Number of tons the warehouses will contain	Number of tons the yards will contain	Number of hogsheads of sugar each Wharf can house
	S bank, E of London Bridge				
1	Chamberlain's Wharf	195	4500	400	3000
2	Cottons	250	4600	500	2000
3	Hays	118	16000	2000	3000
4	Beals	152	4000		1500
5	Griffiths	149	6000	600	3500
6	Symons	124	20000	10000	7000
7	Stantons	157	6000		2000
8	Davis Butt & Co	511	20000	22000	7000
9	Hartleys	194	4000	20000	2000
10	Pearsons	58ft 6in	2000	3400	1500
11	Hollands & Butlers	206	7000	3000	5000
12	Coles	65ft 6in	3500		3000
	In St Saviour's Dock				
13	Carringtons	34ft 1in	3500		3000
14	Hogarth's 3 wharves	121ft 5in	2500	6000	2000
15	Scotts	289ft 6in	4000	5500	2000
16	Merntons or Merringtons	265ft 10in	1450	2000	900
	N bank, St Katharine's				
17	Iron Gate	264ft 6in	8000		7000
18	St Katherine's	33ft 6in	300		300
19	Waltons	52ft 4in	3840		4000
20	Briants	95ft 8in	1000		1000
21	Downes	340	3800	400	1500

Table 11 Details of the Sufferance Wharves, 1796 (Parliamentary Report 1796)

area as the view in Figure 177, and Horwood in 1813 (Figure 180). All three show different configurations of buildings throughout the area, and only in a few cases is it possible to identify the boundaries of individual wharves as complexes.[51]

There is an illustration of Topping's Wharf, which stood between St Olave Tooley Street church and London Bridge (this wharf does not appear in some listings of the Sufferance Wharves, but was included in legislation of 1848). Buckler drew the elevations of the main building to Tooley Street and to the river in 1827 (Figure 181).[52] Topping's Wharf is the rectangular building immediately west of St Olave's church on Horwood's map. The short distance between the river bank and the street meant that this was an efficient form of warehouse not seen elsewhere, in which goods could be directly landed from lighters, put on carts and taken out into the street, all under cover. The buildings on this wharf were destroyed in the first of two widespread fires in the 19th century in the warehouses of Tooley Street, in August 1843; the fire started in these buildings and is sometimes called the Topping's Wharf fire. The elevation to Tooley Street, we suggest, provides a model for the warehouses at Botolph Wharf in the 1730s.[53]

There are no published archaeological details about the construction or appearance of any of the Sufferance

[51] Along with the rest of London immediately below the Bridge, the Wharves are shown on the Reinbeck Panorama of 1806–7, a unique large watercolour work which may have been a draft for a publication not fulfilled. It is now at the Museum of London: https://collections.museumoflondon.org.uk/online/object/431604.html.

[52] The elevations in Figure 156 are dated 1827 in the drawing now at LMA, but Buckler had produced estate maps of Southwark and Bermondsey properties for the owners Magdalen College Oxford in 1814, and the college's catalogue of his work includes what must be [though not seen by us] a version of these two elevations, there dated 1814 (Magdalen College Oxford MP/1/93). The catalogue entry for it notes 'A notice on the Thameside elevation says: constant Traders regularly load for Exeter Topsham Whitby Staiths &c Weymouth &c Chichester &c Hythe Dimchurch Rochester &c Edgars Hoy clears every Saturday.'

[53] The site of the Wharf was excavated in 1972, but only a little evidence of the 18th century recorded, and nothing of these buildings: Sheldon 1974.

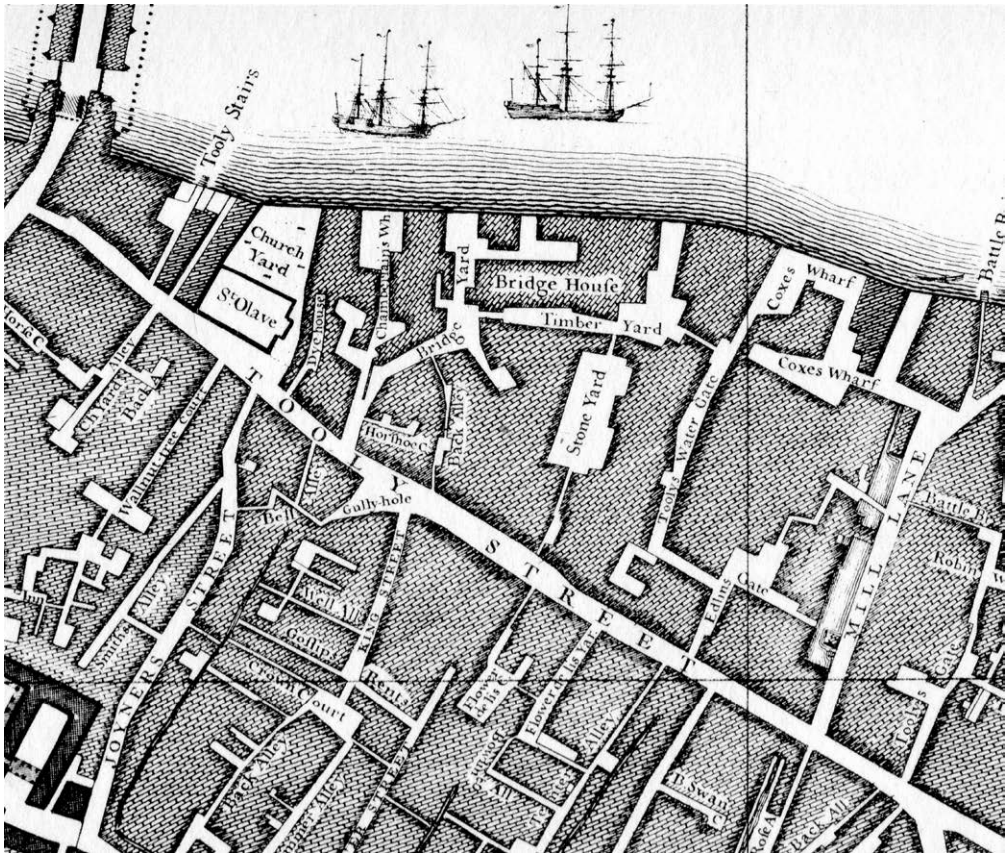


Figure 179 The Southwark bank north of Tooley Street on the map by Rocque, 1747 (Hyde 1982)

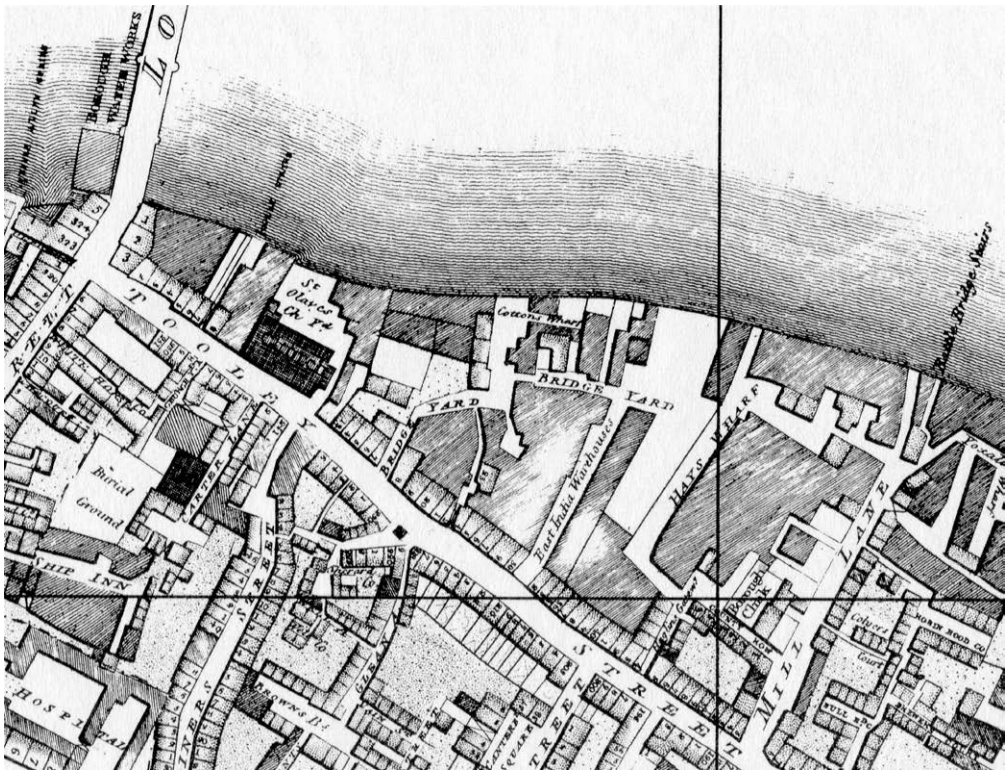


Figure 180 The Southwark bank north of Tooley Street on the map by Horwood, 1813 (Laxton 1985)

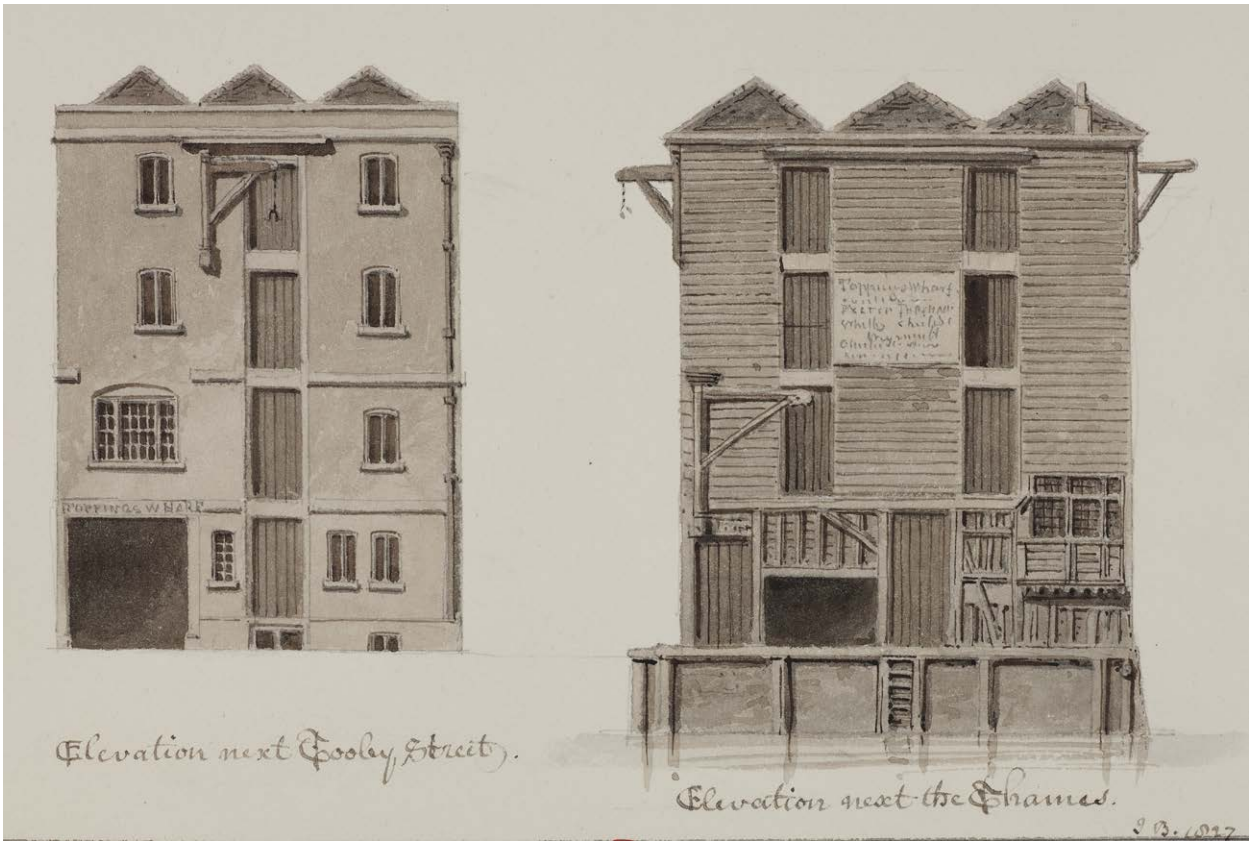


Figure 181 Elevations of Topping's Wharf, to Tooley Street and to the river, in 1827 by J C Buckler (LMA, London Picture Archive 24088). The street front was of brick, but the riverside was clothed in boards. This building was destroyed by fire in 1843

Wharves, though future interrogation of the records of recent excavations in the area between Tooley Street and the river may provide some.

Public buildings as celebrations of empire in the 18th and early 19th centuries

When did the nascent British Empire begin to be celebrated in or around London buildings? Wealth produced by financing slaving voyages embellished some prominent Londoners' houses from the 1670s, as will be described in the next chapter. More overtly, there are references to the City's view of itself and of foreign conquests, though not many, on public buildings and in public spaces through the 18th century. In 1709–12 Francis Bird sculpted the statue of Queen Anne (now replaced by a copy of 1886) outside the west end of St Paul's Cathedral, at the head of Ludgate Hill. One of the crouching attendant figures is a native American, representing all of north America. In around 1734 or in 1745, the pediment of the Great Hall of the Bank of England received a seated figure of Britannia by Robert Taylor or Henry Cheere, and in 1745 Taylor also completed the surviving pediment at Mansion House, which figures the City trampling on Envy, with the river-god Father Thames in one corner. Clearly the City acknowledged the river as the foundation of its wealth.

In 1788 the architecture of India made an entrance into the City, both figuratively and physically. George Dance the younger, the City Surveyor, rebuilt the entrance to Guildhall. He retained the 15th-century porch but placed it within a screen of arches which have details reminiscent of the fort at Agra, and 'the threefold divison of this facade, with the centre section rising higher then the other two, reflects the silouette of the gateway of the Taj Mahal.' Overall, it comprised 'a truly extraordinary adventure into stylistic symbolism.'[54] It still stands today in Guildhall Yard.

The way some of the leaders of the City of London regarded the world in the late 18th century is indicated by a view of East India House in Leadenhall Street of shortly after 1796–9 when the House was rebuilt by Richard Jupp (Figure 182). Monumental and uniform over a long distance, it faced surviving buildings from the pre-Fire, even medieval, city, since the Fire did not reach this point. This mixture of building dates going back several centuries along streets in the City of London would only be eradicated by the spread of bank buildings in the 19th century.

[54] Summerson 2003, 156.



Figure 182 East India House in Leadenhall Street, undated view by Thomas Malton junior (1748–1804) (Yale Center for British Art, Paul Mellon Colection, B2001.2.1001). The house on the right seems to be of immediately post-Fire date, probably in brick; facing both across the street are jettied pre-Fire buildings, with inserted sash windows

The triangular pediment high above Leadenhall Street was carved by John Bacon the Elder. A contemporary engraving (Figure 183) explains the figures as 'Commerce, represented by Mercury - attended by Navigation and followed by Tritons on Sea-horses; is introducing Asia to Britannia; at whose feet she pours out Her Treasures - the King is holding the Shield of Protection, over the head of Britannia, and of Liberty who is embraced by her - By the Side of His Majesty sits Order - attended by Religion and Justice - In the back ground is the City Barge &c - near to which stand Industry and Integrity - the Thames fills the Angle to the right hand, and the Ganges the angle towards the East.' The 'King' is George III in Roman costume.[55] The 'City Barge' is the City of London State Barge, shown simply towards the right.The reference to the Ganges must be one of the earliest in London's public sculpture to a specific Indian location.

One characteristic of London buildings of the East India Company is that in their warehouses, as in their head office, they thought big; constructions on a large, even vast scale.

Conclusions: the period 1750–1800

During the second half of the 18th century, there were developments of the London waterfront, mainly of London Bridge (rebuilt from 1769) and both banks downstream of it. From the east pavement of the bridge, the citizen and the visitor saw a forest of ships' masts which was constantly changing as ships came and went. These were concentrated below the bridge. By 1750, the wharves on both banks downstream of the bridge were choked and grossly inefficient, despite the addition of the Sufferance Wharves which seem to have been no solution, instead contributing to the chaos. This was the public face of the Port of London, and critical to the success of the widening British Empire; something had to be done, and was after 1796.

[55] Ward-Jackson 2003, 26–7, 241, xix (East India House).



Figure 183 Anonymous engraving of Bacon's sculpture in the pediment of East India house, Leadenhall Street, undated but *c.* 1800 (LMA, London Picture Archive 2319). The sculpture was executed in 1797–9

Between the larger complexes on the waterfront, the originally medieval properties were gradually built over with larger buildings, usually warehouses though there were also iron foundries and breweries in the section above the bridge. This process had begun in the 1730s, as exemplified by Greaves's redevelopment at Botolph Wharf. Commercial and civic motives ruled. But the framework of waterfront lanes largely remained to structure the space, even if some lanes became the entrances to larger complexes. People and families still lived here, as in the port areas of other major cities.

Away from the waterfront, the new quadrangles of high, multi-storey warehouses of the 1760s to 1790s (to be followed in size by the warehouses on the West India Docks a decade later) were imposing, but not embellished with architectural fancy or allusion to the empire. Their appearance was in the austere style then favoured along the streets of the polite city to the west. As the historical geographer J E Vance noted, 'London became the capital of a vast empire long before it gained much that was imperial in design'.[56] At the same time, in 1800, three large buildings in the City formed a line, at intervals, across its central ridge: from west to east, St Paul's Cathedral, Mansion House and East India House. They formed the central points of the City's projection of itself.

[56] Vance 1990, 232.

6 London and slavery, to 1800

Connections between the people studied here and slavery have already been made: the finding of cowrie shells on the Billingsgate excavation has been described in Chapter 3, and the merchant Richard Beckford with his interests in Jamaica in Chapter 4. This note briefly discusses the wider context.

London took part in the slavery trade from an early date. In 1552, 1558 and 1561 merchants were sending ships to Guinea; these voyages 'coincided with the beginning of the slave trade between West Africa and the West Indies promoted by syndicates of London merchants'.[1] John Hawkins attempted to break into the transatlantic trade in enslaved persons in the 1560s; he was supported by courtiers, city magnates, and Queen Elizabeth.[2] The Company of Adventurers of London Trading to the Parts of Africa (also called the Guinea Company) was granted a monopoly of trade with Guinea and Benin, that is the West African coast from Senegal to Nigeria, by King James I in 1618. Until the middle of the 17th century, the English were principally after gold, though the Company may have traded in enslaved people also. The introduction of sugar cultivation in Barbados in the early 1640s created a first, substantial demand for enslaved Africans within the empire.[3] The Guinea Company however declined and in 1672 was replaced by the Royal African Company, which traded mainly in enslaved persons. At first it had a profitable monopoly on slave trading (between 1680 and 1688 it sent 249 ships from London to Africa),[4] but an Act of 1698 ended the monopoly and after 1712 the trade became totally free. According to some historians, this stimulated a shift of its main centre from London to Bristol and other ports; Bristol cleared more slave ships than London in the 1730s. From the 1750s, Liverpool became the premier British slaving port; it cleared more ships than London for this for every decade remaining in the century.[5] But in 1755 there were still 147 men listed as slave traders in London;[6] and some have argued that the impression of London's unimportance in the trade in the 18th century is a myth. Half the members of a group of 23 London merchants active in the years 1735–85 traded in enslaved Africans.[7] There may have been a decline in London's involvement in financing slavery after the middle of the century, but a London ship with 300 enslaved people in the Congo river was still working in October 1807, shortly after the official banning of the trade.[8] London-based owners of plantations, along with other owners, were thereafter richly compensated for their losses.

Black people appear many times in London records. In 1598 four are recorded as Strangers in the parish of All Hallows Barking, Great Tower Street. By this time it was fashionable for propertied families to have black servants; Paul Banning, alderman, had three unnamed blackmoor servants in 1593.[9] Samuel Pepys owned at least three black servants at various times, and sold a black boy in 1680.[10] In 1690 the Middlesex Sessions were concerned with the case of Katherine Auker, a black enslaved person petitioning to be discharged from her master; she had been brought to England about six years before. A new dataset at London Metropolitan Archives, *Switching the Lens*, has found records of over 2600 people of colour in Anglican church registers from the City: in the period 1651–1700, for instance, there are records of 145 black people, mostly burials but also baptisms and marriages. Notices of runaway enslaved persons appeared in printed advertisements from the 1650s, and private sales of individuals were advertised in London newspapers from at least 1709.[11] Sales of enslaved Africans in London, mostly children, can be documented throughout the 18th century.[12] One recent estimate has suggested a fluctuating number of between 5,000 and 10,000 in London in the second half of the 18th century. In the 1770s it was thought that there were between 14,000 and 15,000 enslaved people living in England, and most of these would have been in London, where they lived in the eastern and riverside parishes and in the poor area around St Giles.[13] By this time however London's black community was organising itself.[14] There could have been, one might suggest, an archaeology of resistance to slavery in London: a late 18th-century or early 19th-century pipe embossed with a portrait of a kneeling enslaved person in chains has been found at Fulham.[15] One wonders

[1] Willan 1953, 26–8.
[2] Appleby 1998, 59–61; Richardson 1998.
[3] The archaeology of the process of acquiring slaves, transporting them across the Atlantic and presenting them for sale at least in Kingston, Jamaica, is summarised in Nelson 2016, 10–35.
[4] Davies 1974, 119. Pettigrew 2013 provides a history of the Company and lists the number of slave-trading voyages from London, Bristol and Liverpool in 1672–1752, 14, fig 3.
[5] Hair and Law 1998, 251–9; Richardson 1998, 446, table 20.2; for the other European ports concerned with slavery, Butel 1999, 188–93.
[6] Williams 1944, 32.
[7] Hancock 1995, 41.
[8] Rawley and Behrendt 2005, 190–208. Richardson (1998, 446, table 20.2) calculates that between 1699 and 1807 3,351 ships left London to engage in the slavery trade, with the largest annual numbers being between 1710 and 1729.
[9] Scouloudi 1987, 44. For black people in 16th- and 17th-century England, Fryer 1984, 9–12.
[10] Latham 1995, 197.
[11] Fryer 1984, 22–4; White 2013, 128–9.
[12] Fryer 1984, 62.
[13] George 1925, 140–2; Fryer 1984, 77; White 2013, 127–37.
[14] Fryer 1984, 71.
[15] Killock *et al.* 2020, fig 45.

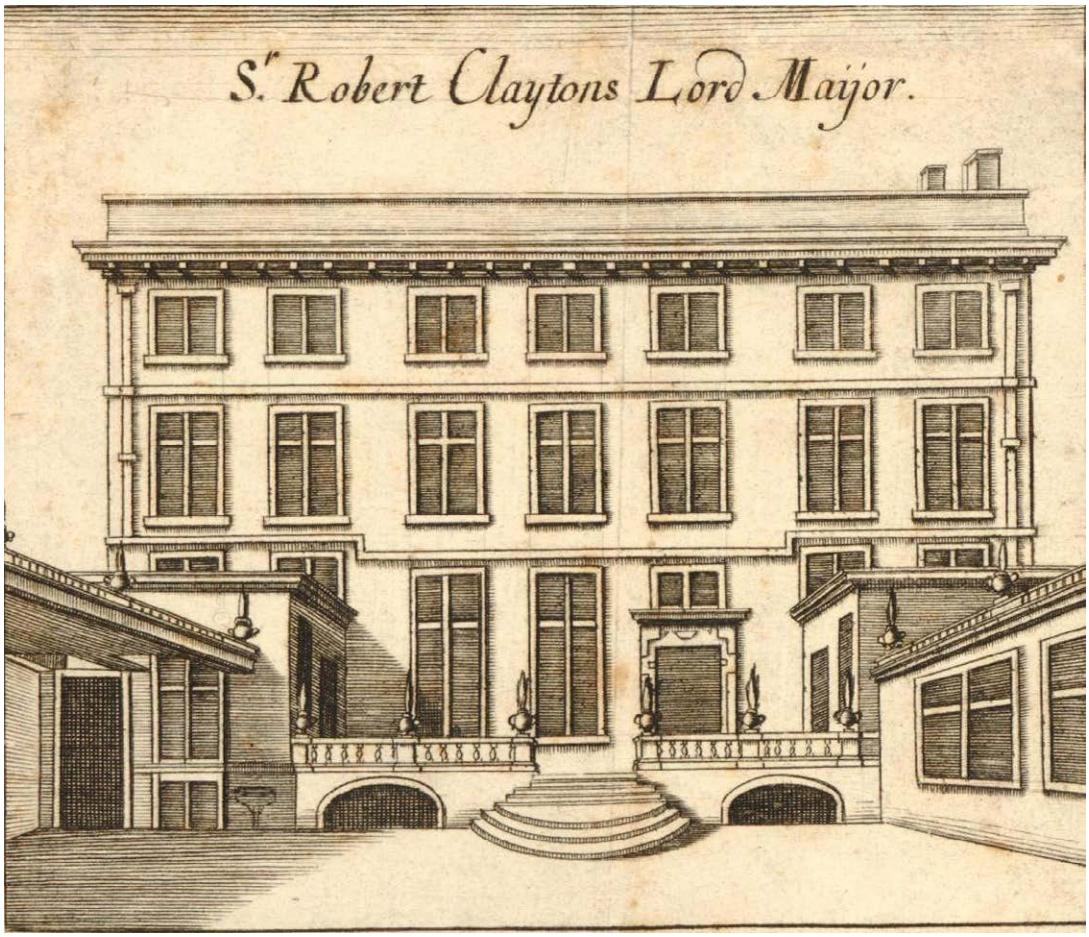


Figure 184 Sir Robert Clayton's house, Old Jewry, anonymous engraving of 1679 (BM 1880,1113.3565). This shows the forms of immediately post-Fire windows. The house was on the east side of Old Jewry, backing onto Grocers' Hall, so this is the front courtyard and the shadows coming from the north are an artistic addition

whether this kind of pipe was used by a black or a white person.

A study of 2007 has concluded that 'collective portraits of London and Liverpool slave and West India merchants await their historians'.[16] Here we collect a few notes. Some of the houses of rich men with interests in the slave trade have been recorded. One of the finest was the house in Old Jewry of Sir Robert Clayton, Lord Mayor in 1679–80 (Figure 184). This was visited when new in 1672 by John Evelyn, who was not impressed: 'the Cedar Dining roome is painted with the Historie of the Gyants War, incomparably by Mr Streeter [Robert Streeter, who did paintings at several London houses, and the ceiling canopy of the Sheldonian Theatre in Oxford which survives], but the figures are too neere the Eye.'[17] The house had a fine arched street entrance (Figure 185). It was Clayton's place of business, as a magistrate and scrivener (banker). Among his many interests Clayton was a member of the Court of Assistants of the Royal African Company, which is generally thought to have shipped more African slaves to the Americas than any other institution. While Clayton was still alive, a statue of him by Grinling Gibbons was erected at St Thomas's Hospital, which he had helped to establish, in 1701–2.[18] Other London buildings of a charitable intent set up by those who made fortunes from slavery in the early 18th century have recently changed their names: Sir John Cass School in Aldgate to The Aldgate School, and the Geffrye Almshouses in Kingsland to The Museum of the Home.

The house at Botolph Lane mentioned above was occupied in the 1670s by Samuel Beake, merchant, when a Chancery case shows him to have had an interest in a ship trading with Madagascar which contained 190 Africans.[19] Richard Beckford, the builder of the house in Great Tower Street noted above, 'had invested heavily

[16] Morgan 2007, 38–9.
[17] De Beer 1959, 578–9.

[18] On 11 June 2020, a joint statement from the Guy's and St Thomas' NHS Foundation Trust announced that Clayton's statue, along with that of Thomas Guy, would be removed from public view; it was screened off pending planning advice.
[19] Alcock and Galinou 2006, 73.

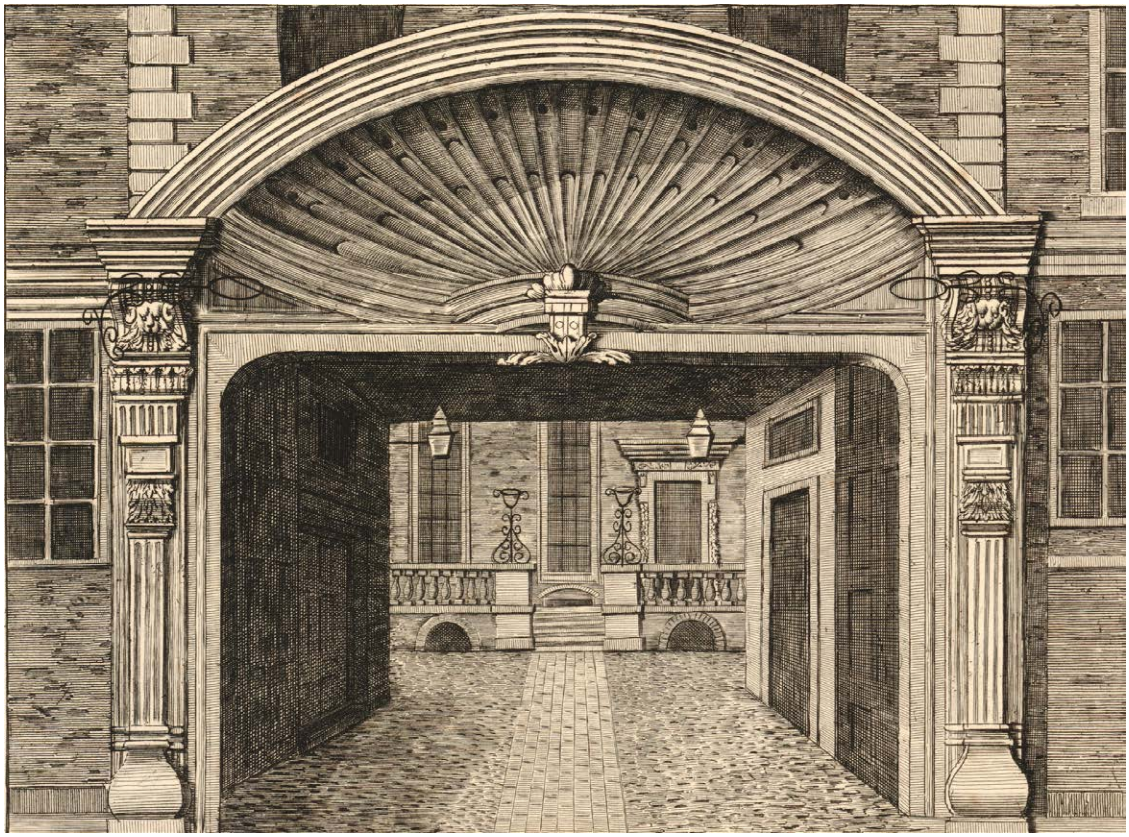


Figure 185 The entrance to Clayton's house, Old Jewry, by A Beugo in 1812 (BM, 1880,1113.3567). Lamps would hang from the iron hoops

in the island [Jamaica] before the Restoration and could boast both the capital and connections to develop a substantial Atlantic trade.'[20] His will of 1679 mentions ships with his merchandise en route from Jamaica, and his plantation there.[21] His inventory, transcribed here in Chapter 10, details investments in the Royal African Company. Other prominent men in the City owned plantations in the West Indies, or did business there (Table 12, which is only for the period 1656 to 1689). Only one of these, Thomas Frere, has an inventory in the City's records.[22]

The greatest of the Beckfords, in wealth and number of slaves, was William Beckford (1707–70), twice Lord Mayor; but he lived mostly in Soho Square (or at Fonthill (Wiltshire), where he is buried). Born in Jamaica, he was the leading landholder in the island, though he was absent for most of his life. One of his plantations was Drax Hall Great House which he acquired in 1762. This was investigated archaeologically in the early 1980s. The artefacts recovered were few, suggesting barely-furnished buildings reminiscent of frontier forts or trading posts; the wealth, it seemed, was concentrated back in England.[23]

Some City men, prominent in the livery companies and leaders of the civic community, had houses which reflected their wealth from many sources, among which investment in slavery was one. They seem to have believed in it. Richard Beckford had a plantation in Jamaica and invested in the Royal African Company, as shown in his inventory in 1679. Two generations later, 'A British Merchant' (probably Malachy Postlethwayt) wrote a 47-page booklet entitled *The African Trade, The Great Pillar and Support of the British Plantation Trade in America* (1745), in which he argued that the British empire was a superstructure of American commerce and naval power on an African foundation. Further, he asserted the slavery trade and plantations were more valuable than all the commerce associated with the East India Company:

> '..though the benefits of re-exportation of India Commodities, and the advantages of navigation arising therefrom, are considerable, yet are they not

[20] Gauci 2013 (a biography of William Beckford), 13.
[21] Woodhead 1965, 28.
[22] Alderman Sir Thomas Beckford, whose house at Billingsgate figures above, was according to Williams 'one of the first absentee proprietors, getting £2,000 per annum from his Jamaican property' (1964, 87); we have not been able to check this.
[23] Higman 1988, 99–100; Armstrong 1990, 26, 258.

Person	City office and Company	Lands or interests in West Indies
Richard Alie	Common Councillor Tower 1682–3, Draper	lands in Barbados
John Bawdon	Alderman Aldersgate 1687–8	estate in Barbados
Richard Beckford	Alderman Bread Street 1667, Clothworker (Master); inventory in Chapter 10	plantation in Jamaica
Thomas Buckler	Common Councillor Castle Baynard 1672–5, Haberdasher	lands in Jamaica
Francis Chaplin	Alderman Vintry 1668–80, Clothworker	lands in Jamaica
John Fish	Common Councillor Aldersgate Without 1680, Fletcher	several plantations in Jamaica
Thomas Frere	Common Councillor Tower 1660, Skinner	plantations in Barbados
John Hobby	Alderman Bishopsgate 1666, Draper	shipping venture of 6000 lb sugar in Barbados 1675
John Jurin	Common Councillor Cheap 1656–9, Dyer	estate in Barbados
John Kirkham	Common Councillor Farringdon Within 1669–82, Haberdasher	plantation in Barbados
Jacob Lucie	Alderman Dowgate 1683–5, Aldgate 1686, merchant	plantations in Barbados and Antigua; Deputy Governor of Royal African Company
Robert Richbell	Alderman Farringdon Within 1661, Skinner (mayor of Southampton 1662 and 1670)	land in Barbados
Benjamin Skutt	Common Councillor Bishopsgate Within 1682–3, Ironmonger	estate in Barbados, agent for Royal African Company
Henry Tooley	Common Councillor Bread Street, 1660, Haberdasher	estate in Barbados
Thomas Wardell	Alderman Cordwainer 1670, Merchant Taylor	234 acres in Barbados

Table 12 Prominent men in the City of London in the period 1656 to 1689 who owned land in the West Indies at the time of their death, from Woodhead 1965

> any way equal to those others we receive from the consequences of the Trade to Africa. A cargo rightly sorted for Africa, consists of about seven-eigths British manufactures and produce; and they return to us no inconsiderable profit; and that not only in gold, ivory, bees-wax, dying woods, gums etc (none of which we can do without) but Negroes, whom we have experienced to be of more value to this nation than any advantages that ever were, or ever can be presumed to arise from the East India Company, which exports our silver, and imports many things, which to be sure, we might well do without.'[24]

This is the context of the links with slavery identified in the documentary records for the Billingsgate site, and the finding in the excavation there of cowrie shells littered through the deposits of several buildings thought to be warehouses.

Merchants from several European countries bought and sold cowries, and by 1700 Amsterdam and London had become sources of supply for nations wanting cowries for the African markets. The East India Company imported many tons of the shells and held auctions in its London warehouses; there were also 'interlopers', private dealers outside the official system.[25] Cowries were an import significant enough to have their own rates for wharfage, that is transfer from ship to quay, either directly or by lighter, in 1674. They came in two bag sizes, a small bag about 1 cwt, and 'The Bag', evidently the standard measure, of 3 cwt.[26] This is a weight of 336 lb or 152 kilos, so the bag might have required a hoist or crane.

In 1722 the East India Company was storing bags of cowrie shells in its warehouse on Botolph Wharf since 53 of them were stolen. The location of this particular warehouse on the Wharf is unknown. The connections with slavery of people living and working on Botolph Wharf at this period are outlined above in Chapter 3. Robert Pallady, son of Robert Pallady, weaver of Botolph Wharf, made his will in 1690 on the eve of his departure for Guinea. We propose this voyage was concerned with slavery. Pallady senior may have been in partnership with our antihero Joseph Ashton, and may even have lived in the same house as Ashton on Botolph Wharf; but where this house was on the wharf also remains uncertain. The excavated evidence is for cowrie shells in the floor levels of three of the warehouses, on both

[24] Postlethwayt 1745, 18–19.

[25] Hogendorn and Johnson 1986, 88–91.

[26] Parliamentary Report 1796, Appendix E e e.

sides of the lane, and spread throughout the period reported here, of 1667 to about 1730.

Some, perhaps many, of the ships which set out from London for slavery voyages must have been constructed in London. Slaving ships were adaptations of merchant vessels and could easily switch between the two roles. One, the *Whidah*, said to have been built in London in 1715, became a pirate ship; it foundered in 1717 off the coast of Massachusetts, near a village ironically called Billingsgsate at the time (now Wellfleet) and the site has been investigated.[27] The subject has yet to be studied.

To summarise, the archaeology of slavery in London, its connections and its consequences, covers several matters. The plantation system in the Caribbean produced enormous amounts of sugar and to a lesser extent coffee which came into London, where both were consumed or re-exported. The slavery trade was lubricated by the use of cowrie shells which were stored at Botolph Wharf and found in the excavation.

By the end of the 18th century the wealthiest area in the British empire was the Caribbean, and in particular Jamaica. The Caribbean plantations were widely thought to be, and in some cases were, the means of acquiring a fortune.[28] London merchants specialising in the West Indies had their own meeting place in the Jamaica Coffee House in St Michael's Alley, established in the 1670s on the west side of St Michael's church on the south side of Cornhill.[29] The existence and long life of this coffee house in the City's financial centre underlines the prominence of the powerful West India merchants in London through the 18th century and well into the 19th century.[30] A powerful lobby of these merchants seems to have been instrumental in the creation of the West India Docks.

The connections between urban wealth, new houses or streets and slavery has been explored in a study of houses at Bristol. Here whole streets of houses, such as St Michael's Hill and Old Park Hill, can be described as the direct consequence of profits from the shipment to the Americas of thousands of Africans by 1730, or from trade in slave-produced commodities, that is sugar, tobacco and chocolate. At Bristol, 'the visible gentility of the late 18th-century city was [...] built upon a trade and lives immersed in the brutality of plantation slavery.'[31] The links between English gentility (in architecture and material possessions) and the slave trade in London could be further examined.

[27] Webster 2008; for controversies surrounding the investigation, Elia 1992.

[28] Eg for Jamaica, Sheridan 1965.

[29] For an internal view in 1885, LMA, London Picture Archive 5129.

[30] Morgan 2007, 53.

[31] Leech 2014, 358–60, 368.

7 From 1796 to the 20th century

Congestion, the debates of 1796 and proposals

In 1796 the British government received a report from a committee 'appointed to enquire into the best Mode of providing sufficient accommodation for the increased Trade and Shipping of the Port of London'.[1] This committee interviewed a wide range of relevant people: sea captains, pilots, wharf owners, lightermen, businessmen, representatives of the waterfront parishes and others. Many aspects of the Legal Quays and the Sufferance Wharves were described by those who worked on them.

It was universally agreed that the Legal Quays were in need of serious reform; they could not handle the greatly increased coastal and international traffic going in and out. Royal commissions of enquiry in 1762 and 1765 had been obstructed by the interests of the wharfingers of the Quays. In 1765 a representative of the East India Company stated that 'the legal quays are infinitely too small for the commerce of the port'. In 1700, imports through London had totalled £4.9m in value, and exports £5.4m; in 1790, imports totalled £12.3m and exports £10.7m. The number and size of ships had both increased. In one year, 1794, 13,949 ships had entered the port; in 1791–6 the maximum number of ships in the river at any one time had been about 1300. The Pool frequently held 775 ships when there was proper space for only 545. Ships were arranged in tiers, rows at right angles to the quay (already in 1725). There was generally no regulation which ordered where ships should go according to their size, though the larger West India ships, of 350 to 500 tons, docked from Deptford onwards upriver and sorted themselves by size. A ship of 150 tons could moor at the side of Fresh Wharf, next to the bridge.[2]

The numbers of ships coming into the port (British and foreign considered together), their total tonnage, and therefore some idea of the increasing average size of ships, are given in Table 13; this does not include the coastal trade. While the table shows a general increase in the average size of ships (British and foreign) during the century, the commentators of 1796 had separate figures showing that British ships engaged in foreign trade had increased more in size than ships from other countries.

A pilot reported that sometimes the Thames was so filled up with shipping he could not pass; ships often ran foul of each other; and he had once been delayed seven days at Deptford because his ship could not move upstream. Another pilot said he was often delayed taking a ship out, and once the lower Pool (from Limehouse to Wapping Point) was so crowded he had to have his boat hauled overland to get round the mass of shipping in order to do his job.[3] There were at least 3,500 smaller craft working on the river, of eight sorts from cutters averaging 71 tons down to punts at 20 tons.[4]

Year	Ships	Tonnage	Average (tons)
1702	1335	157035	117.6
1751	1682	234639	139.5
1794	3663	620845	169.5

Table 13 Numbers of ships entering the port of London at three dates in the 18th century, their total tonnage, and the average size of ships at each date (Parliamentary Report 1796, v and Appendix G)'

Two particular problems were ships bringing timbers and those bringing coal. Ships bringing deal timbers came in the summer, and many then discharged their timbers to make large rafts, awaiting the Customs officers; a raft was often twelve times the area of the ship, and it would only move with the tide. Another serious contribution to congestion was the number of coal-bearing ships; one witness declared that 'ships in the coal trade are of all others the greatest obstruction to the mercantile trade of the port.' A collier required from twelve to sixteen barges to unload, and up to 90 were unloaded at the same time. One suggestion was to move all the timber ships and the colliers to new docks or at least further down the river.[5]

Goods normally landed on the Legal Quays were sugar, coffee, cotton, rum, wine, linens and dry goods. When business required it, the Sufferance Wharves were used. On the capacity of the Legal Quays, John Inglis, merchant, said that only between one quarter to one third of the goods which should be landed there were actually landed on the Quays; and they could only handle about a third of the goods anyway. Thames Street was often at a standstill from the many carts taking goods to inland warehouses. A ship's captain reported that lighters bringing merchandise could wait up to a month for their turn at the cranes on the wharf; a merchant said all his ships took between 20 and 30

[1] Parliamentary Report 1796.
[2] Parliamentary Report 1796, iii–viii, xiii, 18, 51–2, 61, 128.
[3] Parliamentary Report 1796, xi, 42–3.
[4] Parliamentary Report 1796, xi.
[5] Parliamentary Report 1796, viii, xix, 109, 192. The sheer size of the necessary provision of coal continued to be a problem. In 1825 Collier Docks containing 160 ships and space for barges and enormous sheds were proposed to be built in Bermondsey; another scheme at the same time proposed a Collier Dock on the Isle of Dogs: Capper 1862, 168.



Figure 186 The Port of London by Thomas Luny, 1798 (Yale Center for British Art, Paul Mellon Collection, B1976.7.130). The crowd of ships is concentrated between the bridge and Custom House. The painter has squeezed the east–west topography

days to discharge.[6] Given the congestion, the quaysides were used as markets, particularly for liquor, which caused further obstruction. Another problem was that if the lighters were delayed unloading, they would miss the tide to go back downstream. Even so lighters were thought to be a faster method of unloading ships than having a ship brought alongside a quay, because regulations only allowed one crane per ship.[7] The acute congestion is shown in a painting by Thomas Luny of 1798 (Figure 186).

By the end of the 18th century the Legal Quays on the north bank of the Thames, even though supplemented by the Sufferance Wharves on the south bank, were notoriously crowded, inefficient and the cargoes badly subject to theft.[8] This is illustrated by proceedings at the Old Bailey.[9] Some concerning Botolph Wharf between 1718 and 1816 are summarised here in Table 14.

But there was resistance to change. One witness stated that a great number of large warehouses had been built in the City in the five years immediately before 1796 (some have been described above). If new docks at Wapping were built, whole streets near the Legal Quays would lose much of their rental value.[10]

There was a clear risk of serious damage from fires on ships or in buildings on shore, and this was underlined by recent experience. In 1792 a fire on shore at Rotherhithe spread to an empty whaling ship, then at Cherry Garden Stairs. Using the flood tide, it was pulled into the middle of the river, and it drifted in flames between tiers of shipping up to London Bridge, where it lodged against the starlings.[11] A second worry for shipowners was the length of the approach along the winding Thames to the Legal Quays at Thames Street. In 1796 a shipowner of Shadwell reported that he had lost a ship 'coming round from Blackwall to Limehouse', and 'several ships have been lost and damaged in that passage, scarcely a week passes without some ships being [driven] on shore.'[12]

The Committee considered and asked for opinions on eight plans which had been presented for expanding the facilities and solving these problems. Nearly all of them proposed new wet docks at various places east of the City, especially on the Isle of Dogs, then still undeveloped. Two plans would have had direct consequences for the Legal Quays in Thames Street. One, by a Mr Ogle,

[6] Parliamentary Report 1796, 40, 51, 56.
[7] Parliamentary Report 1796, 71, 79, 139.
[8] Stealing from arriving ships was very widespread and involved many kinds of specialist thieves; described in detail in Colquhoun 1800, a plea for better policing.
[9] https://www.oldbaileyonline.org.
[10] Parliamentary Report 1796, 126, 137–8.
[11] Parliamentary Report 1796, 123.
[12] Parliamentary Report 1796, 174–5.

Year	Accused	Material allegedly stolen (in all cases from Botolph Wharf)	Verdict and punishment
1718	Stephen Hand	6 cwt of lignum vitae from a warehouse	Guilty; branded
1719	Abraham Quiet	3 lb tobacco	Not guilty
1729	John Lewin	a hogshead tobacco	Not guilty
1740	William Oliver	2 charges: 160 lb pepper, 320 lb pepper	Guilty; branding
1740	Thomas Ridout	320 lb pepper; also receiving 160 lb pepper	Not guilty
1757	Samuel Bolton	10 lb Spanish wool	Not guilty
1765	John Matthews	box and cutlery in a case	Guilty; transportation
1769	James Catling	40 lb raisins	Guilty; transportation
1770	John Withers	80 lbs 'pomentoe'	Guilty; transportation
1772	John Smith	9 lb of raisins	Not guilty (man at the bar was not Smith)
1773	Alexander Dunning	4lb moist sugar	Guilty; transportation
1774	Ralph Emanuel	10 lb of moist sugar	Guilty; transportation
1775	John Thomas	2 lbs tobacco	Guilty; transportation
1791	William Abbott	114 lb beeswax	Guilty; whipping
1797	Henry Cam	28 lb raw sugar	Guilty; transportation
1798	Matthew Quirk	5 saddles	Guilty; death
1803	Thomas Spencer	33 lb sugar	Guilty; 6 months in Newgate and publicly whipped 100 yards
1810	Richard Rich	26 lb olibanum	Guilty ('aged 69'); 14 days in Newgate, fined one shilling
1816	Joseph Sarbey	2 lb 2 oz pepper	Guilty; whipped 100 yards on Botolph Wharf, imprisoned 2 months

Table 14 Cases of theft from Botolph Wharf heard at the Old Bailey

who described himself as a 'wharfinger upon the Legal Quays, a ship broker, and a ship's husband [a person responsible for providing maintenance and supplies for a ship in port]', would remove the dwelling houses along the Street and replace them with warehouses; widen the streets leading to Thames Street; and extend the quays into a deepened river. His plan would also cut down on theft and pilfering. Another problem was that after unloading, ships in the Pool took on ballast (chiefly river sand) from special lighters which provided it, but the process was clumsy and much of the ballast was lost overboard, contributing to silting against the quays. Ogle proposed to have a ballast station down river; but an experienced seafarer pointed out that 'a ship is very unhandy going down the River without ballast'.[13] The riverbed was composed not only of gravel, but also a substantial amount of human waste from the many drains of the conurbation tipping into the river. This was called mud, and was of no use as ballast. When it was dug up with the gravel, it was removed and offered to builders to raise the ground surface all over the metropolis, particularly where (as was often the case) there had been extensive quarrying for brickearth.[14] So the material in 18th-century dump layers all over London could have come several miles.

