

REPORT ON RECENT EXCAVATIONS IN SOUTHWARK

PART II

BY PETER R. V. MARSDEN

INTRODUCTION

This report contains the results of observations on three building sites in Southwark. It is pleasant to record my thanks to Mr. R. Chaplin, who, as a member of the staff of the Cuming Museum, Southwark, carried out much of the recording on the site of 18-20 Southwark Street. Thanks are also due to the Southern Project Group of the Central Electricity Generating Board for permission to visit the Bankside Power Station site; and to Mr. K. Thompson, the Resident Site Engineer, of the Courage and Barclay site in Park Street for permission to watch the rebuilding work there. Mr. C. P. Castell of the Department of Palaeontology of the British Museum (Natural History) kindly reported on the mollusca from the Bankside site; Mr. R. Chaplin and Miss J. Coy kindly reported on the bones under their Bone Research Scheme; Mr. G. Hart of the Timber Development Association Ltd. kindly reported on the Roman barrel staves; Mr. R. Charleston kindly reported on the 15th century glass fragment from Bankside; Mr. J. Waterer of the Leathercraft Museum kindly reported on the leather from the Bankside site; the Director of the Royal Botanic Gardens, Kew, Surrey, kindly identified the plant remains from the Bankside and Courage and Barclay sites; and Mr. N. C. Cook and Mr. R. Merrifield have kindly helped in various ways. The finds from 18-20 Southwark Street are now deposited in the Cuming Museum, and the Bankside finds are at the London Museum.

160-166 BOROUGH HIGH STREET

In 1959 contractor's excavations exposed part of a black silt-filled depression, possibly a pond, several feet deep on the south side of the site (fig. 1). In the silt were found a few Roman sherds.

In the north-eastern quarter of the site was exposed an area of thick burnt material in which lay burnt timber planks and beams, and the stumps of vertical timber posts. These burnt timbers lay in no apparent order, and no dating evidence was found in the burnt level, which lay only a few inches above the natural sand. Below the burnt level was found a nearly complete Samian Ware dish of Drag. form 18 stamped OPASSIIV (Passenus of La Graufesenque; Period:- Nero-Vespasian). From its depth the burnt level appears to represent the remains of a Roman timber structure destroyed by fire.

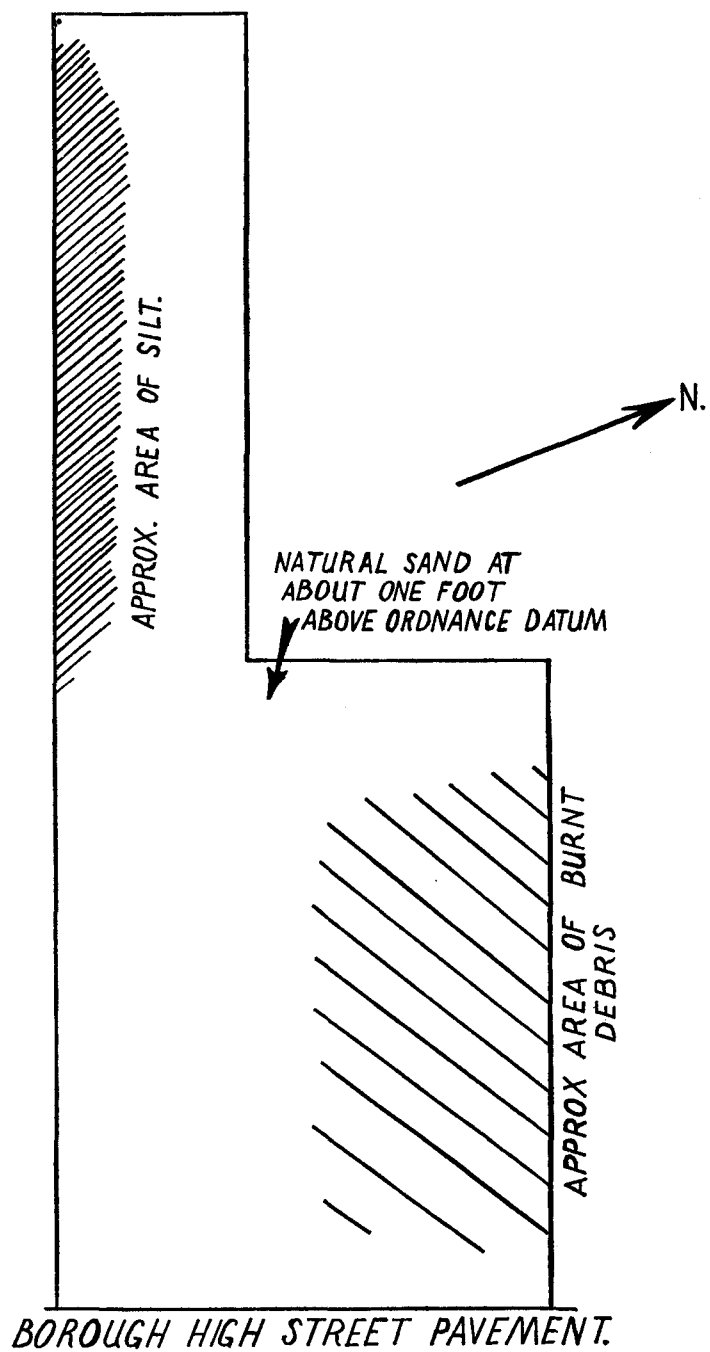


Fig. 1
Sketch plan of 160-166 Borough High Street.

18-20 SOUTHWARK STREET

THE SITE lies at the south end of the Borough Market and was excavated during 1961-62.

THE EXCAVATION (figs. 2, 3)

The surface of the natural sand lay at an average of about 5 feet above Ordnance Datum, and thus this is the highest known point of the "sandspit" on which the Roman settlement was built¹.

The earliest traces of human occupation on this site were found in trench "E" at the north-east corner of the site (fig. 2). Section J-K shows the various strata in the south face of the trench (fig. 3). Overlying the natural sand was layer 1, a deposit of grey sand containing flecks of wood ash and one Roman brick fragment. Level 2 was a stratum of gravel containing a few sherds of the period Nero-Vespasian (fig. 8, nos. 12-17). Level 3 was a clay floor which in its upper part had been scorched or burnt to a red colour. The reason for this was shown by the overlying level 4 which consisted of red burnt daub, some of which showed traces of wattling. Layer 4 was clearly the debris of a wattle and daub building which had been destroyed by fire, and the objects found in this deposit (a complete cooking pot, fragments of domestic pottery, fragments of a lamp, a bone dice, and an iron key) suggest that this structure was a dwelling. The scorching of the underlying clay floor proves that the fire, and therefore the building, lay on that spot. Pottery from the burnt daub level 4 (fig. 8, nos. 18-23, 28) is of the period Claudius-Nero, indicating that the building might have been destroyed during the destruction of London by Boudicca in A.D. 60.

Traces of another fire originally on or near the south end of the site were found in trench "B" where level 5 in section A-B, and level 6 in section C-D, was a single deposit of burnt clay overlying the dirty natural sand. This may be the debris from another building which had been destroyed by fire, and as the position of the stratum in relation to the natural sand suggests, this occurred possibly early during the Roman period. Pit 5 (section C-D), which had been dug down into the fire debris, contained a few sherds of the 1st century, which seem to confirm this suggestion.

At the north-west corner of trench A was found the south side of a drainage ditch first discovered in 1945-47, at which time it was securely dated to the late 1st century². All the strata above the natural sand in section E-F seemed to overlie the filling of the ditch. There was no clear evidence of any building in this part of the site but the strata in section E-F suggest building activity and destruction nearby. Overlying the natural sand in section E-F was the sticky yellow clay layer 7, and over that was level 8, a thin layer of mortar which, because of its varying thickness, had the appearance of a mortar mixing "floor" rather than the floor of a building. Overlying layer 8 was a stratum of black earth, level 9, which was in turn partly covered by layer 10, a stratum of broken Roman tiles lying in wood ash. Layer 11 was a deposit of unburnt yellow clay which was in turn overlaid by level 12, a stratum of red burnt clay and wood ash, and level 13, another layer of red burnt clay and wood ash. The burnt debris overlying the unburnt clay layer 11 must have been dumped, otherwise layer 11 would have been burnt. Perhaps the burnt layers 11 and 12 represent successive spreads of debris from a nearby building which had been destroyed by fire.

In trench "C" was revealed a spread of hard gravel metalling. One Samian ware sherd of the Flavian period (fig. 8, no. 27) was found in the metalling, and another of the same period was the only find in pit 4 which had been cut into the metalling.

