THE RIVER-SIDE DEFENSIVE WALL OF ROMAN LONDON

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During 1841 Charles Roach Smith recorded a length of Roman wall discovered during the construction of the sewer under Upper Thames Street between the foot of Lambeth Hill and Queenhithe. From its position, size and length, he assumed it to be a fragment of the river-side defensive wall of Roman London. From time to time other fragments of walling have been found under Upper Thames Street and Lower Thames Street, all of which have been thought to be further fragments of this Roman river-side defensive wall. The authors of the *Royal Commission on Historical Monuments, Vol. 3, Roman London,*[1] considered that as the wall contained so many fragments of re-used stone, and because its construction varied so considerably from the uniform character of the landward wall, it was a later Roman addition to the defences of the City, possibly dating from the same period as the solid bastions on the eastern side of the City wall, which also contained re-used stones.[2]

Post-war rebuilding along Upper Thames Street has thrown new light on the nature and purpose of some of the fragments of the supposed Roman 'river-wall'.[3] Therefore this is an appropriate time to review the evidence for the existence of such a wall. The *R.C.H.M.*, being the most recent survey of the river-side defensive wall, has been taken as the authority, and on the accompanying plan (*Fig. 1*) the *R.C.H.M.* numbering system of the wall fragments has been used, while the later discoveries have been lettered, and each fragment is critically discussed below.

W.41[4]

Roach Smith records that:

> The excavation of sewage . . . commenced at Blackfriars. The workmen having advanced, without impediment, to the foot of Lambeth Hill, were here checked by a wall of extraordinary strength, which formed an angle with the Hill and Thames Street. Upon this wall the contractor for sewers was obliged to open his course to a depth of about 20 ft.[5] so that the greater portion of the structure had to be overthrown . . . It extends (as far as I had the means of observing) from Lambeth Hill to Queenhithe, with occasional breaks. In thickness it measured from 8 to 10 ft. The height [*sc.* of the wall] from the bottom of the sewer was about 8 ft., in some places more or less; it reached to within about 9 ft. from the present street, and 3 ft. from that which indicates the period of the fire of London, in this district easily recognised. In some places, the ground-work of the houses destroyed by the fire of 1666 abut on the wall. The foundation was made in the following manner. Oaken piles were first used; upon these were laid a stratum of chalk and stones, and then a course of hewn sand-stones from 3 to 4 ft., by 2 and 2½ ft., firmly cemented in the well-known compound of quick lime, sand and pounded tile. Upon this solid substructure was built the wall, composed of rag and flint, with layers of . . . tiles. . . . Many of the large stones above mentioned are sculptured and ornamented with mouldings, which denote their prior use in a frieze or entablature of an