George Dance (the younger, son of George Dance who rebuilt the Bridge), the City's Clerk of Works, proposed docks to the east, but also radical changes to the Legal Quays (Figure 187). He would make Thames Street, from St Magnus to the Tower, 80ft (24.4m) wide from its then existing width of 30ft (9.1m), on a straight line rather than bent as it was; replace the houses on the south side with warehouses; and move the Custom House to a new site on the north side of Thames Street next to the Monument. Much of the land south of Thames Street would be excavated to form five docks 140ft (42.7m) long. Warehouses alongside the new docks would have three times more floorspace than the existing ones. Lanes communicating with Thames Street would be straightened and widened.[15] This scheme, however attractive as town planning, would have required the removal of hundreds of individual properties. This, the City's plan, was opposed by Trinity House, because it would favour the continued requirement for lighters (Dance's quaysides would accept only lighters, not ships), which were a source of many problems; it was also by far the most expensive of the eight proposals.[16] William Daniell produced a superb reconstruction of what it would look like (Figure 188).

[13] Parliamentary Report 1796, 24, 96–106, Appendix P.
[14] Parliamentary Report 1796, 145.
[15] Parliamentary Report 1796, 113–14, Appendix E.
[16] Parliamentary Report 1796, xviii.

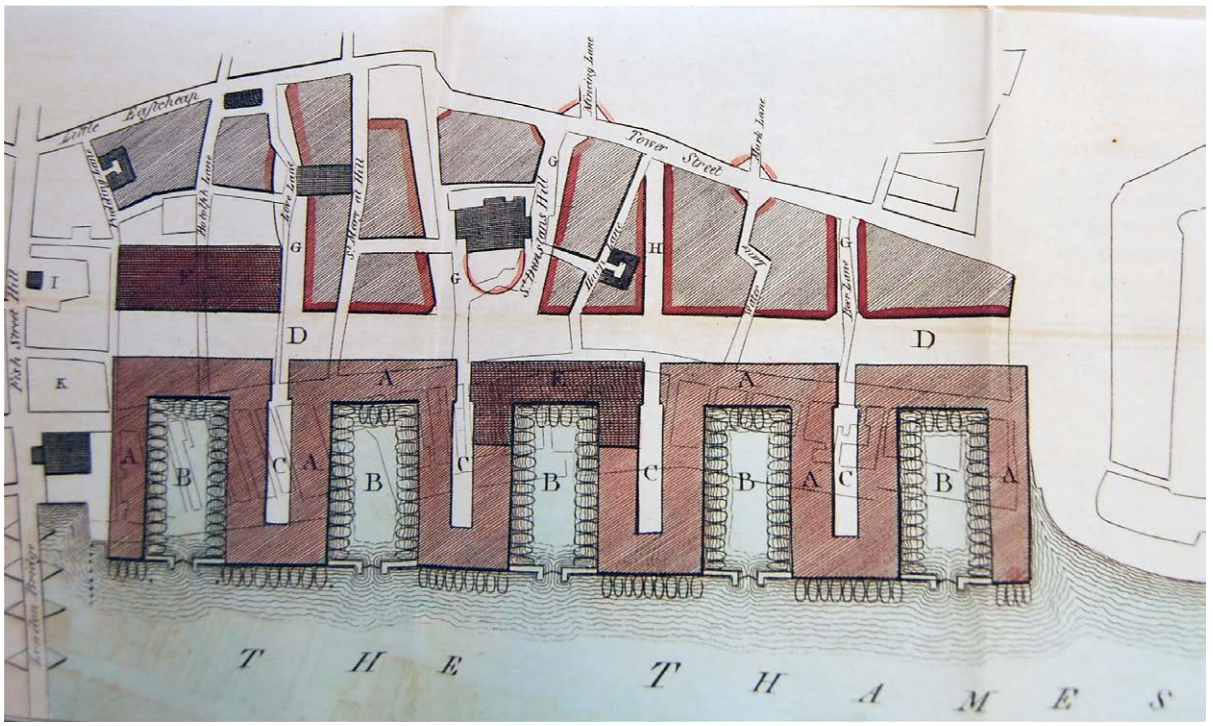


Figure 187 George Dance's proposal for new docks and warehouses south of Thames Street, 1796 (Parliamentary Report 1796, 384). This would have realigned Lower Thames Street, thus destroying the existing frontage on the entire north side and probably much of the south side; the Custom House of Wren, rebuilt by Ripley, would also vanish, a new Custom House being built next to the Monument



Figure 188 William Daniell, after George Dance, Perspective sketch illustrating a Design for the Improvement of the Port of London, *c.* 1800–10, extract (Yale Center for British Art, Paul Mellon Collection, B1977.14.11394). This reconstruction by Daniell of Dance's proposal looks east, with two London Bridges

This grandiose and practically impossible scheme should not be dismissed quickly, for it came from an architect who designed public buildings in the City (most notably, Newgate Prison of 1770–80; his embellishment of Billingsgate has already been noted), several new residential developments (the Crescent in the Minories of 1768, Finsbury Square 1777 and 1802), and other pieces of planning in the City and Southwark, as well as 15 country houses. In summarising his work Howard Colvin says, 'it is as a pioneer of neo-classicism that the younger Dance has his place in English architectural history.' Of Dance's unused design for the new waterfront area and docks, Colvin adds, 'the simple, monumental character of the warehouses envisaged by Dance was not without influence on the design of those subsequently [at the West India Docks] built by [Daniel] Alexander and others.'[17]

The Parliamentary Committee agreed to new docks in principle, which then followed: the West India Docks in 1801–6 (Figure 189), the London Dock in Wapping (1805), and the East India Docks at Blackwall (1803–6).[18] The Commercial Docks on the south bank in Rotherhithe followed after 1810. The ideas for the West India Docks and their gigantic warehouses parallel with the quay probably came from several sources. The grand schemes of the 1790s, and especially that by Dance, may have been influential. One suggestion by the architectural historian Louis P Nelson is that we should note one of the prime movers for the new docks was [later Sir] Robert Milligan (*c.* 1746–1809), a former Jamaica planter who had returned to London in 1780. According to Nelson, Milligan 'and thirteen other West Indians as the board of elected stockholders undertook the largest public works program yet imagined in Britain. The West India Docks complex was Jamaican architecture, a Jamaican building program that transformed the capital city.'[19] According to Eric Williams, another leader of the project and the first chairman of the board of directors was George Hibbert, from the Hibbert family which later received compensation for their 1618 slaves.[20] It seems additionally probable that the ambitious new solution came about because the previous generation of large warehouse buildings in the City itself, from the 1770s, had not solved London's imperial problem.

On the plan of 1802, the previous topography of lanes is lightly shown. An excavation of 1997 just south of the east entrance to the Dock found evidence of a previous 18th-century small shipyard.[21] The houses to the north and west were not built; those on the north became by 1840 the site of the London and Blackwall Railway which connected the docks with Fenchurch Street station in the City. Six of the warehouses are shown shaded red; these were the first to be built. The others are simple rectangles.

Today, after widespread aerial bombardment and redevelopment in 1981–99 by the London Docklands Development Corporation, little survives of the original West India Docks.[22] The docks are now the site of the Canary Wharf development and others around it from the 1980s. The tower of Canary Wharf (1991) is on the land between the two docks, now partly filled in. Two of the warehouses on the north side of the Inward Dock remain. A bronze statue of Sir Robert Milligan of 1810–12 did survive, standing on the quayside outside the new Museum in Docklands; in 2020 this was thought uncomfortable next to the Museum, and was removed.

The development of the new docks to the east left the streets around London Bridge intact, in their 18th-century forms (Figure 190). The frontages contained shops, and there was a substantial population for them to serve. The streets and lanes which led down to Thames Street looked and developed like the rest of the City.

Nineteenth-century developments on the City waterfront and immediately to the east

Downstream of the bridge, the Custom House was replaced in 1814–17 after another fire, and Billingsgate was rebuilt and extended several times during the century. By 1830 there was a second fishmarket building occupying the space between the inner edge of the dock and Thames Street, used with the one on the waterfront built by Dance. This is shown on a plan of 1830 and a map by James Savage of 1837.[23] The dock at Billingsgate was erased in the development of a new market building by J R Bunning, the City architect, in 1849–53. He built a wharf wall of granite across the entrance, and made basements for the new building within, excavating down to the London Clay.[24] His market building was replaced by the present one, on a larger footprint, in 1874.[25]

[17] Colvin 1995, 288–92.

[18] The creation of the various Docks is described in detail in SoL 43–4. The construction of the buildings around the West India Docks and the first decades of their use are described by Sargent 1991. Their remains are described by Williamson and Pevsner 1998 and Cherry *et al.* 2005.

[19] Nelson 2016, 235.

[20] Williams 1964, 88.

[21] Pitt and Goodburn 2003.

[22] For this first period at docklands, Williamson and Pevsner 1998, 101–13. 'Conservation of what remained of the docks and riverside industry was not something high on the agenda in the 1970s' (p57).

[23] The plan is London Picture Archive 21751; the map, of the parish of St Mary at Hill, is published in Hyde 2020, 72 (no. 45).

[24] Timbs 1867, 55.

[25] The Fishmarket is studied in its post-War form by Bird 1958. By 1936 Billingsgate was supplied totally by rail, and no longer by sea. Fish trains came from as far north as Aberdeen and as far west as Milford Haven. The fish came from stations such as King's Cross, and the streets around Billingsgate were zoned according to British Rail regions for the many vehicles. The tentacles of the market stretched into surrounding streets: live trout were kept in tanks beneath buildings in Pudding Lane, and eels were cooked and jellied in Lovat

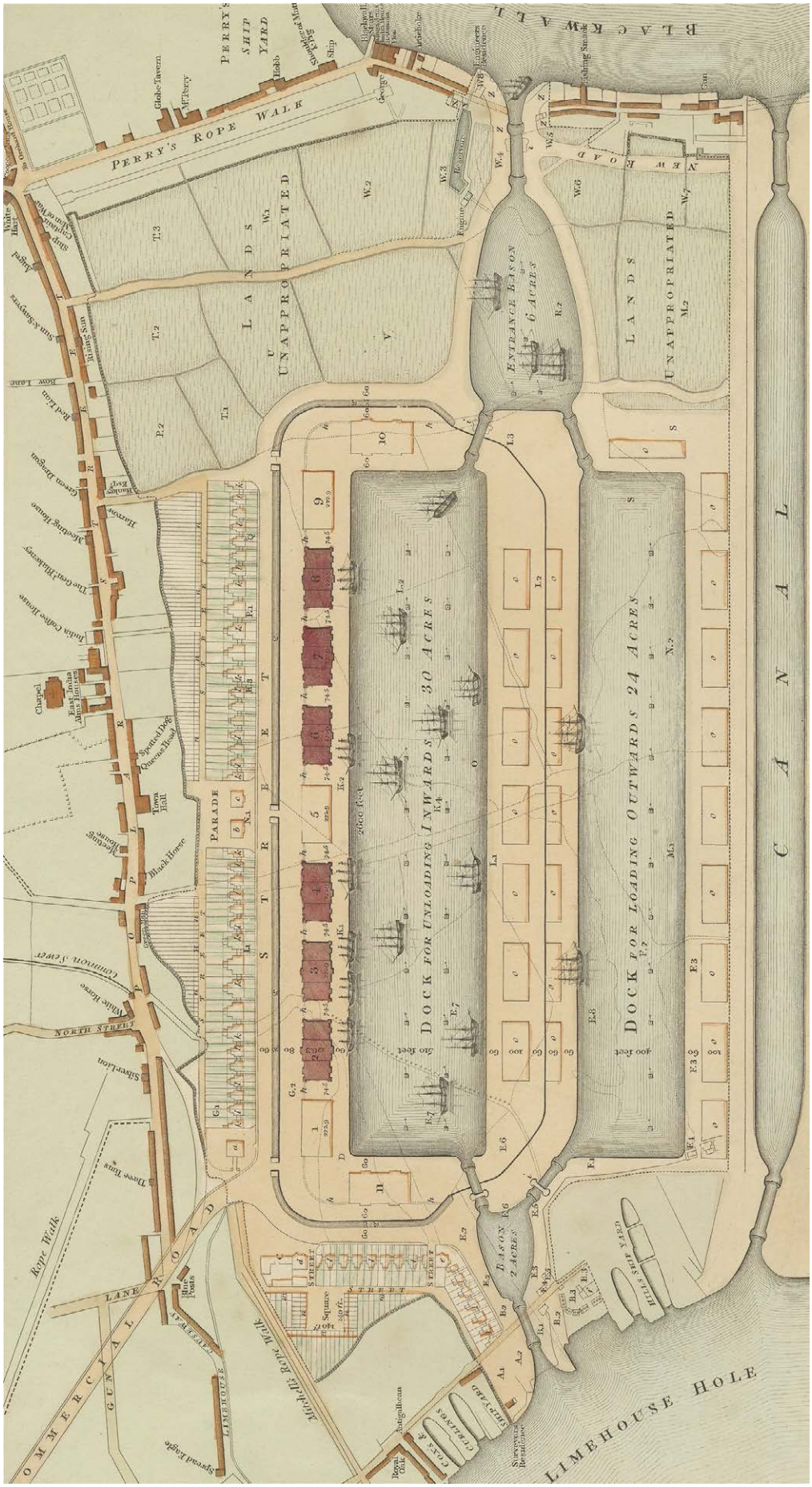


Figure 189 An early plan of the West India Docks in 1802 (by Benjamin Baker after Ralph Walker, Yale Center for British Art, Paul Mellon Collection, B1977.14.14827). North is to the top of the plan.

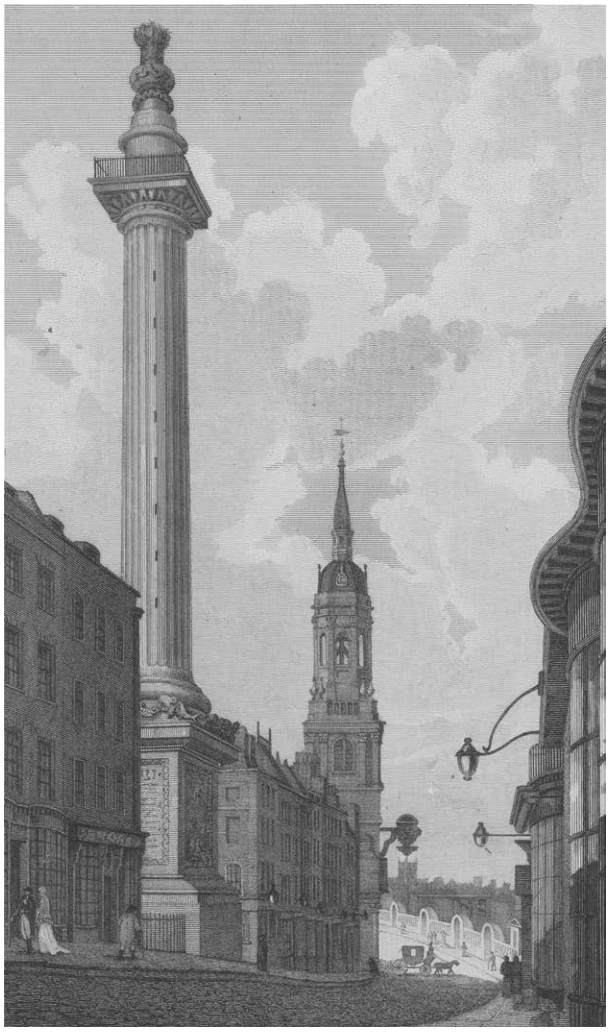


Figure 190 View down Fish Street Hill in 1809 by John le Keux after James Robert Thompson (Yale Center for British Art, Paul Mellon Collection, B1977.14.17608). This shows the Monument and St Magnus prominent in their surroundings, as originally intended

One large-scale topographical change on the north bank occurred immediately east of the Tower. The new St Katharine's Dock or Docks and the inevitable warehouses demolished a whole district of streets and houses in 1826–9 (Figure 191).[26] Several hundred people must have been displaced. The earth excavated for the dock, which must include many stones from walls and decorative features of the medieval hospital, was transported by river to Millbank in Westminster; here it was used to fill up the reservoirs of the Chelsea Waterworks, upon which were built the streets south of Pimlico.[27] St Katharine's is described by a historian of ports as having a 'ridiculously small and ruinously expensive site.'[28] This 'greedy speculation' proved too small for the new generation of iron-built vessels.[29]

In the bridgehead area on the north bank, the new alignment of London Bridge by 1834 and the associated demolitions for new streets also affected many properties; whole swathes of immediately post-Fire buildings and a church (St Michael Crooked Lane) disappeared, at least above ground. In 1831 the architect William Knight, working on the new bridge, drew a plan of the approach and all the sites it would affect (Figure 192). The site of St Michael's is immediately south of the present-day underground passage which leads to Monument Underground station. The site of the church is therefore under the roadway leading south across the present bridge. In 1831 a deep sewer trench was dug north–south along it, and Roman and medieval remains uncovered;[30] but some of the church probably remains. Fragmentary remains of buildings in this area have been found: to the east on Fish Street Hill, excavation at Regis House in 1994–6 found scattered but rich evidence in post-Fire cesspits, cellars and wells, though no internal or external surfaces.[31]

Views done before, during and after this intervention show the complete change to the urban landscape. As the demolition of buildings started in 1830, George Scharf recorded the east side of Miles Lane and the church of St Michael Crooked Lane.[32] Either then or shortly after he was up on the construction level of the new Bridge (Figure 193). It was being pushed through the tightly-packed buildings on both sides of Thames Street, rendering Fish Street Hill redundant as a major entry point into the city.

The new bridge across the Thames was a short distance to the west of the old alignment. Fish Street Hill, now superseded, was probably the very first street of London, as it led from the Roman bridge to the forum 1800 years previously. Now it became a side road, though it still led to Thames Street. The properties along it remained in their smaller immediately post-Fire forms until later than in other major streets. The last of them disappeared only in the 1980s, partly because of the closure of nearby Billingsgate.

The first pile for the new bridge was driven in March 1824, and the first stone laid by the Lord Mayor in June

Lane. These uses ceased when the market moved out in 1981.

[26] A plan of 1825 of the proposed dock at St Katharine's by Thomas Telford and Philip Hardwick shows how the streets were to be removed for the new works: LMA, London Picture Archive 22591. None of the original buildings of the dock survive; the warehouses standing are replacements (Cherry *et al.* 2005, 503–6).

[27] Timbs 1867, 310.

[28] Jackson 1983, 61.

[29] Williamson and Pevsner 1998, 22.

[30] Kempe 1831.

[31] Brigham *et al.* 2010. It is possible to recognise in the 1831 map the outlines of a number of properties and alleys or courts identified by excavation or documentary analysis, especially around Globe Court and along Fish Street Hill (information from Trevor Brigham).

[32] LMA, London Picture Archive 21736.



Figure 191 Excavation for St Katharine's Docks in progress, 1828, by an unknown artist (Yale Center for British Art, Paul Mellon Collection, B1977.14.12781). The view looks west towards the Tower

1825. Within the foundation stone was placed a Latin inscription which said in part

> 'The free course of the river being obstructed by the numerous piers of the ancient bridge, and the passage of boats and vessels through its narrow channels being often attended with danger and loss of life.. the City of London, desirous of providing a remedy for this evil.. resolved to erect a bridge upon a foundation altogether new, with arches of a wider span, and of a character corresponding to the dignity and importance of this royal City; nor does any other time seem to be more suitable for such an undertaking than when in a period of universal peace, the British Empire flourishing in glory, wealth, population, and domestic union, is governed by a Prince.. under whose auspices the Metropolis has been daily advancing in splendour.'[33]

Thus the new bridge was at the same time an improvement demanded for many years by those using the river, particularly coal importers, and an imperial statement.

The bridge was opened by King William IV in 1834.[34] It was hailed as the new entrance to the City, just as its predecessor had been since 1209, if not before. In the 27th edition of John Britton's *Picture of London* of around 1832, the visitor is encouraged to stand on London Bridge (this probably referred in previous editions to the bridge of 1769), where

> the forest of masts presented by the shipping... fills every beholder with astonishment; but how much is this feeling increased, when, in an excursion down the river, it is discovered that this forest covers the Thames for several miles, and also that all the adjacent Docks are full of shipping

and

> The southern banks of the Thames, contiguous to the bridges, for a considerable extent, are lined with manufactories and warehouses; such as iron-founders, dyers, soap and oil-makers, glass-makers, shot-makers, boat-builders andc. To explore these will repay curiosity; in a variety of them, that

[33] Welch 1894, 129.

[34] For Fishmongers' Hall and the matching building, which included a hotel, on the east side of the north approach, see for example LMA, London Picture Archive 4771, a view in or shortly after 1835.

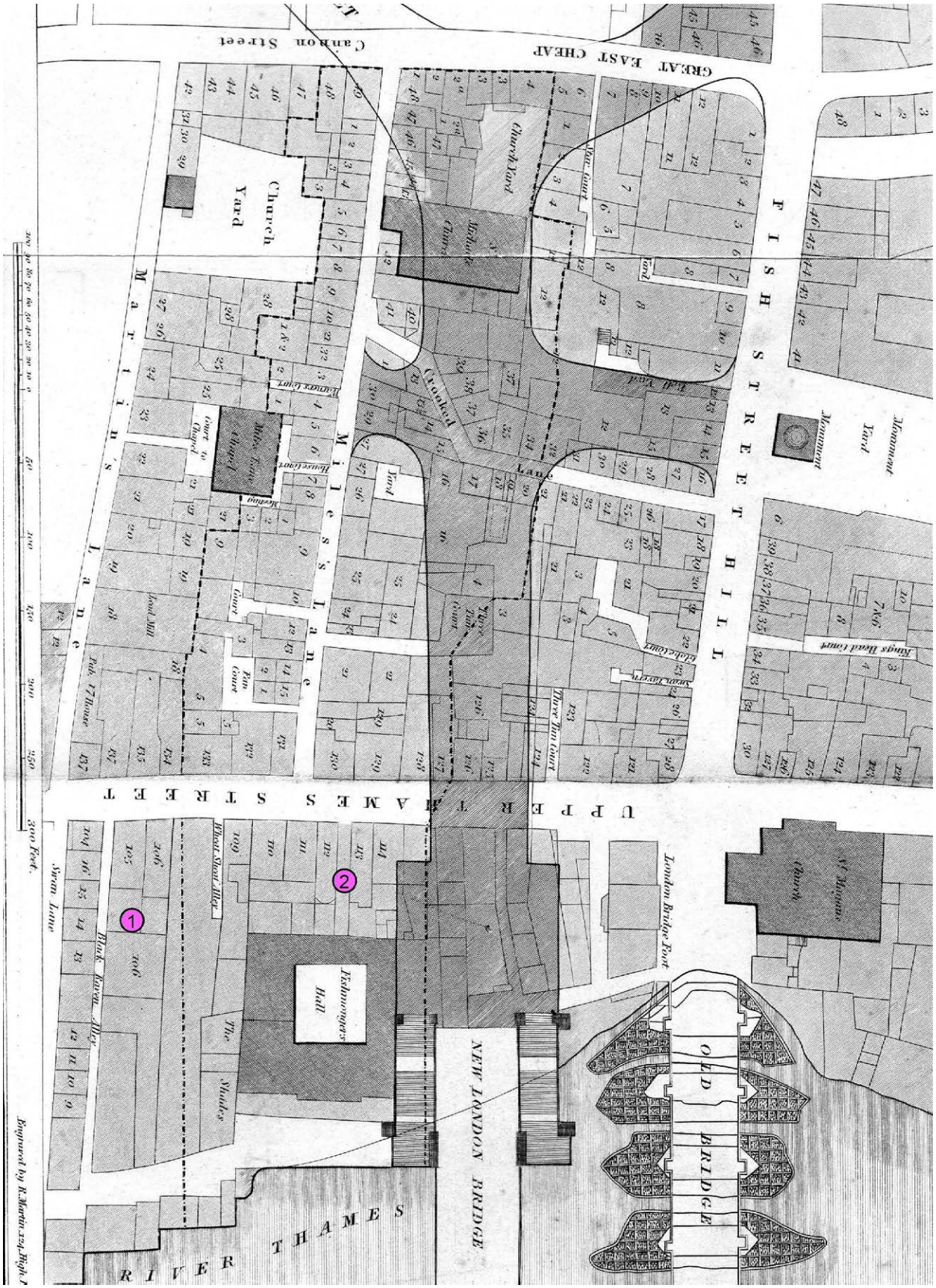


Figure 192 The site of St Michael Crooked Lane church and the approach to the new London Bridge in 1831, by William Knight (Herbert nd (?1833), frontispiece). A view down Fish Street Hill in 1809 is given in Figure 190

Key: 1, Seal House (site B), 106–8 Upper Thames Street; 2, Houses in front of Fishmongers' Hall

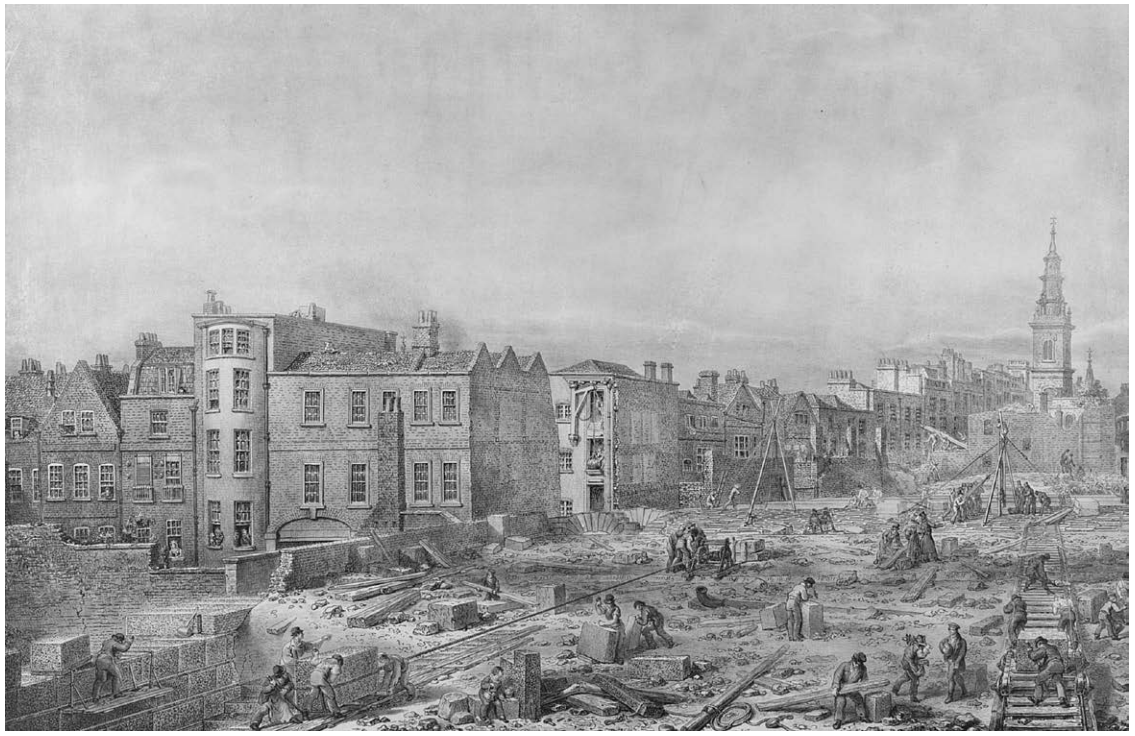


Figure 193 A view of the northern approach to London Bridge in 1830 by George Scharf (Yale Center for British Art, Paul Mellon Collection, B1977.14.19087). This shows the church of St Michael Crooked Lane in the distance; the buildings leading to it must be the west side of Miles Lane, and the houses on the left are those in front of the pre-1835 Fishmongers' Hall (which has perhaps been demolished as part of the construction of the present hall). These houses were surveyed in their immediately post-Fire form by Leybourn in 1686 (see Figure 143) but had clearly been rebuilt since. The building with the hoist was on the north side of Thames Street, and the hoist is shown in the 1831 view of the street in Figure 9

> powerful agent, *steam*, performs the work, and steam engines are daily erecting in others.[35]

A new type of ship now changed the whole nature of seaborne commerce round the world: the steamship.[36] Passenger steam boats had been introduced into the Thames in 1815, running services to Margate and Gravesend, and were soon a common sight (Figure 194). Those on the river were comparatively small, but they still had to lower the funnel when going under a Thames bridge. A popular point of embarkation was the Steam Packet Wharf at London Bridge, its site now beneath Adelaide House in Thames Street. The *Illustrated London News* in 1844 noted 'the number of arrivals and departures at this spot during the day, is truly astonishing; and at the present high steam season, is a constant source of attraction. The vessels are of all degrees of tonnage; and from thence and the adjoining Fresh Wharf, and Cox and Hammond's Quays, steamers start for Greenwich, Woolwich, Sheerness, Gravesend, Herne Bay, Margate, Deal and Dover, Calais, Boulogne, and Ostend, and other places.'

New warehouses were built. Some were replacements of the first warehouses of the middle of the 18th century. Those nearest St Magnus were six storeys high,[37] and the narrow alleys between them must have been very gloomy and damp.[38] Well into the 20th century the dour landscape of high, largely featureless buildings was typical of many alleys leading from Thames Street along its whole length (Figure 195). At Seal House (site B) and Billingsgate (site D) the open basements of these warehouses, which had been hit by aerial bombardment in World War II and cleared, were convenient open sites for the excavations in 1974 and 1982 respectively, in

[35] Britton nd (c 1832), 386–7. John Rennie had suggested in 1796 that cranes powered by steam would be useful in the future London Docks: Parliamentary Report 1796, 29.

[36] For steamships in London, see Armstrong and Williams 2017. Steamships have their own archaeology; for instance, a wreck of a steam paddle tug of the 1870s out in the Thames estuary has been archaeologically investigated, Croce and Gane 2019.

[37] A photograph of them and Billingsgate taken from London Bridge in the late 19th century is in the Historic England Picture Library, CC72/01834.

[38] In London Metropolitan Archives, not examined, are 55 volumes of plans of warehouses surveyed for the London Wharf and Warehouse Committee between 1865 and 1904. They include warehouses at King's Cross, the West India Docks and Millwall, but are mostly along the waterfront; among them Botolph and Nicholson's wharves, 1874 and 1903; Old Swan Wharf, 1895; and Fresh Wharf and Cox and Hammond's quays, 1875 (LMA, CLC/B/017/MS15627/001–55).



Figure 194 London Bridge and Custom House, early 19th century, by Robert Havell (Yale Center for British Art, Paul Mellon Collection, B1977.14.18472). This shows the new Custom House of 1817 on the right. The paddle steamer has to be serviced by small boats



Figure 195 Trig Lane, Upper Thames Street, looking south towards the river, in 1912 (LMA, London Picture Archive 49552). This lane led to a river stair in the medieval period; excavations of medieval waterfronts at Trig Lane would take place on the site of the buildings on the right in 1974–6 (Milne and Milne 1982). The lane is now beneath the present north approach to the Millennium Bridge

that their exterior basement walls held up the land on either side and Thames Street to the north.

This waterfront zone was however still full of workers, some residents and children; from Blackfriars to the Tower, there were ten parish churches on or near Thames Street. One, St Michael Crooked Lane, was demolished to make way for the north approach to the new London Bridge in 1831, but six surviving churches featured in a book called *Down Thames Street*, dedicated solely to a walk along the street, as late as 1921 (Figure 196).[39] On the west edge of the excavation at Seal House, in the strip between Black Raven Alley and Swan Lane not investigated, was a Ward School established in 1775 which existed for much of the 19th century (it may be indicated on Horwood's map of 1813, as a building in the alley shaded darker than the others, Figure 172). On its Swan Lane frontage, as on some other ward schools, were two niches containing figures of a boy and a girl. From later maps, the school occupied a small house, no doubt several floors of it. The establishment was for a hundred poor children, so the area must have been populous.[40]

This topography all changed in the first half of the 20th century. Bombing in World War II devastated Thames Street.[41] In the City it provided a post-War opportunity for planners on a scale not seen since the Great Fire. The over-arching decision to drive a large transport route through the waterfront from end to end is also a product of post-War planning in Naples and Genoa, and no doubt other European ports. Upper and Lower Thames Street now form a thundering bypass (though with the recent addition of a cycle lane along much of it), lined with largely characterless modernist buildings (which are usually replaced every 30 years and sometimes less); and the occasional overwhelmed Wren church.[42]

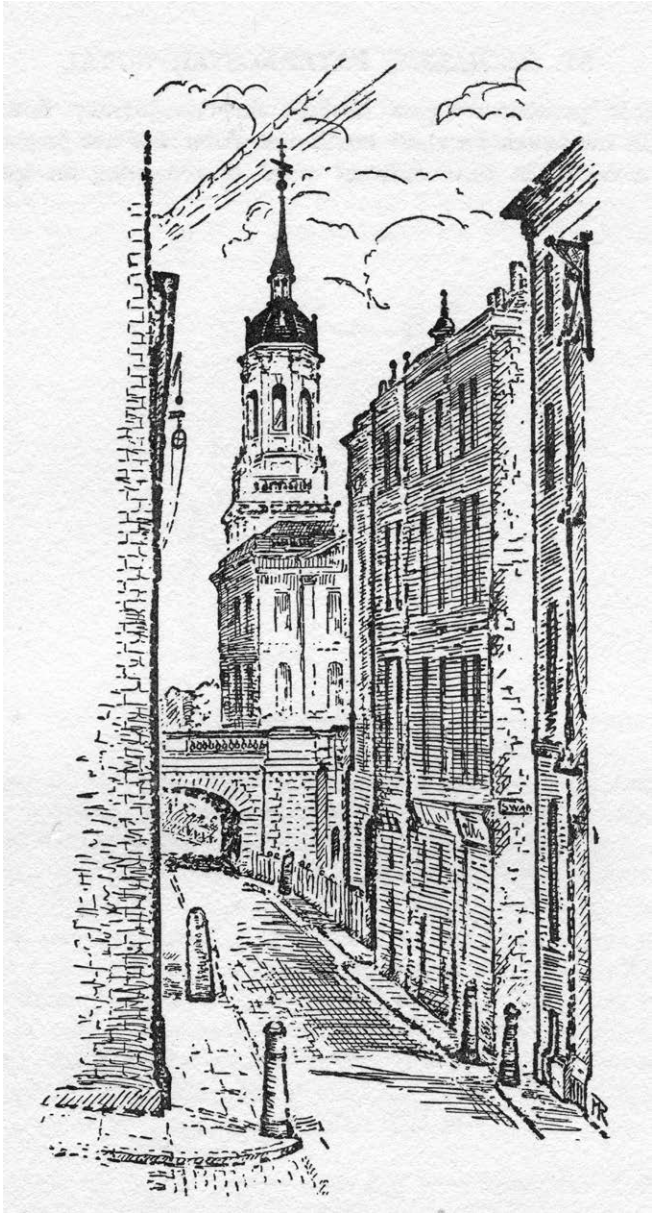


Figure 196 St Magnus and the east end of Upper Thames Street, early in the 20th century (Rogers 1921, 98). This shows the medieval and immediately post-Fire width of Thames Street which had survived until then. The 19th-century building on the left hand side, at the corner of Thames Street and Arthur Street, was still standing in 1969 (photograph in LMA, London Picture Archive, 49539). The building just beyond the bollards marking Swan Lane is the 19th-century building on the Seal House site; excavation would take place beneath its cleared basement in 1974

[39] Rogers 1921.
[40] Rogers 1921, 100.
[41] The bomb damage is catalogued in the maps in Woolven 2005. Buildings on the sites at Swan Lane, Seal House and Botolph Wharf were destroyed in 1941; part of New Fresh Wharf (though not the buildings next to St Magnus along Lower Thames Street) was damaged by a V1 flying bomb in 1944 (photograph in LMA, London Picture Archive 35432).
[42] See the street on Google Earth.

8 London's connections with other ports, 1666 to 1800; post-medieval waterfront archaeology elsewhere

This chapter reviews what some other British and foreign ports along the coasts of continental Europe, north America and in the Caribbean looked like in the period 1666–1800, and how their archaeology may be compared; though none have been investigated to a sufficient degree. The network of ports, in the North Sea and the Atlantic, formed London's wider region, a web of connections.[1]

British ports and coastal shipping

London's vast consumption was fed by coastal trade as well as by international trade; and London also shipped commodities to smaller British ports. By 1700, half of England's most prosperous and populated towns were ports; between 1700 and 1750 the populations of eight ports rose by over 50 per cent.[2] In 1731–48 the Buck brothers produced views of many English towns, both inland and on the coast. Open quaysides or landing places for ferries are to be seen at Berwick, Exeter, Gravesend, Hull, Ipswich, Liverpool, Plymouth, Rochester, Scarborough, Stockton-on-Tees, Swansea, Worcester and Yarmouth.[3] Some of these, like London, were at a distance from the coast. In several riverine ports, a bridge across the river formed a barrier to traffic and the larger boats had their facilities immediately downstream of the bridge, as at Newcastle (Figure 197), where in 1726 Defoe was impressed by its long wide wharf faced with stone,[4] or Berwick.

In his history of the Port of London of 1862, Charles Capper quoted from a return issued by the Commissioners of Customs for 1701–2 which he had seen, listing the ports apart from London in their numbers of ships: from Bristol at the top of the list through Yarmouth, Exeter, Hull, Whitby, Liverpool and Scarborough, with Newcastle and Ipswich trailing behind.[5] Though movement of goods by road was increasingly easier, London dominated the inland trade of England through its network of connections by sea with the coastal and riverine ports. In 1794 almost three quarters of the total number of ships entering the port of London, 10286 out of 13949, were coasters.[6] The 1796 parliamentary report includes a table of ports around Britain with the number of vessels and their tonnage which came to London (Table 15); although it is not



Figure 197 Extract from the view of Newcastle by the Buck brothers, 1731–48
(Yale Center for British Art, Paul Mellon Collection, B1977.14.9666)

[1] For other port cities, Lee and McNamara 2022.
[2] Sacks and Lynch 2000; Wrightson 2002, 236.
[3] Hyde 1994.
[4] Wright 2014, 7.
[5] Capper 1862, 109.
[6] Parliamentary Report 1796, vii. For the types of coastal ships, McGowan 1980, 41–57.

Port	Number of vessels	Tonnage
Aar [Ayr]	2	100
Aberdeen	20	1600
Aberdovey	4	200
Aberystwyth	3	180
Aldborough	8	480
Alloa	2	200
Alnmouth	4	240
Anstruther	2	1100
Arundel	8	640
Barmouth	6	300
Barnstaple	2	100
Beaumaris	6	300
Berwick	14	1120
Bideford	2	100
Boness	10	1600
Boston	16	1280
Bridgewater	2	100
Bridlington	8	480
Bristol	6	900
Caernarvon	4	160
Cardiff	6	480
Cardigan	8	400
Carmarthen	6	360
Chepstow	2	100
Chester	4	400
Chichester	4	200
Clay [Cley]	4	320
Colchester	14	480
Cowes	2	120
Deal	2	50
Dundee	8	480
Eastbourne	1	40
Exeter	8	400
Falmouth	1	50
Faversham	8	480
Folkestone	2	80
Fowey	2	100
Gloucester	1	80
Greenock	4	320
Hartlepool	1	40
Harwich	14	840
Hastings	4	160
Hull	100	10000
Ipswich	30	1500
Kirkwall	2	80
Lancaster	2	200
Leigh	8	400
Leith	12	1800
Liverpool	18	2700
Llanelly [Llanelli]	2	80
Lyme	4	240
Lynn	4	320
Maldon	20	800
Milford	4	200
Montrose	4	320
Neath	4	200
Newcastle	12	1200
Newhaven	6	300
Padstow	2	100
Penzance	4	400
Perth	8	480
Plymouth	8	800
Poole	4	280
Portsmouth	6	360
Preston Pans	1	60
Queenborough	2	40
Rochester	20	800
Rye	4	200
Scarborough	3	240
Southampton	4	240
Stockton	12	960
Sunderland	2	160
Swansea	2	120
Thurso	4	240
Wells	4	320
Weymouth	12	960
Whitby	6	360
Whitehaven	2	200
Wisbech	4	240
Woodbridge	12	960
Yarmouth	30	2400

Table 15 Coasting vessels coming to London with their ports of origin (Parliamentary Report 1796, Appendix Qq). The period measured is not mentioned, but it is probably the year 1795 only

clear what period of time this refers to, it is probably the year 1795, and in any case shows the variety of home ports and relative amounts of goods in the traffic, whatever the time frame used. Besides the major ports of Berwick, Colchester, Exeter, Faversham, Hull, Ipswich, Leith, Liverpool, Maldon, Newcastle, Perth, Plymouth, Rochester, Weymouth, Woodbridge and Yarmouth, there are some lesser known coastal and riverine places, such as Aldborough, Barnstaple, Caernarvon, Chepstow, Chichester, Stockton and Wisbech. From the table, the majority of ships ranged in size from 40

tons to 160 tons, with a rather unlikely figure of 1100 tons in two ships from Anstruther. The numbers given are presumably of ship arrivals, rather than the total of ships from each port; some ships would have come to London several times in the year. In all these places there should be archaeological traces, the archaeology of arrival and departure.

Though the table lists many small ports of origin for ships coming to London, we should pause before assuming there was an equal volume in commodities going the other way. There was some; in 1685 Maldon on the Essex coast is recorded as shipping grain to London in exchange for wines, groceries and luxury items, and in 1795 accounted for a respectable 20 ships (or properly, ship arrivals), as shown in Table 15.[7] But often ships went home with ballast only (there was a thriving service providing river sand from the Thames and gravel from pits on land for this purpose). Ships which brought coal from Newcastle usually went back empty, with only ballast;[8] though as recorded in 1702–3, a small number brought a wide range of consumer goods from London, especially foodstuffs, wine and spirits, cloths and fabrics to make clothing or home furnishings.[9]

Four of the larger English ports furnish examples. There have been archaeological investigations at Exeter, Liverpool, Bristol and Hull. In 1700 Exeter exported well over a quarter of all England's cloth exports, and was the third most vigorous port after London and Bristol, with a flourishing colony of Dutch merchants;[10] several phases of expansion and maintenance of the facilitiesup to 1701 have been noted.[11] A new cut for the River Exe, originally of the 1560s but improved by the 1690s, enabled ships of 150 tons to reach the city.[12] Liverpool was a small place in 1700; its population has been estimated at between 5,000 and 7,000, which if correct would be one hundredth of that of contemporary London.[13] Unlike other British ports, it inherited virtually nothing from its medieval past. But it was already a major sugar and tobacco trading port, and it had expanded in the second half of the 17th century, with significant changes to its waterfront which continued throughout the 18th century (Figure 198).[14] It did not have a long stone-faced quay as in London or Newcastle, but had an early wet dock for ships (the Old Dock of 1710–15, the world's first commercial dock) which has been excavated.[15] Only Liverpool matched London for the development of commercial wet docks for much of the 18th century. A visitor in 1791 thought the quayside there 'offers a pleasing epitome of the metropolis', though he also reported being plagued by swarms of flies which he attributed to the many sugar houses, which provided them with constant food.[16]

At Bristol, in 1650 England's second largest port, there were attempts to improve the waterfront in the 17th and early 18th centuries, including the building of two successive and equally shortlived because unprofitable wet docks downstream, then improvements in the later 18th century which resulted in a length of quay which was thought worthy of an anonymous painting.[17] Here is also a similar pattern to the development of warehouses noted at London. In the 17th and early 18th century there were many adaptations of parts of larger houses in Bristol to form storehouses or warehouses. There was a conscious retention of the property layout with a house at the street front and a warehouse behind, often next to the quay.[18] As in London, warehouses were becoming dominant along the quay.

There are many parallels between London and Hull (which sent by far the largest number of ships to London in 1795, as shown in Table 15) in their waterfront development, buildings and material culture in this period.[19] Hollar had mapped Hull in about 1638 (Figure 199);[20] in 1670 the London waterfront must have looked very like the one at Hull, only longer. In the 17th century much of Hull's trade, both in and out, was with Amsterdam and the Baltic; along with a modest traffic to French and Spanish ports, and a growing interest in whaling. Hull was above all the port which connected northern England with northern Europe.[21]

Despite losses in World War II, Hull still has several fine Georgian houses of its merchant class, with Delft tiles in their fireplaces and Dutch landscapes in their overmantels; one, Blaydes House in the High Street, has a small chamber up high between its chimney stacks for a look-out, an asset like the rooftop balcony on the Master's house at the Steelyard in London, probably Beckford's house in Tower Street (the 'turret'), and Nelson House, Rotherhithe. Also surviving is a four-storey brick warehouse built in 1745 and 1760 by Joseph Pease, of a rich family based in Amsterdam

[7] Sacks and Lynch 2000, 397.
[8] Chartres 1980–1, 41–2.
[9] Wright 2014, 120–1, table 6.6.
[10] Wilson 1965, 189–90.
[11] Henderson 1991.
[12] Jackson 1983, 34.
[13] Sacks and Lynch 2000, 384, table 12.1.
[14] Hyde 1971; Sacks and Lynch 2000, 404; Gregory *et al.* 2014, 31–89; Morgan 2016.
[15] Gregory *et al.* 2014, 37–40. Hyde suggests that the designer of the Old Dock, Thomas Steers, had 'experience of dock construction through his connection with the Rotherhithe project in London' (1971, 14), but does not specify further. Perhaps he means the Howland Great Wet Dock of 1697–1700.
[16] Anon 1793, 354.
[17] Morgan 2016; Baker *et al.* 2018. The painting is now dated to about 1785: Baker *et al.* 2018, 50–1, fig 3.6.
[18] Leech 2014, 166–75.
[19] Starkey *et al.* 2017.
[20] The engraving is not dated; internal evidence suggests that the original survey was done in 1638 (Evans 2018 and pers comm).
[21] VCH 1969, 69–171.