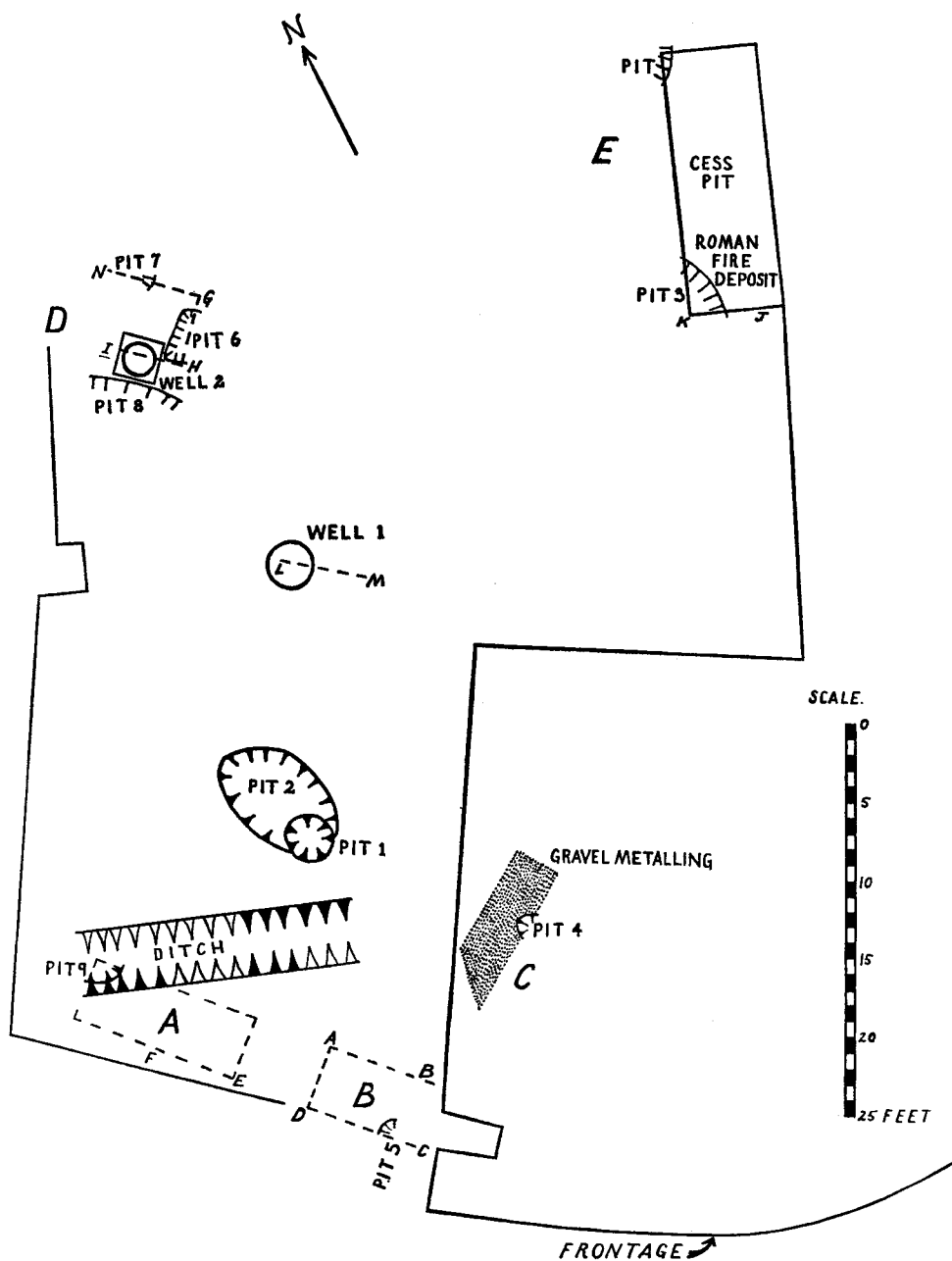


Fig. 2
Plan of discoveries at 18-20 Southwark Street, 1961-62.

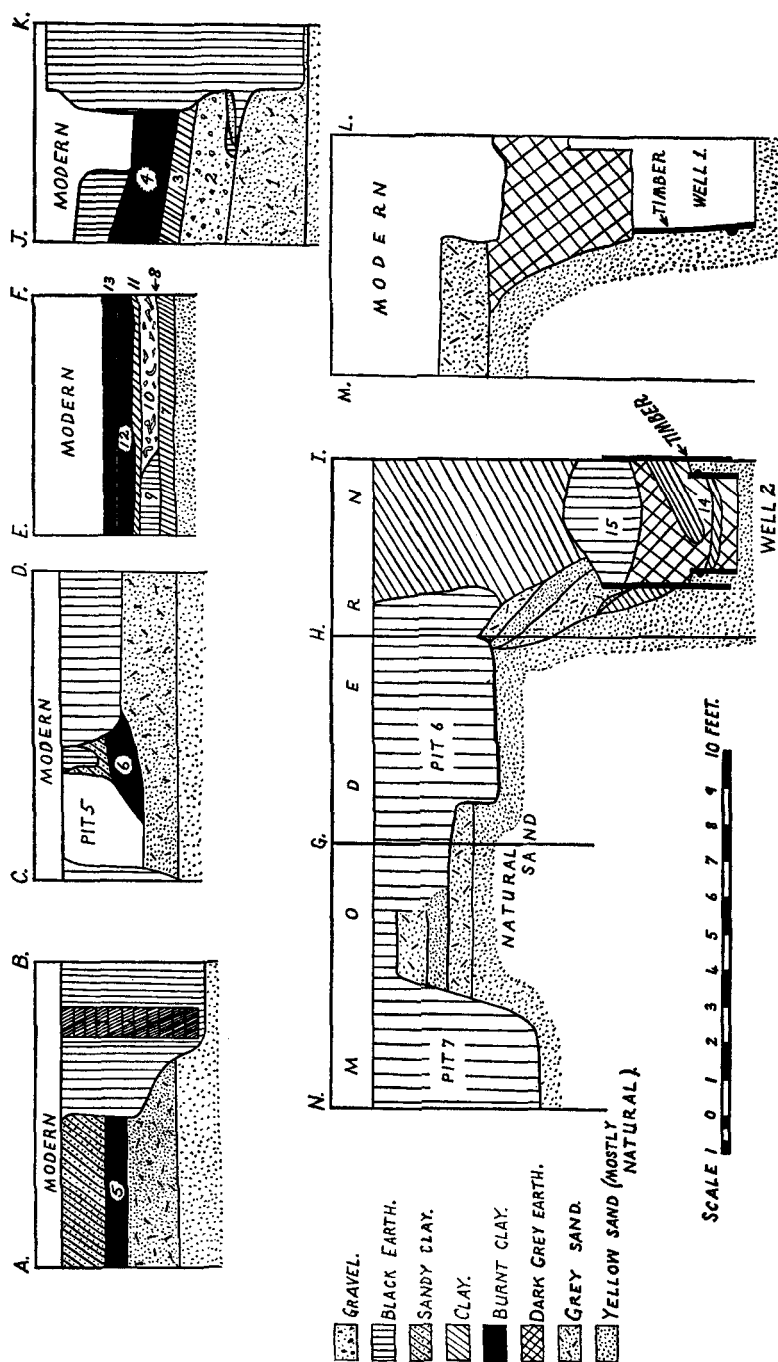


Fig. 3
Sections at 18-20 Southwark Street.

Trench "D" near the north-west corner of the site revealed barrel-lined well 2. The lower part of a barrel was found lying on end in a pit with its base at about one foot below Ordnance Datum. Around the barrel was a square box-like timber structure slightly wider than the diameter of the barrel. The space between the "box" and the barrel had been filled with clean sand, and several clay and sand deposits outside the "box" probably represent the filling of the pit in which the well had been constructed (see section H-I). Pottery from the rubbish filling, layer 14, inside the barrel at the base of the well (fig. 10, nos. 60-62) is of the Flavian period. The barrel staves were made from quarter or "rift cut" timber, and the timber itself is Fir (*Abies* sp.). Unfortunately it was not possible to determine the species of the timber with any certainty but it may have been *alba*, a native timber of southern Spain.

In section H-I level 15 was an intrusion from pit 8 which had been partly undercut into the filling of the well. Pit 8 seems to have been Roman in date because its filling was similar in character to the Roman deposits on the site, and in addition in it was found a small Roman bronze box fitting in the form of a lion's face. Also in the pit were preserved a number of large tree branches, but it was not possible to remove any samples for identification.