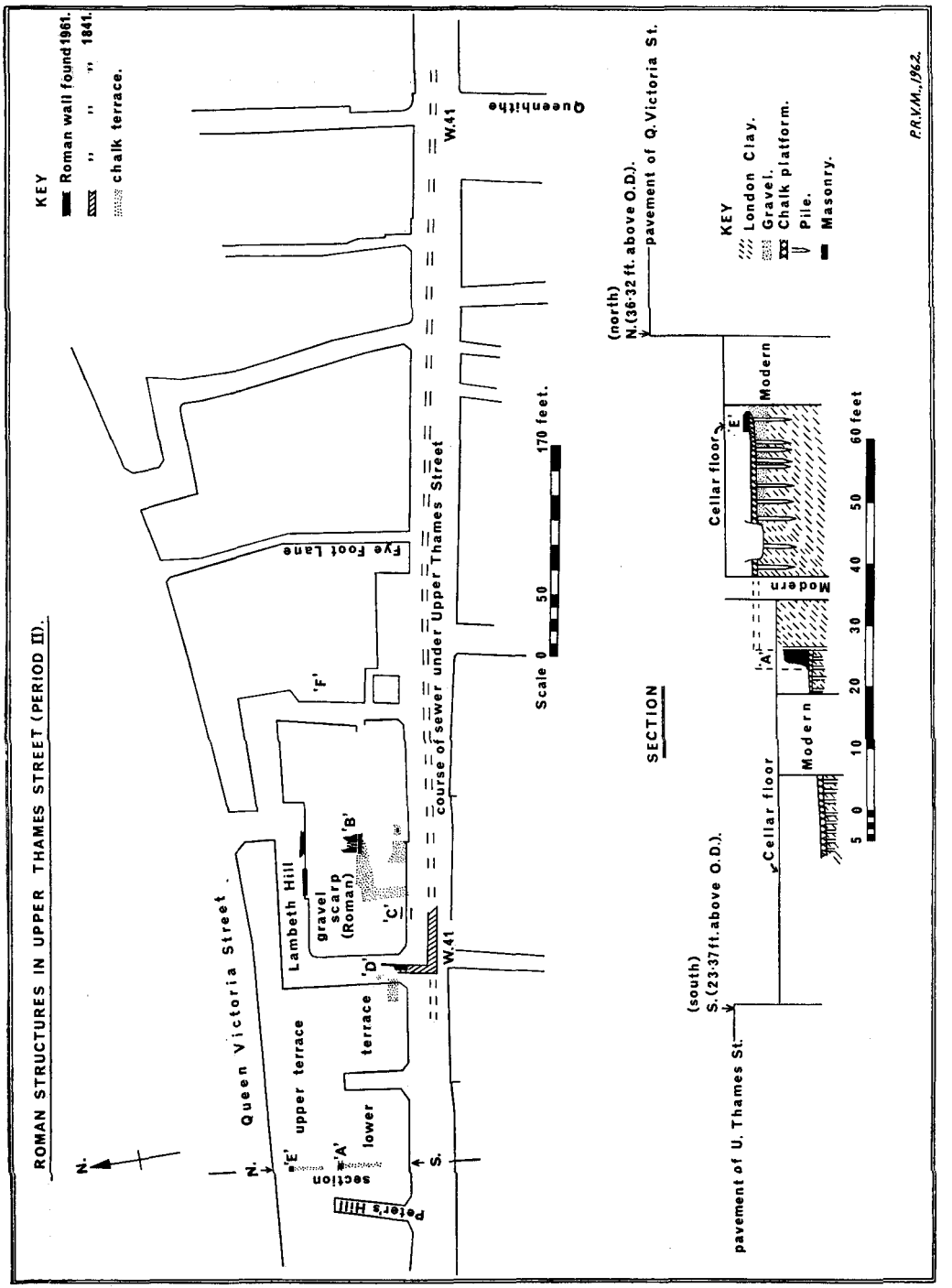
ROMAN STRUCTURES IN UPPER THAMES STREET (PERIOD II).
KEY
Roman wall found 1961.
" " " 1841.
chalk terrace.
N.
Queen Victoria Street
N.
'E'
section
'A'
S.
upper terrace
lower terrace
Peter's Hill
Lambeth Hill
gravel scarp (Roman)
'B'
'C'
'D'
'F'
Fye Foot Lane
course of sewer under Upper Thames Street
W.41
W.41
Queenhithe
Scale 0 50 170 feet.
SECTION
(north)
N.(36·32 ft. above O.D.).
pavement of Q. Victoria St.
Cellar floor
'E'
Modern
Modern
'A'
Cellar floor
(south)
S.(23·37 ft. above O.D.).
pavement of U. Thames St.
KEY
London Clay.
Gravel.
Chalk platform.
Pile.
Masonry.
5 0 10 20 30 40 50 60 feet
P.R.V.M., 1962.