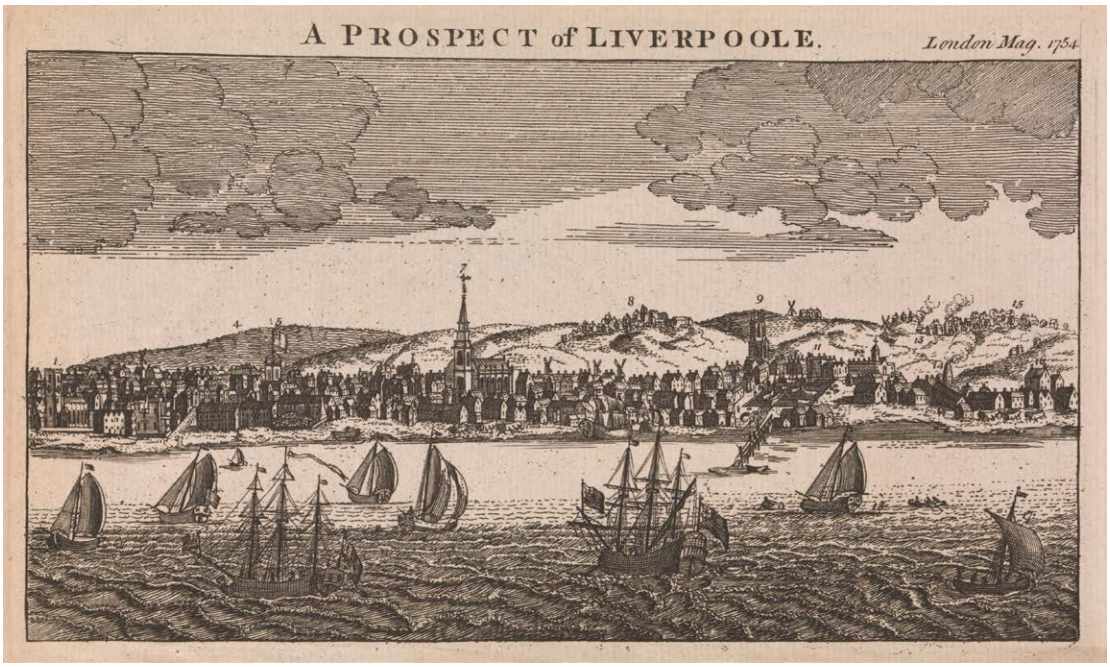


Figure 198 Liverpool, a small copy in 1754 of part of the panorama of 1728 by the Buck brothers (anonymous, Yale Center for British Art, Paul Mellon Collection, B1994.4.586). The new dock of 1710–15 is behind the protruding jetty

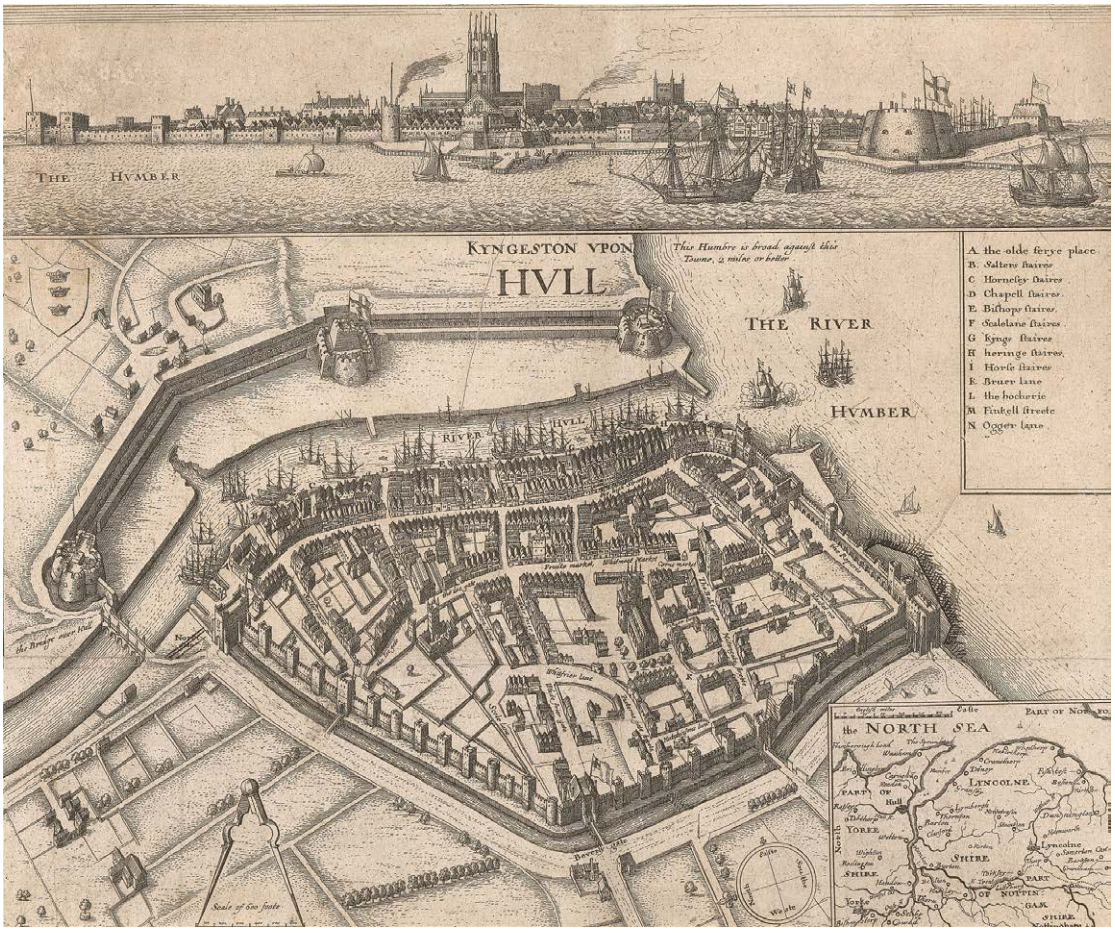


Figure 199 Hull in the 1630s, by Wenceslaus Hollar (Yale Center for British Art, Paul Mellon Collection, Rare Books and Manuscripts Folio *c.* 2010 6e). Ships are crowded along the River Hull. The town lacked a public quay like that of the Custom House in London, where duties on the cargoes were to be paid

and Hull, involved in shipping, banking and whaling. There were connections with the capital: a surviving wall monument to William Maister, merchant, in Holy Trinity Church at Hull was made by Robert Hartshorne of London in 1717, and must have come by sea.[22]

For all the ports and small harbours listed in Table 15 there is a need for more archaeological work to elucidate their histories and importance. The *Cambridge Urban History of Britain* of 2000 included two surveys of British ports, for the periods 1530–1700 and 1700–1840. In the first period, London's needs stimulated ports along the entire east and south coast of England, but its influence was diminished outside this area, as places like Bristol, Exeter and Chester had their own markets and agendas. By 1700 there was a seaport society of wealthy merchants in all the major ports, so that London fashions spread easily. Such people formed an urban elite in the various ports.[23] In the second period, after 1700, all these tendencies increased; and so did squalor and overcrowding, as warehouses pushed aside houses in the competition for space. By 1840, ports 'could be either pretty or prosperous, but rarely both.'[24]

Foreign and colonial ports

By 1700, there were English mercantile communities in many continental ports from Scandinavia to Portugal and dotted throughout the Mediterranean.[25] A survey follows of ports, their waterfront installations and buildings at this period on the Atlantic coast of Europe, then North America and the Caribbean. Only a few will be visited, to show what ports the ships from London and their crews would have seen, and how the quaysides and their buildings looked and functioned in these other places.

The ports of continental Europe which faced London were as grand as London and sometimes grander. Port architecture was a reflection of urban aspirations, as it was in the major Mediterranean ports. Six cities on the west coast of continental Europe will be briefly mentioned as examples. The situation of the port at Hamburg (Figure 200) introduces a consideration which was more important in certain continental ports than at London: the need for extensive military works for defence of the city (the Danes besieged it in 1686). There was no single grand quay at Hamburg, but a complicated system of waterways which had grown up over centuries, lined with generally small narrow properties. A number of 17th- and 18th-century houses are described in a careful study of 1975, using information from before they were almost all destroyed by bombing in 1943.[26] A common form comprised a brick house of four storeys on cellars (and two further storeys in the attic) at the streetside, with a yard at the back which led to a warehouse on the edge of one of the waterways. Within the front house one of the front chambers, just inside the door, was a *Kontor*, a counting house or office, as probably in the London house of Richard Beckford at Great Tower Street described in Chapter 4. The first docks were cut along the line of the town ditch on the south side in the 19th century. The vast free-port area then developed on the marshes of the south bank, at the expense of the houses of nearly 20,000 people.[27] This is a circumstance which recurs in our study.

London printmakers and presumably their customers were interested in the waterfront at Amsterdam (Figure 201). But the example of Amsterdam shows that it is difficult to identify forms or types of house plan which are common to large post-medieval European cities. The variation in secular buildings below the fashionably more uniform styles of public buildings and larger, polite mansions here is great. It may be useful to list some of the features of houses in 17th- and 18th-century Amsterdam which might be identified in contemporary London settings. These include warehouses with their street-side ground floors occupied by built-in houses by about 1600; small, narrow houses of five storeys on cellars by 1656; and much storage in attics, with hoists to the street below. The furnishings in 1665 of the Bartolotti house of 1617–18 (which survives) included dozens of paintings, including seven (though not valuable ones) in a maid's room. Other houses displayed what amounted to 'cartloads' of paintings.[28] A house of 1728 has a possibly significant feature which is so far missing from contemporary houses in the City of London, an emphasis on the ground-floor front room by giving it a decorated plaster ceiling.[29] As the view in Figure 201 shows, by the opening decades of the 17th century the houses were largely of brick.

In the 17th century Rotterdam had a nick-name 'Little London', and a substantial colony of English merchants; the Dutch encouraged them with the provision of a church and a newly laid out district. In 1743 it was estimated that the English colony was 4,000 strong, or about 8% of the city's population.[30] Until their obliteration in bombing of 1940, the city had a range of

[22] Neave and Neave 2017b, 89–112. The surviving historic buildings are presented by Neave and Neave 2017a, a booklet issued to mark Hull's role as UK City of Culture in 2017. I am grateful to D H Evans for information about Hull.
[23] Sacks and Lynch 2000, 397–407.
[24] Jackson 2000, 731.
[25] Fusaro 2015, 208.
[26] Rudhard 1975.
[27] Dickinson 1960, 443–4.
[28] Schama 1991, 313–19. The house (Herengracht 170–172) has changed over time; its original plan and front elevation are reconstructed in Meischke *et al.* 1995, 245–60; including a transcription of the inventory, there dated to 1664.
[29] Meischke *et al.* 1995, 43, 276; the house of 1728, clearly exceptional, is Herengracht 284 (p261–9).
[30] Klein 1984; Ormrod 2008, 13, 36–7, 39, 94.

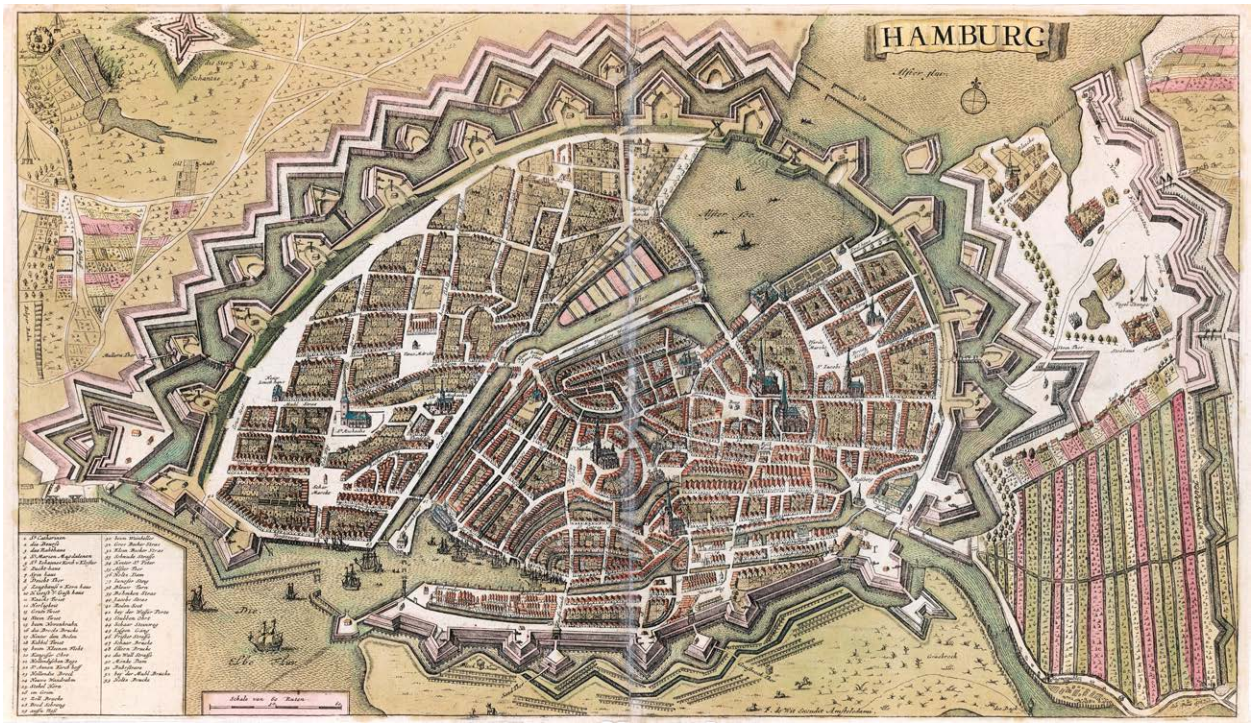


Figure 200 Hamburg in 1694 by Frederik de Wit (Wikimedia Commons). By this time the medieval city had been increased in area with the development of the Neustadt to the west, as shown distinctively here; and the whole surrounded by ramparts in 1616–25



Figure 201 A view of Amsterdam waterfront by Thomas Bowles (d 1753) after Jan Borritsz Smit (1598–1644) (Yale Center for British Art, Paul Mellon Collection, B1995.13.32), 'printed for R Wilkinson at 58 Cornhill'. The waterway leading inland is the Damrak

houses similar to those in Amsterdam, but apparently without the emphasis on storage in attics found there. A very few fragments of buildings survive.[31]

France had many ports on its west coast, from Dunkirk in the north to Bayonne in the south.[32] Nantes and Bordeaux are given as illustrations. Both doubled their population during the 18th century. Nantes was the chief port of France's trade in enslaved people in the 18th century; over 40 per cent of French slaving ships came from there, though many of the other Atlantic ports (and Marseilles) also participated.[33] The port area was rebuilt in several ambitious stages during the century, to produce the present townscape. Works began in 1721. Projects of 1755 and 1761 regularised streets, demolished ramparts, erected quays and built public buildings including a theatre and exchange. The works went on until 1790, by which time the city had been transformed, in both its new parts and old centres.[34]

The prime Atlantic port of France however was Bordeaux, which traded with ports around the North Sea and the Baltic.[35] Here an ambitious scheme to rehabilitate the port area was conceived in 1681, but only constructed from 1731. A new quay fronted in stone ran along the river in front of the city, about 1800m long, longer than the waterfront of London.[36] There were contrasting views from foreign visitors: in 1785 a Mrs Cradock admired the fashion for people coming often by coach to see the ships arrive. Two years later the traveller Arthur Young had heard of it but was disappointed: the quay

> '.. is respectable only for length and its quantity of business, neither of which, to the eye of a stranger, is of much consequence if devoid of beauty. The row of houses is regular, but without either magnificence or beauty. It is a dirty, sloping, muddy shore; parts without pavement, encombered with filth and stones; barges lie here for loading and unloading the ships which cannot approach what should be a quay.'[37]

Further south, the Iberian Atlantic ports had traded with England and London for centuries. A recent study of both the major ports (Seville, Cádiz, Lisbon, Porto) and minor ports (such as Corunna, Santander and Bilbao) in the 16th to 19th centuries furnishes much parallel material. We cite two as examples. Lisbon is comparable to London because it was also a capital city of a maritime empire outside Europe, much of which remained intact until the early 19th century. Quays and an ambitious new area of rectilinear streets based on the waterfront (Barrio Alto) had been constructed in the 16th century. A period of prosperity followed the discovery of gold in Brazil in the 1690s; in 1703, for instance, a convoy of 87 ships arrived in the port. Connections between the two capital cities were close. Over a third of the registered home ports of ships docking there in the period 1641–85 were from England. Portugal became more closely tied to England through a commercial agreement called the Methuen Treaty of 1703. The centre of Lisbon was devastated in 1755 by a very large earthquake, accompanied by a tidal wave and fire. The destroyed area, today the Baixa, was rebuilt, standardised in its layout and building construction. The congested quays were replaced by two large interconnected basins. By 1758 the port was again rivalling Amsterdam and London in the size of its traffic; but one present-day view is that the works after the earthquake failed to address the deficits of the port, 'which remain today';[38] a rather extreme view. North of Lisbon, with its own connections, was Porto. After the Treaty of 1703, British capital and merchants began to settle there, and a British colony flourished: the 'New Street of the Englishmen' became one of the best addresses in the city.[39]

This coastal survey ends at Cádiz, an entrepôt at the beginning of the 16th century and a redistribution centre for bullion, gems and the enslaved. Originally on an island, the town was largely approached or left by boat until the arrival of the railway in the 19th century. Cádiz took over the official monopoly on Spanish colonial trade from Seville in 1717, and then had a golden age of a century and a half which is reflected in its present architecture, not only fine houses (often three or four storeys high, and many with lookout towers) and civic buildings, but especially the large cathedral of 1722.[40] In about 1780, in both Lisbon and Cádiz, 'all the trading-houses are branches of foreign firms.'[41] One could be in London. In Cádiz, unlike in most of the other European ports mentioned, there is much of the 18th-century fabric of the town still standing and worthy of investigation.

London also looked west, across the north Atlantic. Waterfront installations in America and the Caribbean were simpler than those in Europe, as they were built by pioneers or their immediate mercantile successors. In 1681, responding to complaints by merchants in

[31] Vermeer 1999. For Rotterdam's colonial history, including its links with slavery, Oostindie 2021.
[32] Le Mao 2015.
[33] Le Mao 2015, 79–80.
[34] Le Mao 2015, 165–6.
[35] Braudel 1985, map on p259.
[36] Lavaud 2009, 179–82.
[37] Lavaud 2009, 181; Young 1794, i, 59–60.
[38] O'Flanagan 2008, 132–65, 289. In 2020 the wreck of a ship of the second half of the 17th century was found on a waterfront construction site. It was 27m long.
[39] Barros 2022, 92–3.
[40] O'Flanagan 2008, 84–115; Jiménez Mata *et al.* 2012.
[41] Braudel 1985, 40.



Figure 202 The east waterfront of Philadelphia, a detail from a hand-coloured print by J Carwitham, active 1720–40, after George Heap (Yale Center for British Art, Paul Mellon Collection, B1995.13.6). Key: 1, Christ Church; 2, State House; 3, Academy; 4, Presbyterian Church; 5, Dutch Calvinist Church; 6, The Court House; 7, Quaker Meeting House; 8, High Street Wharf

Virginia, the Commissioners of Customs to the Lords of Trade and Plantations recommended that 'trade is to be courted not forced', and although quays had been established, they were without the necessary warehouses which in fact should be built first.[42]

The waterfronts of several cities in the eastern United States have been sampled by excavation, and study of their landfill-retaining structures has begun.[43] The five main towns in colonial times (Boston,[44] Newport, New York, Philadelphia (Figure 202)[45] and Charleston) all had waterfronts from their first periods; they were primarily ports, so their early archaeology will be similar to that of London. In 1675 Boston's merchants, according to one account, had houses as handsomely furnished as most in London; their chief wharf, Long Wharf, was a long projection into the harbour started in 1710 (Figure 203).[46] Newport had a Thames Street with many landing places in the 18th century; a house probably built between 1758 and 1777 survives.[47] Philadelphia was the largest port in America by 1760. It had many brick houses by 1685; one example had three storeys over a cellar, half underground, which communicated directly with the adjacent river.[48] An English traveller to Philadelphia in 1786 thought that the Powel House in South Third Street (which survives) 'might do credit in London' both within and without.[49] The town's waterfront along the Delaware River in the 1790s is minutely described in a street directory of 1860, and there are recent studies of the merchants and their culture.[50] A striking example of the regard which Philadelphia had for London is that according to one architectural historian the designs of both the Pennsylvania Hospital of 1732 and the Spruce Street Almshouses of 1767 were based on Robert Hooke's Bethlem Hospital of 1674 in London's Moorfields, though smaller.[51]

[42] *Cal State Pap, Colonial, America and W Indies 1681–5*, 152.
[43] McDonald 2011; Rothschild and Wall 2014, 55–8. For discussion of waterfront areas of the east coast ports in their urban contexts, Bridenbaugh 1971, 23–4, 170–4, 325–8.
[44] Seasholes 1998; Balicki 1998, with discussion of wharf sites from ten eastern seaboard cities; Lewis 2001. Vance 1990, 258, sees the waterfront or beach to be the nucleus of Boston and most other seaboard towns.
[45] Weigley 1982, 22, 70–4. The original engraving by Heap was nearly 7ft (2.1m) long, and was printed in London from four copper plates. It was issued in several smaller editions in subsequent decades.
[46] Boston's Long Wharf 'succumbed to such incursions as the 19th century's Atlantic Avenue, and is now largely a roadway and parking lot' (Kay 1999, 57).
[47] Bridenbaugh 1971, 38, 170–4, 326. For the house at 30 Thames Street, research by A Bacon (2016), online.
[48] Doerflinger 1986, 5; Wise and Beidleman 1913, 16–17.
[49] Webster 1981, 5.
[50] Ritter 1860; also Jackson 1918 on the properties of Market Street; Doerflinger 1986 for study of the merchant community. For surviving buildings in the old centre of Philadelphia, Webster 1981.
[51] Kornwolf and Kornwolf 2002, 1184–7.



Figure 203 Boston in the early 18th century (by J Carwitham, after another artist; Yale Center for British Art, Paul Mellon Collection, B1995.13.7). This print was produced by Bowles and Carver in St Paul's Churchyard

At New York, the Dutch had built a long wall to form the waterfront by the 1660s (so New York would have looked like Rotterdam). Some British merchants, perhaps including Londoners, moved to New York in the 1680s.[52] As detailed above in Chapter 3, soldiers embarked at Botolph Wharf for New York in 1691. Warehouses and a jetty are shown in a view of about 1700 (Figure 204); there was much officially-encouraged reclamation during the 18th century. An excavation of 1982 at 175 Water Street recorded how a 92ft (28.3m) long ship hulk had been sunk to form the end of reclamation on four contiguous properties.[53] The artefactual evidence for life in New York in the 17th to 19th centuries is familiar to London archaeologists, and there may be connections with specific London artisans.[54]

Eighteenth-century Americans, both before and after the Revolution, looked to Britain and especially to London for fashions in taste. They imported ideas in buildings, furnishings, dress and manners.[55] An Englishness was cultivated from the 1710s and 1720s.[56] Here are two examples. At Westover, William Byrd II's mansion in Virginia, a large pair of wrought-iron gates unparalleled in America may have been made in London in 1711.[57] They were shipped a long way. Second, a whole town: 18th-century Charleston, South Carolina, has been called 'a very English city.'[58] The houses had been adapted to the climate, but the embellishments such as mirrors, chandeliers, styles in panelling and ironwork came from London. They comprised the English life-style. The Miles Brewton house (Figure 205) in Charleston was built for a rich slave trader of that name in 1769, by Londoner Ezra Waite, using a library of architectural texts; upstairs rooms were embellished by two other master carvers who had immigrated from London.[59]

English fashions in houses, however, tended to be indulged in by the upper layers of society. There was more widespread desire for more affordable, smaller

[52] Koot 2011, 172–3.
[53] Cantwell and Wall 2001, 21, 224–41; for particulars of the ('Ronson') ship, Riess 1987. The excavated front end of the ship is now conserved at The Mariners' Museum, Newport News, Virginia.
[54] Four clay tobacco pipe fragments found at the Broad Financial Center site in Manhattan were marked TW, possibly Thomas Worden of London: Cantwell and Wall 2001, 160.
[55] Carson *et al.* 1994. One paper in this collection, Breen 1994, gives many references.
[56] Sweeney 1994.
[57] Waterman 1945, 146. A later date in the century has also been suggested.
[58] Lane 1984, 50, with a list of London craftsmen who had moved to Charleston in the 1740s.
[59] Simons and Lapham 1970, 36–50; Dixon 1981; Poston 1997, 228–9. Lane 1984, 60–71, says that the hall is paved with Purbeck stone (which, from personal observation, it could well be). Both Purbeck and Portland stones were used in public and private Charleston buildings.

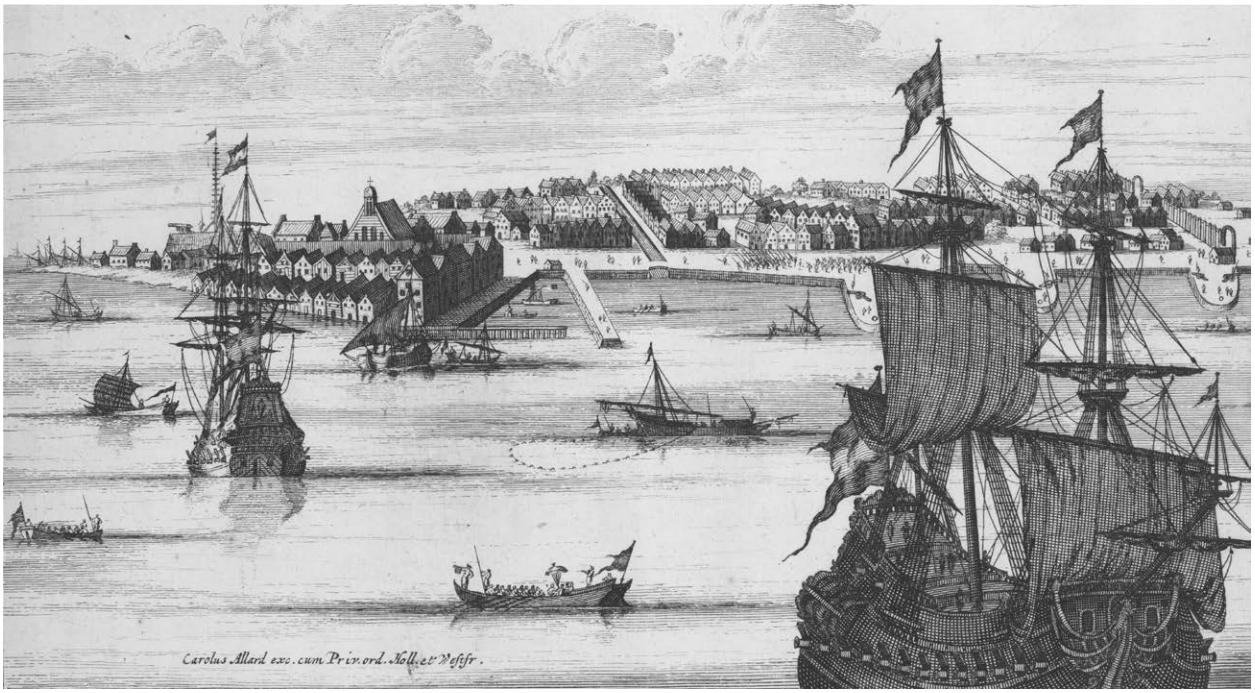


Figure 204 Extract from a view of New York, engraving of about 1700 by Thomas Doesburgh (New York Public Library, Miriam and Ira D Wallach Division of Art, Prints and Photographs). The protruding jetty is the Great Dock, created in 1676



Figure 205 Miles Brewton house, Charleston, South Carolina, USA, finished 1769 (Wikimedia Commons)



Figure 206 Bridge Town Barbados by Samuel Copen, engraved by J Kip, 1695 (Creative Commons Licence, courtesy of the John Carter Brown Library, Brown Univ, Providence RI, USA, Rare Americana, no.62)

and mobile things. In the words of one scholar, 'early American consumers may have lined up for fine earthenwares like claim stakers at an Oklahoma land rush, but not for new housing.'[60]

This brief survey moves south to the Caribbean. Ports here, like many in continental Europe, were defended by forts at their entrances, as at Bridge Town (now Bridgetown) Barbados (Figure 206). The waterfront resembled that in the metropolis with a wharf edge of timber which also formed a sort of parapet. Copen's view of 1695 'makes this Caribbean entrepôt look almost indistinguishable from a commercial town in England or Holland', with its houses of three to four and a half storeys.[61]

In 1708 Edward Hatton declared Thames Street to be 'a most extraordinary, spacious street in London.'[62] Raised, levelled and partly widened (though still with bottlenecks), Thames Street was an enhanced recreation of its former self before the Fire. Further, it was an idea which could be exported. When the English settlement of Port Royal, Jamaica, was established in the 1660s, several streets had names in imitation of those in London (though they are first mentioned in the 1680s). There was a Queen Street, a Lime Street, and a Tower Street (without a tower); but the longest street, along the considerable waterfront of Port Royal, was called Thames Street (Figure 207).[63] Little is known about the form of the waterfront here, except that the writer of a diary thought 'even the largest ships could lay their broadsides to the wharf and load or upload from a plank on shore'.[64] Properties on Thames Street in Port Royal disappeared with a third of the town into the sea in an earthquake of 1692.

In this case there are more parallels with London to be found, and many artefacts found in Port Royal must have come from London. A study of inventories of houses in Port Royal has found similarities in their disposition of rooms with the houses in the Treswell surveys in London in 1610–12; early descriptions of Port Royal (before the earthquake) say it looked like London transposed.[65] Visitors before 1692 described how over half the houses were of brick, four storeys high, with sash windows.[66] A diving exploration of the seabed in the 1960s recovered many artefacts, including a large collection of pewter and among this is a baluster flagon with an inscription on it, 'William Deaven at ye ship Tavern on St Mary Hill' (Figure 208).[67] This London street (now called St Mary at

[60] Chappell 1994, 232.
[61] Dunn 1973, 292. These high houses in Bridge Town are an argument for similar houses of four storeys in Port Royal Jamaica, at least along its waterfront; see next pages.
[62] Hatton 1708, i, 81.
[63] Pawson and Buisseret 1975, 81–5.
[64] Zahedieh 2010, 140–2.
[65] Thornton 1992.
[66] Zahedieh 1994, 253 and n54.
[67] The inscription was read by Winslow in her study of the pewterware (2000, 20 and catalogue H22). There is no need to assume Deaven was ever in Port Royal; only one of his flagons. The flagon and many other pieces are illustrated in Robert Marx's account of his excavations, Marx 1973. They are held in the museum archive of the Jamaica National Heritage Trust.

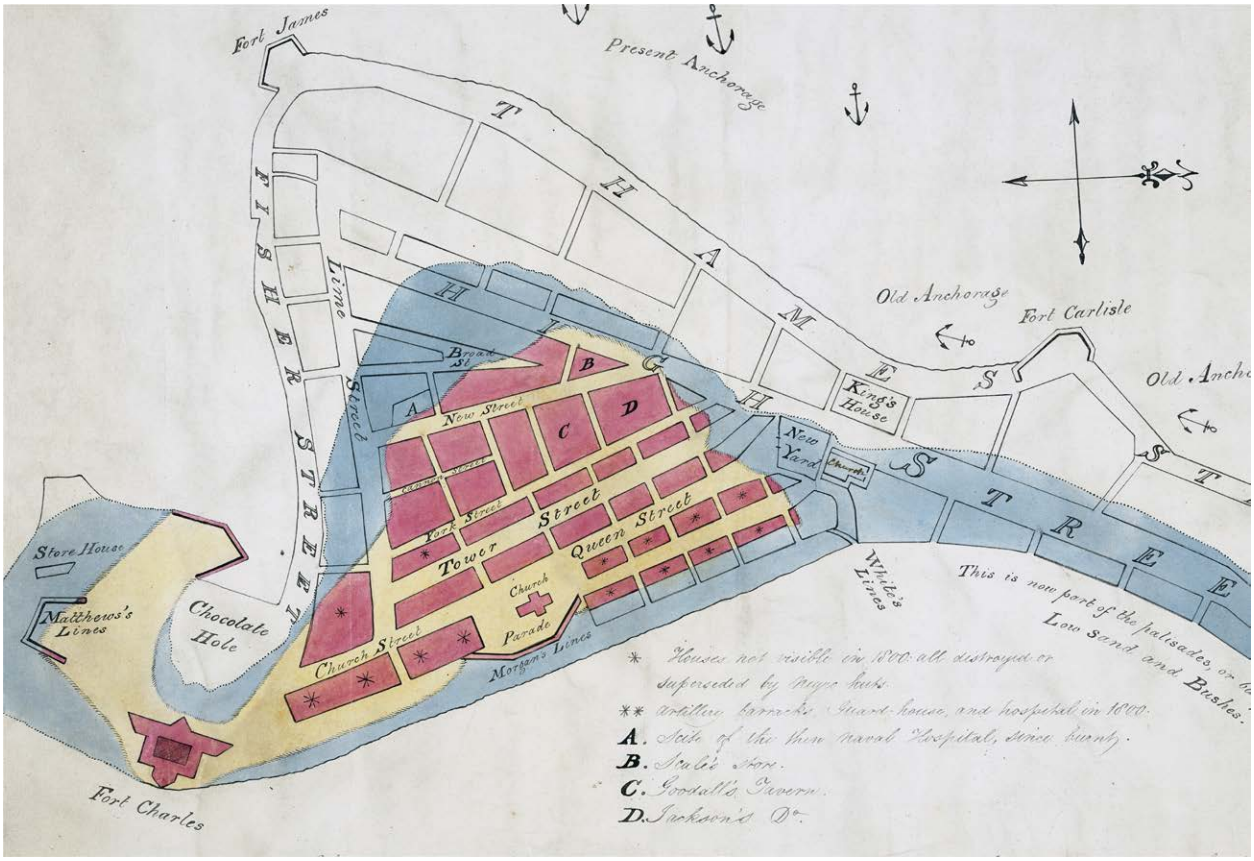


Figure 207 Port Royal Jamaica, an anonymous map of 1837 showing the extent of the town before the earthquake of 1692, and the extent of Thames Street (BL, Add.57717 item 10). All the area shown only in outline fell into the sea. The 17th-century waterfront lay along Thames Street. There has been gradual silting and reclamation around the reduced area since 1692; the blue area of the map indicates 'that which has since been thrown up by the Sea, or made by Art'. Since 1969 archaeological excavations have taken place in the sea over the buildings of Lime Street, and on land at the site of the pre-1692 church (opposite the King's House)

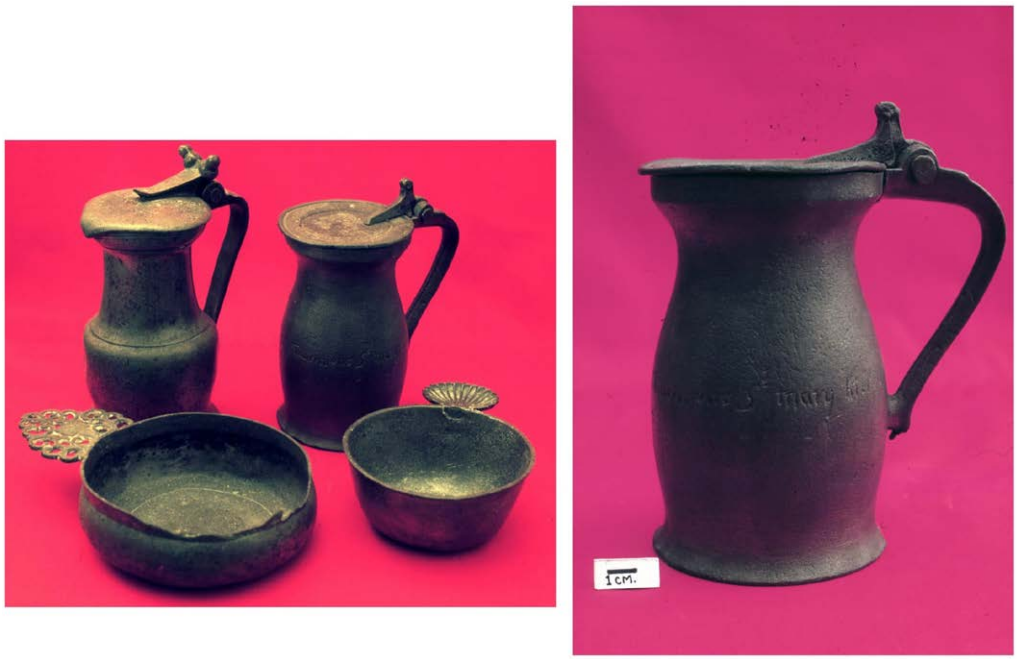


Figure 208 Left, some of the pewter pieces from the underwater excavations at Port Royal in the 1960s. Right, the flagon,150mm high (John Schofield)

Hill) led from Eastcheap to Billingsgate; a tavern called the Ship at Billingsgate, within the parish of St Mary at Hill, is mentioned in parish records in 1510–11.[68] Perhaps a drinker on his way to Port Royal stole the flagon.[69] More research could be undertaken into the many artefacts from the Port Royal site which, because of their burial in the earthquake of 1692, represent the material culture of Restoration London more than material recovered from London itself. Excavations took place on land in 1969–70, on the site of the parish church at the east end of the settlement.[70] Then a team from Texas A&M University investigating the sea-bed in the 1980s uncovered fairly complete plans of houses and many artefacts.[71] The artefacts from the submerged streets of Port Royal are very similar to those described in the present monograph, though richer because they include pewter. They could have been found in the debris of buildings on a London street; which, in some ways, they were.

Whether the network was around the British Isles, for coastal traffic, or on a much wider scale around the world, we need more from these other places to compare with London. The archaeology of the post-Fire trading world has yet to be constructed. A recent historical survey of a selection of European ports from the 17th century to the 20th century contains no mention of archaeology at all.[72] Historic European ports have much in common, and archaeology should be part of their study as they rapidly redevelop themselves. All the themes we are exploring in the present work could also be studied in the port cities of north America, and comparisons made with the older cities of Europe. On an even wider scale, there is an archaeology, a rather forgotten cultural heritage of waterfronts, and port towns around the world can contribute.[73] Now is the moment to create early modern waterfront archaeology as a subject of widespread, comparative international research, before the evidence is destroyed.

[68] Littlehales 1904–5, 276. The location of the tavern is not known; the parish included properties on the south side of Thames Street, immediately east of Billingsgate dock.

[69] Our own suggestion, but already made by Ivor Noël Hume in a 1972 review of a stenographed report on the pewter from his underwater excavations by Marx (Noël Hume 1972, 103).

[70] Mayes 1972.

[71] Hamilton 1984; for pottery from this project, Donachie 2003; with a succinct summary of the archaeological sequence and discoveries, p14–18. For the excavated pewter (including the pieces recovered in the 1960s), Winslow 2000; the clay tobacco pipes, Fox 2002. For 50 pieces of glass from the previous excavations, Noël Hume 1968.

[72] Lee and McNamara 2022.

[73] The building materials of the 18th-century port at Cartagena on the Mediterranean coast of Spain have been analysed, in a paper significantly titled 'Port city waterfronts, a forgotten cultural heritage' (Peñalver Martinez *et al.* 2013). Outside Europe and north America, waterfront archaeology has been undertaken in Cape Town (S Africa) (Saitowitz *et al.* 1993).

9 The port of London, 1666 to 1800: a summary and some questions for further research

This concluding chapter is in three sections, dealing with two general arguments or guiding thoughts behind the enquiry; detailed questions arising from the sites in their setting; and some other matters of archaeological interest to which the study has attempted to make a contribution.

General arguments

London was the centre of the trading network of the north Atlantic and much of western Europe by 1775;[1] but this was a generation before the opening of the London Docks downstream of the City in 1801–6. The latter was a fundamental change which propelled London and Britain into its final and greatest imperial state. What led up to the events around 1800 requires exploration and perhaps explanation. London, and especially its waterfront, was the centre and hub of the British Empire. Study of the houses and utilitarian buildings of trade in the port of London in the late 17th and 18th centuries will illuminate the place of London in the early history of that empire.

The exploration began with a review of the public buildings, wharves and transport arrangements on the City's waterfront from 1666 to about 1750. This was followed by a detailed account of archaeological excavations of the period around the north end of London Bridge in Thames Street in 1974–84, including discussion of buildings, material culture and lifestyle in post-Fire London. The latest excavated layers were of about 1730 on the Billingsgate site, and probably of about 1776 at Seal House. A note looked briefly at the evidence in the City of London for the slavery trade, from its earliest occurrence to 1800. The narrative was taken into the first decades of the 19th century; then London's connections with British and foreign ports during the period were outlined.

Two general arguments have permeated the work and hopefully given it cohesion:

The Great Fire of London in 1666 changed an important and central part of the conurbation of London, but there were also many important continuities in both public and private life.

Only part of the City was destroyed in 1666.The Great Fire devastated about 20 per cent of the conurbation then standing (the City, the suburbs and Southwark, not counting Westminster). It prompted the specification, mostly successful, of new standards of building in the destroyed zone. Around it in 1676, as shown on Ogilby and Morgan's map of the City, was a corona of pre-Fire housing, industrial buildings and churches which changed much more slowly. These zones were like the skins of an onion. A person walking or riding by coach from west to east in 1700, starting in the unburnt part of Fleet Street, would experience first a mixture of pre-Fire and post-Fire buldings, then the area of new post-Fire buildings across the centre of the City (notably the new cathedral, almost finished), and then a longer stretch of largely pre-Fire buildings from Leadenhall Street to Aldgate. In the eastern suburbs beyond, brick building had been widespread in new developments (especially of small scale housing) since 40 years before the Fire. Thus the civic and government direction to rebuild the fire-damaged area in brick was not revolutionary; it was rather the adoption of sounder building practice which was already the case in the majority of new developments, largely on grounds of cost. Stone was only used on churches and public buildings, and then sometimes sparingly.

The plans of Wren and Evelyn for largescale replanning of the Fire-devastated area came to nothing, except for one new street (King Street and its continuation Queen Street) which led from Guildhall to the wharf. There was very little grandiose or baroque replanning of the riverside. The reclaimed land was not extended except in a few areas, such as at the mouth of the Fleet. Thames Street was raised along its entire length and some bottlenecks were removed, but the boundaries of properties on either side remained essentially the same as before. At Botolph Wharf, the walls (though apparently not the vaulting) of a medieval undercroft were recycled as the cellar of a new house which would be occupied by vintner Francis Minshull a few years later. Reuse of the existing was the order of the day.

Within this Fire-affected area, there were some changes. A geographically central point is Wren's church of St Mary-le-Bow in Cheapside. From here, for a distance of half a mile to a mile in all directions, all the existing streets in 1666 were retained after the Fire, though often widened in parts; the slopes down to the river and down to the Fleet were lessened with fire rubble. Three damaged City gates on the burnt west side were rebuilt, and none was sacrificed; they still had symbolic significance, though the City had not been attacked for 200 years and the City wall was now a token boundary between houses. Some markets were moved to more convenient sites, others stayed put. The great

[1] Braudel 1984, 29, 273.

majority of the parish churches which were chosen for rebuilding were the same size and footprint as what was there before; Wren and his associates rarely changed the outline of the church on the ground. In light of this general lack of change, the spasmodic reform of the quayside, and the similar unsuccessful rebuilding of the lower Fleet, were perhaps predictable failures. This was half-hearted river and port architecture by comparison with several contemporary European cities.

Whether houses and other secular buildings (shops, stables, industrial premises) in the City changed their character after the Fire can be addressed by comparing the small corpora of surveys provided by Treswell for 1607–12 and Leybourn in 1686. Some of Leybourn's plans have been illustrated here. What changed in 1666? Only one thing, their method of construction. Along with the new insistence on brick came the final demise of jettied overhangs, which were already out of fashion anyway, as shown by records of timber-framed buildings constructed in the 1650s. The Fire Court sorted out some of the tangled tenancies, and some buildings had new plans because of local cases of street widening within the Fire area. But there is no evidence that houses were now used differently. The post-Fire regulations say nothing about changing the function or appearance of any rooms within houses.

We therefore suggest that the continuities after the Great Fire are just as important as the changes for understanding London at this time.

Archaeological sites along the waterfront, both in the City area and downstream as far as Deptford, have revealed a rich urban culture for the years 1666 to 1800 with many elements of foreign fashions, and these foreign influences were arguably strongest in the nation's largest port. Perhaps in London we can study consumer tastes and consumption.

With this second statement and aspiration, the scope of the study widens to include the settlements on the north bank to the east and on the south side of the River Thames, from Southwark to Deptford. The term 'waterfront' now also means both sides of the river. Having identified numerous excavations in the waterfront zone, we can compare sites and artefacts over a wide and coherent area. Sites east of the City, such as Narrow Street Limehouse or Bombay Wharf Rotherhithe, are often as rich as and sometimes richer in structural remains and especially 16th- to 18th-century pottery than contemporary sites on the City waterfront. Perhaps social life was more colourful in the eastern riverside suburbs than in the City itself; seafaring may have had something to do with this.

To study how standards of living changed during the 17th and 18th centuries is not a new idea. In the 1980s a consumer revolution in Britain was ascribed to the late 18th century, but this idea has been qualified since, with evidence of widening consumer demands in earlier decades and even centuries.[2] There have also been doubts about the idea: Weatherill studied consumers in late 17th-century and early 18th-century England, including London, and thought that attempts to link consumption and society in the 18th century in terms of consumerism were misleading because faulty.[3] But it remains widely accepted that the size and character of London, with its rate of growth in population between 1600 and 1800 equalled only by Paris, provided a prime advantage for the creation of a consumer society, though something like this had been going on in London for centuries before.[4] At the national level, the consensus is that

> 'by the mid 18th century, in contrast to the early 17th century, meals in better-off households were increasingly cooked using sauce-pans on a coal range, eaten with knives and forks off ceramic rather than pewter plates or trenchers, by diners seated in chairs rather than benches, at tables dressed with linen table cloths, in rooms furnished with a degree of style and comfort. Social differences were marked but the trend towards higher levels of consumption per head is unmistakable.'[5]

This has also been studied in north America, where a distinction is seen between a slowly rising standard of living well before 1700 and the decades after 1700 when 'many people began acquiring goods, using services, and engaging in social, recreational, and educational activities that went far beyond meeting or improving basic physical needs.'[6]

How to carry out an archaeological study of a British, or Anglo-American, early modern consumer culture is not yet certain. A summary of the subject in 2007 noted 'archaeology is distinctively positioned to confront the multivalent meaning of goods, probe the ideological roots of material symbolism, and emphasise that even the most commonplace objects provide insights into meaningful social struggles.'[7] We would stress that the commercial and professional classes in English towns generally, and specifically in London as studied here, were not always slavish imitators of their financial and social superiors who could afford new fashions. The

[2] McKendrick *et al.* 1982; Brewer and Porter 1993; for discussion, McCracken 1988; especially the review of the subject in Glennie 1995; Berg 2005: 'historians immediately found fault with a concept that tried to say too much'; to some 'this so-called 'consumer revolution' was surely no more than a panegyric to metropolitan elites' (2005, 9–11).

[3] Weatherill 1993, 207.

[4] McKendrick *et al.* 1982, 21–2. The populations of nine European cities are compared by Beier and Finlay 1986a, fig 1. London overtook Paris in population around 1700.

[5] Broadberry *et al.* 2015, 302.

[6] Carson 1994, 513.

[7] Mullins 2007, 197.

middle classes helped to bring about new standards of domestic consumption by defining their own tastes, often with a penchant for variety. Some aspects of this post-Fire material culture were explored in Chapter 4. We have been watching various neighbourhoods of the London riverside in the period 1666 to sometime after 1750. At the higher levels of mercantile society, the piles of pewter, the Turkey work chairs and silver were evidence of a rich level of consumption. Beckford and Minshull, and many others like them, had certainly accumulated much. At the wider level of more ordinary people whose houses and workplaces in London have been the subjects of excavation, it has been suggested that the widespread adoption of tin-glazed pottery in the 17th century was part of a new trend towards a consumer society.[8] What is also clear is that the London sites, being no doubt cleared of valuable items whenever a building was demolished, do not furnish a complete range of household artefacts from which lifestyles can be accurately deduced. The underwater and catastrophic site of Port Royal shows that houses were full of much else besides pottery; they contained many items in perishable materials such as wood, and pewter, in one case found in stacks beneath a collapsed stair.[9]

The material lives of people in post-Fire London are illuminated by a combination of all the sources reviewed in this study. The interiors of the houses of prominent citizens (Beckford, Minshull) are described in their inventories. Information on the sort of pewter they used is supplied by Port Royal. The lower parts of their houses and warehouses, and fragments of pottery and glass they used, were excavated on the archaeological sites. The archaeological evidence, for instance that from cesspits, will always be partial, but it fits into a wider picture which we have only begun to draw.

Detailed questions on the sites and their setting, 1666 to 1800

Other detailed questions set at the beginning of the study (Chapter 1 above) can now be addressed.

1. To what extent do these waterfront buildings follow the usual notions of rebuilding after the Great Fire? How do they compare with late 17th- and 18th-century buildings on other London sites? What changed between 1666 and 1800?