Well 1 was found near the centre of the site (see section M-L) and was also made from a barrel constructed of quarter cut staves of Fir (*Abies alba*[?]). The base of this well lay at 1.6 feet below Ordnance Datum, but unfortunately its filling had been disturbed in modern times. The Roman pottery from the disturbed well filling was consistently dateable to the late 1st century, and in view of its depth and filling, it is probably Roman in date.

Pottery of the 2nd and 3rd centuries was completely absent on this site, as far as can be judged in this kind of excavation, except for one fragment of Castor ware of the late 2nd century from the filling of the medieval pit 3. Instead, overlying the early Roman strata throughout the site was a layer of black soil. In trench "D" (section G-H) pit 6 was found cutting down into the earlier Roman deposits from the above mentioned layer of black-earth. In the pit were found a few fragments of Roman material including a fragment of red colour-coated ware of the 4th century (Fig. 8, no. 24).

One unstratified find from the site should be mentioned here, and that was a substantial fragment of grey lava from a Roman quern. The quern was found lying beside trench "D" and almost certainly came from it.

The Roman strata were overlaid by dark coloured medieval and later deposits. Pit 2 was discovered in 1945-47 and contained pottery of *circa* 1300. In 1961 was found pit 3 (section J-K) which contained pottery of a similar period (Fig. 8, nos. 5-9). In addition a scatter of pottery of the same period existed all over the site. No evidence of any medieval structures was found, but the pottery scatter and the rubbish pits indicate medieval occupation on or near the site. If the occupation existed on the site then it was probably in the form of timber buildings, which are difficult, if not almost impossible, to recognise on a building site, so it is probable that this site lay within the occupation area of late 13th century Southwark.

Pit 1 was found in 1945-47 and contained Tudor pottery. In 1961 in trench "E" was found part of a square brick-lined cesspit which contained pottery of the period 1650-1700 (Fig. 8, nos. 1-4).

BANKSIDE POWER STATION

THE SITE lies between Bankside in the north and Park Street in the south, and the excavations were carried out in 1960.

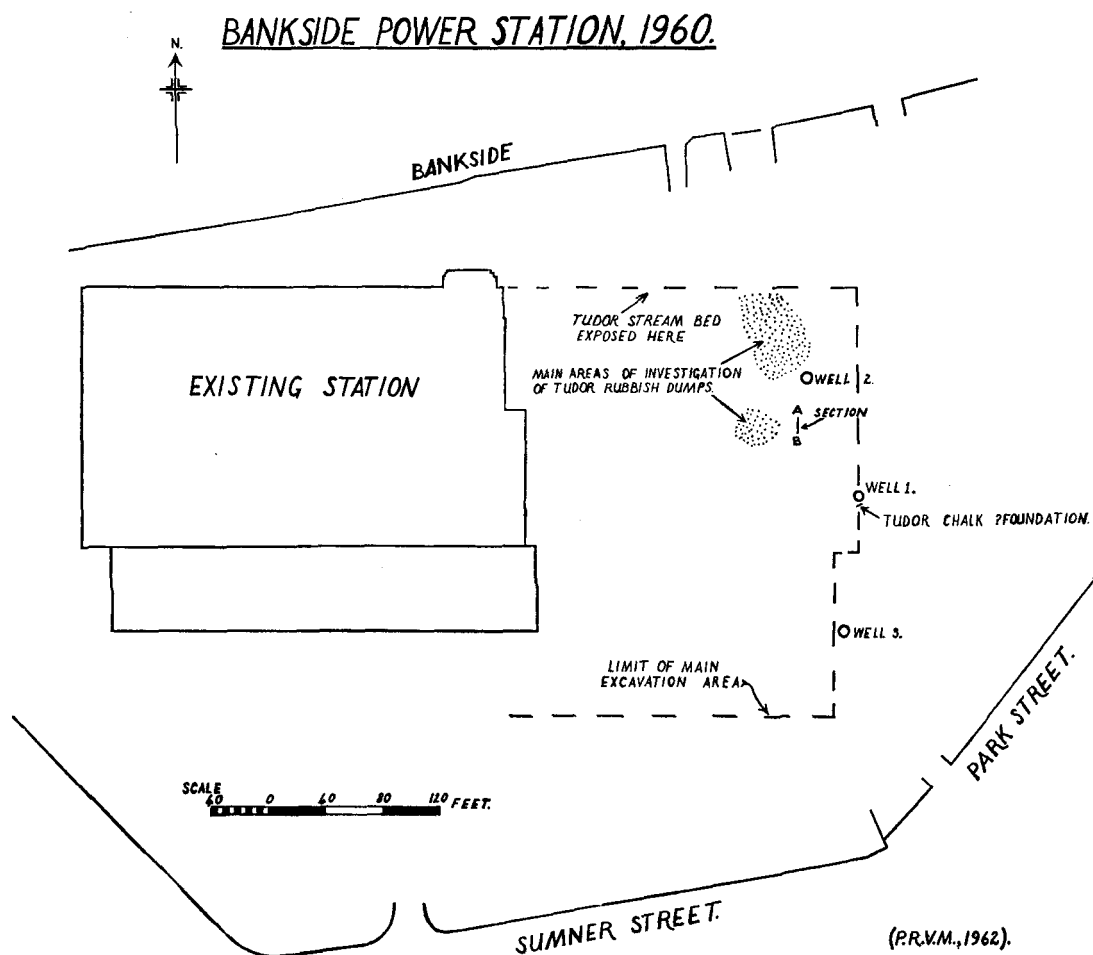


Fig. 4

THE EXCAVATIONS (Fig. 4)

The base of the flood-plain river gravel was not horizontal, but sloped fairly steeply down towards the south-west corner of the site. At the north-east corner of the site the base of the river gravel lay at about 18 feet below Ordnance Datum; at the north-west corner

BANKSIDE , SECTION.

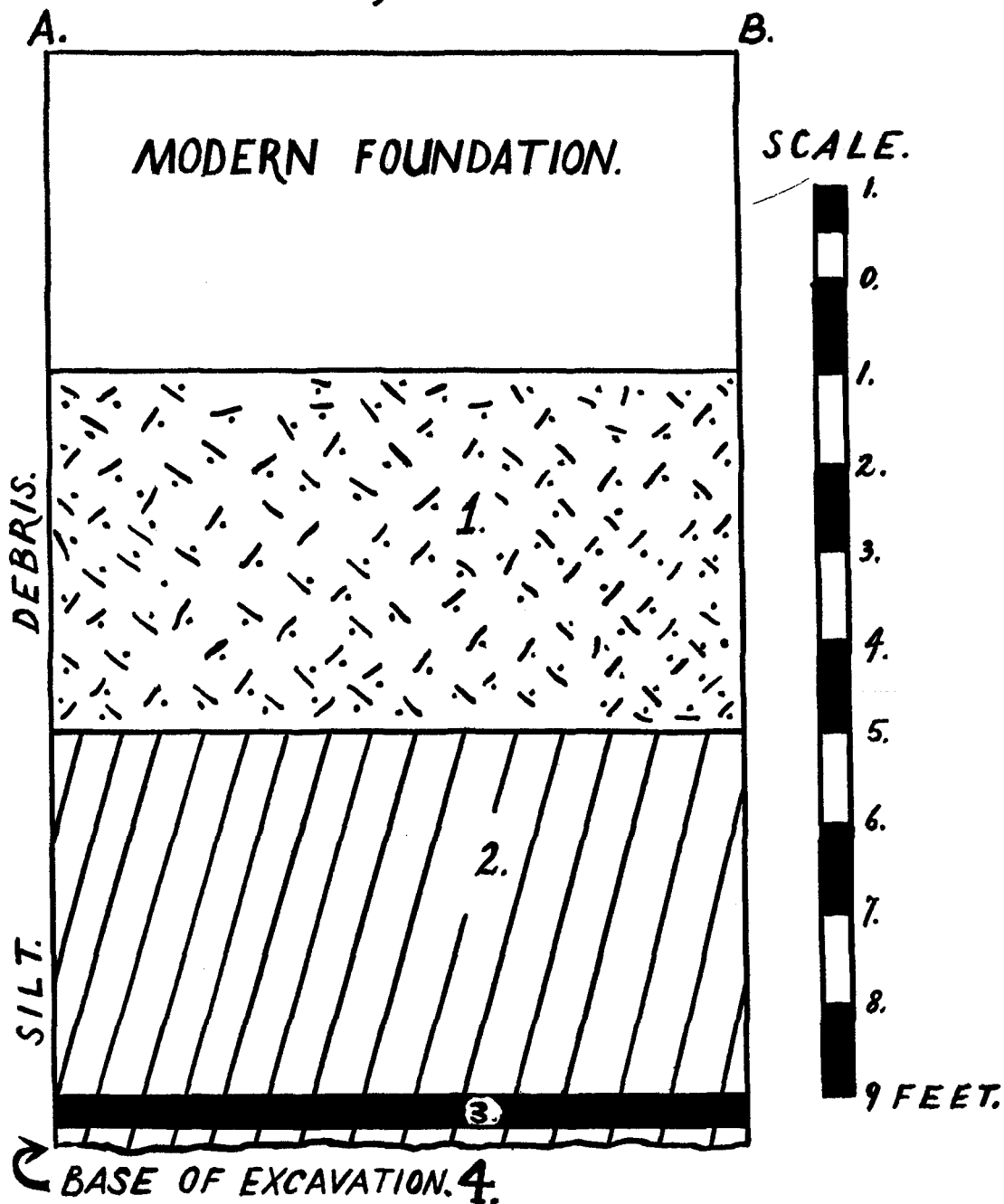


Fig. 5
Section at Bankside Power Station.

it lay at about 22 feet below Ordnance Datum; at the south-east corner at about 26 feet below Ordnance Datum; while at the south-west corner it lay at about 32 feet below Ordnance Datum. This drop in the base of the river gravel can only be accounted for if it is assumed that the Thames, or a tributary of the Thames, flowed much below the normal base of the flood-plain river gravel in order that it could erode deeply into the under-lying London clay. A period at which this erosion could have taken place was when the "Thames Gorge" was being formed³.

The top of the river gravel lay at a depth of about 15 feet (about 2 feet below Ordnance Datum) at the north of the site, while overlying the gravel all over the site, as far as could be judged, were numerous small sandbanks, the maximum heights of which were about 5 feet. Mixed in with the sand of the sandbanks were minute shell fragments. The channels or hollows between the sandbanks were filled with a clean bluish-grey silt the top of which was level with the top of the highest sandbanks. Level 4 in section A-B (Fig. 5) is the silt filling between some sandbanks.

Overlying the tops of the sandbanks and the silt was a layer of black silt, level 3 in section A-B, of varying thickness and depth which seemed to cover the whole site. In some places this layer contained rubbish dumps, the pottery from which has been dated to *circa* 1500 A.D. (Fig. 9, nos. 30-59). Apart from the man-made objects there were numerous quantities of cockle shells and, to a lesser extent, mussel shells. In the rubbish dumps were also pieces of the wood and the bark of Birch (*Betula* sp.). Also found in this layer, and at the east side of the site, was a line of chalk rubble about 2 feet wide which may have been a foundation for a wall or the filling of a drainage gully. The apparent lack of much plant debris associated with level 3 suggests that this site was part of an area of riverside mud flats at that period. At one point small freshwater mollusca in the silt, together with one or two late medieval sherds, indicated the former presence of a small slow-flowing stream which flowed into the Thames (see Appendix 1).

Level 2 was a grey silt deposit containing scattered animal bones, oyster shells, and lumps of chalk. In the top one inch of level 2 at one point on the site was found a clay pipe bowl, probably of the period 1650-1670 (Fig. 10, no. 67). This pipe bowl may have been trodden down into the silt in antiquity from the overlying post-medieval deposits, but anyway it probably indicates the period at or after which frequent flooding of this site ended.

Level 1 was the thick post-medieval made ground above the silt deposits. The soils of this made ground were largely black in colour, and contained considerable quantities of post-medieval rubbish of all kinds. Two sherds (Fig. 10, no. 68) were recovered from the bottom of this make-up just above silt layer 2, and probably date from the first half of the 17th century.

The only dated post-medieval structures on the site were two wells. Wells I and II were brick-lined and contained Mocha ware, transfer printed Staffordshire ware, and clay pipes of the mid-19th century in their top fillings (see Fig. 10, nos. 64-66). The upper fillings of both wells must have been deposited simultaneously for a fragment of a glazed pot found in well II joined onto two fragments of the same vessel from well I. One other brick-lined well was found on the site and was identical in size and construction to wells I and II, and probably dates from the same period.

Interesting unstratified finds from the site include a few fragments of late 17th or 18th century biscuit delft ware; a wooden water-pipe made from a hollowed-out tree trunk; and a scatter of timber piles, probably post-medieval, were found driven into silt layer 3.

COURAGE & BARCLAY BREWERY, PARK STREET

THE SITE (Fig. 6) lies on the inner or south-west corner of where Park Street turns westward through almost a right-angle, and the excavations were carried out in 1961.

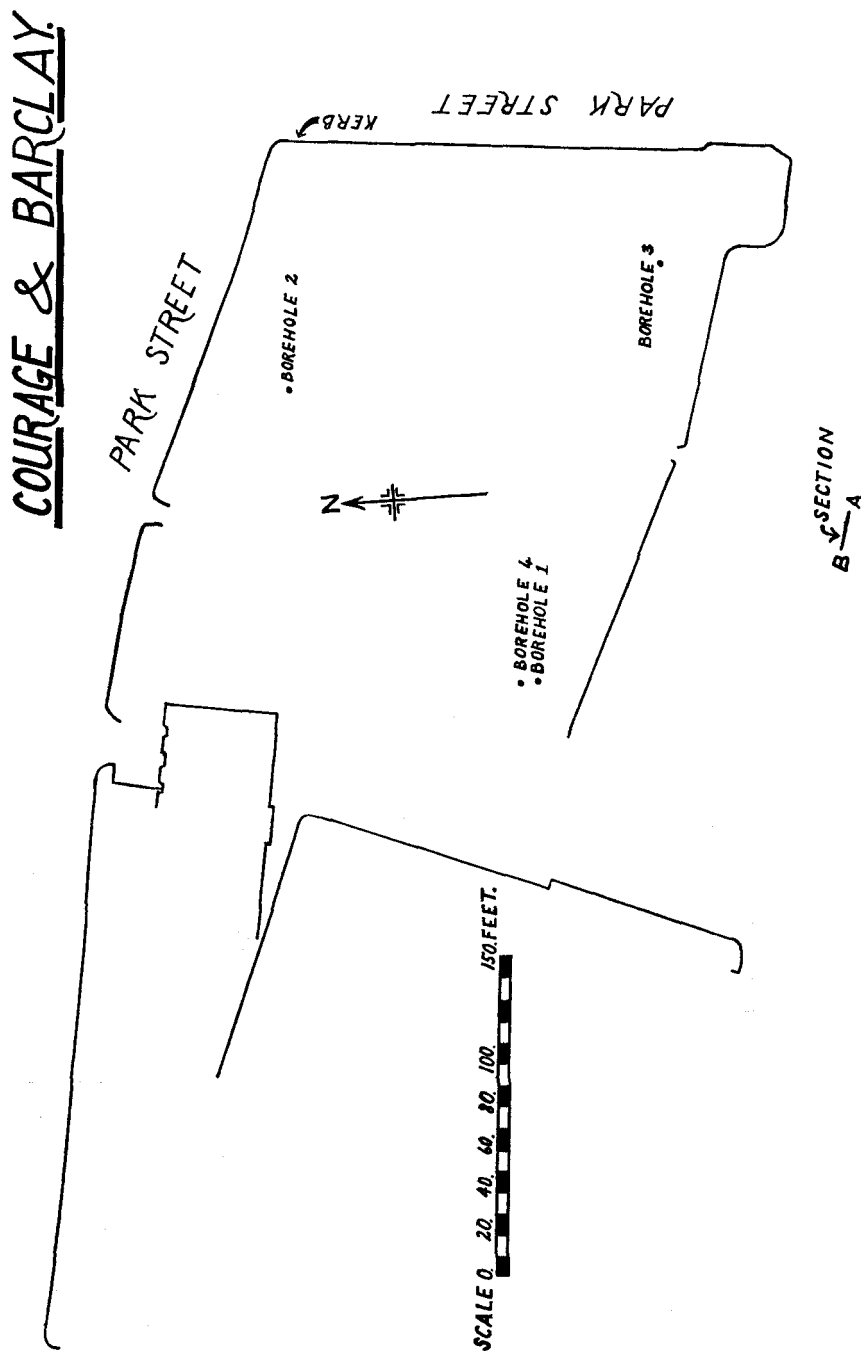
THE EXCAVATION

Unfortunately the excavations were largely limited to pile-driving operations and therefore archaeological observation was extremely limited. The borehole sections (Fig. 7) related to Ordnance Datum, clearly show that the upper surface of the flood-plain river gravel was very uneven. At the south-eastern corner of the "excavated" area the gravel was found to rise up to very approximately the level of Ordnance Datum, although the position of the excavation where this was revealed (section A-B, Fig. 6) was such as to make it difficult to plot the depth of the strata in relation to street level or Ordnance Datum.