The excavated structures have largely been cellars and cesspits; the lowest parts of buildings on Thames Street and down the alleys to the waterfront. At Botolph Wharf, the buildings were erected over a period of six and a half decades after 1666. At Seal House, fragments of cellars excavated were of houses built in 1671 and surveyed in 1686. The domestic waterfront buildings in the period before the middle of the 18th century conformed with the types seen on other sites in the City and surrounding places, and there was little or nothing unusual about them. Chapter 4 described several types of post-Fire house in the City ranging from the courtyard house to a range of small houses down an alley, and the contribution of the archaeological sites has been to the lower end of the social scale. This is, however, where most people lived. One house plan type, known since the 14th century, was common all over the London conurbation at this period; the London terraced house of the late 17th century and throughout the 18th century was of two rooms, with a variety of forms of staircase. The archaeological evidence from the Billingsgate site is not very specific but the parallels of nearby houses in front of Fishmongers' Hall suggest that houses on Thames Street generally had a rectangular form which would accommodate two square rooms or one long one. These houses were like many others elsewhere in the conurbation, and a block containing four of them has been excavated on a backland site south of Aldgate.[10]

The waterfront buildings conform to our notions of the nature of rebuilding after the Great Fire. The excavated buildings observed the few rules then in force. They are similar in plan and materials to many other late 17th- and 18th-century London buildings, known from surviving examples and from a rich range of plans made for legal purposes.[11] But the archaeology provides particular detail not found elsewhere, such as the location of cesspits within buildings and their contents. There was a remarkably fast turnover of buildings, or of alterations to them, in the decades 1667 to 1732 on the Billingsgate site; whereas Darvoll's small row of houses in Black Raven Alley at Seal House seem to have lasted largely intact for a century. The Billingsgate or Botolph Wharf buildings were built for trade, and were almost constantly being reconfigured or replaced; the buildings at Seal House were domestic, so they changed little. There was a pressure for building warehouse space in Thames Street, which from the 1730s triumphed and was widespread, but in the decades 1667 to 1730 there were houses and presumably shops here. They were eventually squeezed out, but not before leaving their own evidence.

In the middle and second half of the 18th century large complexes of warehouses, some comprising several courtyards, appeared in the eastern half of the City. The distance away from the waterfront of these developments indicates that the final stages of the journey of the foreign merchandise had changed, with an increased emphasis on Blackwall taking some of the

[8] Orton 1988, 347.
[9] Donachie 2003, 18.
[10] Thompson *et al.* 1984.
[11] Guillery 2004; Gerhold 2016.

pressure off the crowded Thames Street waterfront and the Sufferance Wharves.

These are some of the changes to buildings in the City in the period 1666 to 1800. Others, such as the arrival and proliferation of banks, commodity exchanges and office buildings, began in the second half of the 18th century but are not covered here. They belong in the 19th century.

2. Was the City waterfront a distinctive place within the post-Fire City of London? How did it differ from the south bank facing it?

Post-Fire Thames Street, for all of its 1.3km length, lay several metres below the parallel crest of the hill formed by Cannon Street and its continuation Eastcheap to the east. Thames Street may have seemed a place apart, occupying a flat zone lower down and bordering the river. On the north side of the street, away from the river, the land rose sharply; so sharply that the lanes had to be lessened in their gradients in the years immediately after the Fire, even with the raising of Thames Street itself at their south ends. As far as the buildings and land use are concerned, the waterfront area south of the street was in some ways similar to the City north of it in its ordinary buildings (so that similarities between the appearance of the frontages on Thames Street and those in other streets can be suggested); but along the edge of the river, specialised buildings predominated: mainly warehouses with their cranes, but also dyehouses and industrial establishments (more evident in 1790 than in 1700), often of considerable size.

What was distinctive about Thames Street after the Fire, as in the period before the Fire, was that it was a service road for all the land between itself and the river. The skeleton, the armature of the reclaimed zone had grown by extension over the medieval period, well before 1666. By the time of Ogilby and Morgan's map of the City in 1676, the waterfront area south of Thames Street was up to 400ft (120m) wide, from the street to the edge of the quay; this largest measurement was by All Hallows the Great church, where Cannon Street railway station's viaduct now is.

Along the river's edge, then as now a different world from Thames Street to the north, some buildings showed off. At the east end of the waterfront, the wings of Custom House enclosed the largest wharf space; next to the bridge, Fishmongers' Hall stood out confidently as its successor does now, and its riverfront facade was its best face in 1670 and in 1836. The idea that buildings could be erected along the riverfront as items of display had been present in the medieval city, and it would continue as a theme throughout the 18th and 19th centuries. It is not absent from consideration in developments at the water's edge today.

The historical development of the north bank of the Thames contrasts greatly with that of the south bank facing it. Before 1650, the overcrowded tenements of the City's riverfront lanes faced a comparatively rural landscape over the river. There were no long thin properties at right angles to the river along the bank here. The late 16th-century theatres on the Southwark side were on the edge of town and almost among fields, as were other theatres north-west and north-east of the City. Buildings on the south bank of the Thames, for miles upstream and downstream, were generally smaller in scale and lower in height. Monumental constructions such as the Albion Mills of 1791 came late in the period and heralded the developments of the 19th century. Until 1800 the tone was industrial, interspersed with streets of generally small houses and among them several courtyards of almshouses. The variety of building forms here was greater than along Thames Street on the north bank.

From these observations we conclude that the waterfront was a distinctive place within the post-Fire City of London, and it looked different from the south bank until monolithic and widespread warehouses occupied both banks in the 19th century. Then the two banks looked the same.

3. What is the place of the archaeology of the waterfront within the archaeology of post-Fire London as a whole?

This asks if the potential for finding out more, is different in the waterfront zone from that in the rest of the City and the conurbation. To answer that some perception of the nature of post-Fire archaeology in London is required.

The number of excavations in the City of London which have produced significant remains of the 17th and 18th century is still small, especially in comparison to the hundreds, if not over a thousand, of excavations which have produced parts of buildings and tons of artefacts from the Roman period of AD 43–400.[12] Since 1974 there have been excavations of 17th-century and later domestic sites at Aldgate, Spitalfields (where the excavated area was many times larger than that at Billingsgate) and Deptford, and at many other smaller sites in and around the City or along the south bank of the Thames. There has been recording of public buildings of the City in the post-Fire period such as St Paul's and Guildhall, and of royal palaces, notably the Tower of London. Some, though by no means many, of London's industries have been sampled on individual sites. Large collections of human remains from burials

[12] Recently synthesised in Perring 2022. That study is based on 398 sites excavated or observed since World War II, culled from a larger group of several thousand sites in the London area (information from D Perring).

in churchyards and crypts of parish churches have been analysed; the progress of early modern science is being addressed. In all these cases, it is the conjunction with documentary evidence, far greater in quantity and quality than ever before, which gives post-medieval archaeology in London (of which the post-Fire period to 1800 is but one part) an extraordinary explanatory power when compared to the archaeology of previous periods.

The availability of post-Fire buildings and strata to be excavated in the City and its immediate suburbs in the future is however unpredictable away from the waterfront which is comparatively rich in such deposits. Ninteenth- and 20th-century basements have removed most of the deposits of the post-Fire centuries from within the City walls. This is well illustrated by the results of excavations of 1997–2003 in a large area bounded by Fenchurch Street, Rood Lane, Eastcheap/Tower Street and Mincing Lane, only a short distance north-east of the present study sites; on the comparative summit or higher plateau of Cornhill and therefore lacking a depth of stratigraphy. Here the only product of the post-Fire period over a large area excavated was a small number of fragments of wall foundations and brick wells. Even cesspits, which were recorded in numbers for the medieval period, and as so often productive of finds, were absent for the period after 1666.[13] Better survival of buildings and stratigraphy of the late 17th and 18th centuries was found in a suburban context at Spitalfields.[14] For domestic sites in central London, this may be the normal story in the future; archaeological survival is better in streets immediately outside the City wall. One question for the future concerns the effect, if any, of the Great Fire on the archaeology of sites in the City which have post-Fire strata to report. Do sites within the Fire-damaged area have a different archaeology from those outside the Fire area? We do not know. A proposal to be tested is that sites to be excavated outside the Fire will display a higher incidence of gradual adaptation of earlier structures, since the opportunities or necessities of rebuilding brought about by the Fire had not intervened so dramatically. In these sites structures from earlier periods would be partly reused where they did not interfere with new designs.

The evidence from the sites reported here strongly suggests that the historic strata still surviving in the area south of Thames Street, though now much reduced in volume by the last 50 years of development, continue to be a rich index of many aspects of London life over centuries. The waterfront has already produced an amount of data which should be interrogated again and again. From 1666 to 1800, the waterfront of the City, along with that to the east along both banks of the Thames, was a very important part of London, since the day-to-day management of London's trading empire was carried out there.

4. How does this study elucidate the late 17th- and 18th-century port and its national and international connections?

The waterfront of the City of London, especially the section below the bridge, was the City's trading gateway to the world outside Britain in the generations before the London Docks were established in the early 19th century. Botolph Wharf was a major centre of this activity: in 1710, as noted in Chapter 3, ships unloading at the Wharf came from Barbados, Maryland, Leghorn (Livorno, Italy) and St Petersburg, at the farthest end of the Baltic Sea. The buildings on the Wharf comprised the final stage of long international voyages of luxuries and goods, and the Wharf was a prime gateway for foreign merchandise into the City.

Chapter 8 described a selection of both British and foreign ports, including those on the other side of the Atlantic, which can be compared to London in the nature of their waterfronts. Economic historians have shown that in the century after the Restoration, 'there was a major redirection of England's overseas trade to areas beyond Europe; an expansion in the shipping and ship-building industries; a dynamic growth in new import and re-export trades.. and the development of expertise in a range of commercial services'.[15] There is an archaeological dimension to this.

First, the evidence is not only in London but in other ports such as Bristol and Liverpool, Hull and Newcastle; and in a multitude of smaller havens around Britain. Comparison of material, whether houses, port facilities or artefacts, should be made with these places. This comparative study has not yet begun for the post-medieval period. Second, ports on the west coast of Europe, from Gdańsk to Cádiz, sent goods and people to London and received goods and people in return. There were colonies of English, and London, merchants in several of them. We have found substantial research on these ports only in France.[16] This is a second subject where more research is required.

Third, the archaeology of the port of London in 1666–1800 should be compared with that of New World port cities. Thames Street was an important post-Fire street in the City; so much so that the idea of Thames Street was exported to the American and Caribbean colonies. In at least two cases, a colonial town had a long waterfront with quays and warehouses based on a street along the shore called Thames Street. As in European cities, the

[13] Pitt *et al.* 2013.
[14] Harward *et al.* 2016.
[15] Zahedieh 2010, 3–4.
[16] Le Mao 2015.

waterfront was the gateway into the town and its region. There was an economic and cultural unity to both sides of the north Atlantic; Americans demanded and consumed British goods in great quantity throughout the 18th century, even during and after their revolution in the 1770s.[17] One way forward here is for London and New World archaeologists to have common standards in pottery and artefact descriptions. To this end we offer to colleagues working in North America and the Caribbean the tables of pottery types and glass forms of 1666 to 1800 used here (Tables 16 and 17 in Chapter 10). Some clay tobacco pipes made in London are already found across the Atlantic. In due course there should be trans-Atlantic discussion of all types of glassware and building materials, and study of the transfer of manufacturing experience and knowledge (for instance in shipbuilding) in both directions at this period.

In 1967, Ralph Davis suggested that 'we may well attach to the period running from the English Restoration to American Independence the title of The Commercial Revolution.'[18] This revolution came in two bursts, with periods of decline or reversal between them. The first was between 1660 and 1689, given strength by the Navigation Acts of 1651 and 1660. Though London had been involved in colonising ventures since the late 16th century, the true origin of its overseas empire can be attributed to these Acts, which were spontaneous rather than the result of a thought-out policy: according to one historian, 'the Rump Parliament... was manoeuvred by one group of the City merchants most hostile to Dutch overseas commerce into passing the law that prohibited imports in foreign ships or through a foreign country other than the one where they originated..yet to England it [the creation of the Acts] marked a new attitude to trade.'[19] The City merchants called the tune. But on the waterfront, there were problems: increased business produced Joseph Ashton and his wharfingers' cartel which prevented the improvement of facilities.

The expansion from the middle of the 18th century, the second of Davis's periods, was characterised by the creation of large, often gigantic warehouse complexes in the eastern part of the landward City, away from the waterfront. The Sufferance Wharves appeared on the south bank of the river and in a small cluster next to the Tower on the north bank. By 1800 the central part of London had a particular range of architectural forms – warehouses of all sizes, and an appropriately large office block, East India House – which were created by an assumption of empire, and this by importing, storing and exporting all the goods of that empire. That confirmed the City of London's special place within Britain, and it had very few close parallels abroad. Bacon's sculptures in the pediment at East India House, celebrating the empire stretching round the world, are of 1797–9.

One theme has recurred throughout the narrative. Ordinary people were evicted and their homes destroyed by commercial imperatives. The creation and prosperity of the British Empire affected many regions of the world and their inhabitants, but also required constant change in the topography of the City and the lives of its inhabitants, as London found its place as an international port. Ordinary people paid the price.

5. What evidence has been found of London's links with slavery?

During this period London became the hub of the new British Empire, new in European history, but contributed to the exploitation of people from other lands known as slavery. The major ports of London, Bristol and Liverpool were the leaders in this trade from its origins in the late 16th century to after 1800.[20]

Slaves were a commodity to be traded, like sugar, rum or timber. To date, the evidence for the connections between the post-Fire City of London and slavery has rarely been presented or discussed, though they do exist. Many prominent citizens had interests in the West Indies; their wealth was reflected in their houses, and probably in their other possessions if they could be researched. Henry Ashton and other people on Botolph Wharf served the slavery business, in that their warehouses stored the cowrie shells which were used to buy enslaved people and a sample of which were found. In 1730 and 1732 Captain William Blackburne wrote to Ashton describing, in a first letter from Kingston Jamaica, how he would search for a place where there was most demand for the enslaved (for he had some to sell); and in the second letter, how he lost five due to illness when sailing from Jamaica to Panama with his human cargo. He buried them at sea. From such references an archaeology of slavery in London can be compiled. The brief note forming Chapter 6 concludes that the links between post-Fire wealth and gentility, or fashion, in London should be explored to see if (or how) the money generated by the slavery trade was channelled into metropolitan display or style. This would complement recent research which has been mainly on the relationships between slavery and the British country house.[21]

6. What were the buildings used for? How do studies of the present kind illuminate the history of buildings in London?

[17] Carson *et al.* 1994.
[18] Davis 1967a, 3.
[19] Pennington 1989, 90.
[20] Morgan 1993; 2000; 2007.
[21] Dresser and Hahn 2013.

From the opening decades of the 17th century, plans of London properties provide copious evidence for named rooms and spaces: hall, parlour, shop, warehouse, garden and so on. Some plans are single examples of individual properties (for instance, when attached to leases), but there are also collections of plans of properties belonging to individual institutions. The earliest collection so far published is the plans by Ralph Treswell in 1607–12.[22] A second collection of surveys, by William Leybourn in 1686, has been used in the present work. Leybourn identifies the function of every space he is surveying. The documentary evidence specifically for the present sites is also helpful; we can surmise that many of the excavated structures were warehouses. The occupiers and sometimes the builders of houses on the sites are identified by the documentary evidence; most notably, that for Francis Minshull and his wife at Botolph Wharf. Here, from the leases and Minshull's inventory in 1704, we can take a simple journey through the house.

The archaeological material from the sites in the present study is poor in providing comparable data. The excavated walls and floors are of the lowest storeys, probably the basement or cellar in all cases. The finds in them were not diagnostic of special functions for any rooms; they were fragments trodden into the floor levels or unknowingly incorporated into the layers which made up floors and yards. Where cesspits existed, we might propose domestic buildings; though the warehouses must also have had some kind of facilities, however crude.

Artefacts can provide evidence for the use of excavated buildings during their lifetime. This does depend, however, on what was discarded and subsequently recovered; buildings associated with trade and commerce may well yield relatively little material evidence directly related to such functions if these items were sold or moved into storage elsewhere and breakages were carefully cleared. Evidence for everyday domestic usage is far more likely to have survived since household items that were damaged or past their functional best would have had no further use and would therefore be discarded, possibly close to the property. This is the picture illustrated by the finds from Darvoll's houses of 1671 at Seal House in the hundred years or so of their active life from the late 17th to late 18th century. The same can be said for the finds from the cesspit fill at Swan Lane. The pottery, glass and other finds are typically domestic in character, covering everyday household functions such as cooking, eating, drinking and storage.

[22] Schofield 1987, many of the plans redrawn in Schofield 2003. Access routes through the ground floor of some of the houses is attempted in Schofield 1994.

At Billingsgate, a number of separate buildings were excavated. D:Building 11, the layers beneath Minshull's house, produced many fragments of green glass bottles. Was this because he was a vintner, as well as a merchant with international connections? Across the alley, large quantities of pottery were recovered from contexts associated with D:Building 12, which has been identified as warehousing used by Ashton, Peacock and Warburton from 1685. A breakdown of the ceramic sources, however (Table 27 in Chapter 10), shows that these compare closely with everyday household usage, with Surrey-Hampshire border wares and London-area redwares predominant in a range of forms in widespread use across London at this period. There is a relatively high proportion of continental imports in Event 10 contexts, but these are in no way exceptional. Chinese porcelain remains of minimal importance throughout the sequence in this building.

Evidence for sugar refining in the form of sherds from sugarloaf moulds and collecting jars was found in several contexts on site D, with a particular concentration in D:Building 12 in Event 13 (70 sherds from at least 31 vessels, together with syrup collecting jars). Discarded waste from refineries is common on sites across the City of London, especially along the waterfront, their favoured location. Evidence of the sugar trade is found in Richard Beckford's 1679 inventory, which records 37 hogsheads of sugar in the warehouse and cellar, valued at £222 (see Chapter 10), that is in a merchant's house a short distance from the waterfront. But at the moment the sugar house to go with the many excavated sherd fragments is not to be found.

Each archaeological site in post-Fire London, when presented along with its documentary evidence, can make a contribution to study of the function of buildings. We must continue to record examples. It is the collaboration between archaeology and documents which produces a very detailed form of history.

Overall conclusions

This study has been of Thames Street, principally its south side and the reclaimed land bordering the river in the period 1666 to 1800. A rich context for this part of the waterfront of the City of London is provided by the development of the wider waterfront on both banks of the Thames, to the west and especially to the east. The study has also compared the buildings and developments of the waterfront area with the rest of the post-Fire City and the immediate suburbs. To borrow and adapt two images put forward by Simon Schama in his study of 17th-century Dutch culture, we have been trying to understand how those who lived and worked here made themselves up as they went along, and we have done this by walking around the 17th- and 18th-

century London waterfront, bumping into the buildings and constructions of the time.[23]

Two particular ideas or proposals about London's waterfront at this period have come out of this research. The first (developed in Chapter 4) is that the archaeology of the port of London in the period 1666 to 1800 is best considered on the widest possible scale, by treating as one the whole conurbation, at least along the riverfront, from the City to Deptford. We should study the internal varieties of houses, artefacts, and ways of living within this single zone. One consequence of this emphasis on the City to Deptford as a single archaeological zone is that the waterfront south of Thames Street in the City is seen to be culturally part of the waterfront which stretched downstream rather than part of the intramural City next to and north of it. The second idea (in Chapter 8) is that the archaeology of post-medieval waterfronts must be advanced by comparative study of British, European and north American ports in the period.

The overall conclusions from this study are first that the Great Fire of London in 1666 changed an important and central part of the topography of the conurbation, but there were also many important continuities and the Great Fire should be placed in a wider context. Second, archaeological sites of the period 1666 to 1800 along the waterfront, both in the City area and downstream as far as Deptford, have revealed a rich urban culture with many elements of foreign fashions, and these foreign influences were strongest in the nation's largest port. Third, the period was one of change as the need to store, distribute and send out increasingly large amounts of goods governed the nature of development on both sides of the Thames. Large complexes of warehouses were required, and these were built by removing swathes of domestic buildings, especially after 1760. Fourth, during this period of 1666 to 1800 London became the hub of the new British Empire, but contributed to the exploitation of people from other lands known as slavery. Perhaps these last two matters are related; they were certainly contemporary. Thus the four themes studied here formed a part, perhaps a signficant part, of the world view of a large number of Londoners. The centre of London's post-Fire commercial life, and the epicentre of its future, was the waterfront.

Let us finish by looking again at Canaletto's view along the waterfront around 1750, in Figure 14 near the beginning of this work or on the cover. The City of London was a distinctive place, within Britain and within Europe; and the period 1666 to 1800 was a formative one in its commercial and imperial history.

[23] Schama 1991.

10 Specialist reports and appendices

Pottery and other artefacts

Jacqui Pearce and Lyn Blackmore

The pottery from all sites included in this waterfront sequence was recorded and quantified in line with finds from the periods pre-dating the Great Fire and already published.[1] The pottery studied in the present work was recorded by fabric, form and decoration, using codes in current usage in MOLA, with the data entered onto MOLA's Oracle database. Expansions of the codes of pottery fabrics (wares) are given in Table 16. Quantification was carried out for all sites in the project by sherd count (SC), estimated number of vessels (ENV), estimated vessel equivalents (EVEs) and weight in grams. All statistics included in the following analyses and in the main text are based on these data.

Code	Expansion	ED	LD	Period
ANDA	Andalusian lustreware	1250	1480	M
BEAU	Beauvais sgraffito ware	1500	1630	PM
BLGR	blue-grey ware	1000	1200	M
BONE	bone china	1794	1900	PM
BORD	Surrey-Hampshire border whiteware	1550	1700	PM
BORDB	Surrey-Hampshire border whiteware with brown glaze	1600	1700	PM
BORDG	Surrey-Hampshire border whiteware with green glaze	1550	1700	PM
BORDO	Surrey-Hampshire border whiteware with olive glaze	1550	1700	PM
BORDY	Surrey-Hampshire border whiteware with clear (yellow) glaze	1550	1700	PM
CBW	coarse Surrey-Hampshire border ware	1270	1500	M
CHEA	Cheam whiteware	1350	1500	M
CHPO	Chinese porcelain	1580	1900	PM
CHPO BATV	Chinese porcelain, Batavian ware	1700	1750	PM
CHPO BLANC	Chinese porcelain, blanc de Chine	1700	1800	PM
CHPO BW	Chinese blue and white porcelain	1590	1900	PM
CHPO MING	Chinese porcelain with late Ming/transitional decoration	1570	1644	PM
CHPO ROSE	Chinese porcelain with famille rose decoration	1720	1800	PM
COLGE	coloured-glazed refined whiteware	1800	1900	PM
CREA	creamware	1740	1830	PM
CREA PNTD	creamware with polychrome-painted decoration	1760	1800	PM
CREA SLIP	creamware with slip decoration	1775	1830	PM
CSTN	Cistercian ware	1480	1600	PM
DUTR	Dutch red earthenware	1300	1650	M–PM
EBORD	early Surrey-Hampshire border whiteware	1480	1550	PM
EMS	early medieval sandy ware	970	1100	M
ENGS	English brown salt-glazed stoneware	1700	1900	PM
ENGS BRST	English stoneware with Bristol glaze	1830	1900	PM
FREC	Frechen stoneware	1550	1700	PM
GERST	unsourced German stoneware	1480	1900	PM
ITGW	unsourced Italian maiolica	1480	1800	PM
KING	Kingston-type ware	1240	1400	M
KING NFR	Kingston-type ware with north French-style decoration	1240	1300	M
LANG	Langerwehe stoneware	1350	1550	M–PM
LCALC	calcareous London-type ware	1080	1200	M

[1] Schofield *et al.* 2018, 335–6.

Code	Expansion	ED	LD	Period
LCOAR	coarse London-type ware	1080	1200	M
LIGU	Ligurian maiolica	1520	1700	PM
LLON	late London-type ware	1400	1500	M
LMHG	late medieval Hertfordshire glazed ware	1340	1450	M
LOND	London-type ware	1080	1350	M
LOND EAS	London-type ware with early-style decoration	1140	1200	M
LOND HD	London-type ware in the highly decorated style (including anthropomorphic/zoomorphic)	1240	1350	M
LOND NFR	London-type ware with north French-style decoration	1180	1270	M
LOND ROU	London-type ware with Rouen-style decoration	1180	1270	M
LOND TUL	London-type ware tulip-necked baluster jug	1270	1350	M
LOND WSD	London-type ware with white slip decoration	1240	1350	M
LONS	London stoneware	1670	1926	PM
MART3	Martincamp-type ware type III flask (red earthenware)	1600	1650	PM
METS	metropolitan slipware	1630	1700	PM
MG	Mill Green ware	1270	1350	M
MISC	miscellaneous unsourced medieval pottery	900	1500	M
MISC	miscellaneous unsourced post-medieval pottery	1480	1900	PM
MPUR	Midlands purple ware	1400	1750	M–PM
NFM	north French monochrome ware	1170	1300	M
NIMS	north Italian marbled slipware	1600	1750	PM
OLIV	Spanish olive jar	1550	1750	PM
PEAR	pearlware	1770	1840	PM
PEN	Peninsular House ware	1650	1700	PM
PMBL	Essex post-medieval black-glazed redware	1580	1700	PM
PMBR	London-area post-medieval bichrome redware	1480	1600	PM
PMFR	Essex post-medieval fine redware	1580	1700	PM
PMFRB	Essex post-medieval fine redware with brown glaze	1580	1700	PM
PMFRG	Essex post-medieval fine redware with green glaze	1580	1700	PM
PMR	London-area post-medieval redware	1580	1900	PM
PMRE	London-area early post-medieval redware	1480	1600	PM
PMREM	London-area early post-medieval redware with metallic glaze	1480	1600	PM
PMSR	London-area post-medieval slipped redware	1480	1650	PM
PMSRG	London-area post-medieval slipped redware with green glaze	1480	1650	PM
PMSRY	London-area post-medieval slipped redware with clear (yellow) glaze	1480	1650	PM
POTG	Portuguese faience	1600	1700	PM
RAER	Raeren stoneware	1480	1610	PM
RBOR	Surrey-Hampshire border redware	1550	1900	PM
RBORB	Surrey-Hampshire border redware with brown glaze	1580	1800	PM
RBORG	Surrey-Hampshire border redware with green glaze	1580	1800	PM
RBOR SL	Surrey-Hampshire border redware with slip-trailed decoration	1580	1800	PM
REDP	red-painted ware	900	1250	M
REFW	refined white earthenware	1805	1900	PM
SAIM	Saintonge ware with mottled green glaze	1250	1650	M
SAIP	Saintonge ware with polychrome decoration	1280	1350	M
SCAR	Scarborough ware	1200	1350	M
SHER	south Hertfordshire-type greyware	1170	1350	M
SIEB	Siegburg stoneware with iron wash	1450	1550	M–PM
SIEG	Siegburg stoneware	1300	1630	M–PM

Code	Expansion	ED	LD	Period
SIEG TRIC	Siegburg stoneware Trichterhalsbecher/Trichterhalskrug	1400	1500	M
ANDA	Andalusian lustreware	1250	1480	M
SIEGR	Siegburg stoneware with green glaze	1400	1500	M
SNTG	south Netherlands maiolica	1480	1575	PM
SPAM	Merida-type micaceous ware	1270	1650	M–PM
SPOA	Spanish unsourced amphora	1200	1900	M–PM
SPOW	Spanish unsourced ware	1250	1900	M–PM
SSW	shelly-sandy ware	1140	1220	M
STMO	Staffordshire-type mottled brown-glazed ware	1650	1800	PM
STSL	Staffordshire-type combed slipware	1660	1730	PM
SUND	Sunderland-type slipware	1800	1900	PM
TGW	English tin-glazed ware	1570	1846	PM
TGW A	London tin-glazed ware with blue- or polychrome-painted decoration and external lead glaze (Orton style A)	1570	1650	PM
TGW B	London tin-glazed ware with manganese-mottled glaze (Orton style B)	1630	1680	PM
TGW BISC	London biscuit-fired tin-glazed ware	1570	1846	PM
TGW C	London tin-glazed ware with plain white glaze (Orton style C)	1630	1846	PM
TGW D	London tin-glazed ware with blue- or polychrome-painted decoration and external lead glaze (Orton style D)	1630	1680	PM
TGW E	London tin-glazed ware with 'sgraffito' on dark blue (Orton style E)	1570	1615	PM
TGW F	London tin-glazed ware with 'Chinamen among grasses' decoration (Orton style F)	1670	1690	PM
TGW G	London tin-glazed ware with 'Lambeth polychrome' decoration (Orton and Pearce style G)	1701	1711	PM
TGW H	London tin-glazed ware with pale blue glaze and dark blue decoration (Orton and Pearce style H)	1680	1800	PM
TPW	refined whiteware with underglaze transfer-printed decoration	1780	1900	PM
TPW1	refined whiteware with underglaze blue transfer-printed Chinese-style line-engraved decoration	1780	1810	PM
TPW2	refined whiteware with underglaze blue transfer-printed stipple and line decoration	1807	1900	PM
TPW FLOW	refined whiteware with underglaze transfer-printed 'flow blue' decoration	1830	1900	PM
WERR	Werra slipware	1580	1650	PM
WEST	Westerwald stoneware	1590	1900	PM
WEST PURP	Westerwald stoneware with purple and blue decoration	1665	1750	PM
YELL	yellow ware	1820	1900	PM
YELL SLIP	yellow ware with slip decoration	1820	1900	PM

Table 16 Codes of pottery fabrics used in this study. ED=Earliest date, LD=Latest date (as currently thought); M=Medieval; PM=Post-medieval (after about 1480)

Glass was recorded in the same manner, using established MOLA codes for colour, technology, decoration, vessel form, rim and base form. Expansions of codes for glass forms are given in Table 17. The data were entered onto the Oracle database, along with quantification by fragment count (FC), estimated number of vessels (ENV) and weight in grams.

Code	Expansion	ED	LD
BOTT	BOTTLE	1600	2000
BOTT-CYL	CYLINDRICAL BOTTLE (ALL FUNCTIONS)	1740	2000
BOTT-MALL	MALLET SHAPE WINE BOTTLE (FROM 1725)	1730	1760
BOTT-ONIO	ONION SHAPE WINE BOTTLE	1680	1740
BOTT-SHGB	SHAFT AND GLOBE SHAPE WINE BOTTLE	1640	1700
BOTT-SHGO	SHAFT AND GLOBE OR ONION SHAPE WINE BOTTLE	1640	1740
BOTT-SPA	SPA BOTTLE (FOREST GREEN GLASS: MOST COMMON 1720-80)	1630	1780
BOTT-SQU	SQUARE SHAPE BOTTLE	1480	2000
BOWL	BOWL	1480	2000
DROP	DROP (WASTE)	1480	2000
FLAS	FLASK	1480	2000
FLAS GLOB	GLOBULAR FLASK	1500	1650
GOB	GOBLET	1500	2000
JAR	JAR	1480	2000
LID	LID	1480	2000
MIRR	MIRROR	1480	2000
MISC	MISCELLANEOUS UNIDENTIFIED	1480	2000
PEST	PESTLE	1480	2000
PHIAL	PHIAL	1480	2000
PHIAL-CYL	CYLINDRICAL SHAPED PHIAL	1650	1800
PHIAL-GLOB	GLOBULAR PHIAL	1650	1700
PULL	PULL (WASTE)	1480	2000
RUN	RUN (WASTE)	1480	2000
VESS	VESSEL	1480	2000
WAST	WASTE	1480	2000
WIND	WINDOW GLASS	1480	2000
WINE	WINE GLASS	1680	2000
WINE FUN	WINE GLASS WITH FUNNEL BOWL	1680	2000

Table 17 Codes of glass forms used in this study. ED=Earliest date, LD=Latest date (as currently thought)

The clay tobacco pipes were also recorded in accordance with current MOLA practice and entered onto the Oracle database. The English pipe bowls have been classified and dated according to Atkinson and Oswald's Chronology of London Bowl Types,[2] with the dating of some of the 18th-century pipes refined where appropriate by reference to Oswald's Simplified General Typology.[3] The prefixes AO and OS are used to indicate which typology has been applied.

The finds specialists here (Lyn Blackmore and Jacqui Pearce) followed the format adopted for the medieval waterfront volume[4] and prepared the text for the present volume along the same lines for consistency. There are some MoLAS/MOLA volumes that go into similar detail[5] although a different approach was adopted in the work on Spitalfields,[6] which followed a more 'biographical' way of looking at all finds in relation to individual buildings. There is value in presenting, as here, a thorough overview of different classes of finds, both chronologically and functionally, as well as by source. It is this kind of approach that has made a major contribution to our understanding of developments and dating for pottery (and other materials) in the period following the medieval dendro-dated waterfront sequence. It is helpful not only to the specialist, but also in enabling us to build a more nuanced picture of material culture during the period in question.

The finds will now be discussed by type from sites A, B and D

Swan Lane (site A)

Almost all the post-medieval **pottery** from this site is from the cesspit A59.60, the contents of which have been summarised above. Occasionally there will be mention of pottery and artefacts from layers apart from the cesspit, which have not been reported in the site narrative; they are included here as notes for future potential work. Only seven other sherds (6

[2] Atkinson and Oswald 1969.
[3] Oswald 1975, 37–41.
[4] Schofield *et al.* 2018, 329–69.
[5] Eg Pearce 2000, in the London Bridge monograph.
[6] Harward *et al.* 2015.

Source	Fabric	SC	%	ENV	%	Weight	%
London-area redwares	PMR	27	4.1%	6	5.0%	1793	7.8%
Essex redwares	METS	69	10.5%	4	3.4%	2643	11.5%
	PMBL	39	6.0%	5	4.2%	668	2.9%
	PMFR/B/G	141	21.7%	14	11.8%	6720	29.3%
Surrey-Hampshire border wares	BORD/B/G/O/Y	153	23.5%	36	30.3%	3533	15.4%
	RBOR	35	5.4%	9	7.6%	1107	4.8%
Tin-glazed wares	TGW B	22	3.4%	7	5.9%	461	2.0%
	TGW C	31	4.8%	11	9.2%	741	3.2%
	TGW D	96	14.7%	18	15.1%	3231	14.1%
Imports	FREC	7	1.1%	5	4.2%	133	0.6%
	NIMS	1	0.2%	1	0.8%	1	0.0%
	POTG	8	1.2%	1	0.8%	224	1.0%
	SPOA	16	2.5%	1	0.8%	893	3.9%
Miscellaneous	MISC	6	0.9%	1	0.8%	812	3.5%
Total		**651**	**100.0%**	**119**	**100.0%**	**22960**	**100.0%**

Table 18 Swan Lane: the composition of the pottery from period P2, cesspit A59.60, by source, fabric, sherd count (SC), estimated number of vessels (ENV) and weight in grams

ENV, 103g) were recovered from other contexts (Gps A59.2, 59.6 and 59.9). In addition, there are 31 sherds 24 ENV, 270g) of medieval pottery, one from cesspit A59.60, the others from Gps A59.2, 59.6, 59.8, 59.1, 59.13 and 59.9). Here the different post-medieval wares from the cesspit are discussed more fully, with brief references to the other post-medieval finds.

The composition of the assemblage is shown in Table 18, where it can be seen that it falls fairly equally into three categories: redwares, Surrey-Hampshire border wares and tin-glazed wares, with a smaller group of imported wares, which are discussed below in this order.

The ratio of London-area to Essex redwares is surprising but probably reflects the later 17th-century date of the cesspit assemblage: the former are limited to 27 sherds (6 ENV, 1.793kg) whereas the Essex wares total 249 sherds from some 23 vessels (10.031kg). Most of the latter are in post-medieval fine redware (PMFR; 141 sherds, 14 ENV, 6720kg), followed by Metropolitan slipware (METS: 69 sherds, 6 ENV, 2.643kg) and post-medieval black-glazed ware (PMBL: 39 sherds, 5 ENV, 668g).

Taking all these redware fabric types together, forms associated with cooking are limited to sherds from four cauldrons/pipkins (PMR), four pipkins/tripod pipkins (PMR, PMFR). Five PMFR bowls of rounded, flaring and handled form may have been used for food preparation or serving. Tablewares used for eating and drinking include two porringers, one in PMFR (a single sherd), the other of rounded form in PMBL, and two mugs in PMBL. There are also sherds from a jug and four dishes in METS. One of the latter, found in all three fills, is near complete, with a simple design based on a cross formed by two wavy lines with geometric motifs in the resulting quadrants (Fig 31). The other pieces, however, are very battered and the designs are barely visible. There are also sherds from four chamber pots in PMFR and one in PMBL.

Surrey-Hampshire border whitewares amount to 153 sherds (36 vessels, 3.533kg), while the equivalent redwares total 35 sherds (9 ENV, 1.107kg). Some sherds in these wares have been published in the catalogue of excavated Border Wares published by Pearce in 1992. Taking the whitewares and redwares together, forms associated with food preparation are in the minority, comprising sherds from two probable skillets and six pipkins/tripod pipkins (all whitewares); the latter include examples in BORDY and BORDO.[7] Also present are the rim of a chafing dish[8] and two shallow flat-topped lids (RBOR; diameters 130mm and 190mm); the smaller is largely complete with an applied ring-type knop handle (Fig 31).[9]

Serving and table wares are more common in Surrey-Hampshire border wares, with sherds from six dishes (three whiteware, three redware), and fragments of ten porringers (one redware and nine whiteware). Drinking vessels comprise up to six mugs (all BORDB); three of these are of the type 1 rounded form (Fig 31, top left).[10] One is similar to the caudle cup form;[11] another is substantially complete. There is also the rim of a possible pedestal cup (BORDO). Other activities are indicated by the bases of three whiteware money boxes, including one with an incised horizontal line just above the girth (Fig 31, middle left).[12] Sanitary wares comprise sherds from six chamber pots (one redware, five whiteware), three of Pearce type 1,[13] one of type 2 and two of uncertain form.

Tin-glazed wares amount to 149 sherds (36 vessels, 4.473 kg). These wares are conventionally classified according to their style of decoration by Orton (1988).[14] All are typical of the period *c.* 1630–80, with no examples of the earliest style (TGW A), or the later styles such as TGW F. Of the three types that are present, TGW C (plain white glaze) is just

[7] Pearce 1992, fig 29, no.163.
[8] Pearce 1992, fig 31, no.188.
[9] *Cf ibid.*, 41, fig 45, nos 436–9.
[10] Haslam 1975; Pearce 1992, 27–8.
[11] Pearce 1992, fig 35, no. 266.
[12] Pearce 1992, fig 43, no. 388.
[13] Pearce 1992, 32, two largely complete, not illustrated.
[14] Orton 1988, 321–7.

slightly more common than TGW B (manganese-speckled glaze) in terms of vessel count (7 and 11 ENV respectively), but TGW D (decorated), with 18 ENV, is almost three times as common as TGW C by sherd count and weight (96 and 31 sherds-respectively) and five times more common by weight 3.231kg and 741g respectively. The decoration of TGW D vessels is similar to that on TGW A, but looser and bolder, and the colours are brighter; most vessels in this group are polychrome, but some are in blue and white only. The forms in TGW D are mainly limited to dishes and chargers, but a wider range is present in TGW C, including two bowls/dishes, a cup, mug and two porringers. The forms in TGW B comprise three caudle cups, a mug, a bowl and a possible jug (thicker-walled than the cups).

Dishes and chargers are the most common category in tin-glazed ware, with sherds from up to 16 examples, mostly in TGW D and with designs based on those produced in the Low Countries; most were probably made at the Pickleherring pothouse or elsewhere in Southwark.[15] Of the four chargers (larger dishes), one is decorated in blue only, with a tulip motif at the centre and a band of intersecting arcs between grouped concentric lines around the wall; the rim is plain (Fig 32 top left). The body contains a large pebble just above the footring (20mm x 8mm across) which almost certainly contributed to, if not caused the breakage of the vessel. One sherd is too small to be sure of the decoration, but the others are polychrome. One is decorated with pomegranates and leaves in green, blue and yellow (Fig 32 top right),[16] while the other (Fig 32 second row left) has a pinwheel at the centre (with a green wash) and a border of swags within which are stylised leaves made up of diminishing arcs (blue only). The dishes mainly have a rounded profile with simple rounded rim, sometimes with a groove on the upper surface just inside the outer edge. The most complete, in blue and yellow, has a central pinwheel with a border of overlapping arcs giving an arcaded effect (Fig 32 second row right). Another, painted in blue only, has a Wan Li border and slightly pinkish white tin glaze on the back (Fig 32 second row middle). The most finely painted piece is represented by part of the base only; the decoration in blue shows the stem of a tall standing plant, with the leaves and flowers infilled with details in yellow and ochre (Fig 32 third row left); it is possible that this is an import rather than locally made. In addition, there are sherds from two fluted dishes and the rim of a medium-sized bowl or dish in TGW C.

Two pieces in TGW D, both decorated in blue only, are more like plates than the dishes and chargers noted above. The more complete example has a flattened, everted rim, simple tulip design in the bowl (Fig 32 third row middle) and a small footring base (not perforated). The other example (not illustrated) is represented by the flanged rim only, but is smaller in diameter. It has a simple design of overlapping arcs around the flange creating an arcaded effect. Both have a distinctive carinated profile that is not matched in Britton's typology,[17] but is similar to a find from Riverside House, Bankside. The latter was dated to *c.* 1630–45,[18] although as the same form was made at Rotherhithe a date after 1638,[19] when this factory started operating, might be appropriate. Plates were not in common use until the 1670s to '80s,[20] although they were being made by the 1650s and possibly earlier.[21] A small rim sherd in TGW C. may also be from a plate or dish.

One small saucer is present (Fig 32 third row right). This has a rounded profile and a raised base with concave underside (not a ring foot as such). Similar dishes/saucers in the Burnett collection were identified as condiment dishes[22] and dated to 1640–60 (see above).[23] Most examples are tin-glazed on the back,[24] as is the case here, which has a rather thick glaze that is bubbled and slightly crawled; the decoration, although blurred, is a geometric/floral design with blue dashes around the rim. Given the poor quality of the glaze and obvious trivet scars, it is possible that this piece was sold as a second.

Other tin-glazed forms related to serving comprise four bowls and three porringers (some illustrated in Fig 34). The most complete bowl, represented by 22 sherds, has a rounded profile with simple decoration of a schematic rosette at the centre (green, blue, ochre), with a chevron border made up of wavy lines and arcs in blue and ochre between broad horizontal bands in blue. Three of the porringers are in TGW C, while one sherd is from an example in TGW B, which is of medium size with a rounded profile and ring foot. Two have a marked change in angle at the base and fall into Orton's type A;[25] one has a horizontal lug handle with heart-shaped perforations, while the other has a vertical rod handle with scrolled terminals which rises well above the rim. Type A porringers have been broadly dated to *c.* 1650–1685,[26] and three dated examples of 1673 are known.[27] It is possible that they also served as bleeding bowls.

Drinking vessels comprise four cups, all in TGW B, and four mugs. According to the MPRG classification, cups are vessels with a single handle and a rim diameter greater than that of the base and (usually) also greater than the height,[28] while mugs have a height that is greater than the diameter of the rim, the base or the maximum girth.[29] Here, however, the vessels are of caudle cup type, with a rounded body that is wider at the base and concave towards the rim; the one base is slightly kicked.[30] A problematic find, in TGW C, is, strictly speaking, neither a cup nor a mug as the rim diameter is less than that of the base, but greater than the overall height; although recorded as a mug, it appears to be a squat variant of the caudle cup form (Fig 31, top left). No parallel for this form exists in the typologies presented by Bloice (1971), Noël Hume (1977), or Orton (1988), but examples with similar dimensions are known from Rotherhithe and the Museum of London collection.[31] Sooting on the underside and bubbling of

[15] Tyler *et al* 2008, 26–59.
[16] *Cf* Britton 1987, no.39, dated to the mid-17th century; fig 40.
[17] Britton 1987, App V.
[18] Blackmore 2013, 52.
[19] Tyler *et al* 2008, fig 128.
[20] Blackmore 2013, 53.
[21] Archer 1997, 70.
[22] Noël Hume 1977, 49–50.
[23] *Ibid*, 87–9, fig XIII, nos 2, 7; *Cf* also Orton 1988, 313, fig 132, no.1303; Blackmore 2013, 54.
[24] Noël Hume 1977, 49–50.
[25] Orton 1988, 311; fig 131, nos 1275–9; Austin 1994, 197, no. 394.
[26] Noël Hume 1977, 91–2, fig XIV, nos 5, 7; Blackmore 2013, 55.
[27] Austin 1994, 197.
[28] MPRG 1998, 6.2.
[29] MPRG 1998, 6.3.
[30] Bloice 1971, 63, fig 54, no. 62a; Orton 1988, 309, fig 131, nos 1272–3.
[31] Tyler *et al* 2008, 80, fig 123; Britton 1987, 124, no. 75, dated to *c.* 1660.

the glaze both inside the base and externally (around the base and handle) show that, unless involved in the Great Fire, this vessel was used for heating the contents, or at least keeping them warm. Caudle cups were most common *c.* 1650–80.[32]

Of the two definite mugs, one example in TGW C (Fig 31, top right) is rounded with a ring foot;[33] it has a kiln scar on the body at the maximum girth. The other, in TGW B (not illustrated) is of straight-sided form, although not exactly cylindrical; its height is uncertain. It would appear that this form came into use in the third quarter of the 17th century.[34] Other forms comprise one sherd that may be from a jug (TGW B), and an albarello with decoration in blue.

There are very few non-local or imported wares in this assemblage. The former comprises part of a large flat-based earthenware jar with greenish-clear glaze internally and glaze streaks externally. This is not a typical London fabric and may be from the Midlands or north-east of England. The most impressive import is a Portuguese tin-glazed ware (POTG) plate with armorial decoration (Fig 33). The decoration of alternating thick and thin lines around the wall is similar to that seen on a Portuguese plate found in Martin's Hundred, Virginia.[35] Other wares comprise a small, flat-based standing costrel similar to those made in Merida-type micaceous ware but in a fine calcareous fabric (SPOA) that is probably from Seville, the rim of a small thin-walled bowl or cup in north Italian marbled slipware (NIMS) with plain green glaze internally, and sherds from three Frechen stoneware (FREC) *Bartmann* jugs.

As noted above, London-area redwares are remarkably sparse in this particular assemblage, while Essex redwares, in particular PMFR, are the dominant type. These are followed by Surrey-Hampshire border wares, of which the whitewares (BORDB/G/O/Y) are much more common than the redware equivalent (RBOR). Both the Essex wares and the Surrey whitewares went out of use in London *c.* 1700. The tin-glazed wares fit this pattern, with decorative styles that were in use from *c.* 1630, but nothing obviously later than 1680. Other than Frechen stoneware, the remaining fabrics cannot be dated so closely, but as the bulk of the datable material is quite homogenous it can be suggested that the pottery could have been in use around the time of the Great Fire. The fact that none of the pieces shows any real evidence of burning, which might be expected in such a central location, close to the seat of the blaze, might suggest that the pottery was already in the cesspit and so was protected from the fire; alternatively, it may have been discarded after the fire. Forms associated with drinking and the serving of food are the most common by sherd count, but sanitary wares are the most common by weight. As a whole, the group is one of the few on sites A and B that was almost certainly used in a nearby building, and it offers a good impression of the range of forms in use in the mid-later 17th century.

The bulk and accessioned **glass** from site A amounts to 261 fragments (60 ENV, 1.879kg). The majority of the collection derives from the three fills of cesspit A59.60 (157 sherds, 31 ENV, 930g). Some fragments from layers apart from the fill of the cesspit are mentioned. Small amounts of glass were found in other layers, and they are included in some total counts, but they are not reported in detail here.