The borehole sections reveal the existence of a thick deposit of silt overlying the river gravel, and above the silt a deposit of peat up to 6 feet in thickness. The impression given by such excavations as were carried out on this site is that in the area shown on the plan the river gravel did not rise above Ordnance Datum. The peat layer and the underlying silt clearly shows that the site was marshy when the peat was being laid down.

There is no doubt that the peat was at least in part formed during the Roman period because pottery of that period was found in a small excavation carried out by a bulldozer in the south-eastern corner of the site (see site plan Fig. 6; also section A-B, Fig. 7) where a peat layer was revealed. The natural flood-plain river gravel was found to rise up from the west and from the north to a level not far removed from Ordnance Datum where the section lay. Above the gravel was level 1, a stratum of pebbly silt. Overlying that was level 2, a deposit of brownish black peat about 5 ins. thick in the middle of which was found a small fragment of a grey coarse ware Roman poppy-head type beaker with dots *en barbotine* on its surface. On analysis, a sample of the peat was found to be so far decomposed that it was impossible to determine its vegetable origin. Some fine roots were present and also some Birch wood (*Betula* sp.). Level 3 was a layer of clean bluish silt 14 ins. thick, which did not contain any pebbles, but it did contain a few sherds of the 1st or 2nd centuries (Fig. 10, no. 69). Above that was the dark grey pebbly silt layer 4 which was at least 8 ins. thick but had been truncated by the modern basement floor. Some pottery found in level 4 was dated to the late 2nd century (Fig. 10, nos. 70-75). The silt layer seems to have been deposited during a period of flooding and the pebbles in the silt indicate the force of the flood-water.

Later deposits on the site were not examined in detail, but it is worth noting here that at the southern end of the site a number of human burials from the Deadman's Cemetery were uncovered. The extent of the cemetery is shown on Rocque's map of 1746.



COURAGE & BARCLAY.

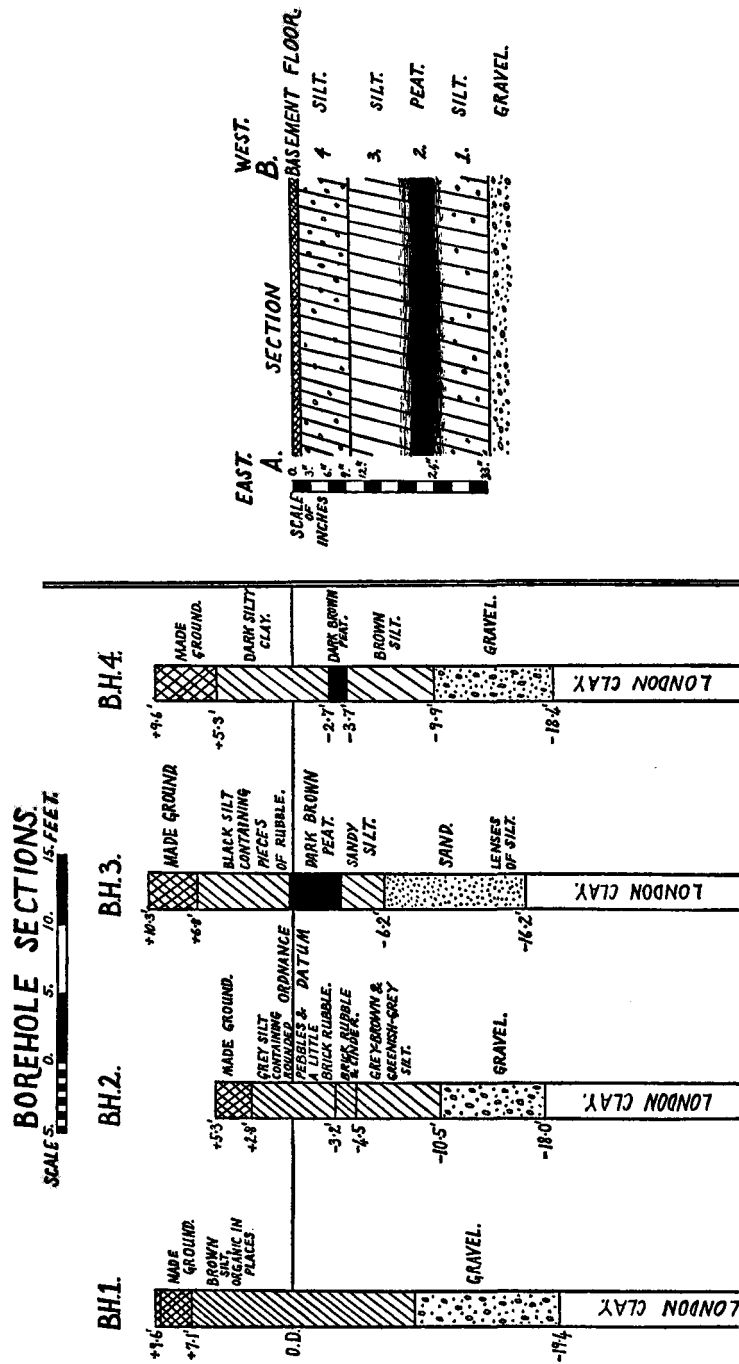


Fig. 7

THE FINDS

A. Pottery

18-20 SOUTHWARK STREET

CESS PIT

1. Lambeth delft ware jug, originally with three spouts. Yellow ware with white glazed surface.
2. Clay pipe bowl from cess pit. Dated about 1650-1670.
3. Plate of Lambeth delft ware with decoration inside of blue and a little yellow of a poor "willow pattern" type design. Yellow ware with white and blue glazed surface.
4. Large drug pot of Lambeth delft ware with decoration of blue blobs and brown rings on outside. Pink ware with white glazed surface.

PIT 3

5. Base of the handle of a buff ware jug, circular in section. Green and yellow glaze on outside of fragment, but no glaze on inside of small remaining portion of the inside of the pot.
6. Rim of dark grey coarse ware. Yellow glaze inside below rim.
7. Small fragment of white coarse ware with green glaze and yellow slip and rouletted diamond decoration outside.
8. Small fragment of a brownish pink coarse ware with a grey core. On the outside are vertical applied strips of white clay and a yellow glaze. $\frac{1}{8}$ inch thick.
9. Fragment of the side and base of neck of a jug. Grey coarse ware with pink inner surface. Applied blobs and vertical strips of whitish grey clay, and yellow and red glaze outside.

Other finds from this pit include a number of Roman sherds, fragments of medieval roof tiles, one of which had half a peg or nail hole $\frac{1}{2}$ inch in diameter at the top and $\frac{3}{8}$ inch diameter at the bottom. Also another tile fragment $\frac{1}{2}$ inch thick with a patch of greenish glaze on top and curved somewhat like the Roman *imbrex* tile. Also small sherds of soft grey ware containing small shell fragments.

Section A-B. Grey Sand below Layer 5

10. Peg of amphora. Pink ware with white slip outside.

PIT 9

11. Pot base fragment of grey ware with greenish yellow glaze in patches on the outside.

Section J-K. Level 2

12. Fragment of a lamp of fine white coarse ware with light brown slip outside.
13. Base of pale pink rather sandy coarse ware.
14. Fragment of dark grey coarse ware pot with burnished diagonal lines.
15. Bead rim of sandy light grey coarse ware with black surface.
16. Very light grey coarse ware rim sherd with polished outside.
17. Grey coarse ware base of platter with burnished lattice pattern on outside and burnished circles on underside of base.

This deposit also includes two sherds of 'rough cast' ware.

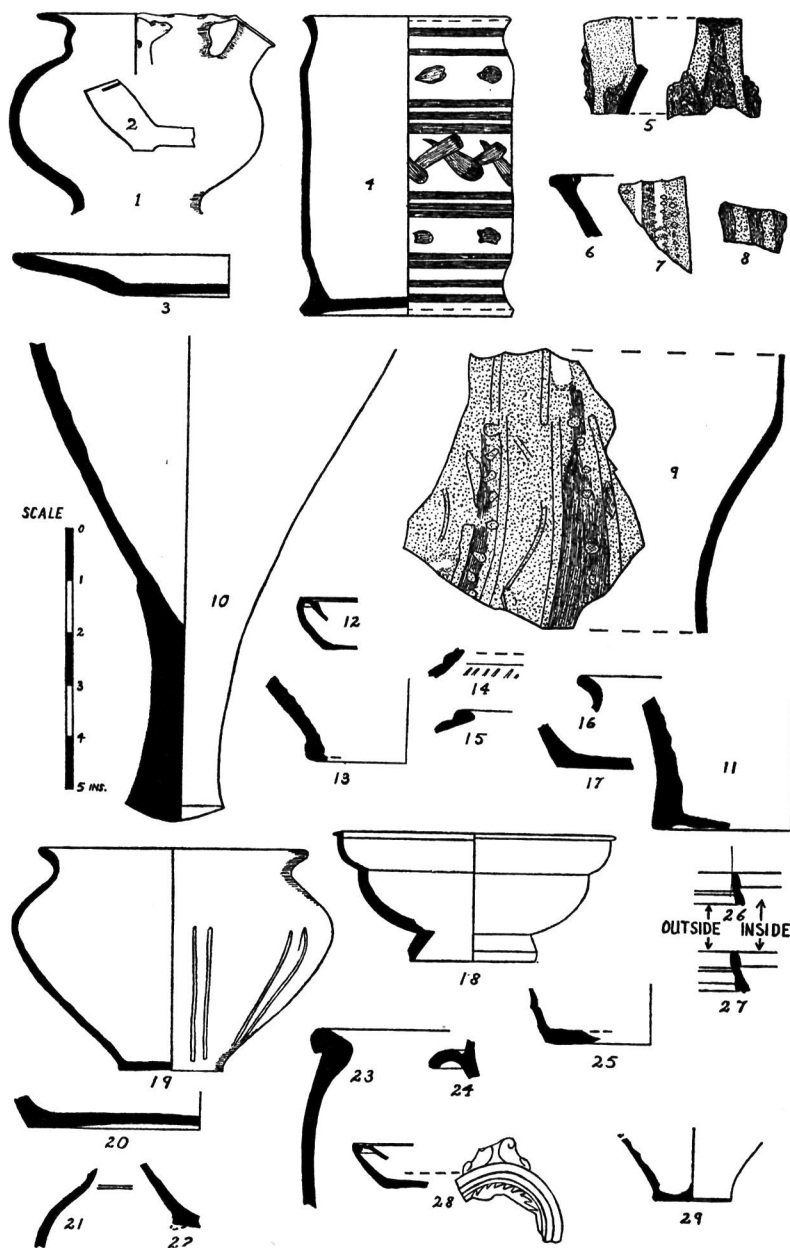


Fig. 8
Pottery drawings.

Section J-K. Level 4

18. Samian ware Drag. form 27 burnt black.
19. Cooking pot with double burnished vertical lines at intervals running from foot to shoulder of pot. Burnt to a pink colour.
20. Base of pink and grey coarse ware platter.
21. Shoulder of pot of a hard light grey coarse ware with horizontal groove.
22. Fragment of a base of light grey coarse ware. Footring broken.
23. Rim of coarse ware storage jar, burnt to pink colour.
28. Fragmentary lamp with wreath decoration in discus.

PIT 6

24. Flanged rim of red colour colour-coated ware mortarium. Pink ware and grey core, with red slip on inside and outside.

Pit also contained one roofing tile fragment, one amphora fragment, one fragment of buff coarse ware, all Roman.

Section A-B. Sandy Clay above Layer 5

25. Base of brown coarse ware with grey surfaces. Slightly soapy to touch.
- Layer also contained two other Roman coarse ware sherds.

Section J-K. Layer 3, Burnt Clay

26. Rim fragment of Samian ware Drag. form 15/17.
- Layer also contained three Roman coarse ware sherds.

Trench C. Gravel Metalling

27. Samian ware rim fragment of Drag. form 15/17.

PIT 5

29. Base of pot of fine white coarse ware.

BANKSIDE POWER STATION

Section A-B. Level 3

30. Sagging base of a cooking pot, unburnt, with thumb impressed bottom edge. Creamy white ware, with patches of green glaze on base.
31. Base, heavily burnt and inside covered with black burnt material. Brown and grey ware with outside heavily pitted. Inner surface covered with white slip.
32. Base of creamy white ware.

33. Probably jug neck, of pink ware with patches of brown glaze outside below rim.
34. Rim of grey ware with black inner and outside surfaces.
35. Sagging base, unburnt, of creamy white ware with inside of pot covered with yellowish green glaze.
36. Probably sagging base. Pink "micaceous" ware with thin greenish yellow glaze inside.
37. Base of creamy white ware, burnt on outside and green glaze inside.
38. Neck of jug, with strap-handle 1.75 ins. wide with central groove running down outside and also containing square stab holes. Creamy white ware.
39. Rim fragment of creamy white ware. Black carbon deposit outside and patch of greenish yellow glaze on inside.
40. Rim fragment of creamy white ware.
41. Rim fragment of creamy white ware, with patch of greenish yellow glaze on outside.
42. Rim fragment of creamy white ware; burnt outside, and patch of green glaze on inside just below rim.
43. Rim of small pot of creamy white ware. Greenish yellow glaze on most of inside and outside. Unburnt.
44. Jug neck of soft brown shelly ware with a grey core.
45. Sagging base of a pink ware with small patches of greenish yellow glaze outside and brown glaze inside.
46. Rim of cooking pot, unburnt, of creamy white ware, with small patches of yellow glaze on inside and outside.
47. Rim of cooking pot, with black carbon deposit inside. Creamy white ware with a patch of green glaze on rim and outside of vessel.
48. Rim, possible a jug neck, of creamy white ware, burnt on outside. Small patch of green glaze inside pot, and slight traces of a red pigment which is soluble in water.
49. Rim, possibly a jug neck of creamy white ware, unburnt, with large patches of greenish yellow glaze on outside.
50. Rim, of sandy brown ware with a grey core.
51. Rim fragment of a large cooking pot of creamy white ware, with patches of green glaze under rim. Possible traces of burning outside.
52. Siegburg ware vessel, with thumb impressed base and horizontal grooves and ridges around body. Hard light grey ware, unglazed.
53. Jug of Siegburg ware, with thumb impressed base and sharp horizontal ridges around body. Fine hard grey ware. Unglazed.
54. Spout on side of pot. Creamy white ware with patches of green glaze.
55. Fragment of a floor tile with glazed surface design of yellow (white on drawing) and red (black). Grey ware.
56. Floor tile with glazed surface design in yellow (white on drawing) and brown (black on drawing). *cf.* Medieval Catalogue, [1940], of London Museum, Fig. 77, no. 20—probably made at Penn). Pink ware, and thickness is $\frac{3}{4}$ inch.