Bottle glass is the main category, with 58 fragments (16 ENV, 1.404kg) ranging from the 17th to 19th century in date, seven of which are from cesspit A59.60. The most complete profile is that of an early bottle of short cylindrical form, the wall tapering into the base, represented by 10 fragments from the base, body, neck and short flaring neck/rim found in the cesspit (Fig 34, A<2756>); in Williamsburg the same form is dated to *c.* 1640.[36]

Seven fragments (142g) are from two wine bottles of shaft and globe/onion form[37] dating to *c.* 1675–85 (Gp A59.60, [981]; Gp A59.63, [1592]), and there are also 10 fragments from two probable onion bottles,[38] which could date to between 1680 and 1730 (Gp A59.60, [980], [981]). Other contemporaneous finds comprise 16 sherds from three case bottles (61g), all from [980] (A<2755>, A<2758>/<2760>, A<3147>); most sherds are small but A<2755> is a near-complete base.

Bottles dating to the later 18th or 19th century are represented by five fragments from three early cylindrical bottles dating from 1735/50–1790[39] from Gps A59.14 (A[17]) and A59.3 (A[22]) and four fragments (35g) from two free-blown cylindrical bottles which date from *c.* 1780.[40] The latter are from Gp A59.63 (A[1592]) and were found together with sherds from two possible sauce bottles, represented by the base of a mould-blown oval bottle (141g) in natural green glass, the neck/rim (42g) of a bottle in natural blue glass and the base (30g) of a mould-blown green glass octagonal bottle which could have been used for a range of purposes.

Five sherds from up to three small natural green glass flasks were found in the cesspit (fills [980], [981], [986]) of which A<2759> is a neck with part of what was possibly an oval body. At least one of these finds was probably similar in form to an example from Jamestown, dated there to *c.* 1710.[41] Only three small phials are represented (6 sherds, 25g), A<2757>, A<2766>, A<3140>). One is of 'bell'-shaped form and of 17th-century date,[42] while the others are cylindrical and probably date to the 18th century.

Window glass amounts to 108 fragments (25 ENV, 138g), of which 25 fragments (8 ENV, 47g) are from the cesspit (A[980]), including sherds from two diamond-shaped quarries, probably of 16th- to 18th-century date.

Vessel glass amounts to 811 fragments from 11 items (180g), almost all from the cesspit (A[980], A[981]) and ranging from the 16th to 17th century in date. Of the nine beakers represented, A<2762>/A<3144> (A[980/981]), with a complete base and two body sherds, is of cylindrical form with rigaree

[32] Noël Hume 1977, 28–30; Pl. 15; Pl. VI, no.1; Lipski and Archer 1984, 156; Britton 1987, 122–5, nos 70–1, 73–78; Orton 1988, 309; Blackmore 2013, 56.
[33] Bloice 1971, fig 54, 62b.
[34] Noël Hume 1977, 33.
[35] Noël Hume 2001, 334, fig 34, nos 8, 9.
[36] *Cf* Noël Hume 1969, fig 17.6.
[37] For background see Dumbrell 1983, 44, 50–7; Blackmore 2015, 247.
[38] Dumbrell 1983, 62–72; Blackmore 2015, 247–8.
[39] Dumbrell 1983, 100–14; Blackmore 2015, 249.
[40] *Ibid*, 249.
[41] Noël Hume 1969, fig 17.9.
[42] *Cf* Noël Hume 1969, fig 17.8.

trails around the base and two on the body (Willmott type 1.7), dating to the late 16th to late 17th century.[43]

Two beakers are of squat form, of which A<2764> (A[980]), in natural green glass, is decorated with staggered optic-blown bosses and dates to the 17th century.[44] The other example, A<2765>/<3135> (A[980/981]), represented by 21 fragments from the rim and body and of colourless glass with a yellow tinge, is undecorated (Willmott type 3.1b).[45] Two beakers are of pedestal form, of which the more complete is A<2761> (A[980]; Fig 34), made of colourless glass, which 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 wrythen-moulded body but no trails and dates to between 1550–1650[46] and type 5.1, which has applied trails on a plain body.[47] Rim A<3137> (A[981]) has staggered optic-blown bosses and is from a pedestal beaker of type 4.4, dated to *c.* 1600–50.[48]

In addition, there are four sherds from the foot and lower body of a German Römer beaker, A<3141> (A[981) and fragments from the rim, handle and base of a small plain bellied tankard, A<2763>/<3145> (Fig 34; A[980/981]). The former has a low piled foot and raspberry prunts[49] and probably dates to the early/mid 17th century, as bases became taller in the late 17th to 18th century. The tankard has an applied trail around the neck and dates to the mid/late 17th century (Willmott type 9.1).[50]

Other vessel glass is limited to four very small fragments, A<3142> and A<3143> (A[980/981]), recorded as being from a beaker but in an unusual pinkish glass, small foot fragments from two goblets, A<2767> (A[980]) and A<3138> (A[981]), and the complete base and handle. A tiny flaring rim (1g) in green glass from Gp A59.14 (A[17]) may be from a goblet (A<74>).

Eleven **items of copper-alloy** were recovered from fills A[980]and A[981]. Two of these are tokens, comprising a near-complete Nuremberg jetton of Hans Krauwinckel (diam. 21mm) dating to between 1586 and 1635 (A<3695> (A[981]) and a small trade token dated to 1648–72, which reads / WILLIAM SWIFT OF THE / on the front and / CITY OF WORCESTER / on the back (Fig 35; A<3825>, A[980]).

The nine other finds are all in poor condition. Three are dress accessories: two complete small dress pins (L *c.* 23mm), one from each fill (A<1770>, A<3693>) and part of a rolled lace chape from fill [980] (A<3846>). Household items include two complete rings (diam. 26–28mm), probably for drapes, A<1768> (A[980]) and A<3697> (A [981]), and possibly a corroded oval disc (*c.* 15 x 11mm) with the remains of a setting (A<3698>, A[981]) which is not a weight or seal 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.[51] No decoration is visible on X-ray, and cleaning has not been possible. Finally, there is a piece of wire (total L 36.5mm) bent into a crook shape (A<3694>, A[981]).

Five **iron objects**, most in poor condition, were found in the cesspit, together with the remains of a composite knife (A<2257>; see also the composite object below). Two finds from A[981] appear to be structural fittings, comprising a near-complete ring/washer in very poor condition (A<1736>; Diam 18mm) and a larger doughnut-shaped collar with hemispherical section (A<1737>; external diam. 50–54mm, ht 28.5mm). The other finds include a length of wire, A<3853> (A[980]; L 132mm) and the remains of what may be a pair of shears or scissors, A<3676> (A[980]; extant L *c.* 71mm), now badly laminating. Object A<3852> (A[980]) is incomplete and mainly represented by corrosion products.

Two **lead** weights were found: one very small (diam. 15mm, weight 2g), with a possible crescent mark on one side (A<382>; A[981]) and possibly for coins, the other larger (diam. 30mm, weight 32.5g) and probably used for a variety of commodities (A<1838>; [986]).

Fragments from two **ivory** combs were found: both double-sided and of one-piece construction. That from A[980] (A<2160>) is *c.* 51mm wide and had *c.* four teeth per 10mm on one side and *c.* 10 on the other. Comb A<2161>, from A[981], is narrower (37mm) and had 3–4 teeth on one side and 9–10 on the other.

The one **composite object** from cesspit A59.60 is part of a knife (extant L 70.5mm), represented by part of the iron blade and complete ivory handle of tapering cylindrical form with a small knop at the terminal (A<2257>, A[980]). Dating of knives generally depends on the form of the blade, but this example is very similar to finds from the area of Tower Hill, where ivory was being worked in the early to mid 17th century.[52]

A total of 92 **clay tobacco pipe** bowls, 292 stems and 35 mouthpieces were recorded in the fill of the cellar/cesspit A[980]/A[981]. These can be dated to *c.*1660–80 by 29 examples of type AO15 bowls (the most common in the fill), ten bowls of type AO13 and one of type AO16. There are also 25 pipes of type AO9 and 20 examples of type AO10, both of which date to *c.*1640–60. All are milled to some extent, and none is marked or decorated. A single type AO28 pipe bowl (<3735>) dates to *c.*1820–40 and is clearly intrusive. This is marked with the initials JC (unidentified) and is decorated with moulded leaf seams.

Seal House (site B)

The **pottery** from all the post-Fire deposits on site B amounts to 1047 sherds (269 ENV, 60.841kg; Table 19; Table 20). Table 19 specifies which individual fabrics are included in each source, and Table 20 is arranged by source alone. In addition, there are 65 sherds (38 ENV, 991kg) from deposits which have not been phased and are not considered here. Pottery from contexts of the post-Fire buildings amounts to 83 sherds (29 ENV, 4.627kg; Table 21), while 705 sherds (127+ ENV, 36.998kg) were recovered from deposits relating to the demolition of these buildings. The later 18th- and 19th-century deposits from the buildings erected after 1776 yielded 259 sherds (113

[43] Willmott 2002, 39, fig 11.
[44] Willmott 2002, type 3.3; 44, fig 23.
[45] *Ibid*, 43–4, fig 21.
[46] *Ibid*, 47, fig 30.
[47] *Ibid*, 51, fig 40.
[48] *Ibid*, 48, fig 31.
[49] Willmott 2002 type 7.2, 53–4, fig 46.
[50] *Ibid*, 56, fig 51.
[51] Blackmore *et al.* 2020, 322, fig 2.
[52] Blackmore 1996, 139–41, figs 21.18, 21.19; Sewart 1996; Goffin 2005.

ENV, 19.216kg). Most sherds from the demolition deposits (which would partly date from the 20th century) are from Gp B131 and the majority of these are small.

As examples of the way pottery was used in dating the deposits in this project, two tables provide here details of the individual pottery wares found in two of the periods at site B (Seal House): the row of brick buildings and the associated cesspit erected in 1671 (Gps 90, 99, 107–9, 113, 115, 121) (Table 22) and the demolition of the same buildings (Gps 117, 122, 128, 131, 135) (Table 23). These are also called the deposits of period 9 and period 10 respectively.

Source	Fabric	SC	%	ENV	%	Weight	%
London-area redwares	PMBR	3	0.3%	2	0.7%	55	0.1%
	PMR	585	55.9%	48	17.8%	37905	62.3%
	PMRE	23	2.2%	18	6.7%	406	0.7%
	PMREM	4	0.4%	1	0.4%	34	0.1%
	PMSRY	4	0.4%	3	1.1%	84	0.1%
Essex redwares	PMBL	8	0.8%	5	1.9%	202	0.3%
	PMFR	10	1.0%	8	3.0%	544	0.9%
Surrey-Hampshire border wares	BORDB/B/G/O/Y	77	7.4%	23	8.6%	2925	4.8%
	EBORD	1	0.1%	1	0.4%	7	0.0%
	RBOR	18	1.7%	12	4.5%	2061	3.4%
Tin-glazed wares	TGW	40	3.9%	16	6.0%	641	1.0%
	TGW A	2	0.2%	1	0.4%	42	0.1%
	TGW B	4	0.4%	1	0.4%	44	0.1%
	TGW C	36	3.4%	22	8.2%	939	1.5%
	TGW D	25	2.4%	12	4.5%	962	1.6%
	TGW E	2	0.2%	1	0.4%	33	0.1%
	TGW F	2	0.2%	2	0.7%	27	0.0%
Non-local wares	CSTN	1	0.1%	1	0.4%	9	0.0%
	MPUR	2	0.2%	2	0.7%	107	0.2%
	STSL	1	0.1%	1	0.4%	29	0.0%
	SUND	1	0.1%	1	0.4%	4	0.0%
	YELL	1	0.1%	1	0.4%	50	0.1%
	YELL SLIP	7	0.7%	2	0.7%	54	0.1%
English stonewares	ENGS	25	2.4%	8	3.0%	3452	5.7%
Factory-made refined wares	COLGE	3	0.3%	1	0.4%	150	0.2%
	CREA	46	4.4%	15	5.6%	2625	4.3%
	CREA PNTD	1	0.1%	1	0.4%	40	0.1%
	CREA SLIP	3	0.3%	2	0.7%	222	0.4%
	PEAR	4	0.4%	3	1.1%	19	0.0%
	REFW	10	1.0%	5	1.9%	1274	2.1%
	TPW	1	0.1%	1	0.4%	9	0.0%
	TPW1	2	0.2%	2	0.7%	11	0.0%
	TPW2	18	1.7%	9	3.3%	394	0.6%
Imports - oriental	CHPO	2	0.2%	2	0.7%	25	0.0%
	CHPO BW	8	0.8%	4	1.5%	206	0.3%
	CHPO ROSE	2	0.2%	1	0.4%	87	0.1%
Imports - continental	DUTR	1	0.1%	1	0.4%	27	0.0%
	FREC	13	1.2%	6	2.2%	290	0.5%
	ITGW	2	0.2%	2	0.7%	5	0.0%
	NIMS	2	0.2%	2	0.7%	34	0.1%
	RAER	22	2.1%	9	3.3%	846	1.4%

Source	Fabric	SC	%	ENV	%	Weight	%
	SIEG TRIC	1	0.1%	1	0.4%	7	0.0%
	SNTG	6	0.6%	1	0.4%	7	0.0%
	SPAM	2	0.2%	1	0.4%	85	0.1%
	SPOW	10	1.0%	2	0.7%	3766	6.2%
	WERR	1	0.1%	1	0.4%	43	0.1%
	WEST	4	0.4%	4	1.5%	43	0.1%
Miscellaneous	MISC	1	0.1%	1	0.4%	10	0.0%
Total		**1047**	**100.0%**	**269**	**100.0%**	**60841**	**100.0%**

Table 19 Seal House: the composition of the pottery from periods 9 and 10, by source, fabric, sherd count (SC), estimated number of vessels (ENV) and weight in grams

Source	SC	%	ENV	%	Weight	%
London-area redwares	619	59.1%	72	26.8%	38484	63.3%
Essex redwares	18	1.7%	13	4.8%	746	1.2%
Surrey-Hampshire border wares	96	9.2%	36	13.4%	4993	8.2%
Tin-glazed wares	111	10.6%	55	20.4%	2688	4.4%
Non-local wares	13	1.2%	8	3.0%	253	0.4%
English stonewares	25	2.4%	8	3.0%	3452	5.7%
Factory-made refined wares	88	8.4%	39	14.5%	4744	7.8%
Imports	76	7.3%	37	13.8%	5471	9.0%
Miscellaneous	1	0.1%	1	0.4%	10	0.0%
Total	**1047**	**100.0%**	**269**	**100.0%**	**60841**	**100.0%**

Table 20 Seal House: the composition of the pottery from periods 9 and 10 by source, sherd count (SC), estimated number of vessels (ENV) and weight in grams

Source	Fabric	SC	%	ENV	%	Weight	%
London-area redwares	PMR	9	10.8%	1	3.4%	1128	24.4%
	PMRE	5	6.0%	3	10.3%	62	1.3%
Essex redwares	PMFR	5	6.0%	3	10.3%	331	7.2%
Surrey-Hampshire border wares	BORDG	21	25.3%	3	10.3%	911	19.7%
	BORDY	17	20.5%	3	10.3%	1101	23.8%
	RBOR	5	6.0%	2	6.9%	499	10.8%
Tin-glazed wares	TGW	7	8.4%	4	13.8%	94	2.0%
	TGW C	6	7.2%	2	6.9%	32	0.7%
	TGW D	1	1.2%	1	3.4%	5	0.1%
Non-local	STSL	1	1.2%	1	3.4%	29	0.6%
Imports - oriental	CHPO	2	2.4%	2	6.9%	25	0.5%
Imports - continental	DUTR	1	1.2%	1	3.4%	27	0.6%
	FREC	2	2.4%	2	6.9%	34	0.7%
	SPOW	1	1.2%	1	3.4%	349	7.5%
Total		**83**	**100.0%**	**29**	**100.0%**	**4627**	**100.0%**

Table 21 Seal House: the composition of the pottery from period 9 by source, fabric type, sherd count (SC), estimated number of vessels (ENV) and weight in grams

Here two tables of another type are presented: to show how the pottery was used to date individual layers and groups, Table 22 and Table 23 detail the types of pottery in the layers of the post-Fire buildings and their destruction.

Land use	Group	Context	Evidence	Sherds/ weight	Description	Date
Cesspit 9	99	9	PPOT	3/56	CHPO, PMFR, TGW	1680–1700
Cesspit 9	99	53	PPOT	1/6	BORDY	1550–1700
Cesspit 9	99	119	MPOT	38/681	CBW, KING, LCOAR, LCOAR CALC, LOND, LOND EAS, LOND NFR, SHER, SHERFL, SIEG, SSW, MISC	1380–1400/1500
	99	119	PPOT	1/6	PMRE	1480–1600
	99	168	MPOT	16/240	ANDA, CBW, KING, LANG, LOND NFR, SAIM	1350–1500
	99	168	PPOT	2/17	PMRE	1480–1600
B:Building 8	107	43	MPOT	1/5	CBW	1270–1350
	108	173	MPOT	2/9	KING	1240–1400
	109	147	MPOT	2/13	LANG	1350–1500
		148	MPOT	2/7	CBW	1350–1500
	119	41	MPOT	1/27	DUTR	1580–1900
	119	80	MPOT	4/12	CBW, CHEA	1350–1500
	119	80	PPOT	2/39	PMRE	1480–1600
	121	146	PPOT	10/6	CHPO, FREC, TGW, TGW C	1630–1700
B:Building 9	90	73	MPOT	6/144	LCOAR, LOND. SSW	1180–1350
B:Building 10	115	76	PPOT	1/19	FREC	1500–1700
brick surfaces	113	132	MPOT	6/40	CBW, KING, LCOAR, LOND	1270–1350
	113	169	MPOT	22/314	CBW, KING, LANG, LIMP, LOND, LOND NFR, SHER	1350–1500

Table 22 Seal House: dating table for pottery from B:Buildings 8 to 10 and Cesspit 9, Gps 90, 107–9, 112, 114–15, 119–21

Land use	Group	Context	Evidence	Sherds/ weight	Description	Date
B:Building 8	117	336	MPOT	1/26	LOND NFR	1180–1270
demolition						
	117	156	PPOT	1/31	RAER	1480–1550
	117	157	PPOT	1/8	RAER	1480–1550
	122	47	PPOT	138/ 5479	BORDB, BORDG, BORDY, CHPO BW, EBORD, FREC, NIMS BICR, PMFR, PMR, PMRE, SIEG TRIC, TGW, TGW A, TGW C, TGW E, WEST	Mostly 1675–1700, some 1740–1780
	128	165	MPOT	5/14	CBW, LOND	1270–1350
	128	165	PPOT	6/36	BORDY, PMRE, MART3	1600–1650
	131	51	MPOT	37/347	CBW, LCOAR, LOND, LOND NFR, LOND ROU, SCAR, SHER	1270–1350
	131	51	PPOT	519/ 30144	BORDG, CREA, ENGS, PMR, TGW B, TPW, TPW2, WERR, YELL SLIP	1820–1900
	131	55	MPOT	1/9	LOND	1150–1350
	131	55	PPOT	17/236	CSTN, ITGW, PMRE, PMREM, PMSRY	1500–1600
	131	155	MPOT	15/154	CBW, CBW BIF, KING, LLON, SHER, SSW	1380–1500
	131	155	PPOT	7/276	PMBR, PMRE, RAER	1480–1550
	131	183	MPOT	13/718	CBW, DUTR, KING, LCALC, LOND, LOND EAS, LOND HD, SHER	1350–1400
	131	183	PPOT	4/108	PMBR, PMSRY, RAER	1480–1550

Land use	Group	Context	Evidence	Sherds/ weight	Description	Date
	135	3	MPOT	3/27	LCOAR, SIEG	1350–1500
	135	3	PPOT	15/864	BORDG, BORDY, PMFR, PMR, RAER, TGW, TGW C, TGW D, MISC	1630–1700
	135	75	MPOT	4/29	EMSH, LCOAR, SIEB, SIEG	1350–1500
	135	75	PPOT	8/200	BORDO, MPUR, PMR, PMRE, RAER, SPAM	1580–1600/1650

Table 23 Seal House: dating table for demolition of B:Building 8, Gps 122, 128, 131, 135

London-area redwares total 619 sherds (72+ ENV, 38.484kg) from periods 9 and 10. The total ENV is, however, misleading, as the 500 sherds from demolition dump B[51] were not fully quantified and the number for this group is a best guess. Only 14 sherds (4 ENV, 1.190kg) are from period 9. These include a complete handled bowl (Fig 46 top left, from well B[26]) (Gp B137) and three sherds from a bowl and jar from the cesspit (Gp B99).

In contrast to site A, Essex redwares are very much in the minority, with only 18 sherds (13 ENV, 746g). Post-medieval fine redware (PMFR) is the most common, with 10 sherds (8 ENV, 544g) from bowls, porringers, jars, a jug and a tripod pipkin; the eight other sherds (5 ENV, 202g) are all of post-medieval black-glazed ware (PMBL). The three vessels (five sherds) include a substantially complete porringer in PMFR (Fig 46 second from left on front row) from well B[26] (Gp B137). Surrey-Hampshire border whitewares are much more common than the redwares, with a total of 96 sherds (36 ENV, 4.993kg) from periods 9 and 10, of which one sherd appears to be in the early variant of the whiteware tradition (EBORD) and 77 sherds (34 ENV, 2925kg) are in the later whiteware fabric (BORDB/G/O/Y). The other 18 sherds (12 ENV, 2.061kg are in the redware fabric (RBOR), most of which (13 sherds, 10 ENV) are from later 18th-century deposits. All but one of the 38 whiteware sherds and both of the redwares are from well B[26], comprising the greater parts of a handled bowl, a flanged dish, two porringers and a stool pan (all in Fig 46); also present was part of a redware colander with piecrust thumbed rim.[53] The finds of border ware from the deposits associated with the demolition of Tenement 6 are much smaller but include a wider range of forms, with sherds from chamber pots, mugs, pipkins and a skillet in addition to bowls, dishes, porringers. The same applies to the finds from later 18th-century deposits, the only new forms being a lid and a paint pot.

Tin-glazed wares are only slightly more common than the Surrey-Hampshire border wares by sherd count, but much more so by ENV and less so by weight (111 sherds, 55 ENV, 2688kg). Of these, only 14 sherds (7 ENV, 131g) are from period 9, considerably less than on site A, but 79 sherds (36 EV, 2375kg) are from the deposits associated with the demolition of Tenement 6. Several of these are blackened and so could be redeposited Great Fire debris, but perhaps more likely discoloured in a more recent fire or even at the time of the demolition work. A further 18 sherds (12 ENV, 182g) are from later 18th-century contexts. As the range of tin-glazed forms and decoration in all periods is typical of the period *c.* 1630–80, the finds are considered following their style of decoration, as described by Orton (1988),[54] and then by form type.

Types TGW A, the earliest produced in London (1570–1650), which has a lead glaze externally, and TGW B, with a manganese-mottled glaze (*c.* 1630–1680) are represented by single sherds only, both from demolition deposits (Gp B122 (B[47]), Gp B131, B[51]; the former is, however, more likely to belong to group D. Type TGW C, which has a plain white glaze and dates from *c.* 1630–1846, is the most common, with 38 sherds (22 ENV, 939g); the two vessels from Period 2 deposits include a part of an upright candlestick from well B[26] (Gp B137), while the 15 vessels represented in the demolition deposits include a near-complete pedestal vase with three spouts which has clearly been subjected to great heat, possibly the Great Fire (Fig 51); this find is similar to an example in the MOL collections dated to *c.* 1650–1700, (acc. no. 12201).[55] The next most common is TGW D (*c.* 1630–80), which is decorated and tin-glazed on both surfaces (25 sherds (12 ENV, 962g). Only one small dish rim was associated with tenement 6, found in well B[26, but six dishes were represented in the demolition deposits; the sherds from later 18th-century contexts derive from a bowl, two dishes and two jars. One scalloped rim sherd recorded as TGW E (blue-glazed with sgraffito decoration, 1570–1615) and two of TGW F ('Chinamen in grasses', *c.* 1670–90) were also found in the demolition deposit (Gp B122) and period 3 deposits respectively.

Taking all the tin-glazed wares together, the 13 forms types represented are clearly dominated by vessels used for serving/dining, with 20 dishes (49 sherds), nine plates (24 sherds) and six bowls (six sherds); drinking vessels, by contrast, are limited to one cup and one mug. Jars/containers are thus the second most common form type, with 11 examples, of which one was recorded as an albarello and one as an ointment pot. Other forms comprise a candlestick, a chamber pot, a salt and a vase.

Wares from outside the London area are rare until the mid 18th century (13 sherds, 8 ENV, 253g). They include part of a Staffordshire-type slipware (STSL) cup from well B[26] (Gp B137), one sherd from a Cistercian ware (CSTN) cup with white slip decoration and one from a Midlands purple ware (MPUR) butter pot from the demolition deposits (Gps B121, B135). Finds from later deposits comprise another sherd of MPUR, one from a 19th-century Sunderland ware (SUND) dish and eight sherds of yellow ware (YELL), both plain and slip-decorated. Stonewares are also a minority category, with only

[53] *Cf* Pearce 2007, 105, fig 62.413.

[54] Orton 1988, 321–7.

[55] Britton 1987, 118, no. 62.

25 sherds (8 ENV, 3.452kg). Two of these are from demolition deposits (Gp B131), although at least one (11g), recorded as a blacking bottle, may be intrusive. The others are from later deposits and derive from bottles, jars and a flagon.

Factory-made refined wares are the third most common ware type, with 88 sherds (39 ENV, 4.744kg). Five groups are represented, comprising creamwares (CREA, CREA PNTD, CREA SLIP), pearlwares (PEAR), refined white earthenwares (REFW) and transfer-printed wares (TPW, TPW1, TPW2). Of these, plain creamwares (CREA), which were introduced *c.* 1740, just before the end of the period considered here, are the most common with 46 sherds (15 ENV). Two of these are from demolition deposits, which also contained five intrusive sherds, one of pearlware, the others of transfer-printed ware (2 ENV); the remainder are all from later contexts. The other ware types all date to after 1770 (mostly to the 19th century) and are not considered here.

Imports are much more common on site B than site A, with 76 sherds (37 ENV, 5.471kg), of which over half (41 sherds, 21 ENV, 1.229kg) are from Germany. Only six sherds are from deposits associated with tenement 6, but 32 (17 ENV) are from the demolition deposits associated with this building and tenement 7; the remainder are from later deposits (several clearly residual). All three groups are quite mixed in terms of origin.

Chinese porcelain (CHPO; 13 sherds, 8 ENV) mainly comprises table wares, with sherds from a bowl and a lid; the other sherds are from another bowl, a dish, a plate, a saucer, a lid; the only exception is a vase from a later 18th-century context. Italian wares comprise four sherds, including a 16th-century altar-type vase (ITGW) and a bowl in north Italian marbled slipware (NIMS), a further sherd of which was found in Period 3, along with part of a vase (ITGW; Gp B140). Three vessels were recorded as Spanish, although it is possible that the jar with turquoise glaze on the outer surface found in well B[26] is Ligurian (Fig 46 left). The one sherd from demolition deposits is of Merida-type micaceous ware (SPAM) and could be of medieval date. The nine other sherds are from the rim of a jar found in a 19th-century context (Gp B132). Two vessels are probably from the Low Countries: part of a Dutch redware (DUTR) dish from B:Building 8 (Gp B119) and part of a tin-glazed vase (possibly Italian) from the drain laid through the demolition (Gp B123).

The German imports are dominated by stonewares (40 sherds, 20 ENV, 1.186kg), but the bulk of these are residual wares from Raeren (RAER; 18 sherds, 6 ENV) and Siegburg (1 sherd, 7g). Only four sherds from later Raeren jugs, 13 sherds (6 ENV) of Frechen stoneware (FREC) and four small sherds from Westerwald stoneware (WEST) jugs could have been contemporary with the use of tenement 6 or its demolition: of these, only two sherds (2 ENV) are from Period 2 contexts (Gps B115, B121) and 12 sherds (5 ENV) are from demolition deposits (Gp B122); none are of any note. The one other sherd is from a Werra slipware (WERR) dish, found in a demolition deposit (Gp B131).

The site B assemblage covers a longer timescale than that from site A, and also derives from a larger and more diverse range of contexts. In terms of its composition, therefore, there is a much wider range of ware types and sources of supply. London-area redwares, which continued to be produced until the 19th century, are much more common than those from Essex, which went out of use *c.* 1700, and are remarkably sparse. Tin-glazed wares are the second most common group, mostly dating to the mid/later 17th century, while Surrey-Hampshire border wares are in third place; as on site A, whitewares, which went out of use *c.* 1700, are much more common than the longer-lived redware equivalent (RBOR). The main differences between this assemblage and that from site A are the high number of imported wares and the strong presence of factory-made refined wares. The former are mainly typical of the 17th century and from the demolition and later deposits, while the latter are almost all from later contexts.

The fact that only seven sherds from period 9 show any evidence of burning might suggest that any Fire debris on the site was well-cleared before the new houses on Tenement 6 were built; only 83 sherds of pottery (29 ENV) were recovered from the areas excavated and most of these (62 sherds, 14 ENV) are from well B[26]. Like the cesspit group on site A, the pots and artefacts in the well were probably used in a nearby building in the mid-later 17th century. The finds from the demolition contexts also contain a fair amount of material which could have been in use while the tenement was occupied (Table 24). Of the estimated 127 vessels represented, 32 (mainly tin-glazed) are heat-altered. While it is not impossible that these sherds are indirectly derived from Great Fire debris, it is more likely that they were damaged in a subsequent event, possibly the demolition work itself.

Source	Fabric	SC	%	ENV	%	Weight	%
Essex redwares	PMFR	2	0.3%	2	1.6%	88	0.2%
London-area redwares	PMR	541	76.7%	35	27.6%	32845	88.8%
	PMRE	15	2.1%	12	9.4%	242	0.7%
	PMREM	4	0.6%	1	0.8%	34	0.1%
	PMSRY	1	0.1%	1	0.8%	8	0.0%
Surrey-Hampshire border wares	BORDB	1	0.1%	1	0.8%	5	0.0%
	BORDG	7	1.0%	6	4.7%	97	0.3%
	BORDO	1	0.1%	1	0.8%	36	0.1%
	BORDY	5	0.7%	3	2.4%	111	0.3%
	EBORD	1	0.1%	1	0.8%	7	0.0%

Tin-glazed wares	TGW	25	3.5%	11	8.7%	418	1.1%
	TGW	8	1.1%	1	0.8%	129	0.3%
	TGW A	2	0.3%	1	0.8%	42	0.1%
	TGW B	4	0.6%	1	0.8%	44	0.1%
	TGW C	25	3.5%	15	11.8%	851	2.3%
	TGW D	13	1.8%	6	4.7%	858	2.3%
	TGW E	2	0.3%	1	0.8%	33	0.1%
Factory-made refined wares	CREA	2	0.3%	2	1.6%	8	0.0%
	PEAR	1	0.1%	1	0.8%	3	0.0%
	TPW	1	0.1%	1	0.8%	9	0.0%
	TPW2	3	0.4%	1	0.8%	38	0.1%
Non-local	CSTN	1	0.1%	1	0.8%	9	0.0%
	MPUR	1	0.1%	1	0.8%	33	0.1%
	YELL SLIP	4	0.6%	1	0.8%	30	0.1%
English stonewares	ENGS	2	0.3%	2	1.6%	87	0.2%
Imports - oriental	CHPO BW	7	1.0%	3	2.4%	199	0.5%
Imports - continental	FREC	10	1.4%	3	2.4%	246	0.7%
	ITGW	1	0.1%	1	0.8%	3	0.0%
	NIMS	1	0.1%	1	0.8%	14	0.0%
	RAER	8	1.1%	5	3.9%	291	0.8%
	SIEG TRIC	1	0.1%	1	0.8%	7	0.0%
	SPAM	2	0.3%	1	0.8%	85	0.2%
	WERR	1	0.1%	1	0.8%	43	0.1%
	WEST	1	0.1%	1	0.8%	35	0.1%
Miscellaneous	MISC	1	0.1%	1	0.8%	10	0.0%
Total	**Total**	**705**	**100.0%**	**127**	**100.0%**	**36998**	**100.0%**

Table 24 Seal House: the composition of the pottery from period 10 demolition deposits, by source, fabric type, sherd count (SC), estimated number of vessels (ENV) and weight in grams

Looking at the forms represented in the assemblage (269 ENV) from the lifetime of the buildings (period 9), those associated with drinking and the preparation and serving of food are the most common by sherd and vessel count; they include the remains of 25 dishes and 10 plates, of which 19 are tin-glazed, seven porringers and five cups/mugs. As the glaze on many tin-glazed sherds from the demolition deposits is heat-altered it is not possible to compare them with the range of decorative styles on site A. Only nine vessels are associated with the cooking of food; sanitary wares are also rare, but 21 jars are represented, 12 of which are in redware fabrics. A similar pattern can be seen in the finds from the later period 10 deposits.

There were two **stone** artefacts. Part of a mortar B<732> comes from the cellar in building B9 (Gp B90, B[324]). Part of a ragstone hone B<669> was found in a 19th-/20th-century context. Neither can be closely dated.

Glass from the post-Fire deposits on this site amounts to 149 fragments (72 ENV, 2.476kg) from 23 contexts, of which 25 fragments (10 ENV, 709g) are from period 9 deposits, 33 fragments (9 ENV, 295g) are from the demolition contexts described above and the remainder are from later deposits.

Bottle glass is the main category on this site, with 79 fragments (31 ENV, 2.144kg) from period 9 and period 10 deposits which range from the 17th to 19th century in date. No complete profiles are present, but the 26 wine bottles which are represented include a near-complete example of shaft and globe form dating to *c.* 1640–80[56] from the lower fill of well B[26]. Other late 17th- to early 18th-century forms comprise five shaft and globe/onion bottles (23 fragments, 325g) dating to *c.* 1675–85 and three probable onion bottles, which could date to between 1680 and 1730.[57] One of the former is from Building B8 (Gp B121; two sherds) and two are from the demolition deposits (Gps B122, B135; 19 sherds); while one of the onion bottles is from well B26 (Gp B137). Other probable 17th-century finds comprise the rim/neck possibly from a case bottle (B<875>, [47]) from demolition Gp B122 and three fragments of heat-altered and distorted green glass, probably debris left after the Great Fire, from demolition Gps B122, B[47] (B<809>) and B131 (B[51]) and an 18th/20th-century context (B[6]).

[56] For background see Dumbrell 1983, 44–55; Blackmore 2015, 246.
[57] Dumbrell 1983, 44, 50–7, 62–72; Blackmore 2015, 247–8.

Bottles dating to the 18th century include one neck/rim fragment from a possible mallet bottle dated from 1725–60+[58] from an unstratified context ([38]) and 16 fragments (82g) from five squat cylindrical bottles (1735–1830), one from a demolition context (Gp B131), the others from 18th- to 19th-century deposits. Four fragments from well B26 (Gp B137), possibly intrusive, could be from a squat or early cylindrical bottle, while nine fragments (779g) are from up to eight early cylindrical bottles (1735/50–1790), three of which are from demolition deposits discussed above (Gps B117, B128, B131); the others are from 18th- to 19th-century contexts. Finds from 19th/20th-century deposits include the complete base of a green glass octagonal bottle, B<524> (Gp B132, B[109]) dating to 1730–90 and probably used for alcohol[59] and a piece of amber-coloured glass is from a cylindrical bottle probably used for beer (B[66]). One small fragment of green glass from the cesspit, Gp B99 (B<868>, B[9]) could be from a small flask.[60] Only four phials are represented (9 fragments, 15g), all from period 10 (period P3) contexts (Gp B125, B[27], B[27]; Gp 139 (B[29]) and B[39].

Window glass from post-Fire deposits amounts to 44 fragments (24 ENV, 122g), of which four (2 ENV, 13g) are from period 9, well B[26] (Gp 137) and the cesspit (Gp B99 (fill B[9]). Nine fragments (5 ENV, 71g) are from demolition deposits discussed above (Gps B122, B131); at least one of the four fragments from B131 ([51]) is intrusive, being 19th-century sheet glass, which is frosted on one side. The remaining finds are from later deposits.

Most fragments cannot be assigned to a specific type, but two pieces of potash glass from B[39] (19th-century context) are probably of medieval or early post-medieval date. The 12 fragments from B[39] and B[63] (18th-century drain) include two with rims and are probably from cylinder spun glass. Three fragments of sheet glass are of 19th-century or later date (B[51], B[66], B[882]); that from [66] has an irregularly dimpled surface with transverse ribbing in each cell.

Vessel glass from post-Fire deposits amounts to 14 fragments (11 ENV, 129g), recovered from six contexts. Three of the four beakers represented are of cylindrical form. One of these, <812> from a Gp B113 surface deposit in Building 8 (B[169]) is a plain body fragment, but the others, from a 19th-/20th-century context (B[66]) are more ornate. Beaker B<444> has optic-blown wrythen ribs and is of early to mid 17th-century date (Willmott type 1.3),[61] while B<445> is older and in the *façon de Venise* style, 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 beaker 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. From the same deposit, beaker B<447> is of pedestal form; only part of the base survives, so it is impossible to tell if it was of knopped or unknopped form (Willmott types 13.1, 13.2).[62] In addition, a flattened prunt, from a German Römer beaker (B<662>), was found in an unphased deposit; this is of Willmott type 7.3 and dates to *c.* 1600–50.[63] Produced in northern Germany and the Low Countries, this type of beaker is generally rare in England. Four goblets/wine glasses are represented (six fragments, 87g), of which B<810> from the demolition deposits (Gp B131, B[183]) is from the foot of a vessel of uncertain form. The others are from period 10 contexts, of which B<811> from Gp 135 (B[63]) is a large vertically ribbed spherical knop from a goblet of Willmott type 10.6 which probably dates to the 1670s (broad dating 1550–1700).[64] A rim fragment from B[39] (not accessioned) is from a wine glass with funnel-shaped bowl, while B<816> from the 19th-/20th-century context B[66] is from a leaded glass goblet of drawn trumpet form, probably dating to the late 17th or early 18th century.

Other finds comprise the near-complete spout from a posset pot (Fig 47 B<681>; Willmott type 19.1)[65] found in the lower fill of well B[26] (Gp B137, B[88]) and two very small unaccessioned fragments from 19th-/20th-century deposits B[39] and B66]. Two fragments (13g) from what might have been a mirror (B<501>) were found in the lower fill of well B[26] (Gp B137, B[88]). The production of mirrors in London began in the second quarter of the 17th century at Mansell's factory in Southwark, with other makers following at Vauxhall and Bankside in the later 17th century.[66]

For **copper-alloy and composite finds**, two coins comprise an illegible halfpenny from demolition dump Gp B135 (B<4>) and a George III halfpenny (1760–1820) from an 18th-century drain (Gp B125, B[63]). Three accessions include a complete cast sub-rectangular buckle with central bar, B<20> (Fig 42; Gp B108, B[173]) and two small dress pins (B<376>) from the lower fill of well B[26] (Gp B137, B[88]), one ball-headed, the other possibly with a wound head. The buckle is made of copper-alloy (L 21.6mm at outer edge, 18.6mm at centre; W 31mm, Th 2.5mm) with a copper-plated iron pin and the remains of a roller on the central bar. Similar buckles without rollers are known from 17th-century contexts,[67] but this example cannot be closely dated. Finds of pinner's bones show that the making of small dress pins with wound heads (Caple 1991, types A and B) began to develop in the 16th century and became widespread in the 17th century; round-headed pins (Caple type C, with clenched wound heads) date to after 1700. The third find is a piece of scrap sheet metal (B<368>) from well B[26].

The most impressive of the four finds from the period 10 demolition contexts are a complete coin weight, B<26> (Fig 53), from Gp B131 (B[155]) and part of a composite scale tang knife B<3> (Fig 52) from Gp B135 (B[3]; see below). The weight (diam. *c.* 14mm, weight 3.2g) has a fleur-de-lis stamp on one side with lettering around the edge. Also from Gp B135 are coin (B<4>, above) and three tiny flakes of sheet metal, <336>, from B[75]. Other finds comprise a near-complete button B<10> and a drape ring, B<13> in four pieces, both from B[4]

[58] Dumbrell 1983, 79–86; Blackmore 2015, 248–9.
[59] Dumbrell 1983, 79–86.
[60] Noël Hume 1969, fig 16.9.
[61] Willmott 2002, 38, fig 7.
[62] Willmott 2002, 68–9, figs 75, 76.
[63] *Ibid*, 54, fig 47.
[64] *Ibid.*, 61, fig 60
[65] *Ibid.* 78, fig 94.
[66] Watts 2009.
[67] Egan 2005, 37–8.

(Gp B140), and the George III coin (above). The button was possibly of South type 9 (1726–76).[68]

Iron is the most abundant category, with 20 accessions from seven contexts, plus the iron knife B<3> and bucket B<57/316/553>, discussed below under 'Composite finds'. Some objects, however, are almost certainly represented by more than one accession. Two pieces are from building B8 (Gp B108, B[173]), and four are from well B26 (Gp B137, B[88]). Among the former there is a complete rotary key, now in two joining pieces, of Ward Perkins type VIIA (L *c.* 135mm), with an oval bow, shank of unknown section and bit with three equally sized wards; the oval bow suggests a 13th- to 15th-century date, although it could be later.[69] The other item from this group, B<128>, comprises two small rectangular plates (L 16.5mm, W 12.5mm), each with a possible rivet hole at one end, the original function of which is unknown. The finds from the well B[26] include two large hook-like objects, B<425> (L *c.* 290mm) and B<427> (L *c.* 220mm), each with a long straight shaft of sub-rounded section expanding towards the crook, with a return of *c.* 50–53mm. These might be tools associated with the use of the well, as may the incomplete hasp B<426> (extant L 75mm, W 35mm). The other find from this feature is a small lump of iron slag (B<426>, weight 85g).

Four iron artefacts from the deposits from the period 10 demolition appear to be structural fittings: a mount or hasp, B<372>, from Gp B135 (B[3]), and a rivet/clench bolt with lozenge-shaped rove, B<341>, a U-shaped staple, B<473> and a tongue-shaped piece of sheet metal, B<472> from Gp B131 ([B[51], B[155]). The remaining finds are all from a later 18th-century context (B[4], Gp B140). The only one which can be identified is a large nail/bolt, B<12> (L 124.5mm) from which secured timber 63 mm thick and was embedded in mortar to a depth of 51mm. The eight other finds from this context (B<460>–B<465>, B<467>, B<468>) probably derive from two or three objects but are so badly laminated that it is no longer possible to identify their original function.

The three **lead** finds from site B are all scraps. That from tenement 6, B<339>, found in building B8 (Gp B108, B[173]), is a thick piece of sheet metal, cut or broken along the long sides (L 93mm). That from 18th-century rubble Gp B140, B<361> (B[4]) is a narrow strip, partly twisted at one end, while B<456>, from a 19th-/20th-century context (Gp B132, B[109]) 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 the other side.

Two **ivory** objects are represented. The first is part of a double-sided one-piece comb, B<25> from B:Building 8 (Fig 41; Gp B108, B[173]), which is similar to the Swan Lane finds but larger and with a more rounded end. The other find is half of a large ivory ring, <34> (diam. *c.* 50mm), from a 19th-/20th-century context (Gp B132, B[104]) period 10 context [104], the original purpose of which is uncertain.

The remains of at least two **leather** shoes, B<182> and B<865>, were found in the lower fill of well B[26] (B[88]); the finds are badly fragmented but one fragment from B<865> would appear to be from a child's shoe.

Excluding the bucket (considered under composite objects below), there are three objects of **wood** from site B, all from fill B[88] of well B[26], comprising a bobbin or short spindle, B<2> (Fig 48), possibly double-ended (L *c.* 153mm),[70] and two semi-circular discs of oak, B<543> and B<822> (Fig 49). Of these, B<543>, taken to be from the base/head of a bucket/barrel,[71] is *c.* 290mm in diameter (Th 18mm) and charred, possibly as a result of the Great Fire. The other find, B<822>, is in less good condition but is larger and thinner (diam. *c.* 380mm, Th *c.* 10mm), with a developed noticeable 'lip' around part of the outer edge suggesting that it might be from a possible dish. Neither find has dowel holes to allow them to be secured to another semi-circular disk, nor any other perforations.[72] As neither disc is the same diameter as the bucket/barrel <57>/316/553> (Fig 45, considered next) and, even if they were, the rims would not fit into the groove in it, the relationship of these finds is unclear, although they seem to be from different objects. It would, therefore, appear that at least two buckets or barrels are represented in well fill B[88].

Five **composite objects** were recorded, two of which are from fill B[88] of well B[26]. The most impressive of these is a bucket or barrel B<57/316/553>, the main part of which B<57> (Fig 45) 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 *c.* 270mm (Th 7mm); the groove for the base shows that this was less than 3mm thick at the outer edge (Fig 45, far left). It was bound with at least four iron hoops with a height of *c.* 35–40mm (Fig 45, second from right), the lowest set around the base (unless it has slipped). One stave has a vertical row of five small nail holes (Fig 45, far left) suggesting that it was made of reused timber, while differential colouring suggests that it was partly burnt, perhaps in the Great Fire, 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 (Fig 45, far right). This argues for it being a bucket, which might be more likely in a well. Two other fragments of wood and iron from B[88] (B<316> and B<553>) probably also derive from B<57>.

Another find from the well is an object made of beech wood with iron studs or hobnails along the surviving edge, B<542>. Although originally recorded as a patten, it differs from other published medieval finds from London[73] in that there are no projections to raise it off the ground, and it 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,[74] it is of uniform thickness. The function of this item, therefore, is unclear, but it is not impossible that it is part of a small box

[68] Noël Hume 1969, fig 23.
[69] Ward Perkins 1940, 141–42, pl. XXXI.
[70] *Cf* Morris 2000, 2331, fig 1147.
[71] *Cf ibid*, 2225–32, fig 1081, nos 8770, 8798.
[72] *Ibid*, 2243–51.
[73] Grew and de Neergaard 1988.
[74] Egan 2005, 30–1, fig 14.

lid; an example from York was dated to the 14th century,[75] but such decoration was also used in the post-medieval period.

The one find from the period 10 demolition is scale tang knife B<3> (Fig 52) from Gp B135 (B[3]), represented by the remains of the iron tang with shoulder plates of copper-alloy. The handle (probably of bone or horn), traces of which are visible on the tang, was secured by three closely spaced small rivets in triangular formation, while the small rectangular shoulder plates were fixed by a central rivet at the junction with the blade. The back plate is plain but the front is decorated with an engraved saltire cross with triangular blocks of hatching at the corners and in cruciform arrangement within the triangular fields. This find is likely to be of late 15th- to 16th-century date.[76] The two finds from 19th-century dump B[109] (Gp B132) comprise part of a possible sheath or scabbard made of leather and wood (B<621>, now desiccated) and a complex object of iron wire with aluminium and some wood (B<398>).

A total of 77 clay pipe bowls, 237 stems and 20 mouthpieces were recorded in 22 contexts across the site.[77] Eleven contexts yielded stem fragments alone, in addition to one mouthpiece and one unidentifiable bowl fragment that cannot be closely dated. Such contexts can only be broadly dated to *c*.1580–1910, covering the entire period of clay pipe manufacture.

The earliest pipes in post-Fire contexts from site B date to *c*.1640–60 and consist of one type AO9 bowl in Gp 140, one AO10 bowl in Gp 99 and three AO12 bowls in Gps 122, 125 and 137, all residual in later contexts. All but one of these bowls is overfired or heart-reddened and/or has fragments of kiln muffle adhering, showing that they are production waste from a clay pipe kiln. Pipes of this date form 6.5% of all pipe bowls from site B.

Pipes dating to *c*.1660–80 constitute 31.2% of all bowls from the site. These include two bowls of type AO13, 12 of type AO15, the second most common form on the site, two bowls of type AO18 and 8 of type AO18A. None of the pipes are marked or decorated, although most have milling to some extent around the top of the bowl. It is noteworthy that six bowls have encrusted kiln muffle and have clearly been overfired (one AO18 and the remainder type AO15). There are also several stem fragments that can be classed as kiln waste from contexts dating to the same period.