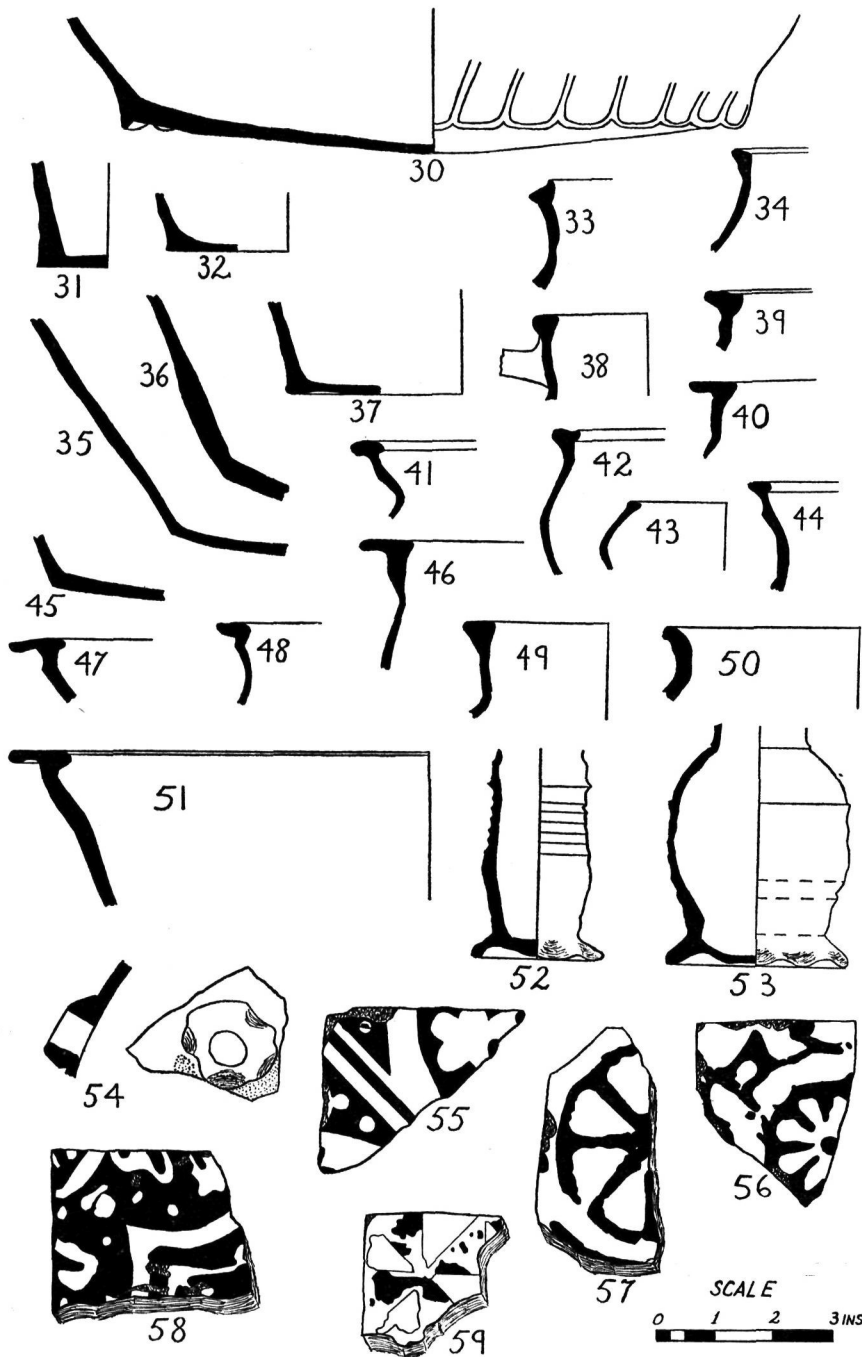


Fig. 9
Pottery and Floor Tile drawings

57. Floor tile with glazed surface design of brown (black on drawing) and yellow. Red ware. (*cf.* Med. Cat. [1940] of London Museum, Fig. 78, no. 27).
 58. Floor tile of buff ware, with glazed surface design of yellow (white on drawing) and red (black on drawing). Thickness is 1 inch.
 59. Floor tile of red ware, with glazed surface design in yellow (white on drawing) and brown (black on drawing).

18-20 SOUTHWARK STREET

FILLING OF WELL 2

60. Amphora handle of buff coarse ware, with the potter's stamp]GL ▲[.
 61. Lamp of buff coarse ware with mica dusted surfaces. Handle broken. Traces of burning in nozzle.
 62. Samian ware footring of Drag. Form 31 or 18/31.

Also found in the well were four fragments of grey coarse ware cooking pot with lattice pattern and one fragment of rough-cast ware.

FILLING OF WELL 1

63. Rim of amphora in buff coarse ware.

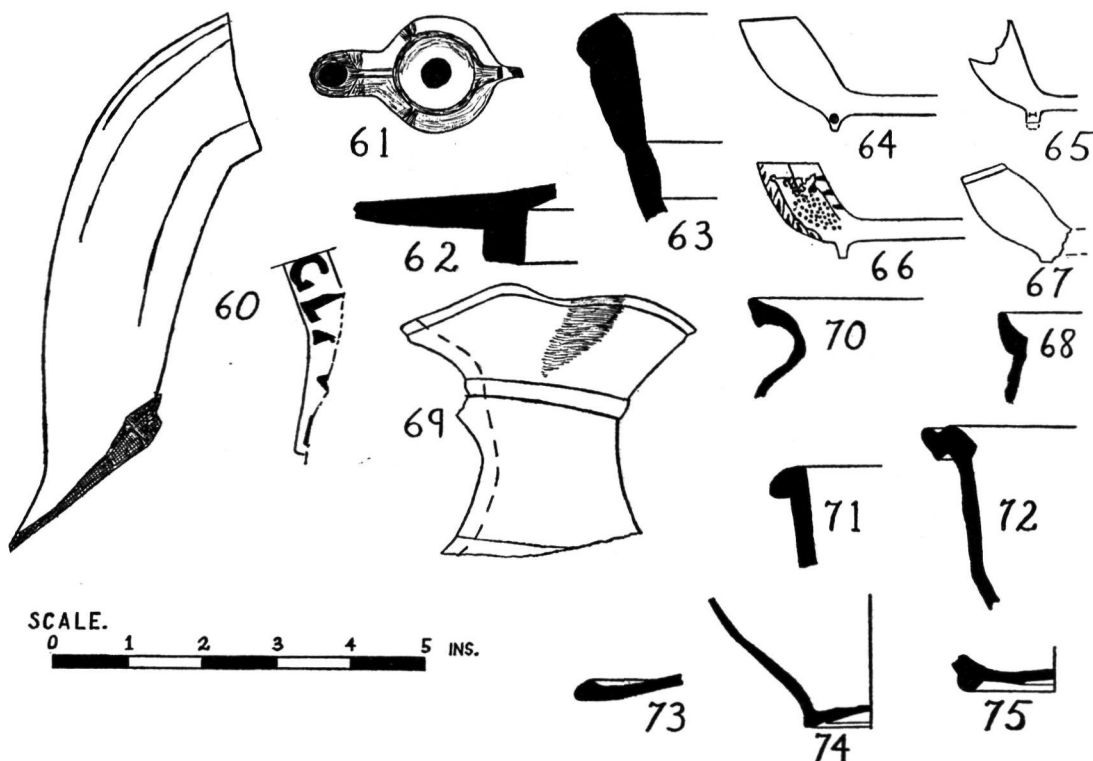


Fig. 10
Pottery drawings

BANKSIDE POWER STATION

WELL I (c. 1860)

64. Clay pipe bowl, with rosettes on peg and stamped impressed shield on bowl with the arms of the City of London and the inscription]CHETE . . . LO[NDON].
65. Clay pipe bowl, stamped I, I on peg.
66. Clay pipe bowl with unidentifiable stamps on peg. Bowl decorated with bunches of grapes.

Also from this well was recovered the stem of a clay pipe inscribed]T BORO / T ? CT[.

Section A-B. Level 2

67. Clay pipe bowl.

Section A-B. Level 1

68. Rim of grey coarse ware, with black carbon deposit on outside and green glaze inside.

Also from this layer was a fragment of pinkish grey ware with pinkish glaze on inside and outside.

COURAGE AND BARCLAY

Section A-B. Level 3

69. Jug neck of buff coarse ware with the spout in the form of a figure of eight. Raised ring around neck immediately above junction of handle and neck.

Other finds include three fragments of Samian ware Drag. 18.

Section A-B. Level 4

70. Rim of olla of gritty brown coarse ware with a grey-brown surface.
71. Rim of platter of pale sandy grey coarse ware with black slip inside and outside.
72. Rim of reeded bowl of red gritty coarse ware with black outer surface, burnt.
73. Edge of a lid of buff coarse ware.
74. Base of Rhenish ware beaker. Pink ware with black-brown slip inside and outside.
75. Pot base of pink coarse ware with white slip outside.

REPORT ON FOOTWEAR, ETC., FROM BANKSIDE POWER STATION, DATED CIRCA 1500. SECTION A-B. LEVEL 3

BY JOHN W. WATERER

The soles and portions of footwear examined all seem to be roughly of the same period, namely from mid-14th to mid-15th century. There is no means of dating the other objects which could, however, be of the same period.

The majority of soles and shoes display the marked pointed toe associated with the type of shoe usually called a "poulaine"; the moss found was used for stuffing the points. A few appear to have been of more orthodox shape although still with a point but much less marked; these are probably of the same period. All upper portions and most soles belong to what is called the "turn-shoe" type, that is they are sewn together inside out; the stitching goes from the inner surface of the sole, turns at a right-angle and emerges at the side, thus having passed through only half the thickness of the leather; when the shoe is turned right

side out, the stitching is hidden and protected from wear. Insoles or linings were probably stuck inside. Three soles still have fragments of thread remaining; this is not very common, the thread usually having rotted completely. Only analysis could determine whether the thread was made from flax or hemp yarn.

After turning, the edges of the soles tend to be pulled upward by the strain on the upper; this tendency can be clearly seen on several soles. One sole has been patched, showing that such footwear was not amenable to sound repair.

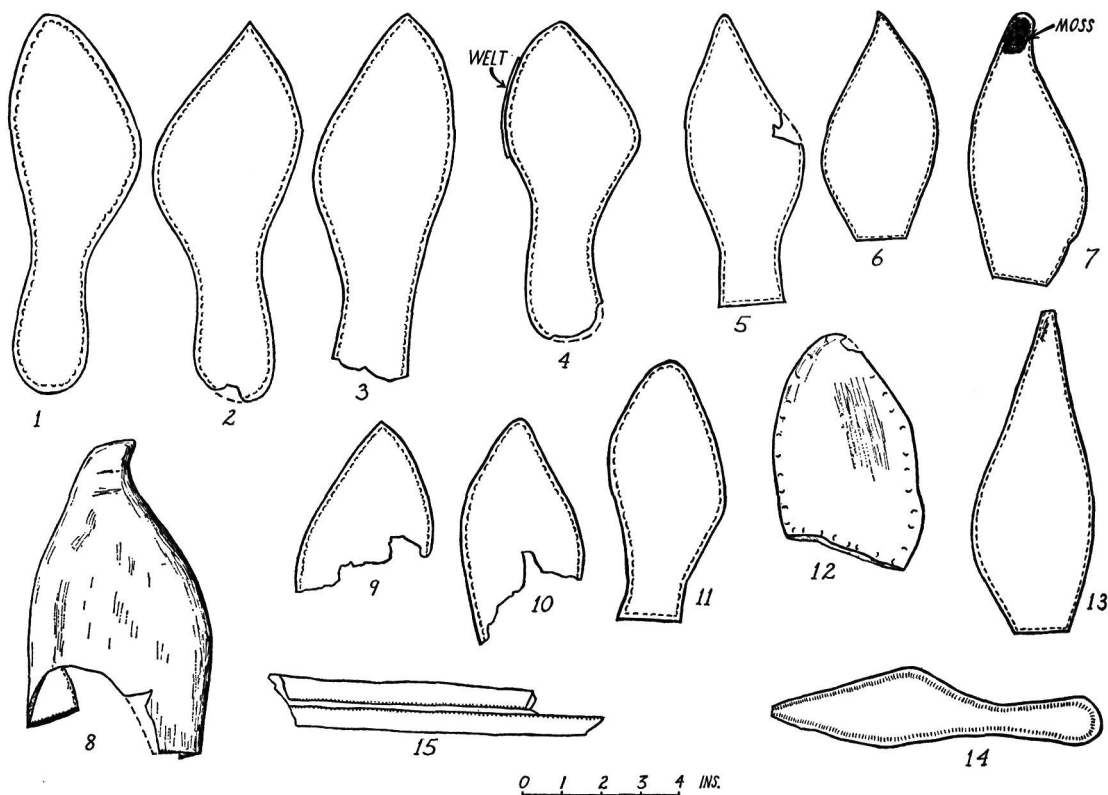


Fig. 11

An object of particular interest is the sole of a small, long-pointed shoe (for right foot, probably a young boy's) (Fig. 11, no. 14). This more exaggerated form of pointed shoe is sometimes called a "cracowe". The usual explanation of this term is that the style was introduced into England by Anne of Bohemia, but pointed shoes can be traced back to Hittite cultures. This small sole comprises seven layers of thin leather sewn together; the awl-holes are very clear. The present lowest layer shows signs of wear but the awl-holes go right through this layer. In the absence of the other parts it is not clear exactly how this was made. Stitching left unprotected on the surface of the outer sole would last no time. There is no sign of a "channel" which even after much wear usually leaves some traces. Perhaps there was once another layer which, when badly worn, was torn off, leaving unprotected stitching.

Another item of interest is the sole which has the remains of a welt which was inserted between sole and upper; this feature is unusual in such a shoe (Fig. 11, no. 4).

Among the shoemaker's scraps is one from which a half-sole has been cut, probably for patching (Fig. 11, no. 12).

"Split closing" has been used for joining the different parts of the uppers in most examples; in this method, as with the soles mentioned above, the stitches pass, from the back or flesh side of the leather, through only half the thickness, thus making a butt-joint in which the stitching is hidden.

OTHER OBJECTS

The pieces of goatskin show signs of use and are probably parts of jerkins. The oblong strip (Fig. 11, no. 15) with edges turned up so as to form a "channel" shape, I cannot identify. It is not, I think, part of a sheath or scabbard because the leather is much thinner than normally employed for this purpose, the outer edges (where folded) are quite straight and parallel, whereas a sheath is usually shaped, and there is no clear evidence of the normal raised seam. This would be an unusual way to make a strap or belt; it might be a covering for a flat piece of metal, for example a cobbler's flat-blade knife from which the leather was cut away as the metal wore down, but it is rather long for this.

Leather from Bankside Power Station; Section A-B. Level 3, circa 1500 A.D. (Fig. 11).

- 1-3. Leather soles of poulaines.
4. Leather sole of poulaine. Right foot. Welt preserved on left side of toe.
- 5-7. Half-soles of poulaines. These were joined to the heel part with split-closing.
8. Fore-part of a large right foot poulaine. This is the upper of no. 7.
- 9-10. Fragmentary toe ends of soles of poulaines.
11. Half sole of poulaine. Right foot.
12. Patch from toe part of a leather shoe. Right foot.
13. Half-sole of poulaine. Left foot.
14. Laminated sole of a boy's right foot "cracowe".
15. Piece of leather with both edges folded back to meet in the middle. Stitch holes on one side only. Purpose unknown.

APPENDIX I

Bankside Power Station: Analysis of silt sample from stream filling dated *circa* 1500 A.D.

(A) *Mollusca*, by C. P. Castell.

"Your silt sample produced the following:

<i>Valvata piscinalis</i> (Müller)	18
<i>Bithynia Tentaculata</i> (L)	7 + 7 opercula
<i>Bithynia leachi</i> (Sheppard)	5
<i>Lymnaca peregra</i> (Müller)	8
<i>Planorbis planorbis</i> (L)	1
„ <i>albus</i> (Müller)	8
„ <i>contortus</i> (L)	1
<i>Succinea</i> sp.	1
<i>Helix aspersa</i> (Müller)	fgt.
<i>Arion</i> sp.	3 granules
<i>Pisidium</i> spp.	17 valves
<i>Ostrea edule</i> L(Oyster)	fgt.
<i>Mytilus edulis</i> L(Mussel)	fgts.
Ostracod	2 valves
Fish vertebrae	2
Newt vertebra	1
Plant remains (see (B)).	

The fauna suggests a slow-flowing stream. The mollusca are nearly all aquatic, with the exception of *Helix aspersa* (the garden snail) and the slug *Arion*. *Succinea* is a marsh dweller".

(B) *Plant Remains* by Sir George Taylor.

"The greater part of the sample consists of Oak wood (*Quercus* sp.). A few pieces of twigs bearing branch thorns are probably Blackthorn (*Prunus spinosa*). Half of a single seed was noted, but it was not identified".

REPORT ON THE ANIMAL BONES FROM 18-20 SOUTHWARK STREET

BY RAYMOND E. CHAPLIN and JENNIE P. COY, B.S.C.

The series of bones from this site have been examined and are detailed below. They are of no great interest as they are largely fragmentary and few in number. Such measurements as could be taken show no unusual features. It is unfortunate that the fragmentary remains of the birds do not permit specific identification.

FROM 1ST CENTURY DEPOSITS

- Bos*. Fgt. proximal end metacarpal. Max. width proximal end, 49mm.
- Sheep/goat*. Fgt. of tibia, ramus of mandible, olecranon process of ulna.
- Bos*. Proximal phalange. Maximum overall length, 52mm.
- Sheep/goat*. Distal end of radius, width distal end, 29mm. Fgt. lumbar vertebra.

FROM 13TH CENTURY DEPOSITS

- Sheep/goat*. Distal end of humerus, max. width distal end, 29mm.
- Bos*. Six fragments. Astragalus, length 59mm.
- Sheep/goat*. 1 fgt. *Bird*, 2 fgts. *Dog*, 1 fgt.

VERTEBRATE REMAINS FROM BANKSIDE POWER STATION

Two bones were submitted for report from this site, both dated *c.* 1500 A.D. One was the right posterior portion of the cranium of a sheep, cut obliquely across the parietal bone. The second, a fish bone, was identified by Mr. A. C. Wheeler of the fish section of the British Museum (Natural History). It is the right dentary bone of the Whiting-pout (also known as the Pout, Pouting or Bib) *Trisopterus luscus* (L). It is a common fish in the Thames Estuary today and can be caught on lines or in seine and trawl nets. It is quite good eating, comparable with its near relative—the Whiting.

¹ For sandspit see *Illustrated London News*, March 10th, 1962, pp. 3746375.

² K. M. Kenyon, "Excavations in Southwark", *Surrey Arch. Soc. Research Paper No. 5* (1959), p. 26.

³ See W. B. R. King and K. P. Oakley, "Pleistocene succession in the lower parts of the Thames Valley". *Proceedings of the Prehistoric Society*, 1936, pp. 52-76.