Pipes dating to *c*.1680–1710 account for 44.2% of all bowls. These include single examples of types AO19 and AO21, with types AO20 and AO22 more numerous. The last of these constitutes 31.2% of all pipe bowls from the site, with 24 examples, 18 of which were associated with the silting-up of the well (Gp 137). The one complete pipe recovered during excavation comes from this well fill (Fig 50, B<970>). Some pipes from this period are partially milled around the top of the bowl, but there are no decorated or marked examples. Most pipes of this period have been smoked, with no evidence for kiln muffle or overfiring recognised; they clearly post-date any clay pipe manufacture that was taking place in the vicinity.

There is only one pipe of type AO25, which dates to *c*.1700–70, and this is represented by part of the heel alone. It was found in context [4] in Gp 140, which is very mixed in composition, with residual 17th-century pipes and three examples of the latest pipe bowls recorded in Period 10. These are of type AO27 (*c*.1780–1820), and two of them are decorated, one with moulded vertical ribbing and leaf seams and the other with Masonic symbols (Fig 54, B<874>). The latter, which incorporates the 'all-seeing-eye', encapsulates the late 18th-century ideals of the Freemasons, and is relatively well represented in London excavated contexts, while the former is a common find. one of the more popular decorative types of the period. All three type AO27 pipes have a maker's mark moulded in relief on the sides of the heel. In one of these, the initials are illegible (<873>), and in the second they take the form of stars (<872>), which cannot be linked with any one workshop. The third pipe (<874>), which has Masonic decoration, was probably made by John Jarman (initials IJ), who is recorded in Bishopsgate in 1805–47.[78] This is the only identifiable maker's mark on pipes from site B.

Evidence for production waste from a clay pipe kiln was recorded in several contexts. This mainly takes the form of stem fragments that have been embedded in the walls of a muffle chamber, the substance of which remains encrusted along their length. There are also several stems and six pipe bowls that are clearly burnt, reddened and overfired (some with muffle adhering), representing kiln waste (rather than Great Fire debris). This includes numerous examples recorded in Gp 136 ([22]), dated to *c*.1660–80.

A muffle chamber was constructed of refractory material inside a furnace or kiln and protected the contents from direct contact with flames during heating, in much the same way as a saggar.[79] The muffle structure was reinforced using pre-fired pipe stems, which mostly run horizontally through the walls. The surviving fragments typically show evidence for fire-damage and exposure to high temperatures on their external surfaces, with patches of flash glazing and heavy slagging. This can be seen in finds from the recently excavated early 18th-century kiln at Royal Mint Street (sitecode RLM13).[80]

The pipe bowls date between *c*.1640–60 (one example each of types AO9, AO10 and AO12) and *c*.1660–80 (five type AO15 bowls and one type AO18). This clearly covers the period of operation of the workshop in which they were produced, with no types later than *c*.1680 identifiable as kiln waste. Since none of the pipes was marked, and no evidence for a kiln was found during excavation, it is impossible to identify the pipemaker. It seems likely, however, that their workshop was situated nearby, with some of the waste discarded on site B probably after production had come to an end (*i.e.* after *c*.1680).

General finds discussion, sites A and B

All the identifiable finds from late 17th- to earlier 18th-century contexts are typical of daily life in London at this time, with a mix of household ceramics, glass bottles and drinking vessels, and clay tobacco pipes. A few items associated with dress and

[75] *Cf* Morris 2000, 2291, fig 1117.
[76] *Cf* Cowgill *et al* 1987, fig 67.266.
[77] This text on the clay pipes is by David Higgins.
[78] Oswald 1975, 139.
[79] Peacey 1996, 15.
[80] Pearce and Banikov 2019.

personal hygiene are also represented, while the lead weights hint at trade of some kind, although no definite evidence of any industry as such was recovered. No metal objects associated with cooking were found, making it difficult to consider trends in catering, but it is clear that glass drinking vessels were beginning to be used more frequently than ceramic forms by the late 17th century. As found elsewhere in London at this time, the 17th-century pottery groups contain little imported material, and the emphasis is on local and regional wares, mainly from the Surrey-Hampshire borders and the new tin-glazed pottery factories being established in Southwark but later supplemented by wares from outside the region.

In the context of the four sites discussed in this volume, the cesspit and well groups on sites A and B can be compared with contemporaneous assemblages, adding to a growing corpus of early and mid 18th-century pit groups from the City, for example at Mitre Street,[81] and the surrounding area, such as Old Church Street, Chelsea.[82] Such clearances 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.[83] Unfortunately it has not been possible to compare the pottery with that from more recent excavations in the area, as virtually no 17th- or 18th-century material from Riverbank House or Watermark Place has been published.[84]

Billingsgate (site D)

A total of 3237 sherds of **pottery**, 2143 ENV, 35.5 EVEs, 41005g were recovered from contexts assigned to period 17 on site D. This includes 196 sherds of residual medieval pottery (153 ENV, 1.97 EVEs, 2615g). There are some features that include a higher proportion of residual medieval sherds, notably D:Building 9, accounting for 68.2% of all sherds in Event 2, and a high, but lower, proportion of sherds in Events 5 and 9 (see Table 27 for details of the pottery in each Event). Table 25 and Table 26 give details of the pottery sources.

The pottery is considered chronologically in the main text, by site and by Event and phase. Pottery alone is presented by major source in Table 27. This table allows the relative proportions of the different sources to be compared between buildings over the period of use covered by this study, demonstrating, for example, the predominance of the everyday, utilitarian Surrey-Hampshire border wares in all buildings, and the high proportion of more decorative tin-glazed ware and continental imports in separate phases of D:Building 9.

In broad terms, the fabrics and forms identified date to the 17th century, with no fabrics present that were introduced into London after *c*.1700 (for example, there is no white salt-glazed stoneware, first used in and widely available from the 1720s). Within the broad date range covered by the various pottery fabrics and forms recorded, refinement of the chronology is best provided by different decorative styles on certain wares, reflecting changing taste on the part of consumers. Where closer dating is possible (in larger contexts and/or where there are significant diagnostic features) the main chronological emphasis seems to be on the period from the 1630s through to the beginning of the 18th century.

By far the commonest fabric group is Surrey-Hampshire border ware, which includes both white and redwares, accounting for 70.2% of all pottery sherds from period 17 (68.3% ENV, 43.8% EVE, 36.1% weight; see Table 25 and Table 26). This is consistently the best represented fabric group in all buildings except D:Building 9, where residual medieval sherds dominate, and D:Building 12, Event 13, where London-area redwares are the most common source (Table 27). Taken together, whitewares with clear or green glaze (BORDY, BORDG) are more common than redwares (RBOR) from the border kilns. This is in keeping with general trends in London during the 17th century, with RBOR becoming the main fabric produced within the industry during the 18th century, probably as a result of diminishing sources of white-firing clay in the area of manufacture.

Surrey-Hampshire border wares formed a major part of Londoners' everyday pottery from the mid 16th century onwards, with the capital providing a major market for the industry through to the 19th century. During the 16th and 17th centuries, the range of vessel forms produced by the border ware potters was probably wider than that of any other ceramic industry supplying London, covering wares used for cooking, food preparation, serving food and drink, sanitary needs, storage, heating and lighting as well as many other more unusual functions. In the pottery from site D, bowls and dishes are the most common forms by a long way (79.0% of all border ware sherds, 77.4% ENV, 69.8% EVE, 75.4% weight). Many are small sherds so the shape of bowl/dish cannot easily be identified, but of those forms that can be recognised, flared dishes are the commonest (17.2% SC, 9.8% ENV, 45.6% EVE, 23.3% weight).[85] Flanged dishes are also well represented,[86] with other forms including rounded and handled bowls.

After bowls and dishes, which would have been used for a variety of purposes, mostly involving the preparation and serving of food, cooking vessels are the next most common functional group in Surrey-Hampshire border ware (4.8% SC, 1.8% ENV, 16.2% EVE, 11.3% weight). These consist principally of tripod pipkins, a distinctive three-footed form with straight tubular handle, which was a particular feature of the border industry, most likely introduced by the immigrant Rhenish potter, Harman Raignold, in the second half of the 16th century.[87] Forms with both internal and external lid-seating are represented in the finds.[88] There are also sherds from two lids of the kind that would have been used with such forms, one of them, with brown glaze, retaining part of a loop handle over the top (Fig 122).[89] Tripod pipkins were one of the main forms used for heating food in late 16th-/17th-century London, alongside cauldrons in London-area redware. By

[81] MIR84; Pearce 1998, 104. A plate from this group is illustrated at Fig 158 above.
[82] Jarrett 2000; Blackmore 2008.
[83] Blackmore 2005, 247.
[84] Fowler and Mackinder 2014; Mackinder 2015.
[85] See Pearce 1992, fig 21, nos 45–9, fig 22, no. 50, where they are referred to as 'deep dishes'; Pearce 2007, 96–100.
[86] See Pearce 1992, figs 19–20, fig 21, nos 33–42.
[87] Pearce 2007, 195–6.
[88] Pearce 1992, figs 27–8.
[89] For example, Pearce 2007, fig 72, no. 564.

Source	Fabric	SC	%	ENV	%	EVE	%	Wt	%
Surrey-Hampshire border wares	BORD	17	0.5%	12	0.6%	0.12	0.3%	181	0.4%
	BORDB	4	0.1%	3	0.1%	0.04	0.1%	27	0.1%
	BORDG	428	13.2%	292	13.6%	2.36	6.6%	1670	4.1%
	BORDO	9	0.3%	8	0.4%	0	0.0%	67	0.2%
	BORDY	1094	33.8%	711	33.2%	9.58	27.0%	6839	16.7%
	RBOR	655	20.2%	416	19.4%	3.97	11.2%	5198	12.7%
	RBORB	11	0.3%	5	0.2%	0.14	0.4%	164	0.4%
	RBORG	48	1.5%	13	0.6%	0.53	1.5%	412	1.0%
	RBORSL	5	0.2%	3	0.1%	0.13	0.4%	248	0.6%
Tin-glazed ware	TGW	15	0.5%	15	0.7%	0.09	0.3%	151	0.4%
	TGW A	4	0.1%	4	0.2%	0	0.0%	18	0.0%
	TGW BISC	8	0.2%	6	0.3%	0.05	0.1%	64	0.2%
	TGW C	69	2.1%	33	1.5%	1.83	5.2%	1103	2.7%
	TGW D	81	2.5%	58	2.7%	0.55	1.5%	1089	2.7%
	TGW F	2	0.1%	2	0.1%	0.06	0.2%	29	0.1%
	TGW G	1	0.0%	1	0.0%	0	0.0%	1	0.0%
	TGW H	29	0.9%	16	0.7%	1.51	4.3%	371	0.9%
English stoneware	ENGS	14	0.4%	7	0.3%	0.09	0.3%	423	1.0%
	ENGS BRST	4	0.1%	2	0.1%	0.45	1.3%	143	0.3%
	LONS	4	0.1%	5	0.2%	0.11	0.3%	33	0.1%
English porcelain	BONE	1	0.0%	1	0.0%		0.0%	1	0.0%
Essex redwares	METS	30	0.9%	6	0.3%	0.31	0.9%	541	1.3%
	PMBL	7	0.2%	5	0.2%	0.14	0.4%	52	0.1%
	PMFR	11	0.3%	10	0.5%	0.33	0.9%	269	0.7%
Factory-made refined wares	TPW FLOW	1	0.0%	1	0.0%		0.0%	10	0.0%
Imports - oriental	CHPO	4	0.1%	4	0.2%	0	0.0%	7	0.0%
	CHPO BATV	7	0.2%	5	0.2%	0.1	0.3%	20	0.0%
	CHPO BLANC	1	0.0%	1	0.0%	0	0.0%	8	0.0%
	CHPO BW	19	0.6%	18	0.8%	0.17	0.5%	61	0.1%
	CHPO MING	1	0.0%	1	0.0%	0	0.0%	5	0.0%
Imports - continental	BEAU	1	0.0%	1	0.0%	0	0.0%	1	0.0%
	DUTR	1	0.0%	1	0.0%	0.07	0.2%	37	0.1%
	FREC	66	2.0%	52	2.4%	3	8.5%	2357	5.7%
	GERST	6	0.2%	2	0.1%	0	0.0%	64	0.2%
	LANG	12	0.4%	5	0.2%	0	0.0%	222	0.5%
	LIGU	1	0.0%	1	0.0%	0	0.0%	2	0.0%
	NIMS	7	0.2%	3	0.1%	0	0.0%	393	1.0%
	OLIV	5	0.2%	3	0.1%	0	0.0%	118	0.3%
	PEN	35	1.1%	2	0.1%	0	0.0%	1139	2.8%
	POTG	13	0.4%	4	0.2%	0.04	0.1%	99	0.2%
	RAER	7	0.2%	6	0.3%	0	0.0%	74	0.2%
	SPAM	4	0.1%	4	0.2%	0.13	0.4%	39	0.1%
	WEST	12	0.4%	10	0.5%	0.45	1.3%	96	0.2%
	WEST PURP	3	0.1%	1	0.0%	0.5	1.4%	109	0.3%
London-area redwares	PMR	248	7.7%	209	9.8%	6.68	18.8%	14027	34.2%

Source	Fabric	SC	%	ENV	%	EVE	%	Wt	%
	PMSR	1	0.0%	1	0.0%		0.0%	11	0.0%
	PMSRG	1	0.0%	1	0.0%	0	0.0%	45	0.1%
	PMSRY	5	0.2%	4	0.2%	0	0.0%	23	0.1%
Non-local	MPUR	7	0.2%	3	0.1%	0	0.0%	233	0.6%
	STMO	4	0.1%	3	0.1%	0	0.0%	26	0.1%
	STSL	12	0.4%	4	0.2%	0	0.0%	21	0.1%
Miscellaneous	MISC	6	0.2%	6	0.3%	0	0.0%	49	0.1%
Residual medieval	BLGR	1	0.0%	1	0.0%	0	0.0%	7	0.0%
	CBW	12	0.4%	12	0.6%	0	0.0%	185	0.5%
	CHEA	1	0.0%	1	0.0%	0	0.0%	27	0.1%
	EMS	6	0.2%	3	0.1%	0.12	0.3%	205	0.5%
	KING	22	0.7%	16	0.7%	0	0.0%	65	0.2%
	KING NFR	2	0.1%	2	0.1%	0	0.0%	18	0.0%
	LCALC	9	0.3%	3	0.1%	0	0.0%	94	0.2%
	LCOAR	10	0.3%	6	0.3%	0	0.0%	228	0.6%
	LMHG	3	0.1%	3	0.1%	0	0.0%	100	0.2%
	LOND	47	1.5%	45	2.1%	1	2.8%	538	1.3%
	LOND EAS	2	0.1%	2	0.1%	0	0.0%	11	0.0%
	LOND HD	9	0.3%	6	0.3%	0	0.0%	55	0.1%
	LOND NFR	13	0.4%	12	0.6%	0	0.0%	71	0.2%
	LOND ROU	10	0.3%	6	0.3%	0	0.0%	72	0.2%
	LOND TUL	1	0.0%	1	0.0%	0	0.0%	60	0.1%
	LOND WSD	2	0.1%	2	0.1%	0	0.0%	3	0.0%
	MG	2	0.1%	2	0.1%	0	0.0%	19	0.0%
	NFM	1	0.0%	1	0.0%	0	0.0%	15	0.0%
	REDP	1	0.0%	1	0.0%	0	0.0%	11	0.0%
	SAIM	1	0.0%	1	0.0%	0	0.0%	2	0.0%
	SAIP	1	0.0%	1	0.0%	0	0.0%	1	0.0%
	SCAR	2	0.1%	2	0.1%	0	0.0%	94	0.2%
	SHER	12	0.4%	7	0.3%	0.07	0.2%	198	0.5%
	SIEG	3	0.1%	2	0.1%	0	0.0%	64	0.2%
	SIEGR	1	0.0%	1	0.0%	0	0.0%	22	0.1%
	SSW	22	0.7%	14	0.7%	0.78	2.2%	450	1.1%
Total		**3237**	**100.0%**	**2143**	**100.0%**	**35.5**	**100.0%**	**41005**	**100.0%**

Table 25 Breakdown of pottery fabrics from site D by sherd count (SC), estimated number of vessels (ENV), estimated vessel equivalents (EVEs) and weight in grams

the beginning of the 18th century, they were largely being displaced by metal cooking vessels and smaller ceramic pipkin forms without feet. None of these later forms were identified in the pottery from site D. There were no sherds from skillets, nor any other form used for heating food, although one sherd from a possible chafing dish or portable heating stand was recorded in context D[721].

Chamber pots are relatively well represented in Surrey-Hampshire border ware, mainly in BORDY, with only two examples in BORDG and one in RBOR. Most are of tall, rounded form with thickened rim, glazed inside only (Pearce Type 1),[90] with sherds from two of the later more squat form with flat-topped rim, glazed inside and out (Type 2), and introduced in the mid 17th century.[91] Drinking vessels consist of drinking jugs in BORDG and BORDY, and mugs in BORDB and RBOR.[92] Other forms include porringers (small handled bowls used for spoon foods), two costrels or portable flasks in BORDG and small jars

[90] See Pearce 1992, fig 39.
[91] Pearce 1992, fig 41, nos 332–6.
[92] For example, Pearce 1992, figs 33–4, fig 35, nos 263–70 and fig 36, nos 271–81.

Source	SC	%	ENV	%	EVE	%	Wt	%
Surrey-Hampshire border wares	2271	70.2%	1463	68.3%	16.87	47.5%	14806	36.1%
Tin-glazed ware	209	6.5%	135	6.3%	4.09	11.5%	2826	6.9%
English stoneware	22	0.7%	14	0.7%	0.65	1.8%	599	1.5%
English porcelain	1	0.0%	1	0.0%		0.0%	1	0.0%
Essex redwares	48	1.5%	21	1.0%	0.78	2.2%	862	2.1%
Factory-made refined wares	1	0.0%	1	0.0%		0.0%	10	0.0%
Imports - oriental	32	1.0%	29	1.4%	0.27	0.8%	101	0.2%
Imports - continental	173	5.3%	95	4.4%	4.19	11.8%	4750	11.6%
London-area redwares	255	7.9%	215	10.0%	6.68	18.8%	14106	34.4%
Non-local	23	0.7%	10	0.5%	0	0.0%	280	0.7%
Miscellaneous	6	0.2%	6	0.3%	0	0.0%	49	0.1%
Residual medieval wares	196	6.1%	153	7.1%	1.97	5.5%	2615	6.4%
Total	**3237**	**100.0%**	**2143**	**100.0%**	**35.5**	**100.0%**	**41005**	**100.0%**

Table 26 Breakdown of pottery fabrics from site D by major source by sherd count (SC), estimated number of vessels (ENV), estimated vessel equivalents (EVEs) and weight in grams

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
Essex redwares	1	5.6%	1	5.6%	0.05	17.2%	15	3.0%
Imports - continental	1	5.6%	1	5.6%		0.0%	1	0.2%
London-area redwares	13	72.2%	13	72.2%	0.24	82.8%	464	92.2%
Surrey-Hampshire border wares	2	11.1%	2	11.1%	0	0.0%	10	2.0%
Tin-glazed ware	1	5.6%	1	5.6%		0.0%	13	2.6%
Total	**18**	**100.0%**	**18**	**100.0%**	**0.29**	**100.0%**	**503**	**100.0%**

Event 1 - lane shortly after 1666

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
Imports - continental	2	9.1%	1	5.0%	0	0.0%	15	3.7%
London-area redwares	1	4.5%	1	5.0%	0.07	5.7%	8	2.0%
Residual medieval	15	68.2%	14	70.0%	1	81.3%	332	81.0%
Surrey-Hampshire border wares	4	18.2%	4	20.0%	0.16	13.0%	55	13.4%
Total	**22**	**100.0%**	**20**	**100.0%**	**1.23**	**100.0%**	**410**	**100.0%**

Event 2 - Building 9 1667–76

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
English stoneware	12	8.0%	6	7.1%	0.54	19.9%	520	18.4%
Essex redwares	3	2.0%	3	3.5%	0.1	3.7%	115	4.1%
Imports - continental	16	10.7%	11	12.9%	0	0.0%	233	8.2%
London-area redwares	15	10.0%	14	16.5%	0.24	8.8%	395	14.0%
Non-local	2	1.3%	2	2.4%	0	0.0%	13	0.5%
Residual medieval	17	11.3%	14	16.5%	0	0.0%	155	5.5%
Surrey-Hampshire border wares	76	50.7%	26	30.6%	1.79	65.8%	1291	45.6%
Tin-glazed ware	9	6.0%	9	10.6%	0.05	1.8%	109	3.9%
Total	**150**	**100.0%**	**85**	**100.0%**	**2.72**	**100.0%**	**2831**	**100.0%**

Event 3 - Buildings 10 and 11 1670s

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
Essex redwares	1	0.5%	1	0.5%	0.14	5.0%	16	0.5%
Imports - continental	30	13.7%	26	13.3%	1.08	38.7%	748	23.2%
Imports - oriental	5	2.3%	5	2.6%	0	0.0%	14	0.4%
London-area redwares	22	10.0%	18	9.2%	0.37	13.3%	1029	31.9%
Residual medieval	15	6.8%	15	7.7%	0	0.0%	176	5.4%
Surrey-Hampshire border wares	104	47.5%	93	47.7%	0.64	22.9%	584	18.1%
Miscellaneous	2	0.9%	2	1.0%	0	0.0%	40	1.2%
Tin-glazed ware	40	18.3%	35	17.9%	0.56	20.1%	623	19.3%
Total	**219**	**100.0%**	**195**	**100.0%**	**2.79**	**100.0%**	**3230**	**100.0%**

Event 4 - Building 12 1667

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
English stoneware	1	1.6%	1	1.7%	0	0.0%	1	0.1%
Essex redwares	1	1.6%	1	1.7%	0	0.0%	7	0.8%
Imports - continental	14	21.9%	13	21.7%	0.54	58.7%	215	25.8%
London-area redwares	6	9.4%	6	10.0%	0.22	23.9%	249	29.9%
Residual medieval	22	34.4%	21	35.0%	0	0.0%	189	22.7%
Surrey-Hampshire border wares	17	26.6%	15	25.0%	0.16	17.4%	142	17.0%
Tin-glazed ware	3	4.7%	3	5.0%	0	0.0%	30	3.6%
Total	**64**	**100.0%**	**60**	**100.0%**	**0.92**	**100.0%**	**833**	**100.0%**

Event 5 - Building 9 1680–1720

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
Essex redwares	6	1.5%	5	2.1%	0.04	0.9%	129	3.4%
Imports - continental	10	2.5%	6	2.5%	1	21.5%	555	14.7%
Imports - oriental	1	0.3%	1	0.4%	0	0.0%	4	0.1%
London-area redwares	4	1.0%	4	1.6%	0	0.0%	20	0.5%
Residual medieval	26	6.5%	13	5.3%	0.19	4.1%	502	13.3%
Surrey-Hampshire border wares	347	86.8%	208	85.6%	3.3	71.0%	2512	66.5%
Tin-glazed ware	6	1.5%	6	2.5%	0.12	2.6%	57	1.5%
Total	**400**	**100.0%**	**243**	**100.0%**	**4.65**	**100.0%**	**3779**	**100.0%**

Event 6 - Building 13 by 1680

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
English porcelain	1	50.0%	1	50.0%	0	0.0%	1	50.0%
English stoneware	1	50.0%	1	50.0%	0	0.0%	1	50.0%
Total	**2**	**100.0%**	**2**	**100.0%**	**0**	**.0%**	**2**	**100.0%**

Event 7 - Building 10 modifications shortly after 1700

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
Imports - continental	14	1.6%	8	1.2%	0	0.0%	88	2.6%
Imports - oriental	1	0.1%	1	0.2%	0	0.0%	1	0.0%
London-area redwares	11	1.3%	9	1.4%	0	0.0%	103	3.1%

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
Residual medieval	1	0.1%	1	0.2%	0	0.0%	4	0.1%
Surrey-Hampshire border wares	840	95.6%	637	95.8%	3.02	98.1%	3051	90.7%
Tin-glazed ware	12	1.4%	9	1.4%	0.06	1.9%	117	3.5%
Total	**879**	**100.0%**	**665**	**100.0%**	**3.08**	**100.0%**	**3364**	**100.0%**

Event 8 - Building 12 shortly after 1700

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
Imports - continental	8	4.6%	4	4.3%	1.5	27.4%	933	24.0%
Imports - oriental	3	1.7%	2	2.2%	0.27	4.9%	10	0.3%
London-area redwares	4	2.3%	3	3.3%	0.08	1.5%	31	0.8%
Residual medieval	82	47.1%	61	66.3%	0.78	14.3%	1120	28.8%
Surrey-Hampshire border wares	29	16.7%	7	7.6%	0.04	0.7%	624	16.1%
Tin-glazed ware	48	27.6%	15	16.3%	2.8	51.2%	1169	30.1%
Total	**174**	**100.0%**	**92**	**100.0%**	**5.47**	**100.0%**	**3887**	**100.0%**

Event 9 - Building 9 after 1700

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
Imports - continental	56	20.2%	6	3.7%	0	0.0%	1374	43.3%
Imports - oriental	4	1.4%	3	1.9%	3	50.9%	6	0.2%
London-area redwares	18	6.5%	11	6.8%	0.53	9.0%	228	7.2%
Residual medieval	1	0.4%	1	0.6%	0	0.0%	2	0.1%
Surrey-Hampshire border wares	190	68.6%	133	82.1%	2.36	40.1%	1529	48.2%
Tin-glazed ware	8	2.9%	8	4.9%	0	0.0%	32	1.0%
Total	**277**	**100.0%**	**162**	**100.0%**	**5.89**	**100.0%**	**3171**	**100.0%**

Event 10 - Building 12 around 1700

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
Essex redwares	27	5.8%	3	1.2%	0.31	9.2%	515	16.2%
Imports - continental	2	0.4%	2	0.8%	0	0.0%	20	0.6%
Imports - oriental	4	0.9%	4	1.6%	0	0.0%	6	0.2%
London-area redwares	4	0.9%	4	1.6%	0.07	2.1%	41	1.3%
Surrey-Hampshire border wares	427	91.4%	227	93.4%	2.99	88.7%	2576	81.1%
Tin-glazed ware	3	0.6%	3	1.2%	0	0.0%	17	0.5%
Total	**467**	**100.0%**	**243**	**100.0%**	**3.37**	**100.0%**	**3175**	**100.0%**

Event 11 - Building 13 around

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
Essex redwares	1	1.4%	1	2.4%		0.0%	9	0.6%
Factory-made refined wares	1	1.4%	1	2.4%		0.0%	10	0.7%
Imports - continental	4	5.8%	4	9.5%	0.07	58.3%	108	7.6%
Imports - oriental	2	2.9%	1	2.4%		0.0%	4	0.3%
London-area redwares	6	8.7%	5	11.9%	0	0.0%	38	2.7%
Non-local	7	10.1%	3	7.1%	0	0.0%	237	16.7%

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
Residual medieval	16	23.2%	12	28.6%	0	0.0%	129	9.1%
Surrey-Hampshire border wares	19	27.5%	10	23.8%	0.05	41.7%	729	51.3%
Tin-glazed ware	13	18.8%	5	11.9%	0	0.0%	156	11.0%
Total	**69**	**100.0%**	**42**	**100.0%**	**0.12**	**100.0%**	**1420**	**100.0%**

Event 12 - Building 9 after 1699

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
English stoneware	1	0.4%	1	0.6%	0	0.0%	9	0.1%
Essex redwares	5	1.8%	3	1.7%		0.0%	39	0.3%
Imports - continental	5	1.8%	3	1.7%	0	0.0%	343	2.8%
Imports - oriental	9	3.3%	9	5.0%	0	0.0%	44	0.4%
London-area redwares	125	46.1%	102	57.0%	4.51	86.4%	10934	89.3%
Non-local	13	4.8%	4	2.2%	0	0.0%	25	0.2%
Residual medieval	2	0.7%	2	1.1%	0	0.0%	6	0.0%
Surrey-Hampshire border wares	83	30.6%	39	21.8%	0.71	13.6%	620	5.1%
Tin-glazed ware	28	10.3%	16	8.9%	0	0.0%	225	1.8%
Total	**271**	**100.0%**	**179**	**100.0%**	**5.22**	**100.0%**	**12245**	**100.0%**

Event 13 - Building 12 after 1700

Source	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
English stoneware	6	2.7%	4	3.0%	0.11	4.0%	68	3.2%
Essex redwares	3	1.3%	3	2.2%	0.14	5.1%	17	0.8%
Imports - continental	11	4.9%	10	7.4%	0	0.0%	117	5.4%
Imports - oriental	3	1.3%	3	2.2%	0	0.0%	9	0.4%
London-area redwares	26	11.6%	25	18.5%	0.35	12.7%	566	26.3%
Non-local	1	0.4%	1	0.7%		0.0%	5	0.2%
Residual medieval	2	0.9%	2	1.5%		0.0%	8	0.4%
Surrey-Hampshire border wares	133	59.4%	61	45.2%	1.65	60.0%	1083	50.3%
Miscellaneous	1	0.4%	1	0.7%	0	0.0%	1	0.0%
Tin-glazed ware	38	17.0%	25	18.5%	0.5	18.2%	278	12.9%
Total	**224**	**100.0%**	**135**	**100.0%**	**2.75**	**100.0%**	**2152**	**100.0%**

Event 14 - Building 13 1700–32

Table 27 Breakdown of pottery sources from site D by Event, using sherd count (SC), estimated number of vessels (ENV), estimated vessel equivalents (EVEs) and weight in grams

in BORDY and RBOR. Given the considerable diversity of the border industry, the strong emphasis on bowls and dishes in the finds from site D is both striking and unusual. It is a feature of the finds that is reflected in the overall breakdown of forms in all fabrics, with vessels for preparation/serving accounting for 57.9% of all sherds (56.0% ENV, 34.4% EVE, 30.8% weight).

After Surrey-Hampshire border wares, the next most common fabric group is London-area redwares, although these are, unusually, much less frequent (7.9% of all sherds, 10.0% ENV, 17.4% EVE, 34.4% weight). No 16th-century redwares were identified in the finds, and only one example each of the slipped variants with green and clear glaze (PMSRG, PMSRY). As with border wares, the main forms are again bowls and dishes of various sizes and shapes, with deep flared bowls and flared dishes well represented.[93] Cooking vessels were also recorded, in the form of cauldrons and tripod pipkins, and there are also sherds from jugs and jars. Industrial forms, however, constitute a major component of the London redwares, with sherds from sugarloaf moulds particularly numerous (93 sherds, 75 ENV,

[93] See Pryor and Blockley 1978, fig 13, nos 66–8 and fig 14, nos 73–6; Jarrett 2004, fig 73.

1.91 EVE, 9685 g). These large conical vessels were used for refining sugar, which was sold in the form of solid 'sugarloaves', with the molasses collected in large, heavily-built, shouldered jars with a substantial footrim base via a small 'nipple' at the base of the mould.[94] Most sugarloaf mould sherds have traces of white slip covering the interior surfaces, a common feature of the form, which may have helped removal of the sugarloaf from the mould, since an internal glaze would have slowed down evaporation of water from the sugar solution.[95] The sugarloaf rim diameters were measured at 350–400mm, which falls within the range of the largest size, comparable with the French *bâtarde*.[96] Both sugarloaf moulds and collecting jars were made at the Woolwich and Deptford potteries in the 17th century,[97] and were supplied to sugarhouses across London. As the English colonies in the West Indies were developed in the mid 17th century, the growing importation of raw sugars had a marked impact on the growth of the sugar refining industry.[98] This inevitably influenced the potteries producing forms used in the refining process, as at Woolwich and Deptford, as the number of sugarhouses in major cities such as London, Bristol, Exeter and York grew exponentially. In London, these were usually located close to the river, to facilitate the transport of raw and refined sugar, as well as providing access to water and drainage.[99] Billingsgate was no doubt ideally situated, within an area known for its industrial connections and warehousing, although it has not been possible to identify any one sugarhouse that might have used the moulds and jars recovered.

The next most common fabric group is London-made tin-glazed ware or delftware (6.5% SC, 6.3% ENV, 10.6% EVE, 6.9% weight). These have been classified according to the groupings based on decorative style developed by Clive Orton for pottery from Mark Brown's Wharf, since decoration provides the best guide to dating (together with form). The main types are tin-glazed ware with plain white glaze (TGW C) and with decoration in blue and white or polychrome typical of the mid 17th century (TGW D). Both are seen as most likely starting in the second quarter of the century, with the use of plain glaze continuing through to the end of the industry in the 19th century and TGW D flourishing into the 1680s.[100] Plain white vessels from site D include chamber pots, with rim forms of a kind that was made at the Rotherhithe pothouse, operating from *c*.1638 to *c*.1684,[101] but also dated by Noël Hume to *c*.1675–1725,[102] and porringers with a rounded profile and everted rim, again of a kind made at Rotherhithe.[103] There are also small jars or ointment pots,[104] a form that continues through to the 19th century, and sherds that may come from a candlestick, lid and vase.

Vessels in TGW D are dated chiefly to *c*.1630–80,[105] but could continue to be produced into the 18th century. The chief forms recorded at site D are cylindrical jars of the kind used principally to hold pharmaceutical preparations,[106] with simple polychrome or blue and white decoration, and dishes or chargers, often with lead-glazed exterior surfaces.[107] A variety of decorative designs are present, including simple geometric patterns, and five examples with painted tulips in polychrome, a reflection of the then current craze for the flower in the Netherlands.[108] There are also a small number of sherds from jars and dishes decorated in the earlier TGW A style, characteristic of production at the Pickleherring pothouse and dating from the early to mid 17th century.[109] These include sherds from a dish in [366], decorated in the so-called Wanli style, made at Pickleherring and Rotherhithe and derived from late Ming Chinese porcelain.[110]

There are sherds from two plates (in phases D17.21 and D17.22) decorated in TGW F, a distinctive Chinese-inspired style dubbed 'Chinamen among grasses' by Garner and Archer, and current *c*.1670–90.[111] One sherd of 'Lambeth polychrome' (TGW G) was recorded in phase D17.24 and can be dated to *c*.1701–11.[112] The remaining decorated delftware falls into Orton's groups (ix) and (x) at Aldgate (TGW H), having a very pale blue glaze with blue-painted decoration and in circulation from the last quarter of the 17th and throughout the 18th century.[113] The main forms are plates with floral or Chinese-style decoration. There is also part of a bowl (Fig 102) and drinking vessels for hot liquors, including a cup decorated with flowers and butterflies (Fig 103), as well as a teabowl with chinoiserie decoration (Fig 104), all from phase D17.12 (context [310]). Ceramics for taking tea and coffee were becoming increasingly popular during the later 17th century, with the influence of Chinese porcelain forms and styles reflected in local pottery industries specialising in decorative wares (*i.e.* tin-glazed ware). In addition to finished, glazed ware, there are also eight sherds of biscuit tin-glazed ware (TGW BISC), five of them from context [570] in phase D17.11, including a chamber pot and dish. It is uncertain where these were made but most of the London delftware pothouses were located south of the Thames.

All other fabric groups are much less frequent. Essex redwares, which include PMFR, PMBL and METS, account for only 1.5% of all sherds (1.0% ENV, 2.0% EVE, 2.1% weight). This is in keeping with general usage in London, with the Harlow wares tending to become less widely available during the later 17th century. The clear-glazed PMFR is represented by sherds from dishes, jugs and bowls, while the black-glazed PMBL was used mainly for mugs and jugs, with dishes and bowls in slip-decorated METS. Other English wares come from sources in the Midlands, including butter pots in Midlands purple ware (MPUR), bowls in Staffordshire mottled ware (STMO) and dishes and porringers in Staffordshire-type slipware (STSL).

[94] Brooks 1983, 1, 8–9.
[95] Jarrett 2004, 109.
[96] Brooks 1983, 7.
[97] Pryor and Blockley 1978, fig 13, no. 64 and fig 14, nos 70–1, recorded as 'storage jars'; Jarrett 2004, fig 76, nos 10–13, fig 75, nos 5–9.
[98] Gutiérrez 2022, 3.
[99] Gutiérrez 2022, 20.
[100] Orton 1988, 321–7.
[101] Tyler *et al.* 2008, fig 101.
[102] Noël Hume 1977, 101, fig XVIII, nos 2–7.
[103] Pearce 2018, fig 14, no. 3 (MOL A4399).
[104] Orton 1988, fig 131, nos 1248–55; Pearce 2018, fig 18; Tyler *et al.* 2008, fig 114.
[105] Orton 1988, 327.
[106] Orton 1988, fig 131, nos 1256–64; Tyler *et al.* 2008, figs 112–17; Pearce 2018, figs 18–20.
[107] Orton 1988, fig 132, nos 1294–1301; Pearce 2018, figs 5–8, 10.
[108] *e.g.* Orton 1988, fig 134, no. 1354, fig 135, no. 1359; Tyler *et al.* 2008, fig 104, <P103>; Britton 1987, pls 87–8.
[109] Orton 1988, 321.
[110] See Orton 1988, fig 137, no. 1368; Pearce 2018, fig 8; Tyler *et al.* 2008, figs 42, 44. Britton 1987, pl. 32.
[111] Garner and Archer 1972, 17–18, 25; Orton 1988, 327, fig 142, nos 1316, 1400, 1403–04; Britton 1987, pl. 97.
[112] Garner and Archer 1972, 37–8.
[113] Orton and Pearce 1984, 56–8, figs 28, 29, nos 133–7.

The last two of these were coming into London from the third quarter of the 17th century, with MPUR available from the late 16th century. There are, however, few sherds in any of these fabrics in period 17 contexts on site D. The remaining English wares consist of English brown salt-glazed stonewares (ENGS), including London-made stoneware (LONS), most likely from Fulham. The main forms are bottles, jars and mugs, with one example carrying the impressed AR ale measure mark (from [282] in phase D17.15). This was introduced following an Act of Parliament of 1700, with the original WM mark replaced by AR during the short reign of Queen Anne (1702–14), and the mug was made at John Dwight's Fulham Pottery;[114] it is likely that the remaining mugs and other forms represented on the site in this phase came from the same source. Sherds of 19th-century stoneware with Bristol glaze are intrusive, as are single sherds of bone china and transfer-printed ware.

Continental imports account for 5.3% of all period 17 sherds from site D (4.4% ENV, 11.8% EVE, 11.6% weight). The most numerous of these are from jugs in Frechen stonewares (FREC), most of which will have come from the iconic *Bartmann* (*eg* Fig 94), with face mask and/or medallion surviving. There is also a complete rounded jug in FREC from [310] (Fig 105). Other Rhenish imports include jugs and drinking jugs in Langerwehe stoneware (LANG) and Raeren stoneware (RAER), although these would have been residual by the later 17th century. Westerwald stoneware (WEST) continued to be imported into the 18th century, mainly in the form of jugs and mugs. One example, from three contexts in Building D:13, is decorated with a portrait of Queen Mary, giving a dating of 1689–1702 from William's reign (Fig 94). There is also part of a mug in Westerwald stoneware with blue and purple decoration (WEST PURP; Fig 106), which was introduced in the mid 17th century.

Apart from Rhenish stonewares, imported pottery from the Continent is much less frequent, although several different sources are represented. These include the Netherlands, with one sherd from a cauldron or pipkin in Dutch red earthenware (DUTR) in [280]; France, with part of a dish in Beauvais sgraffito ware (BEAU) in [767]; Italy, with sherds from a dish in Ligurian maiolica (LIGU) in [309] and from a costrel and bowls in north Italian marbled slipware; and the Iberian peninsula with sherds from three Spanish olive jars (OLIV) and two jars in Peninsular House ware (PEN), as well as bowls and jars in Iberian micaceous ware (SPAM), as well as plates and a bottle in Portuguese tin-glazed ware (POTG; Fig 85).

Chinese porcelain was entering England from the late 16th century, and after a hiatus in trade caused by civil war in China in the mid 17th century, this luxurious ceramic commodity was becoming increasingly available from the end of the century onwards. There are 25 sherds of Chinese porcelain in site D contexts, mostly in blue and whiteware (CHPO BW). These come from teabowls and plates, which were among the most common forms carried by the China trade, catering to the market for fashionable teawares and dining wares. These include part of a teabowl from [310] with finely painted decoration. There are also sherds from teabowls and a saucer in Chinese porcelain, Batavian ware (CHPO BATV), with its characteristic brown exterior surfaces, entering the country from *c*.1700. The only other find is the head of a small female figure in *blanc-de-chine* (CHPO BLANC) from [363]. Overall, the amount and range of Chinese porcelain from the site is in keeping with a date range in the late 17th/early 18th century.

When the pottery from site D is considered by functional grouping (Table 28), it is notable that vessels used for food preparation/serving are by far the most common type (57.9% SC, 56.0% ENV, 36.3% EVE, 30.8% weight). If unidentified and residual/intrusive forms are removed, this becomes an even higher proportion of all identifiable post-medieval sherds (69.4% SC, 72.7% ENV, 36.3% EVE, 33.6% weight). Vessels used for food preparation and service consist of bowls and dishes of various forms and sizes, made almost entirely in Surrey-Hampshire border wares and London-area redwares. This is a reflection of the prevalence of these two major sources of London's domestic pottery on the site, although the marked emphasis on these particular forms is not typical. For example, comparison with the late 17th-/mid 18th-century finds from excavations in Tanner Street, Bermondsey show a more even breakdown between vessels used for preparing and serving food and drink, as well as other functional categories, without the same focus on utilitarian bowls and dishes.[115] Vessels used chiefly for serving food are the second most common functional type in site D pottery, with dishes and, to a lesser extent, plates the main forms. These are chiefly decorated wares that would not have been used in the kitchen, with delftware the main source and including a variety of styles in blue and white and polychrome. Other decorative serving wares include METS and STSL, as well as imported dishes in BEAU, LIGU, NIMS, POTG and CHPO. Many, if not all of these could equally have been used for display within the home and would have made a fine centrepiece on the table during mealtimes.

Vessels for serving drink are relatively well represented. A large proportion of these consist of jugs in Frechen stoneware (FREC), and in other Rhenish stonewares (LANG, RAER and WEST). Imported stonewares were favoured for serving wine through much of the 17th century, until they began to be displaced by local stoneware production at Fulham and by the growth of the bottle glass industry. They were particularly favoured by public houses and have been recorded in large numbers on several such excavated sites in London and elsewhere.[116] There are also jugs in PMR, PMBL and PMFR, as well as sherds from two costrels in BORDG, which served as portable flasks, but FREC jugs, mostly *Bartmänner*, constitute the main form used for serving drink in the site D post-Fire assemblage. Drinking vessels are represented chiefly by mugs and drinking jugs in Surrey-Hampshire border wares (both white and redwares) and in Rhenish stonewares, particularly RAER and WEST. There are also mug or tankards in English stoneware (ENGS and LONS), post-dating the start of production at Fulham in the 1670s. Although border wares remained popular through much of the 17th century, stoneware was always a strong choice for alcoholic beverages (ale and beer especially), especially in a public house environment, where its innate durability was a distinct advantage.

Cooking vessels account for 4.0% of all sherds (2.0% ENV, 9.5% EVE, 4.9% weight). These are almost entirely tripod

[114] Green 1999, figs 107–8.

[115] Pearce 2016, 218–19, fig 32.

[116] For example, see Jeffries *et al.* 2014.

Function	SC	% SC	ENV	% ENV	EVE	% EVE	Wt	% Wt
Cooking	130	4.0%	43	2.0%	3.67	9.5%	2008	4.9%
Drinking	43	1.3%	33	1.5%	1.24	3.2%	553	1.3%
Garden	1	0.0%	1	0.0%	0.1	0.3%	75	0.2%
Hygiene	84	2.6%	21	1.0%	1.11	2.9%	1166	2.8%
Industrial	107	3.3%	87	4.1%	3.85	10.0%	11292	27.5%
Intrusive	1	0.0%	1	0.0%		0.0%	10	0.0%
Lighting	6	0.2%	2	0.1%	0.34	0.9%	31	0.1%
Other	11	0.3%	7	0.3%	1.18	3.1%	175	0.4%
Pharmaceutical	34	1.1%	21	1.0%	0.5	1.3%	508	1.2%
Preparation/serving	1874	57.9%	1200	56.0%	13.24	34.4%	12614	30.8%
Residual	193	6.0%	151	7.1%	1.97	5.1%	2481	6.1%
Serving - drink	110	3.4%	78	3.6%	3.8	9.9%	3089	7.5%
Serving - food	182	5.6%	103	4.8%	5.59	14.5%	2544	6.2%
Serving/storage	18	0.6%	6	0.3%	0	0.0%	498	1.2%
Storage	73	2.3%	28	1.3%	0.93	2.4%	2883	7.0%
Teaware	26	0.8%	21	1.0%	0.93	2.4%	91	0.2%
Unidentified	344	10.6%	338	15.8%	0.05	0.1%	984	2.4%
Total	**3237**	**100.0%**	**2141**	**100.0%**	**38.5**	**100.0%**	**41002**	**100.0%**

Table 28 Breakdown of pottery from site D by functional group, using sherd count (SC), estimated number of vessels (ENV), estimated vessel equivalents (EVEs) and weight in grams (Wt)

pipkins and cauldrons in Surrey-Hampshire border wares and London-area redware, with only one cauldron or pipkin in DUTR in [280]. This is in keeping with the usual pattern across London during the 17th century, with these two major pottery industries supplying most of the capital's needs as far as cooking vessels were concerned. By the 18th century, the pattern was changing as cooking practices developed and ceramic cooking vessels tended to be smaller, handled, without feet and used more in the manner of a saucepan rather than for slow-cooking large meals.

Wares used for hygienic (sanitary) purposes consist entirely of chamber pots, with Surrey-Hampshire border wares and tin-glazed ware with plain white glaze the only fabrics represented. This is again in keeping with general trends during the 17th century, although other pottery industries were also supplying the London market. Pharmaceutical wares consist entirely of jars and ointment pots in tin-glazed ware, either plain or with simple coloured decoration (TGW C, TGW D mostly).

Storage vessels are more varied for source. These include storage jars in PMR, RBOR and BORDY, but also jars used for transporting and storing various commodities. Butter pots in MPUR were brought into London as containers for dairy produce from the Midlands, while Spanish olive jars and jars in Peninsular House ware (PEN) carried various products from Spain, including oil, wine and dried fruit.

Teawares, in the form of sherds from teabowls and saucers only, were recorded in various contexts. They were mostly made in Chinese porcelain, which was the most fashionable choice available during the late 17th/early 18th century. It was also the most suitable ceramic body for hot beverages, far more so than tin-glazed ware, which is the only other fabric recorded for these forms on site D, with sherds from teabowls in TGW H decorated typically with Chinese-inspired scenes. Other functional groups include vessels associated with lighting, with sherds from only two candlesticks recorded, in RBOR and possibly in TGW C.

The other notable functional group recorded is industrial pottery (3.3% of all sherds, 4.1% ENV, 10.0% EVE, 27.5% weight; Table 28). With the exception of part of an industrial vessel of uncertain function in PMR from [721], these consist of sherds from sugarloaf moulds and syrup collecting jars, all made in PMR (discussed in more detail above). It is notable that the majority of sherds come from D:Building 12, which may suggest that they were stored there.

A total of 1564 fragments of **glass** (864 ENV, 14002 g) were recorded, with the largest quantities coming from D:Building 13 (300 fragments, 27 ENV, 466 g) and D:Building 10 (295 fragments, 84 ENV, 4510 g; Table 29). There are some problems with close dating as there are numerous very small fragments of glass that cannot be identified with a specific form with confidence, especially when diagnostic features, such as bottle rim finishes, are lacking. Much of the glass falls between the mid 17th and early 18th centuries. The latest contexts that do not include obviously intrusive (late 18th-/early 19th-century) material are associated with final alterations to D:Building 12 (*c*.1720–1800) and modifications to D:Building 9 (*c*.1730–1800). For the most part, the glass dating complements that of the other ceramic finds, including clay tobacco pipes. The codes or acronyms used for the various forms of glass objects are given in Table 30.

Phase	Event	TPQ	TAQ	FC	% FC	ENV	% ENV	Wt	% Wt
17.16	1	1600	1800	25	1.6%	15	3.2%	85	0.6%
17.1	2	1500	1800	8	0.5%	7	1.5%	11	0.1%
17.2	2	1680	1740	8	0.5%	8	1.7%	56	0.4%
17.17	3	1770	1840	142	9.1%	36	7.7%	1086	7.8%
17.18	3	1770	1840	153	9.8%	48	10.3%	3424	24.5%
17.21	4	1680	1800	151	9.7%	38	8.1%	363	2.6%
17.20	5	1640	1740	8	0.5%	2	0.4%	56	0.4%
17.3	5	1500	1800	1	0.1%	1	0.2%	1	0.0%
17.7	5	1680	1800	14	0.9%	10	2.1%	227	1.6%
17.4	6	1640	1800	2	0.1%	2	0.4%	8	0.1%
17.5	6	1650	1800	275	17.6%	15	3.2%	59	0.4%
17.6	6	1640	1800	23	1.5%	10	2.1%	399	2.8%
17.19	7	1640	1800	2	0.1%	2	0.4%	3	0.0%
17.22	8	1680	1800	29	1.9%	14	3.0%	175	1.2%
17.12	9	1730	1800	209	13.4%	40	8.6%	2725	19.5%
17.23	10	1640	1800	38	2.4%	7	1.5%	56	0.4%
17.10	11	1680	1740	122	7.8%	27	5.8%	2642	18.9%
17.8	11	1650	1740	16	1.0%	8	1.7%	79	0.6%
17.13	12	1680	1800	71	4.5%	30	6.4%	863	6.2%
17.24	13	1680	1800	89	5.7%	36	7.7%	746	5.3%
17.26	13	1720	1800	42	2.7%	21	4.5%	150	1.1%
17.11	14	1720	1800	79	5.1%	43	9.2%	470	3.4%
17.15	14	1700	1800	53	3.4%	44	9.4%	105	0.7%
17.9	14	1680	1800	3	0.2%	3	0.6%	16	0.1%
Un phased		1650	1700	1	0.1%	1	0.2%	197	1.4%
Total				**1564**	**100.0%**	**467**	**100.0%**	**14002**	**100.0%**

Table 29 Breakdown of glass from site D by Event and Phase, using fragment count (FC), estimated number of items (ENV) and weight in grams(Wt)

Wine bottles in green glass are the most numerous of glass finds on the site (Table 30), accounting for 34.9% of all glass fragments, 36.5% ENV, 74.2% weight. This breakdown is obviously affected by the substantial weight of individual bottles when compared with forms such as phials or drinking glasses, and the fact that they tend to break into larger fragments. The earliest form represented is the shaft and globe bottle, dating to *c*.1640–80.[117] These account for 13.9% of all glass fragments (5.8% ENV, 49.6% weight), with a further 11.3% of fragments (17.6% ENV, 11.8% weight) recorded as shaft and globe/onion bottles (BOTT SHGO). The latter consist of indeterminate fragments that could belong to either form, so are broadly dated to *c*.1640–1740. The more squat, rounded onion bottle form, with its relatively shorter neck is dated to c.1680–1730/40,[118] and far fewer were positively identified on site D (4.0% of fragments, 5.1% ENV, 7.6% weight), although it is unknown what proportion of the BOTT SHGO records fall within this form. It is highly likely that many of the wine bottles from the site were in use for a lengthy period, as bottles were customarily taken to the vintner for refilling rather than being discarded when empty. There is only one example of a mallet bottle recorded (in [312]). These represent the transition from the rounded onion form to a cylindrical bottle, suitable for horizontal binning, and are dated to *c*.1725–60.[119] Fragments from three late 18th-century cylindrical wine bottles (in [44] and [263]) are all probably intrusive. The only other bottle forms are represented by fragments from two square case bottles,[120] probably used for spirits, and both in phase D17.11. There is also the complete neck from a mineral water bottle in context [390], the only example of this form recorded on the site.

The discovery of at least 17 globular flasks represents an important find (9.0% of all fragments, 2.0% ENV, 13.5% weight; Fig 108). Most are complete or almost so, and 14 come from context [310], modifications to D:Building 9, with two more in [278], final alterations to the same building. Analysis of a sample of the flasks has demonstrated that they were used

[117] Dumbrell 1992, 44–55; Willmott 2002, 89, fig 114a.
[118] Dumbrell 1992, 56–72.
[119] Dumbrell 1992, 79–86.
[120] Willmott 2002, 87, fig 112.

Code	FC	% FC	ENV	% ENV	Wt	% Wt
BOTT	46	2.9%	62	7.2%	106	0.8%
BOTT-CYL	3	0.2%	3	0.3%	83	0.6%
BOTT-MALL	37	2.4%	1	0.1%	467	3.3%
BOTT-ONIO	62	4.0%	44	5.1%	1069	7.6%
BOTT-SHGB	218	13.9%	50	5.8%	6948	49.6%
BOTT-SHGO	177	11.3%	152	17.6%	1653	11.8%
BOTT-SPA	1	0.1%	1	0.1%	48	0.3%
BOTT-SQU	2	0.1%	2	0.2%	12	0.1%
BOWL	2	0.1%	1	0.1%	33	0.2%
DROP	2	0.1%	2	0.2%	2	0.0%
FLAS	4	0.3%	3	0.3%	21	0.1%
FLAS GLOB	141	9.0%	17	2.0%	1897	13.5%
GOB	9	0.6%	6	0.7%	49	0.3%
JAR	1	0.1%	1	0.1%	11	0.1%
LID	1	0.1%	1	0.1%	81	0.6%
MIRR	1	0.1%	1	0.1%	6	0.0%
MISC	34	2.2%	17	2.0%	23	0.2%
PEST	1	0.1%	1	0.1%	20	0.1%
PHIAL	31	2.0%	28	3.2%	78	0.6%
PHIAL-CYL	299	19.1%	21	2.4%	239	1.7%
PHIAL-GLOB	5	0.3%	5	0.6%	15	0.1%
PULL	1	0.1%	1	0.1%	1	0.0%
RUN	1	0.1%	1	0.1%	1	0.0%
VESS	28	1.8%	22	2.5%	29	0.2%
WAST	8	0.5%	8	0.9%	52	0.4%
WIND	429	27.4%	405	46.9%	952	6.8%
WINE	19	1.2%	7	0.8%	74	0.5%
WINE FUN	1	0.1%	1	0.1%	32	0.2%
Total	**1564**	**100.0%**	**864**	**100.0%**	**14002**	**100.0%**

Table 30 Breakdown of glass from site D by form, using fragment count (FC), estimated number of vessels (ENV) and weight in grams (Wt). The form codes for glass, in the left-hand column, are explained in Table 17

to hold medicinal preparations,[121] so the number of flasks associated with one building in particular has significance for our understanding of that building's function.

Phials, principally for pharmaceutical use, appear relatively common on the site By fragment count (21.4% FC, 6.3% ENV, 2.4% weight), but this is largely because they can easily shatter into tiny fragments, with the overall weight considerably less than, for example, wine bottles. In particular, there is one phial, in context [819] that has shattered into at least 250 minute fragments. Cylindrical phials are the main form identified (299 fragments out of a total of 335), and these developed during the second half of the 17th century, becoming the predominant form during the 18th century.[122]

By comparison, there are only five fragments from globular flasks, a form that was becoming less prevalent by the 18th century.[123]

There is also a high fragment count for window glass, although this is more difficult to quantify and to determine which fragments come from the same panes, or which technology was used to produce them, since the majority are too small. A total of 429 fragments was recorded (27.4% FC, 46.9% ENV, 6.8% weight). For reasons given above the ENV (or in this case, the minimum number of items) should not be regarded as reliable. Most fragments are in natural green glass, with some colourless. A small number of fragments from diamond or hexagonal panes were identified, with grozed edges (*e.g.* in [15], [494] and [721]). Only three badly burnt and warped

[121] Gibson and Evans 1985; Castillo Cardenas 2014, fig 5; Willmott 2002, fig 114b.

[122] Willmott 2002, 91, fig 117; Castillo Cardenas 2014, 314, fig 4.

[123] Castillo Cardenas 2014, 311–12, fig 3.

fragments were recorded, and these may well have come from buildings destroyed by the Great Fire (contexts [34], [45] and [472]).

Other glass forms are much less frequent. There are nine fragments from goblets, mainly in colourless glass and of 17th-century date. These include a stem from [309] (Fig 117) with applied seal, probably made by Ravenscroft, following his 1677 first patent,[124] and part of an inverted baluster stem from [429], also probably made by Ravenscroft. Other forms are in *façon de Venise* , with evidence for rigaree trailing and optic-blown vertical ribbing (in [482] and [864]). Twenty fragments of colourless glass come from eight wine glasses. Of these, 16 fragments from the bowls of *c*.5 vessels cannot be identified as to the shape of glass. There are, however, three stems that are more informative. These include an inverted cinquefoil baluster stem dating to *c*.1665–80 from [337] (Fig 119);[125] a six-sided pedestal stem dating to *c*.1720 from [294] (also Fig 119);[126] and the base of a funnel bowl with inverted baluster stem and folded foot, of early 18th-century date (Fig 122). the only other identifiable forms include part of a lid, possibly for a bell jar, from [755]; the base of a small bowl in white glass from [310]; the base of a jar in [527]; and a pestle in natural green glass from [363] (<G6>). Apart from these, and fragments from unidentifiable forms, there are 12 fragments of glassworking waste, including a run, a drop and a pull.[127] There is insufficient evidence from these few finds for glassworking taking place in the immediate vicinity of the site.

A total of 513 **clay pipe** bowls, 2280 stems and 61 mouthpieces were recorded from site D (Table 31).[128] The majority are London-made and most have been smoked.

The earliest pipe identified is a type AO8 bowl from context [601] (phase D17.2, modifications to D:Building 12). This dates to *c*.1610–40 and is clearly residual. There are only four pipes in period 17 that date to *c*.1640–60, their manufacture pre-dating the Great Fire. These are two pipe bowls of type AO10, one of type AO9 and one of type AO12, all found in contexts dating to *c*.1660–80, so probably residual. All are unmarked and undecorated.

Most frequent are pipes made *c*.1660–80, which account for 58.5% of all bowls (Table 32). These are types AO13, AO15, AO17, AO18 and AO18A, and of these types AO15 and AO18 are the most common, at 30% and 23% respectively of all pipes from the site. This is typical of Restoration-period sites in London, and all these types of pipe would have been in current use at the time of the Great Fire and for a while afterwards (at least 14 years). In some features, these are the latest pipes present (in Events 1 to 3), all of them connected with immediate post-Fire activity and the construction of D:Building 9 and 10. Most pipes of this period have milling to some extent around the top of the bowl. Only three are marked, one of them a Dutch pipe (Fig 119 and Table 32).

Pipes made *c*.1680–1710 account for 13.6% of all identifiable bowls, with type AO22 the most common at 8.4%. The other contemporaneous forms are types AO19, AO20 and AO21. Two pipes only are marked (Table 33). These types are the latest pipes in Events 3, 5, 6 and 10, and they are important in helping to refine the dating obtained from pottery, glass and other finds.

Phase	Event	TPQ	TAQ	B	S	M
17.16	1	1660	1680	7	20	1
17.1	2	1660	1680	2	8	
17.2	2	1660	1680	1	7	
17.17	3	1660	1680	26	84	2
17.18	3	1680	1710	97	292	9
17.21	4	1700	1770	42	122	5
17.20	5	1680	1710	2	7	
17.7	5	1680	1710	12	65	1
17.4	6	1580	1910		1	
17.5	6	1680	1710	23	99	3
17.6	6	1680	1710	14	62	6
17.19	7	1580	1910		1	
17.22	8	1700	1710	45	312	4
17.12	9	1730	1760	23	90	5
17.23	10	1690	1710	23	120	3
17.10	11	1700	1710	35	160	4
17.8	11	1690	1710	18	92	
17.13	12	1820	1840	20	66	1
17.14	12	1660	1690	1	1	
17.24	13	1730	1770	43	328	7
17.26	13	1730	1770	27	90	2
17.11	14	1730	1770	38	150	5
17.15	14	1730	1770	8	70	2
17.9	14	1690	1710	5	33	
Unphased		1680	1710	1	0	1
Total				**513**	**2280**	**61**

Table 31 Breakdown of clay tobacco pipes from site D by Event and Phase, using bowls (B), stems (S) and mouthpieces (M)

Pipes of type AO25 are dated to *c*.1700–70, with this broad range refined by reference to Oswald's Simplified General Typology of 1975 (types OS10, OS11 and OS12). These are the latest pipes present in contexts assigned to events 4, 8, 11, 13 and 14, associated with the later life of the various buildings and their final disuse. Nineteen pipe bowls have been marked by their makers with initials or symbols (Table 33), and none are decorated.

The two latest pipes recorded in period 17 are a type AO27 bowl (*c*.1780–1820) from context [192] (event 12, phase D17.13), found with a type AO28 bowl (*c*.1820–40). The AO27 pipe has a maker's mark. Both pipes are chronologically out of place in this period.

[124] Willmott 2002, 117–18.
[125] Thorpe 1969, pl. XXXVI, no. 5; Bickerton 1971, pl. 4.
[126] Bickerton 1971, pl. 197.
[127] Brain *et al.* 2020.
[128] This text on clay pipes from site D is written in conjunction with David A Higgins.

Form	B	B%	ED	LD
UNK	62	12.1%	1580	1910
AO8	1	0.2%	1610	1640
AO9	1	0.2%	1640	1660
AO10	2	0.4%	1640	1660
AO12	1	0.2%	1640	1660
AO13	19	3.7%	1660	1680
AO15	154	30.0%	1660	1680
AO17	1	0.2%	1660	1680
AO18	118	23.0%	1660	1680
AO18A	7	1.4%	1660	1690
AD17-19	1	0.2%	1660	1680
AO20	13	2.5%	1680	1710
AO21	4	0.8%	1680	1710
AO22	43	8.4%	1680	1710
AO19	10	1.9%	1690	1710
AO25	36	7.0%	1700	1770
OS10	10	1.9%	1700	1740
OS11	22	4.3%	1730	1760
OS12	6	1.2%	1730	1780
AO27	1	0.2%	1780	1820
AO28	1	0.2%	1820	1840
Total	**513**	**100.0%**		

Table 32 Breakdown of clay tobacco pipes from site D by form, with quantification by number of bowls (B)

Overall, 27 pipes from site D have a maker's mark (Table 33). All but three of these have initials or symbols moulded in relief on the sides of the heel and all but one of the marked pipes are London-made. Three of the marked pipes date to the 17th century (*c*.1660–80) with two examples (possibly three) made *c*.1680–1710. One of the earlier pipes is Dutch (Fig 86) and has the maker's initials AI (maker unidentified). Dutch pipes are not common in excavated contexts from London, with locally made wares predominant throughout the 17th to 19th centuries. A type AO13 pipe in context [864] has the initials SV stamped incuse on the stem, behind the bowl, possibly standing for 'Smoke Virginia' rather than representing the name of the pipemaker.[129] There is also an unusual example of a type AO18 pipe bowl that has been marked with what appear to be the initials FA handwritten in red ink on the base of the heel, with five short strokes that may form a letter E on the left-hand side of the stem just behind the bowl (Fig 82). David Higgins writes:

> There are several other examples from London of pipes with red ink inscriptions applied to them. There are two bowls in the Elkins Collection [part of the SCPR Archive, in Liverpool University] 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.[130] 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 *c*.1680–1710.[131] All three of these inscribed pipes were collected from the Thames foreshore in London. Some similar examples have also been excavated at the Tower of London (THW85 [6]). These occur on similar bowl forms of *c*.1660–80 to the

Ctxt	Phase	Event	Acc	TPQ	TAQ	Form	ED	LD	Mark	Meth	Type	Pos
504	17.23	10	790	1690	1710	UNK	1580	1910	MW	M	R	SH
840	17.21	4	1265	1660	1680	AD17-19	1660	1680	AI	S	I	H
263	17.18	3	571	1680	1710	AO18	1660	1680	FA	HW		H
864	17.5	6	0	1660	1680	AO13	1660	1680	SV	S	I	SX
284	17.11	14	922	1700	1710	AO21	1680	1710	?BC	M	R	SH
346	17.11	14	788	1700	1710	AO22	1680	1710	H (RIGHT)	M	R	SH
310	17.12	9	941	1730	1760	OS10	1700	1740	?IH CROWNED	M	R	SH
421	17.15	14	934	1700	1740	AO25	1700	1770	?S?	M	R	SH
421	17.15	14	781	1700	1740	OS10	1700	1740	CROWNED HARPS	M	R	SH
282	17.15	14	786	1730	1760	AO25	1700	1770	HC	M	R	SH
292	17.26	13	1771	1730	1760	AO25	1700	1770	IL	M	R	SH
310	17.12	9	944	1730	1760	OS10	1700	1740	RM	M	R	SH
401	17.24	13	0	1730	1760	AO25	1700	1770	TM	M	R	SH
292	17.26	13	1774	1730	1760	AO25	1700	1770	WL	M	R	SH
252	17.26	13	769	1700	1770	AO25	1700	1770	WM?	M	R	SH
570	17.11	14	1043	1730	1740	OS10	1700	1740	AA	M	R	SH
570	17.11	14	1253	1730	1740	OS10	1700	1740	AA	M	R	SH
570	17.11	14	1254	1730	1740	OS10	1700	1740	AA	M	R	SH

[129] Oswald 1984; Le Cheminant 2008.
[130] Le Cheminant, 1981, 167, figs 35 and 36.
[131] Tatman 1985, 366, fig 21.

Ctxt	Phase	Event	Acc	TPQ	TAQ	Form	ED	LD	Mark	Meth	Type	Pos
308	17.24	13	948	1730	1760	OS11	1730	1760	CROWNED HARPS	M	R	SH
338	17.26	13	947	1730	1760	OS11	1730	1760	DOT (LEFT)	M	R	SH
310	17.12	9	945	1730	1760	OS12	1730	1780	IB	M	R	SH
476	17.11	14	774	1730	1760	OS11	1730	1760	ID	M	R	SH
294	17.26	13	1041	1700	1730	OS11	1730	1760	IL	M	R	SH
282	17.15	14	572	1730	1760	OS11	1730	1760	TB	M	R	SH
570	17.11	14	1252	1730	1740	OS11	1730	1760	WM	M	R	SH
310	17.12	9	943	1730	1760	OS12	1730	1780	WM CROWNED	M	R	SH
192	17.13	12	946	1820	1840	AO27	1780	1820	HH	M	R	SH

Table 33 Marked clay tobacco pipes from site D, with suggested pipemaker (meth(od) – HW – handwritten, M – moulded, S – stamped; type – I – incuse, R – relief; pos(ition) – H – underneath heel, SH – sides of heel, SS – sides of spur, SX – along sides of stem

> 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.[132]

The makers of the pipes made *c*.1680–1710 have not been identified, although the heel from a pipe that was possibly made in this period (<790>) has the initials MW, which may stand for pipemaker Mark Webb, who signed the Oath of Allegiance in 1696 (Table 33).

Twelve pipes, of types AO25 and OS10 and post-dating *c*.1700, have a maker's mark moulded in relief on the sides of the heel. Three of these have one letter unclear, and one (<781>) has crowned harps rather than letters. Of the remainder, seven marked pipes have five suggested makers (Table 33), including two working in Whitechapel and Cripplegate. One of these is Richard Manby (1) (Fig 110), working in Whitechapel in 1701–23, part of a well-established east London pipemaking dynasty.[133] Later pipes made by other members of this important family, who had links with the American trade, were also recorded on the site. There are also three pipes (all in context [570]) probably made by Anthony Andrews, 1694–1716 (Fig 122);[134] pipes of this period marked AA are well represented on London sites.

There are eight marked pipes made between *c*.1730 and *c*.1760/80 (Table 33). One has crowned harp symbols moulded in relief on the sides of the heel (Fig 119), and another pipe has a single raised dot on the left-hand side only (also Fig 119), neither of which can be traced to a particular pipemaker. Six sets of legible initials include one pipe probably made by John Langley, recorded in St Luke's in 1721–35, and two pipes marked WM, one of them crowned, made by William Manby (3), of Limehouse, 1719–46 and/or William Manby (4), of Green Dragon Alley, 1740–70 (see Table 33). Two other sets of initials have not been identified with any particular pipemaker. The latest marked clay pipe from the site is likely intrusive. It is a type AO27, dating to *c*.1780–1820, with the unidentified initials HH moulded in relief on the sides of the heel (<946>).

The 17th- and 18th-century clay pipes from site D are predominantly plain. The only attempt at embellishment consists chiefly of bands of milling or roll stamp decoration around the stems, of which there are 11 examples. Only two of these are associated with identifiable bowls – a type AO18 in [263] and a type AO13 in [913]. David Higgins writes:

> 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 *c*.1660–80 with at least five plain grooves impresses 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 *c*.1700–40, 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.

[132] Higgins 1989.
[133] Pearce 2013.
[134] Oswald 1975, 130.

The examples are [363] <599> *c.*1660–1720, [721] <1267> *c.*1660–80 and [840] <1268> *c.*1660–80.[135]

The only other decorated pipe is the type AO27 example from context [192], which is possibly intrusive, and has moulded leaf seams on the bowl.

Concerning imported pipes, three pipes with roll stamp decorated stems, which are probably Dutch, are noted above, dating to *c.*1660–80/1720. The one pipe bowl that has been identified as Dutch comes from context [840] (Fig 86). It is marked with the initials AI moulded in relief on the sides of the heel and falls within the period *c.*1655 to *c.*1685.[136] There is also one stem with a roll stamped border of uncertain origin, which dates from *c.*1700–40 (context [310]). This could possibly be a Chester import.[137]

Details of non-ceramic artefacts from site D are given in the main narrative.

Post-medieval coins from Billingsgate

Julian Bowsher

The corpus of 17 post-medieval coins from Billingsgate (site D) is largely composed of contemporary 17th-century pieces. Nevertheless the earliest and last dated coins are outside the basic range. A corroded coin D<3680> appears to be Roman 'radiate' rather than post-medieval. Another corroded and halved coin with a brassy patina D<799> may also be Roman. The Billingsgate excavations revealed extensive Roman remains 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, D<501>, which is judged intrusive into earlier layers.

Eleven copper-alloy coins all appear to be 17th century, beginning with a farthing D<509> of James I. This was from 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 and 1679. Three farthings have unclear dates D<544>, D<863>, D<559>, while D<520> is dated 1675. D<548> has a laurelled head right which looks like James II – so dating between 1684 and 1687. A further three coins are the size and fabric of contemporary farthings but remain corroded, precluding exact dates: D<763>, D<846> and D<543>. It is probably safe to suggest that these are coins of Charles II, or even up to William III.

The remaining pieces are contemporary 'private' productions: a trade token and two jetons. London 'trade tokens' were introduced in 1648 when state coin was scarce and continued until Charles II reintroduced regnal coinage in 1672. The tokens were usually tariffed as halfpennies but were often used as currency. D<452> was minted by George Shelton from his premises at St Mary Overy stairs on the south bank. Continental jetons, mostly made in Nuremberg from the late 15th century, are very common in London. The Nuremberg rechenmeisters made imitation 'coins' of European currency presumably to supplement small change or for use as counters. They were described as rechenpfennig, '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. D<539> was made by Hans Krauwinckel II, from one of the most prolific rechenmeister dynasties. He was a rechenmeister from 1585 to 1636. D<540> is a copy of a small coin of Louis XIV of France made by a member of the Lauffer dynasty of rechenmeisters. It could have been minted at any time during Louis's long reign, 1643–1715.

Apart from the residual Roman and intrusive Georgian pieces, the assemblage reveals basic small change of two sorts. The first is from the first half of the 17th century, and only consisted of the James I farthing and the London trade token; both were obsolete after the Restoration. New copper currency began with Charles II, and produced the bulk of the coin found at Billingsgate. The ten farthings and halfpennies came from the last 30-odd years of the century. They may well have circulated into the earlier part of the 18th century.

Catalogue

ROMAN

Copper-alloy coin
D<3680>, [494]; period D17.17 (1666 to probably 1678)
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
D<799>, [721]; period D17.21 (1667–78)
?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
D<509>, [257]; period D17.26 (1700–32)
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
D<520>, [279]; period D17.13 (perhaps after 1699)
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

[135] Higgins 1989.
[136] Atkinson and Oswald 1972, fig 78, nos 17–19.
[137] Higgins 1989.

D<559>, [363]; period D17.24 (1700–32)
Charles II, 1672-79; farthing. Diam 22mm; Wt 5.10g. Ax 6; Wr D.
Obv]AROLO, laur, cuir, bust l.. Rev faint traces of Britannia seated l.

Copper-alloy coin
D<863>, [625]; period D17.21 (1667–76)
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
D<544>, [344]; period D17.12 (probably 1690–1710)
Charles II, 1672-79; farthing. Diam 21mm; Wt 2.34g. Ax ; Wr.
Obv CARO[LVS]. faint trace of bust l. Rev uncertain details
? Charles II or James II

Copper-alloy coin
D<548>, [363]; period D17.24 (1700–32)
? 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
D<763>, [549]; period D17.22 (shortly after 1700)
c 1672 - 1699; farthing. Diam 25mm; Wt 4.46g. Ax ; Wr.
Obv corroded, illegible. Rev possible traces of Britannia seated l

Copper-alloy coin
D<846>, [557]; period D17.9 (1700–32)
Late 17th century; farthing. Diam 22mm; Wt 4.20g. Ax ; Wr.
Obv corroded, illegible. Rev faint traces of Britannia seated l.
Copper-alloy coin
D<543>, [344]; period D17.12 (probably 1690–1710)
Late 17th century; Diam 23mm; Wt 3.22g. Ax ; Wr.
Obv illegible. Rev traces of Britannia seated l.

Wiliam and Mary

Copper-alloy coin
D<457>, [44]; period D17.17 (1666–78 from documentary evidence but coin later)
William III and Mary, 1688/9 - 1694; halfpenny. Diam 28mm; Wt 10.31g. Ax 12; Wr D.
Obv GVLIEL[MVS ET MARIA]. Jugate busts r, William laur [cuir] l, Mary (faintly) on r. Rev faint traces of Britannia seated l. Cf Peck 1964, 160.

Copper-alloy coin
D<1082>, [570]; period D17.11 (1700–32)
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 l, Mary on r. Rev faint traces of Britannia seated l. Cf Peck 1964, 160.

George III

Silver coin

D<501>, [175]; period D17.18, (1666 to 1678 from documentary evidence, but coin later)
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.

Ceramic building material from Billingsgate

I M Betts

The majority of building material from post-1666 contexts comprises lead-glazed and tin-glazed floor tile and tin-glaze wall tiles, roofing tile and brick; a mixture of residual pre-1666 and post-Great Fire components. Most types have been discussed in detail by Betts[138] so are not examined in any depth here. Similarly, the tin-glazed floor tiles and early (pre-1666) tin-glazed (delftware) wall tiles, particularly those with mounted military figures, have already been discussed by Schofield and Pearce.[139]

It is clear that there is a considerable amount of redeposited medieval material from the earliest post-1666 Billingsgate features. This includes a few 13th-century London-made 'Westminster' and 14th century Penn tiles and a number of lead-glazed medieval and early post-medieval Low Countries floor tiles. From the 17th century imported Low Countries floor tiles were no longer glazed. Other pre-1666 material includes tin-glazed floor tiles, Dutch delftware wall tiles and a single medieval nib tile. The Dutch delftware wall tiles from the earlier post-1666 phases of period 17 (17.16, 17.1–2) mainly comprise mounted figures. Many have a slightly pitted or discoloured surface. These closely match the tiles recovered from Thomas Soane's buildings on the same site before the Fire, which would date them to the period 1640–66. There is no evidence for their use in buildings after the Great Fire.

Although there are over 100 delftware wall tiles from the Billingsgate site, many are represented by small fragments. It is often difficult to identify the decorative scheme present. What is certain is that most are blue on white. This may be because they seem to have been installed in buildings dating from after the Great Fire to around 1700, whilst purple (also known as manganese) on white and polychrome wall tiles only seem to have become fashionable in the 18th and 19th centuries. The earliest purple wall tiles are a fingernail-size fragment of powdered purple border from modifications to D:Building 9 and part of a mounted military figure from the final alterations to D:Building 13. The latter is again Dutch as mounted figures do not seem to have been made by British tin-glazed tile manufacturers.

There is little indication as to where the tin-glazed tiles from Billingsgate were used, although a small number seem to have blackened due to heat damage. What is known, from surviving *in situ* London examples, is that the majority were used in fireplace surrounds.[140] Examples of late 17th and 18th-century Dutch wall tiles have been found on other London sites, for instance at Spitalfields, though there mostly they were unstratified. Pictorial subjects included Old and

[138] 2018, 369–86.
[139] 2009, 317–19.
[140] Betts and Weinstein 2010, 54–83.

Context	Acc No.	Period	Type in previous publication of site (Betts 2018) or Betts and Weinstein 2010	Source	Location
721	999	17.21	<T8>, Betts and Weinstein 2010, no. 34	Antwerp	redeposited Fire debris
721	1017	17.21		probably Antwerp	redeposited Fire debris
721	1313	17.21		Antwerp	redeposited Fire debris
[+]	1792	[+]	<T9a>	probably Antwerp	unstratified
721	1434	17.21		probably Antwerp	redeposited Fire debris
721	1568	17.21		probably Antwerp	redeposited Fire debris
721	1313	17.21	<T9b>	probably Antwerp	redeposited Fire debris
625	1346	17.21		Aldgate	redeposited Fire debris or construction
721	1567	17.21		Aldgate	redeposited Fire debris
761	1421	17.21		Aldgate	post-Fire reconstruction
761	990	17.21	<T10>	Aldgate	post-Fire reconstruction
41	460	17.18		?Aldgate	post-Fire reconstruction
625	1340	17.21		Early Dutch	redeposited Fire debris or construction
1180	2195	17.1	<T11>	probably Early Dutch	redeposited Fire debris
531	1035	17.7		Pickleherring	primary surfaces in D:Building 9
385	587	17.18		Pickleherring	post-Fire reconstruction
721	982	17.21		Pickleherring	redeposited Fire debris
42	465	17.18	<T13>, Betts and Weinstein 2010, no. 141	Rotherhithe	post-Fire reconstruction
531	1452	17.7		Rotherhithe	primary surfaces in D:Building 9
394	998	17.6		?Rotherhithe	D:Building 13
540	991	17.22	<T14>, Fig 252	probably London	D:Building 12
22	458	17.16		probably London	redeposited Fire debris
721	1005	17.21	<T15a>, Fig 252	probably London	redeposited Fire debris
721	5934	17.21	<T15b>, Fig 252	probably London	redeposited Fire debris
197	1022	17.15		probably London	D:Building 13
282	4798	17.15		probably London	D:Building 13
294	1029	17.26		probably London	D:Building 12

Table 34 Tin-glazed floor tiles from Billingsgate (site D)

New Testament scenes.[141] The purpose of these glazed tiles would appear to have been two-fold: to provide a surface to be cleaned easily and to reflect heat into the room. This is also often their position in the interiors of houses in Dutch paintings of the mid-17th century.

Writing in 1703, Richard Neve describes *'Ancient Dutch Tyles'* used for *Chimney-foot paces,* some with 'Postures of Soldiers' and more modern ones commonly used instead of *'Chimney-Corner-Stones'*.[142] Architect Batty Langley, discussing Dutch tiles in 1748, describes their use as 'CHIMNEY TILES, commonly call'd *Gally Tiles*, for to set *the Coved Sides of Chimnies*'.[143] Dutch paintings also show delftware tiles used in other positions, such as skirting boards or as decorative panels in their own right.[144] In London delftware tiles are also used to decorate external light wells as at Fournier Street and in a basement dairy, for storing butter, cream, milk and cheese, at Rainham Hall, Essex.[145]

Two tables are provided here to list floor and wall tiles from Billingsgate: the tin-glazed floor tiles (Table 34) and tin-glazed wall tiles (Table 35). Many tin-glazed floor and wall tiles were found in the floor levels of post-Fire buildings, but they have been taken to be debris from immediately pre-Fire buildings. Only the examples found in post-Fire levels are listed here, the tables have been edited to remove those found in pre-Fire layers.

[141] Harward *et al.* 2015, 183, 312 (research by I M Betts).
[142] Ray 1973, 37.
[143] Ray 1973, 38.
[144] Betts and Weinstein 2010, 38.
[145] Betts and Weinstein 2010, 56–58, 79–80.

Context	Acc No.	Period	Type in previous publication of site (Betts 2018) or Betts and Weinstein 2010	Source	Location
575	1000	17.22	<T16>, Fig 218	Dutch	D:Building 13
496	960	17.23		Dutch	D:Building 13
496	5744	17.23		Dutch	D:Building 13
721	965	17.21		Dutch	D:Building 12
721	993	17.21		Dutch	D:Building 12
721	997	17.21	<T20>, Betts and Weinstein 2010, no. 384	Dutch	D:Building 12
721	1313	17.21		Dutch	D:Building 12
721	965	17.21	<T21>, Fig 253	Dutch	D:Building 12
41	459	17.18	<T22>, Betts and Weinstein 2010, no. 208	Dutch	D:Building 11
721	1435	17.21		Dutch	D:Building 12
309	1257	17.13		Dutch or English	D:Building 9
570	1265	17.11		Dutch or English	D:Building 13
unstratified	1792			Antwerp – later delft	unstratified

Table 35 Tin-glazed wall tiles from Billingsgate (site D)

Cowrie shells from Billingsgate

Alan Pipe

Introduction and methodology

Recovery of cowrie shells from Billingsgate (site D) initially attracted interest at an early stage, during wet-sieving and sorting of the samples in 1982. As cowries (Family Triviidae) are very poorly represented in the marine faunas of Britain and Ireland, with only two main species, spotted cowrie *Trivia monacha* and Arctic cowrie *Trivia arctica*, both of which are only up to 12mm long and not brightly coloured, the distinctive bright markings of the cowries immediately suggested recovery of exotic, probably tropical, species. Further identification confirmed two species of cowrie, money cowrie and gold ring cowrie, both with long histories as economically significant commercial commodities.

Preliminary inspection of cowrie shells from the site indicated that the assemblage mainly derived from money cowries of at least two species, both formerly of international importance as currency, and that the context groups, at least initially, indicate harvesting of a resource linked to commercial exploitation and international trade.[146] Further study at assessment level[147] identified and roughly quantified the most important components of the species assemblage as money cowrie *Monetaria moneta*, and gold ring cowrie *Monetaria annulus*, also called gold ringer, ring cowrie or ring top, and tentatively indicated that at least one more species, with possibly at least one colour variation of money cowrie, was also present.[148]

A total of 534 cowrie shells were recovered from 27 contexts. Shell counts from each context ranged between one and 224. The contexts and buildings in which the shells were found are given in the site narrative above, Table 8; and some are illustrated in Fig 87.

Visual inspection during assessment indicated that the assemblage was almost entirely composed of two main species; money cowrie *Monetaria moneta* (estimated 48 shells), and gold ring cowrie, also known as ring cowrie, ring top cowrie or gold ringer *Monetaria annulus* (estimated 449 shells), with 33 shells of a darker colour variation of gold ring cowrie, mainly from [602], with single examples from [864] (period 17.5, 1680–1700, D:Building 13; and one from what is recorded as context D[876], but this must be an error as the context is a human skeleton in the underlying church. In addition, shells of another common cowrie species, Lamarck's cowrie *Naria lamarckii* were recovered from D[427] and [471] in period 16.5, pre-Fire (also judged to be intrusive or recording error); and [602] in period 17.10.

The species

Money cowrie *Monetaria moneta* 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, Maldive Islands, Laccadive Islands, Madagascar, 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 10–30 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 until at least the late 19th century.[149] The Maldive and Laccadive Islands 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. In addition to their use as currency, they were widely used for personal adornment, either as

[146] Pipe 1992.
[147] Pipe 2020.
[148] Identification of species and colour variation followed Eisenberg 1981; Harasewuch and Moretzsohn 2010; Lorenz and Hubert 2000; Oliver 2004; and Wye 2003. Interpretation also followed these authorities, together with Safer and Gill 1982; and Yang 2019.

[149] Harasewuch and Moretzsohn 2010, 327.

personal choice, as royal symbols, as evidence of social rank or status, or in religious rituals. It includes several subspecies and occurs in a range of colour variations. The shells have a modest commercial value to mollusc shell collectors.[150] Money cowries occur in a diverse range of widespread colour variations.

Gold ring cowrie *Monetaria annulus* 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 use as currency, in divination and as jewellery and other decorative 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. Gold ring cowries occur in a diverse range of widespread colour variations although the assemblage produced 33 shells of a dark colour variation, it was not possible to suggest a geographical source for these. Occasionally the distinctive ring marking on the dorsum is found hammered away, making it very difficult to distinguish from the money cowrie *M moneta*.

Lamarck's cowrie *Naria lamarckii* is an abundant and widely distributed Indo-Pacific species occurring in the inter-tidal zone and on coral reefs down to depths of 20m. It is a faunal grazer, occurring from east Africa, Madagascar, Zanzibar, Indian Ocean, India, Thailand, Indonesia, and the Philippines, mainly active and feeding at night. Although a common species, there is no literature on use as currency and it is quite possibly present in the Billingsgate assemblage as 'by-catch' during harvesting of money, and gold ring cowries, or was selected for ornamental or divination use due to its bright distinctive colour and pattern.

Evidence of damage was extremely sparse, with only single examples of gold ring cowrie showing damage to the dorsal area, possibly resulting from deliberate breakage or abrasion. Single damaged gold ring cowrie shells were recovered from [363] (period 17.24, 1700–32, final alterations to D:Building 12; [602] (period 17.10, around 1700, modifications to D:Building 13); and [613] (period 17.11, 1700–32, final alterations to D:Building 13). Context [602] also included a single gold ring cowrie shell showing slight smoothing of the ventral side; this may be a result of damage due to transport in a bag, accidental trampling, or from use as a gaming piece or in divination. None of these examples of modification is definite evidence of an artefact as opposed to mere accidental damage, it should be emphasised that there is no evidence of tool marks, hammering or abrasion, or burning, noted on cowrie shells from any context group.

Discussion

The use of cowrie shells, primarily money cowrie *Monetaria moneta*, and ring or gold ring cowrie *Monetaria annulus*, as currency has a long and detailed history. Even as early as 1200 BC, they were important valuables in China, possibly predating the use of coins. In India, cowrie shells have been found in association with coins in sites dating from the 1st century AD. In Africa cowrie shells arrived by the 10th century, certainly predating European colonisation by several centuries, and there is evidence for 9th- and 10th- century Arab trade of cowries for African gold. As a form of currency, they have several suitable characteristics being small, portable, very durable, and unlike most coins, impossible to counterfeit. Most of the cowrie shells used in global trade are thought to derive from highly organised bulk collection in the Maldive and Laccadive Islands, with widespread use as currency continuing until the 19th century,[151] and detailed records of Maldive and Laccadive procurement and export procedures produced by Arab travellers and traders from at least the 9th century.[152] Anthropological evidence from the Yoruba culture of Nigeria indicates association of these species with specific rituals and deities, and indicates subtle differences between the two major money cowrie species, in terms of source and value, with highly-valued money cowries *M.moneta* from India present several centuries before European contact, and ring cowrie *M. annulus* from the east coast of Africa introduced by Europeans in the 19th century, but never considered as valuable as the Indo-Pacific money cowries. The predominance of gold ring cowrie, including the dark colour variation, with 482 shells of the total of 534 shells, relative to the much smaller sample of only 48 shells of money cowrie may allow speculation as to their source 'fishery'. It must also be stressed that these species are still used in Hindu astrology, divination in some African cultures, and as jewellery and decoration indicative of culture, rank, and status, and it is very likely that these uses may probably predate the concept of currency.[153]

Inspection of each shell has confirmed that there is no evidence of deliberate modification either by use of tools, for example by hammering, or abrasion, or by burning, to alter the appearance of specific shells for currency, decorative or ritual purposes. The cowrie assemblage derived almost entirely from very small context groups, some producing only single shells, with even the largest group in [602] producing only 278 shells and therefore likely to represent spilled cargo. Further integration of this catalogue and report into the London waterfront study may allow comment on the recovery of these species as to their source(s) and the intentions behind their transport, storage, and deposition.

Inventories of Richard Beckford (1679) and Francis Minshull (1704)

Stephen Freeth

Introduction

Two of the wealthy merchants who feature in this volume were Richard Beckford, Past Master of the Clothworkers' Company, who died in 1679, and Francis Minshull, citizen and vintner, who died in 1704. Beckford left a PCC will;[154] Minshull died intestate.[155] Inventories exist for both, not in the PCC (whose

[150] Wagner and Abbott 1967, 65–6.

[151] Safer and Gill 1982, 50–3.
[152] Yang 2019, 25–6.
[153] Safer and Gill 1982, 133–5.
[154] Will of Richard Beckford esq, dated 7 June 1678, proved 10 December 1679, TNA, PROB 11/361, fos. 233-234v.
[155] Woodhead 1965, 116.

probate inventories have not survived), but in the City's Court of Orphans. This is because they both left children who were minors. The City authorities needed to value their effects in order to calculate the sums due to secure the welfare of each child. The City's archives at LMA contain over 3,300 such inventories between the 1620s and 1742. The relevant financial calculations were then entered in the Common Serjeant's Books. In the case of Beckford, the relevant calculations were never fully filled in. In the case of Minshull, they are complete.[156]

The two inventories list the contents of the respective houses, room by room, followed by leases, ready money, debts to be received, debts to be paid and funeral charges. The houses themselves are not identified. However the mention in Beckford's inventory of an extremely valuable lease in Tower Street from 'Mr Banckes' reveals that the inventory does indeed relate to the former 34 Great Tower Street, once one of the finest surviving late-17th-century merchants' houses in the City. This was built by Beckford in 1668 or shortly after on a building lease from 'Mr Banckys' and meticulously recorded by the Survey of London in 1934, a few years before its destruction in World War II.[157] Minshull on the other hand lived at Botolph Wharf, in a house built soon after 1671 above the large medieval cellar within the site of the destroyed church of St Botolph Billingsgate. No images or plans of his house are known.

Beckford's house was photographed and surveyed before it was destroyed by enemy action. His inventory is a resource to allow comparison with the actual building. This is not easy, as the house had been much altered over time. In the case of Minshull, the inventory can be used to reconstruct the house itself. This has been attempted briefly in the account of the St Botolph Billingsgate church site above in Chapter 3.

Beckford's appraisers seem to have been a little more systematic than Minshull's, often tackling the contents of a room in a set order (such as beds, then furniture, then window curtains, then fireplace). However the lists of household goods in both inventories focus, frustratingly, on the mundane: beds and bedding; curtains; fireplace equipment; kitchen utensils; and linen. References to pictures, books, tapestries or to furniture in the best rooms such as the Dining Room give no details other than vague terms such as 'Turkey chairs' (chairs of Turkish origin or in Turkish style). Plate is simply valued by weight. These are not art auction catalogues.

No attempt is made to distinguish between grand rooms for show and lesser rooms, though high valuations give a clue. There are a few hints at expensive decoration, such as the five pieces of 'gilt leather' in Beckford's Withdrawing Room. Gilt leather hangings were choice and expensive.[158] However Beckford's gilt leather hangings in the bedroom next to the 'Chamber up two pairs of Stairs Forward' are more puzzling, except that both these rooms and the adjoining closet have high valuations. They must have been the best bedrooms. This 'Chamber' was also the only bedroom with a warming pan (though there was another one in the wash house, near the furnace). By contrast, Minshull's Little Parlour sounds like an office, not a room for a man with a young family.

It is important to be aware of the limitations of these lists of household goods. Put bluntly, it is hard to understand how the families actually lived in the house, especially in rooms such as the bedrooms. This same 'Chamber' in Beckford's house was the only bedroom with any sanitary provision (a close stool), and none of his other bedrooms are listed as having chamber pots or washing facilities. Minshull's house had no close stools or chamber pots at all, though it did have a warming pan in the kitchen. This must be misleading. These were wealthy men with comfortable houses. The problem is that the inventories are not comprehensive. There are no details of foodstuffs, or of stocks of wine or coal. The furniture, chattels and clothing are those which belonged to the head of the household, and not to the other members of the family. There are no children's toys or books. (Minshull's inventory includes the contents of the Widow's Room, valued at £20 12s, but this seems to have been included in error. The whole sum was later deleted from the overall value of his estate in the Common Serjeant's Book.) Nor is there any information about water supplies, domestic staff, or about the properties nearby of helpful relatives.

The leases listed are of property leased *from others* by Beckford and Minshull. They would then have sublet to others, occupied the property personally, or used the buildings for other purposes. The rents stated are those for which Beckford and Minshull were themselves liable. The valuations of the leases are puzzling and inconsistent at first sight. However they will have been dictated (much as today) not just by the remaining term of years and rent, but by the position of the property and its state of repair, the quality of the tenants and the potential for future subletting or assignment (sale) to others. One curious detail is that Minshull's three leases from the parish of St Botolph Billingsgate are given a total annual rent that is far too high (£44 instead of £26).

The list of Beckford's household goods includes some stock-in-trade in the warehouse, while Minshull's includes the same in the shop next to the house. The

[156] LMA, CLA/002/01/004, f. 119 (Beckford); /005, f. 126 (Minshull)
[157] SoL 15, 23–30.
[158] Koldeweij 2000.

details of debts to be received and debts to be paid allow a glimpse of their wider business interests, and in Minshull's case some of the names (Degrave, Woodcock, Slany) can be matched with his business associates or family as described elsewhere in this volume. However this too is only a partial view. The Court of Orphans inventoried chattels, not real estate, so although leases are listed, freehold property is excluded. (Beckford's inventory even includes a query at the end about whether it was right for money raised by Beckford on a mortgage of the Manor of Yate to be included, because it was essentially real estate.) So Beckford's shares in the Royal African Company are valued, but his freehold property in England and his plantation and other lands in Jamaica are not. We only know of these from his will.

Richard Beckford

LMA, CLA/002/02/01/1646 – inventory of Richard Beckford, 1679, in two duplicate copies

[Spelling, capitals and punctuation modernised, and abbreviations mostly expanded. Significant differences between the two copies of the inventory are noted, but minor variations (such as words instead of numerals) have been ignored.]

The inventory indented bearing date the 13th day of December Anno Domini 1679 and in the 31st year of the reign of our Sovereign Lord Charles the Second by the grace of God of England Scotland France and Ireland King, Defender of the Faith etc, of all and singular the goods, chattels, rights and credits which late belonged unto Richard Beckford Esq late citizen and clothworker of London deceased, seen valued and appraised by Richard Blackborne [blank] Thomas Rogers [blank][159] Edward Alder [blank] and Samuel Wallin [blank][160] citizens of London, sworn for the true valuation and apprizement thereof before the Right Worshipful Sir Thomas Alleyne knight and baronet and one of the Aldermen of the City of London, the particulars whereof do hereafter ensue, vizt:

In the Kitchen
Imprimis one Jack with weight and pulley
one range and fender
2 pairs of spit racks
a crane
a pair of tongs, 2 shovels, a fork
one frying pan
one gridiron
3 box irons
a shredding knife
11 spits
a broiler
flesh fork
one dripping pan
4 iron pots, 3 pot hooks
2 chopping knives
a frame
5 brass and copper kettles
5 skillets
a chafer
2 pestles and mortars
a copper pot
a pair of brass scales and weights
one brass pot
14 brass candlesticks and branch
one ladle and scummer
one iron kettle
one grater
one leaden cistern
2 brass pails
one iron back
one table and a napkin press
one hanging shelf
8 chairs, 2 stools
with other wooden ware and lumber
Valued at £18-17-00

410lbs of pewter at 7d per lb
Valued at £11-19-02

Summa £30-16-02

In the Wash House, Cellars and Larder
Item 2 copper furnaces
2 leaden cisterns
several brewing vessels, tubs and wooden ware
2 stills
a warming pan
some leaden pipes
stillings [stands for casks]
a safe
a parcel of bottles
some wood, coals and lumber
Valued at £21-13-00 summa post

In the Parlour and two Closets
Item one couch
17 old chairs
one table and carpet
one looking glass
one picture
one pair of brass andirons, a grate and fender, dogs, tongs, shovel, forks and hooks
a spice box and some other odd things
Valued at £5-03-00 summa post

In the Hall and Counting House
Item 8 leather chairs
two tables

[159] *Rogeres* in the second copy
[160] *Wallen* in the second copy

one carpet
and one scrutore [escritoire, writing desk]

Valued at £2-10-00 summa post

In the Coachman's Room and Passage
Item one half-headed bedstead
2 feather beds, 3 bolsters, one pillow, one rug, 2 blankets
a chair and 24 leather buckets

Valued at £2-10-00 summa post

In the Warehouse and Cellar
Item 37 hogsheads of sugar at £6 per hogshead, £222-00-00
Item a parcel of linen cloth, £340-00-00
Item 2 counters and 3 old tables valued at £1-05-00
Summa £563-05-00

In the Yard Warehouse, and Room over
Item 2 beams, 2 pairs of scales, 2200½ lbs of leaden weights, a triangle and 2 pulleys, 2 iron weights, one stone
one horse bridle and saddle
a parcel of iron and lumber
Valued at £21-12-00 Summa post

In the Dining Room
Item 5 pieces of tapestry
3 tables
2 carpets
24 Turkey chairs
6 cushions
one looking glass
3 window curtains and rods
a pair of dogs, one fire iron, one back, a shovel
one copper cistern and a Turkey couch
Valued at £75-15-00 Summa post

In the Withdrawing Room
Item 5 pieces of gilt leather
one squab [sofa]
2 chairs, 6 cane bottom chairs, 6 cushions
one table
two window curtains and rods
a picture
a pair of fire irons, a pair of dogs and an iron back
Valued at £17-05-00 Summa post

In the Chamber over the Kitchen
Item one bedstead, mat, cord and rods, a serge furniture, curtains, valance, tester etc
8 chairs and stools
2 carpets
a feather bed, 2 bolsters, 3 pillows, 2 blankets, 2 quilts
3 pieces of tapestry hangings
a chest of drawers
2 window curtains and rods
Valued at £12-00-00 Summa post

In the Next Chamber over the Passage
Item one bedstead, mat, cord and rods, curtain, valance, tester etc
2 feather beds and bolsters
one flock bed, 3 blankets, a rug
a chair and bell and old hangings in the room
Valued at £2-10-00 Summa post

In the Chamber over the Wash House
Item one bedstead with a sackcloth bottom, curtains and double valance, head cloth, tester etc
one down bed and bolster
one feather bed and bolster, one pillow, one flock bolster, 4 blankets, a quilt
3 chairs and stools
a chest with drawers and carpet
flock-work hangings
a window curtain and rod
bellows, fire irons, shovel, dogs and tongs
Valued at £10-05-00[161] *Summa post*

In the Chamber up two Pairs of Stairs forward
Item a sackcloth bottom bedstead and rods, silk curtains, double valance, head cloth and tester
one silk quilt and bases [skirts, fringes]
4 cups
a case rod with silk curtains
a feather bed and bolster, 3 blankets, 2 down pillows
14 chairs and stools
one table, one looking glass
5 pieces of tapestry hangings
window curtains and rods
a close stool and pan
a warming pan
andirons, shovel, tongs and fork, dogs and backs
Valued at £38-08-00 Summa post

In the next Room
Item one bedstead, mat, cord and rods with curtains and valance
a feather bed, 2 bolsters, one flock bolster and pillow, one blanket and one couch
5 chairs, one stool
one picture and the hangings about the room of gilt leather
2 window curtains and rods
and an iron chest
Valued at £7-12-00 Summa post

In the Closet
Item 3 pieces of tapestry hangings
one table
one chest with drawers

[161] This sum is taken from the second copy. The space in the first copy is blank.

one hanging shelf
two chairs, two stools, one cushion
one window curtain and rod
and two quilts
Valued at £25-17-00 Summa post

In the next Room
Item one bedstead, mat, cord and rods, wrought curtains and valance and counterpane
cases for chairs
2 featherbeds and bolsters, 2 pillows, four blankets
one table and carpet
7 chairs, one stool
flock-work hangings about the room
2 stands
one looking glass
two window curtains and rods
one chest of drawers
fire irons and tongs
Valued at £9-07-00 Summa post

In the Matted Room
Item one bedstead, mat, cord and rods with curtains and valance lined with silk
9 chairs and stools
one table and carpet
2 cushions
1 feather bed and bolster, 2 pillows, one flock bolster, 4 blankets, 2 quilts
hangings in the room
a looking glass
window curtains and rods
fire irons, brass andirons, tongs and a back
Valued at £17-15-00 Summa post

In the Garrets
Item one piece of old tapestry and some striped stuff
a pallet bed [trundle bed for servants]
one feather bed and bolster, one quilt
and 2 chests
Valued at £2-08-00 Summa post

In the Gallery
Item 2 tables, one carpet and 9 chairs
Valued at £1-00-00 Summa post

In another Garret
Item a bedstead, mat, cord and rods with curtains, valance tester etc
one feather bed and bolster, 2 rugs, one quilt
a screen and chairs
Valued at £2-17-00 Summa post

In the Fourth Garret
Item one bedstead, mat, cord and rods with curtains and valance
one feather bed and bolster, 3 pillows, 3 blankets, one rug and a quilt
one half-headed bed, mat andc
one flock bed, one rug, one blanket
one table and carpet
a screen
one chair, 2 chests and one trunk
Valued at £3-00-00

Item one Turkey carpet
2 silk quilts
one pallet chink [pale red Chinese?] quilt

8 cushions
one table
a chest of drawers
one chest
one cupboard
2 chairs and lumber
Valued at £8-08-00
Summa £11-08-00

In the Terrett [Turret?]
Item one table, 6 stools and a carpet
Valued at £1-06-08 Summa post
Item pictures upon the staircase
£2-00-00 Summa post

Apparel
Item the testator's wearing apparel, linen and woollen gown, books and arms
Valued at £20-00-00 Summa post

Linen
Item 62 pairs of fine and coarse sheets
25 diaper tablecloths and cupboard cloths
23 dozen and 6 napkins of diaper
37 diaper towels
6 dozen of napkins
9 tablecloths old
some coarse old tablecloths and towels and other odd pieces
10 pairs of pillow bears [pillowcases]
2 damask tablecloths and 24 napkins
Valued at £63-13-08 Summa post

Plate
Item 503oz of plate at 5s per oz –
£125-15-00 Summa post

Leases
Item a lease from the Clothworkers' Company in Cow Lane for about 21 years to come, whereupon is reserved the yearly rent of £18
Valued at £420-00-00
Item a lease from the Hospital of St Bartholomew in Harp Lane for about 51 years to come, whereupon is reserved the yearly rent of 40s
Valued at £54-00-00

Item a lease from Christ's Hospital of three messuages in Basinghall Street for about 35 years to come, whereupon is reserved the yearly rent of £12
Valued at £200-00-00
Item a lease from Mr Silverlack in 'Beare Lane' [Beer Lane] for about 49 years to come, whereupon is reserved the yearly rent of £6
Valued at £32-00-00
Item the lease from Fox in Water Lane assigned by Fisher for about 59 years to come, whereupon is reserved the yearly rent of £10
Valued at £405-00-00
Item a lease from Cox in Beer Lane for about 60 years to come, whereupon is reserved the yearly rent of £20
Valued at £216-00-00
Item a lease from Parker in 'Beare Lane' [Beer Lane] for about 49 years to come, whereupon is reserved the yearly rent of £20
Valued at £64-00-00
Item a lease from Mr Banckes in Tower Street for about 88 years to come,[162] whereupon is reserved the yearly rent of £100
Valued at £2044-00-00
Item a lease from Margery Nicholls upon Little Tower Hill for about 7 years to come, whereupon is reserved the yearly rent of £8
Valued at £30-00-00
Item a lease from the Archbishop of Canterbury for about 14 years to come, whereupon is reserved the yearly rent of £10
Valued at £300-00-00
Summa [blank]

The whole sum of all and singular the goods, chattels and other the premises late belonging and appertaining unto Richard Beckford the testator seen valued and apprized by the abovesaid prizers to the which they have set their hands amounteth to *£4859-11-06. Summa post*

Ready money etc
Item in ready money in the house at the testator's decease - £930-15-01
Item the testator's stock in the East India Company sold for - £1593-15-00
Item the testator's stock in the Royal African Company sold for - £560-00-00
Item received of Joseph Knapman on account of the ship *Loyal Merchant* - £20-00-00
Item received for a horse sold for more than apprized at - £12-00-00
Item of James Herbert Esq per rest of an account - £1-08-11½
Item of the Royal African Company a dividend of - £53-15-00
Item received of the East India Company a dividend - £62-10-00
Item of Mr John Knap - £41-05-00
Item of several persons for arrears of rent - £337-08-00
Summa £3612-17-0½

The total sum of this inventory for so much as is presently good amounteth to *£8472-08-6½.*

Debts, Voyages and Adventures owing and belonging to the Testator at his Decease
Item owing by John Styche - £48-15-09
Item by Sir Thomas Player - £141-05-00
Item by John Butterfeild - £200-00-00
Item by one eighth part of the ship *Paradise* - £143-01-04
By returns from Jamaica, A N H and D J - £155-12-03
Item by Nicholas Hicks - £78-11-08
Item by Daniel Jordan - £111-13-06
Item by voyage to Barbados - £410-07-04
Item by voyage to Jamaica with W B 2/2 - £202-18-03
Item by voyage to Jamaica to W B - £71-11-08¼
Item by James Taylor, commander of the ship *Charles* - £92-05-01
Item by William Bragg on account of debts and *remanentia* [things remaining on account][163] - £1069-08-06½
Item by the Officers of the Ordnance – [blank]
Item by returns from Jamaica from W B – [blank]
Item by money in the Exchequer - £2270-00-00
Item by John Watts - £19-02-04
Item by voyage to Jamaica with F M - £18-15-02
Item a debt due from the Exchequer - £47-08-09
Item by one eighth part of the ship *Loyal Merchant* - £240-00-00
Item by one eighth part of Captain Mingham's ship - £70-00-00
Item by return[s] from Jamaica, A P B – [blank]
Item by returns from Jamaica - £44-13-10
Item by Thomas Best - £4-18-09
Item by William Richardes - £35-17-00
Item by Nathaniel Haggett Esq - £89-08-02
Item by Sir Thomas Beckford - £20-03-00
Item by William Hills - £46-00-00
Item by mortgage of the manor of Yate, about – £3000-00-00
Item by several tenants for arrears of rent[164] – [blank]
[Summa] £8451-17-04¾

Debts owing by the Testator at his Decease
Item paid Francis Mingham per bond - £308-08-06
Item to John Draper - £154-00-00
Item owing for rent – [blank]
Item to John Brathwaite - £50-00-00

[162] The first copy has 'eight years'. The second copy has the correct number of years.

[163] The second copy has 'rem^{a}' which appears to be for *remanentia*. The first copy is blank at this point.

[164] The first copy has nothing after 'rent'; the second copy has after 'rent', 'res' ' or perhaps 'res^{t}', probably for *restituenda, to be supplied.*

Summa £512-08-06

Funeral Charges and other Necessary Expenses
Item bestowed in and about the testator's funerals and other necessary charges as blacks for mourning apparel and rings andc - £451-09-03
Item paid charges of proving the will, prizing the goods and other necessary charges - £12-19-05
Memorandum that there is a coach and horses which were not valued but the executors will hereafter be accountable for the same.
Memorandum that William Kendall and Nathaniel Haggett two of the executors do scruple the £3000 above mentioned as a mortgage of the manor of Yate and do suppose the same to be a real estate; and do not certainly know what is the certain sum of William Hills' debt.

Examinatur per me Henry Crispe
Com' Servien' ad Legem Civitat' London'.

Endorsed:
Exhib' in Curia Orphanorum xxiii die Novembris 1680
Ricardus Beckford Armiger civis et clothworker London' defunctus, summa totalis huius inventarii - £7960-00-0½
All debts owing by the said testator being deducted
Debts owing to him - £8451-17-04¾

Thomas Beckford Miles et Aldermanus et civis et clothworker London' et Johannes Butterfeild civis et grocer London' duo executorum iurat' die et anno supradictis
Willelmus Kendall de Medio Templo London' Armiger alter executorum iurat' 17 die Februarii 1680
Nathaniel Haggatt [sic] de Medio Templo London' Armiger alter executorum iurat' 31 die Maii 1681[165]

Francis Minshull

LMA, CLA/002/02/01/2641 – inventory of Francis Minshull, 1704

[Spelling, capitals and punctuation modernised, and abbreviations mostly expanded. Some surfaces damaged and illegible.]

The inventory indented bearing date the 11th day of December Anno Domini 1704 of all and singular the goods, chattels, rights and credits late belonging and appertaining unto Francis Minshall of the parish of St Botolph Billingsgate late citizen and vintner of London deceased [th]en valued and appraised by Anthony Hilton embroiderer and Joseph Green [blank] citizens of London, sworn for the true valuation and appraisement thereof before [blank].

The particulars whereof do hereafter ensue, vizt:

In the Back Garret
Imprimis 1 half-headed bedstead
one flock bed and pillow
1 featherbed and bolster, 2 pillows, serge curtains and valance
another pair of serge curtains and valance
3 blankets, 2 rugs
1 pallet bedstead [trundle bedstead, for servants]
2 stills
1 horse for clothes
1 screen
1 sacking bedstead
4 old trunks
1 old chest
5 old chairs
1 iron grate
7 pieces of tapestry hangings
and some lumber
Valued at £11-19-00 [error for £11-09-00]

In the Middle Garret
Item 1 half-headed bedstead
3 feather beds, 3 bolsters, 5 pillows, 2 blankets, 1 rug
a sea chest
beds and hammock
4 chairs and 1 stool
Valued at £7-13-06

In the other Garret
Item 1 bedstead and rods, serge curtains and valance
3 feather beds, 3 bolsters, 2 blankets, 1 rug
12 chairs and stools
1 grate
1 wrought bed, curtains and valance
10 covers for chairs
3 chairs
1 couch
1 quilt
2 pairs of calico window curtains
and 1 chest
Valued at £12-19-00

Over the Kitchen
Item 1 bedstead and rods, serge curtains and valance
1 flock bed
1 feather bed, bolster, 2 blankets, 1 rug
1 chest of drawers
1 looking glass
5 cane chairs
6 shag cushions
2 pairs of brass 'hand irons' [andirons], 1 pair of dogs, 1 fender
and 1 iron chest

[165] The second copy records these two last executors with Haggatt first and Kendall second, ie not in date order.

Valued at £10-04-06

In the Widow's Room
Item 1 sacking bedstead and rods
mohair furniture lined with silk, 1 silk quilt
1 feather bed, bolster, 2 pillows
1 pallet bedstead [trundle bedstead for servants]
feather bed, bolster, 1 pillow, 4 blankets, 1 quilt
2 looking glasses
1 table and stands

1 dressing box and set of boxes
8 needlework chairs and stools
1 walnut tree chest of drawers and frame
4 pairs of window curtains and rods
4 boxes
1 chest of drawers
1 pair of brass dogs, fender, shovel and tongs, bellows and hangings
Valued at £20-12-00

In the Dining Room
Item 5 tables
2 looking glasses
12 Turkey work chairs
1 Turkey work carpet
1 picture over the chimney
1 stone grate, fender, shovel, tongs and poker
1 tea table and tapestry hangings
Valued at £5-03-06

In the Little Parlour
Item 1 scrutore [escritoire, writing desk]
14 Spanish skins
2 buck skins
Valued at £1-15-00

In the Kitchen
Item 1 grate, fender, 3 shovels, 1 pair iron dogs, 4 pokers, 3 pairs of tongs
2 pot hangers
2 pairs of backs
5 spits
2 gridirons
2 box irons and heaters
1 iron frying pan
1 toaster
1 chopping knife
2 iron rings
1 plate frame
1 flesh fork
1 iron dripping pan
1 iron chafing dish
3 iron pots
1 brass pestle and mortar
1 warming pan
10 brass candlesticks
2 brass fish plates
1 ladle and scummer slice
1 brass lamp
1 jack chain and weight
a pair of brass scales
1 copper kettle, 3 brass kettles
2 brass pots and covers
2 bell metal pots
3 saucepans
2 stew pans
1 copper with ironwork
2 brass chafing dishes

2 bell metal mortars
1 copper drinking pot
3 copper coffee pots
1 napkin press
2 tables
5 old chairs
1 stone mortar
197lbs of pewter
some tin, earthen and wooden ware
Valued at £15-08-07

In the Yard
Item 1 leaden cistern
1 pipe
1 bottle rack and washing tubs
10 dozen of glass bottles
Valued at £03-09-00

In the Cellar
Item 3 chests of Florence and half a hogshead of wine
Valued at £11-00-00

Goods in the Shop
Item 56 bundles of chest boards
96 Genoa chests
300 heads
a parcel of deal heads
3 hogsheads
2,000 clamping nails
5 empty casks
2 large vats
a cask of lemon juice
70lbs of beeswax
1 gallon, 1 quart pot, 1 funnel
a parcel of boxes
2 parcels of straight nails, a parcel of crooked nails and some lumber and a parcel of hair
Valued at £43-11-00

Item 1 chest
1 cupboard
8 stools, 5 chairs
1 table
1 grate
a leaden cistern and sink
1,000 fans

Valued at £35-10-00

Apparel
Item the intestate's wearing apparel, linen and woollen, books and arms
Valued at £12-00-00

Linen
Item 5 pairs Holland sheets
8 pairs flaxen sheets
4 Holland 'pillow bears' [ie pillowcases]
7 flaxen 'pillow bears' [ie pillowcases]
4 damask tablecloths
21 napkins, damask
16 diaper tablecloths
7 dozen and 7 diaper napkins
14 towels ditto
6 huckaback [ie stout linen] tablecloths
2 dozen of napkins
1 dozen of towels
15 flaxen tablecloths
6 dozen and 8 napkins
30 towels
3 pieces and 17 yards of muslin
and 1 piece of white calico
Valued at £38-10-06

Plate
Item 276 oz and 15 dwt of plate
Valued at £56-13-09

Item 2 watches, some old gold and some silver pieces
Valued at £17-10-00

The whole sum of all and singular the goods and chattels and other the premises late belonging and appertaining unto Francis Minshall the intestate seen valued and appraised by the abovesaid appraisers, unto which they have set their hands, amounts to £303-09-04.

Leases
Imprimis a lease of several lands and tenements in the parish[es] of Shermanbury and Albourne in the county of Sussex, about 26 years to come, estimated at £700-00-00.
Item 3 leases from the parish of St Botolph Billingsgate London of two houses in the same parish, one of the same leases about 38 years to come, the other 51 years to come, being £44 per annum clear of ground rent, estimated at £484-00-00.

Goods not appraised and sold since the Intestate's decease
Imprimis oranges and lemons sold for £454-07-08.
Item for a hogshead of tobacco, £24-15-00.
Item for wine, £109-17-00.
Item for hair, £07-17-00.

Ready Money
Item ready money in the house at the time of the Intestate's decease, £277-11-09.

Debts owing to the Intestate at the time of his decease, and since received
Imprimis received of Robert Tilliard, £76-07-00.
Item of Mr Porson, £37-14-00.
Item of Capt Slaughter, £24-12-01.
Item of Mr Lamb, £50-00-00.
Item of Capt Camell, £526-16-00.
Item received more of Capt Slaughter, £99-05-11.
Item of Capt Robottham, £17-00-00.

Item of Hen: Woodcock, £12-10-00.
Item of Roger Miller, £06-15-00.
Item received of several persons divers small sums, amounting to £65-04-06.
Summa £916-04-06.

The total sum of this inventory for so much as is presently good amounts to £3278-12-03. [Should it be £3278-02-03?]

Debts owing to the Intestate at the time of his decease which not received, sperate
Imprimis owing from Capt ?Beard on mortgage principal besides interest, £150-00-00.
Item owing by mortgage on an Exchequer assignment, £60-00-00.
Item owing from John Degrave on note, £94-15-00.
Item from John Goodby on note, £10-00-00.
Item from Robert Wood, £43-05-00.
Item from Edward Williams, £13-05-10.
Item from John Willford, £13-15-00.
Item from Humphrey Bellamy, £12-02-00.
Item from Mile[s] Smith, £16-00-10.
Item from Mr Hughes, £19-06-07.
Item owing from divers persons, several small sums amounting to in all, £242-00-00.

Desperate
Item owing from Henry Chambers, £?121-00-00
Item from Thomas Baker, £16-10-08.
Item from Henry Young, £08-10-02.
Item from Samuel Lockley, £68-11-02.
Item from Rowland Harris, £38-19-04.
Item from John Hills, £15-15-00.
Item from John Furly, £13-16-09.
Item owing from divers persons, several small sums amounting to in all, £144-00-00.

Sperate upon Bonds
Item owing upon bond from Mr Richard and Thomas Styles, principal besides interest, £100-00-00.
Item from Robert Wood on bond, principal beside interest, £48-10-00.
Item from Sarah Shipley on bond, principal, [illegible].
Item from John Triggs on bond, £101-10-00.

Item from John Mitchell on bond, £101-10-00.
Item from Edmond Mitchell on bond, £215-09-00.
Item from Major Long, remaining on bond, £400-00-00.

Desperate
Item from Mr Timothy Poston on bond, principal besides interest, £507-10-00.
Item from John Combes on bond, £16-00-00.
Item from Daniel Gyles on bond, £27-10-00.
Item from Mr William Masters on bond, £182-00-00.
Item owing from several persons on divers small bonds, £36-00-00.
Summa, £2865-12-04.

Several Effects and Adventures Abroad, as follows
Item one fifth part of the *Queen* galley, supposed to be worth £146-00-00.
Item one sixteenth part of the *London* galley, supposed to be worth £100-00-00.
Item one 8th part of the *Betty* pink, supposed to be worth £60-00-00.
Item by the half of an Irish debenture in concern with Mr Robert Mitchell, an account not adjusted, supposed to be worth £600-00-00.
Item an Insurance made on the *de Grave* being lost, supposed to be worth about £187-10-00.
Item Insurances made on several ships lost in concern with Mr Gun and Company, supposed to be worth about £40-00-00.
Item an Adventure of Lead ... in the hands of Strange and Bo... worth about £30-00-00.
Item the balance on an Adventure of Corn and Lead in the hands of Hopkins and Bellamy, supposed to be worth £280-00-00.
Summa £1443-10-00.

Debts owing by the Intestate at the time of his decease
Imprimis to Mr John Warden, £15-03-06.
Item to Mr Gripping on account of ship *London*, £87-15-10.
Item to Mr Sparham, £08-14-00.
Item to Mr Wilkins, £08-07-06.
Item to Samuel Eyre, £16-01-10.
Item to Mr Dixon, £22-10-06.
Item to Mr Slany, £102-10-00.
Item to Mr Ayles, £100-00-00.
Item for turning John Jewer over to another Master, [illegible].[166]
Item to Glover and Gregory, about £90-00-00.
Item to Mr Stephen Halford, £33-05-03.
Item to Oliver Harper for Wm ? and Company, [illegible].
Item to John Richardson, ?£05-07-06.
Item owing to the Queen's Majesty, £??-04-00.
Item for the Prebend's rent of the estate at Shurmanbury [sic], £03-05-08.
Item owing to divers persons several small sums amounting to in all, £204-00-02.
Summa £958-06-09.

Funerals
Item bestowed in and about the Intestate's funerals as Black for mourning apparel etc, £133-15-08.
.....
Item paid charges at Doctors' Commons, taking out letters of administration, £04-02-00.
Item paid the Appraisers, £04-06-00.
Item household expenses for one year since the Intestate's decease, £122-19-00.
Item in charges of exhibiting this Inventory at the Court of Orphans London, and Common Cryer's fee etc, £[05]-18-00.
Item paid Mr Jackson, Clerk of the Orphans, £00-08-06.
[Summa] £137-13-06.

Examinatur per me Duncan Dee Com' Servient'

Endorsed:[167]
Exhibit' in Curia Orphanorum 3° die Maii 1705

Franciscus Minshall nuper civis et vinetar' London' summa totalis huius inventarii £2320-05-06.[168]
All debts owing [by the intestate] being deducted.

Debts owing to him, £2865-12-04.

Several Effects [and] A[dvent]ures, £1443-10-00

[Summa] £4309-02-04.

Elizabetha Relicta et Administratrix iurata die et anno supradictis

Thames Street, prope St Magnes [sic] Church

[166] John Jewer [entered as 'Juar'], son of John Juar of Shadwell, Middlesex, haberdasher, had been apprenticed to Francis Minshall on 9 Feb 1704, Vintners' Company register of apprentice bindings, LMA, CLC/L/VA/C/017/MS15220/002.

[167] Much of this text is illegible, but enough remains to reconstruct it using the endorsements on other inventories.

[168] This figure is the sum of the inventory, £3278-12-03, less Francis Minshull's debts owed to other people, £958-06-09.

Résumé

Translated by Surrey Translation Bureau

Très peu de traces restent aujourd'hui, dans le centre de Londres, de la période s'étendant de 1666 à 1800. Elles doivent être dévoilées et reconstruites en combinant travaux archéologiques et recherche documentaire.

Cette monographie rassemble les preuves archéologiques et documentaires concernant plusieurs propriétés de Thames Street, dans la cité de Londres, réparties à travers quatre sites sur les berges de la Tamise qui ont été fouillés par le Musée de Londres entre 1974 et 1984. D'ouest en est : Swan Lane (site A) et Seal House (site B), juste au-dessus du niveau du London Bridge médiéval et du London Bridge actuel, ainsi que New Fresh Wharf (site C) et Billingsgate Lorry Park (site D), à une distance similaire en dessous des ponts. Les découvertes archéologiques pour la période allant de 1666 (date du grand incendie de Londres) à 1776 environ sont présentées et contextualisées par une étude des abords de la Tamise, sur les deux rives, de l'ouest de la cité jusqu'à Deptford, vers l'est, qui était à l'origine une petite ville située à neuf kilomètres de Londres, mais qui fait aujourd'hui partie de sa banlieue. L'étude détaillée s'achève sur la décision prise en 1796 d'établir ce qui devint ensuite les docks de Londres en aval de la cité. Il s'agit donc d'une analyse des transformations et des processus qui ont abouti à la construction du premier des docks de Londres, le West India Dock, en 1801-6. Si la construction de ce dock fut synonyme de relance majeure de l'expansion commerciale mondiale de Londres au XIX[e] siècle, il convient également de la considérer comme le point culminant de 150 ans de développement intensif des abords de la Tamise au niveau de la cité.

La zone examinée dans le plus grand détail s'étend du London Bridge à Custom House, sur Thames Street, et inclut les allées qui vont vers le nord de Thames Street dans ce district de l'est. Cette zone, à côté et en aval du London Bridge, constituait à l'époque le cœur de l'activité commerciale fluviale de Londres. Les fouilles réalisées sur deux sites de Upper Thames Street, légèrement au-dessus du London Bridge, sont décrites en premier. Côté ouest de Swan Lane, en 1981-2 (site A), un grand groupe de poteries a été découvert dans une fosse septique comblée de pierres, composé de 648 tessons issus de jusqu'à 119 récipients (probablement les restes des biens sauvés d'une maison immédiatement après le grand incendie). Sur Seal House (site B), de l'autre côté de la rue, des fouilles réalisées en 1974 ont permis d'exposer une rangée de six petites maisons en briques du côté est de Black Raven Alley, menant de Thames Street au quai. Celles-ci avaient été construites en 1671 par William Darvoll, et figurent sur un levé du site effectué par William Leybourn en 1686, car elles appartenaient à la Fishmongers' Company (Compagnie des poissonniers). Un puits, qui se situait peut-être dans la cave d'une des maisons, contenait des poteries, notamment des récipients entiers, datant du début au milieu du XVIII[e] siècle. Les maisons furent démolies en 1776 pour faire place aux vastes entrepôts qui commençaient à proliférer dans la zone.

Dans l'étude publiée en 2018 concernant les quatre sites à l'époque médiévale, les deux qui se trouvaient en aval du London Bridge étaient New Fresh Wharf et Billingsgate Lorry Park (souvent appelé Billingsgate pour faire court). Sur le site de New Fresh Wharf (site C), seuls des petits fragments de mur datant d'après le grand incendie furent recensés en 1974-5 dont les traces sont aujourd'hui conservées dans les archives archéologiques ; certains détails issus des preuves documentaires sont présentés. Sur le site de Billingsgate (site D), en revanche, une grande quantité de vestiges de bâtiments datant d'après le grand incendie, jusqu'aux alentours de 1732, ont été découverts en 1982-3. Ces vestiges se trouvent sur Botolph Wharf, de chaque côté de l'allée qui divisait le quai en deux et conduisait à la Tamise. À l'extrémité nord de la moitié ouest du quai, l'église St Botolph Billingsgate, datant d'avant l'incendie, ne fut pas reconstruite, mais son site devint l'emplacement de bâtiments séculiers, notamment une maison appartenant à la famille Minshull qui transforma une crypte du XV[e] siècle, anciennement sous l'aile sud de l'église, en cellier. Francis Minshull était un marchand d'envergure internationale avec des intérêts en Amérique. Le reste de Botolph Wharf fut initialement développé par Sir Josiah Child, qui occupait un poste important au sein de la Compagnie des Indes orientales.

Ces bâtiments, assemblage de maisons (probablement avec des magasins) donnant sur la rue et d'entrepôts, connurent plusieurs périodes de transformation avant que tout le quai, excepté le site de l'église, ne soit réaménagé dans les années 1730. Le quai était au cœur du cartel des *Wharfingers* (gardiens de quais) de Joseph Ashton et d'autres, qui paralysaient de plus en plus l'arrivée des importations.

La découverte de cauris sur le site de Billingsgate montre que les coquillages étaient conservés dans ce lieu. À leurs marques vives distinctives, il était clair qu'il s'agissait d'espèces exotiques, probablement tropicales. Des travaux d'identification complémentaires ont confirmé la présence d'au moins deux espèces, le porcelaine-monnaie et le porcelaine à anneau d'or, toutes deux étant reconnues comme des marchandises commerciales à l'importance économique majeure à travers l'histoire. Ces cauris constituent un exemple précoce d'artefacts prouvant le commerce des esclaves

à Londres. Un tableau est brossé des liens que Londres entretenait avec l'esclavage, du XVI^e^ siècle jusqu'en 1800.

Bien qu'une nouvelle période de construction d'entrepôts sur tous les sites au XVIII^e^ siècle n'ait laissé aucun vestige physique à étudier, les informations sont dérivées de documents, de cartes et de plans. L'étude résume ensuite les grands débats des années 1790 autour de la façon dont le port pourrait être amélioré avec de nouveaux docks, plus imposants et spécialement construits, comme ils le furent à partir de 1801 en aval. La création de la plaque tournante de l'Empire britannique nécessita, au cœur et à l'est de la cité, d'obtenir l'autorisation d'affecter de larges terrains à un autre usage après 1750, ce qui semble s'être fait sans opposition. À quatre occasions, de vastes terrains furent utilisés à des fins commerciales ou pour la reconstruction du London Bridge et de ses nouvelles routes.

Les fronts d'eau de la cité furent un élément important pour le développement de Londres en tant que centre impérial, car ils permirent à ses activités commerciales de s'ouvrir sur le monde, avant l'établissement des docks de Londres au début du XIX^e^ siècle. Ce qui arriva aux bâtiments et aux résidents et usagers de ces sites en bordure du fleuve, au cours du siècle qui suivit le grand incendie et jusqu'en 1800, est à la fois particulier à Londres et un exemple des changements qui ont eu lieu dans la topographie d'un port majeur du monde atlantique. Les inventaires de Minshull et d'un autre marchand qui vivait tout près, Richard Beckford, sont transcrits. Deux groupes de ports de la fin des XVII^e^ et XVIII^e^ siècles font l'objet d'un bref examen parallèle : des ports majeurs de la côte ouest du continent européen, de Hamburg à Cadiz, et cinq villes coloniales du littoral est des États-Unis et dans les Caraïbes. Si on observe le caractère de ses fronts d'eau, Londres était loin d'être comparable aux ports européens les plus développés, mais sa culture matérielle joue un rôle important dans l'histoire des peuplements coloniaux qui se sont installés en Amérique et dans les Caraïbes. Ce constat est bien illustré par les objets recouvrés à Port Royal, en Jamaïque, dont une partie avait été enterrée sous la mer lors du tremblement de terre de 1692.

Deux arguments ressortent de cette étude et demandent à être développés. Le premier est qu'il vaut mieux étudier l'archéologie du port de Londres entre 1666 et 1800 à l'échelle la plus large possible, en considérant comme un tout l'ensemble de la conurbation des bords de la Tamise, de la cité jusqu'à Deptford. Nous devrions étudier les variétés internes des maisons, des artefacts et des modes de vie au sein de toute cette zone, en combinant analyse archéologique et étude de documents. Le second argument est que l'archéologie des fronts d'eau post-médiévaux doit faire l'objet d'études plus poussées, notamment d'analyses comparatives des ports britanniques, européens et nord-américains sur cette période.

Les conclusions générales de cette étude sont, premièrement, que le grand incendie de Londres en 1666 a modifié une partie importante et centrale de la topographie de la conurbation, mais qu'il existe aussi de nombreuses continuités majeures et que le grand incendie doit être contextualisé. Deuxièmement, des sites archéologiques le long du fleuve, tant dans la cité qu'en aval jusqu'à Deptford, ont révélé une riche culture urbaine, avec de nombreux éléments de modes étrangères, et c'est dans le plus grand port de la nation que ces influences de l'étranger étaient les plus marquées. Troisièmement, les fronts d'eau londoniens connurent une période de changements entre 1666 et 1800, car la nécessité d'entreposer, de distribuer et d'expédier des quantités toujours plus importantes de marchandises régissait la nature des transformations des deux côtés de la Tamise. Il fallut créer de vastes complexes d'entrepôts, qui furent construits en rasant des lots entiers de bâtiments résidentiels. Quatrièmement, au cours de cette période, Londres devint la plaque tournante du nouvel Empire britannique, mais contribua à l'exploitation de peuples d'autres contrées, autrement dit à l'esclavage. La création et la prospérité de l'Empire britannique affectèrent de nombreuses régions du monde et leurs habitants, mais elles nécessitèrent également des évolutions constantes dans la topographie de la cité et dans la vie de ses habitants, permettant à Londres de devenir le cœur de cet empire.

Zusammenfassung

Translated by Surrey Translation Bureau

Heute sind in der Londoner Innenstadt nur wenige Spuren aus dem Zeitraum zwischen 1666 und 1800 erhalten. Diese müssen durch eine Kombination aus Archäologie und dokumentarischer Recherche gehoben und rekonstruiert werden.

Diese Monografie präsentiert die archäologischen und dokumentarischen Funde zu einer Reihe Grundstücken an vier Grabungsstätten am Themseufer, die im Zeitraum von 1974 bis 1984 durch das Museum of London in der Thames Street in der City of London ausgegraben wurden. Dabei arbeiten wir uns von Westen nach Osten vor: Swan Lane (Grabungsstätte A) und Seal House (Grabungsstätte B), ein kleines Stück flussaufwärts der mittelalterlichen und der modernen London Bridge gelegen, gefolgt von New Fresh Wharf (Grabungsstätte C) und Billingsgate Lorry Park (Grabungsstätte D), in ähnlicher Entfernung flussabwärts der Brücke gelegen. Die archäologischen Funde aus dem Zeitraum von 1666 (Großer Brand von London) bis etwa 1776 werden vorgestellt und durch eine Studie des Themseufers an beiden Uferseiten vom westlichen Ende der City of London in Richtung Osten bis zum sechs Meilen entfernten Deptford (einer ehemaligen Kleinstadt, die nun ein Londoner Vorort ist) in ihren historischen Kontext gesetzt. Diese Detailstudie endet mit dem Jahr 1796 und der Entscheidung über die Errichtung des heute als „London Docks“ bekannten Areals flussabwärts der City. Es handelt sich somit um eine Analyse der Entwicklungen und Prozesse, die zum Bau des ersten der Londoner Docks, dem West India Dock, in den Jahren 1801 bis 1806 führten. Obwohl es sich beim Bau dieses Docks um den Startschuss der neu erwachenden Londoner Handelsexpansion über den gesamten Erdball hinweg im 19. Jahrhundert handelte, sollte er auch als das kumulative Ergebnis von 150 Jahren vorangegangener intensiver Entwicklung des Themseufers in der City angesehen werden.

Das im Detail betrachtete Areal umfasst die London Bridge bis zum Custom House in der Thames Street sowie die kleinen Straßen, die in diesem östlichen Stadtviertel von der Thames Street aus nach Norden führen. Dieses Areal rund um die Brücke sowie flussabwärts von ihr war zu diesem Zeitpunkt das zentrale Londoner Handelsufer. Zunächst werden die Ausgrabungen an zwei Stätten in der Upper Thames Street, flussaufwärts der Brücke gelegen, beschrieben. An der Westseite der Swan Lane (Grabungsstätte A) wurde in den Jahren 1981 und 1982 in einer gemauerten Abfallgrube eine größere Ansammlung Tonwaren gefunden, die sich aus 648 Scherben von bis zu 119 Gefäßen zusammensetzte und vermutlich aus einer Hausräumung im Zeitraum unmittelbar nach dem Großen Brand stammt. Bei Seal House (Grabungsstätte B) auf der gegenüberliegenden Straßenseite wurde bei einer Ausgrabung 1974 eine Reihe kleiner Ziegelhäuser an der Ostseite der Black Raven Alley gefunden, die von der Thames Street zum Uferkai führte. Sie wurden 1671 von William Darvoll erbaut und sind in einem Vermessungsdokument von William Leybourn aus dem Jahr 1686 verzeichnet, aus dem hervorgeht, dass sie der Fishmongers' Company gehörten. Ein Brunnen, der vermutlich im Keller eines dieser Häuser erbaut wurde, enthielt ebenfalls Tonwaren, unter anderem unbeschädigte Gefäße, die Anfang bis Mitte des 18. Jahrhunderts hergestellt worden waren. Das Haus wurde 1776 abgerissen, da zu diesem Zeitpunkt immer mehr große Lagerhäuser in diesem Areal erbaut wurden.

In einer Studie der mittelalterlichen Geschichte dieser vier Grabungsstätten, die 2018 veröffentlicht wurde, wurden zwei Grabungsstätten stromabwärts der London Bridge in New Fresh Wharf und Billingsgate Lorry Park (auch häufig „Billingsgate“ abgekürzt) untersucht. In New Fresh Wharf (Grabungsstätte C) wurden 1974 bis 1975 nur kleinere Fragmente von nach dem Brand errichtetem Mauerwerk gefunden. Details finden sich im archäologischen Archiv. Hier werden einige Daten der dokumentarischen Zeugnisse vorgestellt. An der Grabungsstätte Billingsgate (D) jedoch konnten 1982 bis 1983 zahlreiche Überreste von Gebäuden ausgegraben werden, die nach dem Brand bis ca. 1732 errichtet worden waren. Diese befanden sich an Botolph Wharf auf beiden Seiten der Straße, die den Uferkai in zwei Abschnitte teilte und direkt zur Themse führte. Am Nordende des westlichen Kaiabschnitts befand sich die Kirche St. Botolph Billingsgate, die nach dem Brand nicht wieder aufgebaut wurde. Stattdessen entstanden säkulare Gebäude an diesem Ort, darunter ein Haus der Familie Minshull, das eine aus dem 15. Jahrhundert stammende Krypta, die sich ursprünglich unter dem südlichen Seitenschiff der Kirche befunden hatte, als Lagerkeller nutzte. Francis Minshull war ein international tätiger Händler, der auch am Handel mit Amerika Interesse zeigte. Der Rest der Botolph Wharf wurde zunächst von Sir Josiah Child ausgebaut, der eine bekannte Rolle in der East

India Company spielte. Die hier entstandenen Gebäude waren eine Mischung aus Wohnhäusern (wahrscheinlich mit Läden) entlang der Straße und Lagerhäusern und durchliefen mehrere Phasen der Veränderung und Überholung, bevor das gesamte Kaigebiet mit Ausnahme der Kirche in den 1730er Jahren vollständig neu bebaut wurde. Der Uferkai befand sich im Herzen des Kartells von Kaimeistern wie Joseph Ashton, die die Ankünfte von Importen zunehmend zum Erliegen brachten.

Die an der Grabungsstätte Billingsgate gefundenen Kaurimuscheln zeigen uns, dass diese dort gelagert wurden. Die deutlichen, farbenfrohen Zeichnungen der Kauris wiesen sofort auf exotische und höchstwahrscheinlich tropische Spezies hin. Weitere Untersuchungen bestätigten, dass mindestens zwei Spezies, Geldkauri und Goldringkauri, dort gelagert wurden, die beide auf eine lange Geschichte als Zahlungsmittel mit großer wirtschaftlicher Bedeutung zurückblicken. Sie sind ein frühes Beispiel für artefaktische Beweise für den Sklavenhandel in London. Es wird eine Übersicht über die Verbindungen Londons mit dem Sklavenhandel vom 16. Jahrhundert bis 1800 vorgestellt.

Von den neu errichteten Lagerhäusern, die sich im 18. Jahrhundert an diesen Grabungsstätten befanden, sind keine physischen Überreste vorhanden, die untersucht werden könnten, doch aus Dokumenten, Karten und Plänen lassen sich nützliche Informationen zu ihnen gewinnen. Im weiteren Verlauf der Studie werden die großen Debatten der 1790er Jahre über die Verbesserung der Hafenanlagen durch neue, größere und eigens erbaute Docks zusammengefasst, die schließlich ab 1801 flussabwärts entstanden. Für die Erschaffung des Zentrums des britischen Weltreichs wurde ab etwa 1750 viel Raum für neue Zwecke in der City selbst sowie östlich davon benötigt, der scheinbar ohne Widerstand geschaffen werden konnte. An vier Zeitpunkten wurden größere Landstriche für die kommerzielle Nutzung oder den Wiederaufbau der London Bridge sowie neuer Straßen beansprucht.

Das Themseufer der City of London spielte bei der Entwicklung von London als Zentrum eines Weltreichs eine wesentliche Rolle, da es sich dabei bis zum Bau der London Docks im frühen 19. Jahrhundert um das wichtigste Handelstor der City zur Welt handelte. Was mit den Gebäuden sowie den Menschen geschah, die während des Jahrhunderts zwischen dem Großen Brand und etwa 1800 in diesen Häusern lebten und arbeiteten, ist sowohl einzigartig für London als auch ein Beispiel für den Topografiewandel wichtiger Häfen in der atlantischen Welt. Das Inventar von Minshull und eines anderen in der Nähe lebenden Händlers, Richard Beckford, wurde schriftlich festgehalten. Zur Herstellung einer Parallele werden kurz zwei Hafengruppen aus dem ausgehenden 17. bzw. dem 18. Jahrhundert beschrieben: wichtige Häfen an der europäischen Westküste, von Hamburg bis Cadiz, sowie die Häfen von fünf Kolonialsiedlungen an der Ostküste der USA und in der Karibik. Das Londoner Themseufer konnte sich in seinen Eigenschaften nicht mit den am besten ausgebauten europäischen Häfen messen, doch seine materielle Kultur spielt eine wichtige Rolle in der Geschichte amerikanischer und karibischer Kolonialsiedlungen. Besonders unterstrichen wird dies durch Funde aus Port Royal auf Jamaika, das aufgrund eines Erdbebens 1692 teilweise im Wasser versank.

Aus den vorliegenden Forschungsarbeiten ergeben sich zwei Diskussionspunkte, die wir für die künftige Weiterentwicklung durch andere bereitstellen möchten. Erstens: Die Archäologie des Londoner Hafens im Zeitraum zwischen 1666 und 1800 sollte am besten in den breitestmöglichen Kontext gesetzt werden. Das gesamte Areal von der City of London bis nach Deptford ist als ein einziges Uferballungszentrum zu betrachten. Wir sollten die darin befindlichen Variationen an Häusern, Artefakten und Lebensweisen in dieser Gesamtzone untersuchen und archäologische Analysen mit der Dokumentenrecherche verknüpfen. Zweitens: Die Archäologie der Ufer der Neuzeit muss durch vergleichende Studien der britischen, europäischen und nordamerikanischen Häfen dieses Zeitalters unterstützt werden.

Das Fazit dieser Studie ist erstens, dass der Große Brand von London 1666 einen wichtigen und zentralen Teil der Topografie dieses Ballungszentrums veränderte, es aber auch viele bedeutsame Kontinuitäten gab und der Große Brand in Kontext gesetzt werden muss. Zweitens zeigen uns archäologische Fundstätten entlang des Ufers, sowohl in der City selbst als auch flussabwärts bis hinunter nach Deptford, dass hier eine reichhaltige Stadtkultur herrschte, die zahlreiche Elemente ausländischer Moden vereinte, und dass diese Einflüsse aus dem Ausland im größten Hafen des Landes am stärksten waren. Drittens war der Zeitraum zwischen 1666 und 1800 für das Londoner Themseufer eines des Wandels, dessen Bebauung auf beiden Seiten der Themse bestimmt wurde durch den Bedarf an Infrastruktur für Lagerung, Distribution und das Verschiffen stetig wachsender Gütermengen. Es wurden weitläufige Lagerkomplexe benötigt, denen zahlreiche Wohngebäude weichen mussten. Viertens entwickelte sich London während dieses Zeitraums zum Zentrum des britischen Empire, trug aber zur Ausbeutung von Menschen aus anderen Ländern, also der Sklaverei, bei. Die Entstehung und der Wohlstand des britischen Empire wirkten sich umfassend auf die Welt und ihre Bewohner aus, erforderten aber auch laufende Veränderungen der Topografie der City und des Lebens der Stadtbewohner, als sich London zum Zentrum dieses weltumspannenden Reichs entwickelte.

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London's Waterfront and its World, 1666–1800 presents the results of archaeological excavations of 1974 to 1983 in the central waterfront area of the City of London. The archaeology of the port of London is considered on a wide scale, from the City down the Thames to Deptford. The Great Fire of London in 1666 prompted some changes to the topography of streets and buildings, but there were also many continuities in life and work. The waterfront changed during the 18th century as warehousing replaced houses. This process is illustrated by archaeological excavation, documentary study and the survival of plans of properties surveyed for land-owning institutions. The artefacts and pottery recovered from these sites include many pieces from overseas, and London's waterfront can be compared with those of other port cities in Europe, North America and the Caribbean. Perhaps in late 17th- and 18th-century London we can study urban tastes and consumption from an archaeological viewpoint. During this period London became the hub of the new British empire, but contributed to the exploitation of people from other lands known as slavery. The waterfront on both sides of the Thames was at the centre of the new empire.

John Schofield was an archaeologist at the Museum of London from 1974 to 2008. Between 1975 and 1983 he identified and organised all the archaeological excavations in the City of London. He has written extensively about the archaeology and buildings of the City at all periods. He is Secretary of the City of London Archaeological Trust and from 1990 to 2021 was Archaeological Consultant to St Paul's Cathedral.

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