Fig. 1

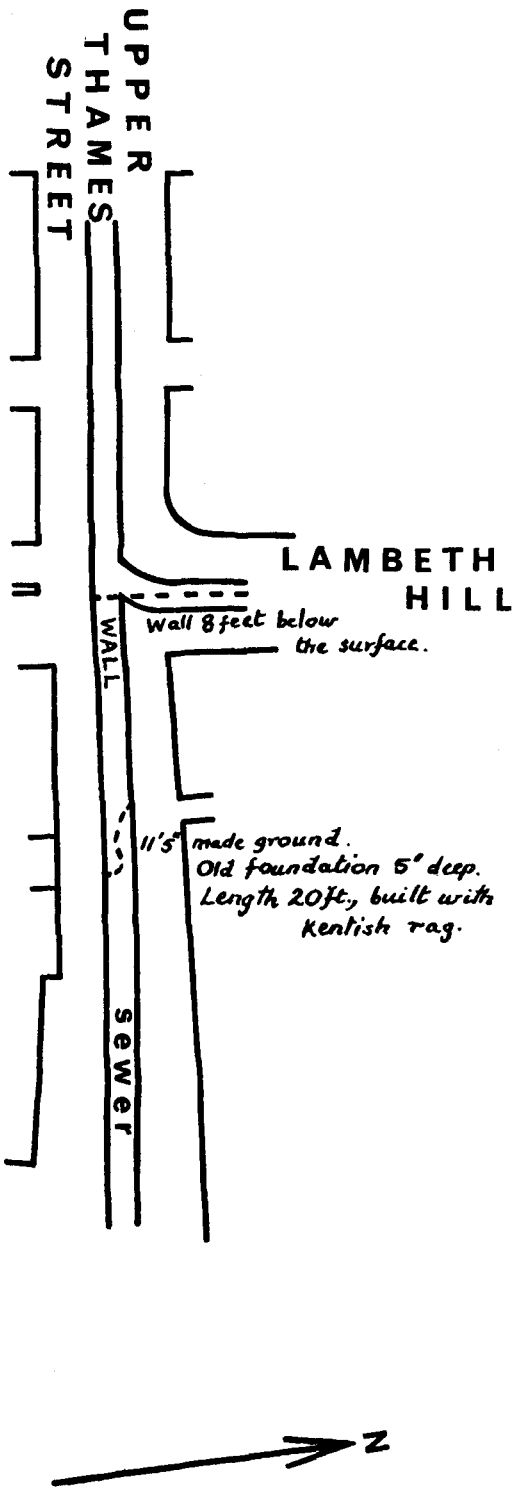

Fig. 2
Copy of Sewer Plan 378, with note on Plan 315 added

> edifice, the magnitude of which may be conceived from the fact that these stones were weighing in many instances, upwards of half a ton . . . I observed, also, that fragments of sculptured marble had been worked into the wall, and also a portion of a stone carved with an elegant ornament of the trellis-work pattern. . .[6]

Roach Smith says that the top of the wall lay about 9 ft. below the present road surface, and that the wall was standing about 8 ft. high; therefore the base of the wall lay about 17 ft. below Upper Thames Street, or at about 6 ft. above Ordnance Datum. What he meant when he said that the wall 'formed an angle with the [Lambeth] Hill and Thames Street' has been the subject of much dispute.[7] Fortunately excavations for the new Salvation Army Headquarters during 1961–2 have provided the answer, for this large site straddles Lambeth Hill for a considerable distance on both sides, between Queen Victoria Street and Upper Thames Street. In addition to this, Sewer Plans 378 and 315 of the City of London Commissioners of Sewers, now in the Records Department of the Corporation of London, have the position of the walls forming the angle marked on them with notes on the wall levels and construction (*Fig. 2*).

Briefly, the excavations on the Salvation Army site revealed two main Roman building periods. Only slight traces of period I were found, and these consisted of ragstone foundations in the southern half of the site. Period II (*Figs. 1 and 3*) was most important in that it related to the supposed 'river-wall' uncovered by Roach Smith. The steep slope between Queen Victoria Street and Upper Thames Street (now a slope of 1 : 8, even though the construction of Queen Victoria Street caused the top of the slope to be lowered by many feet) was terraced in Roman times. The upper surface of the higher terrace, or platform, which was

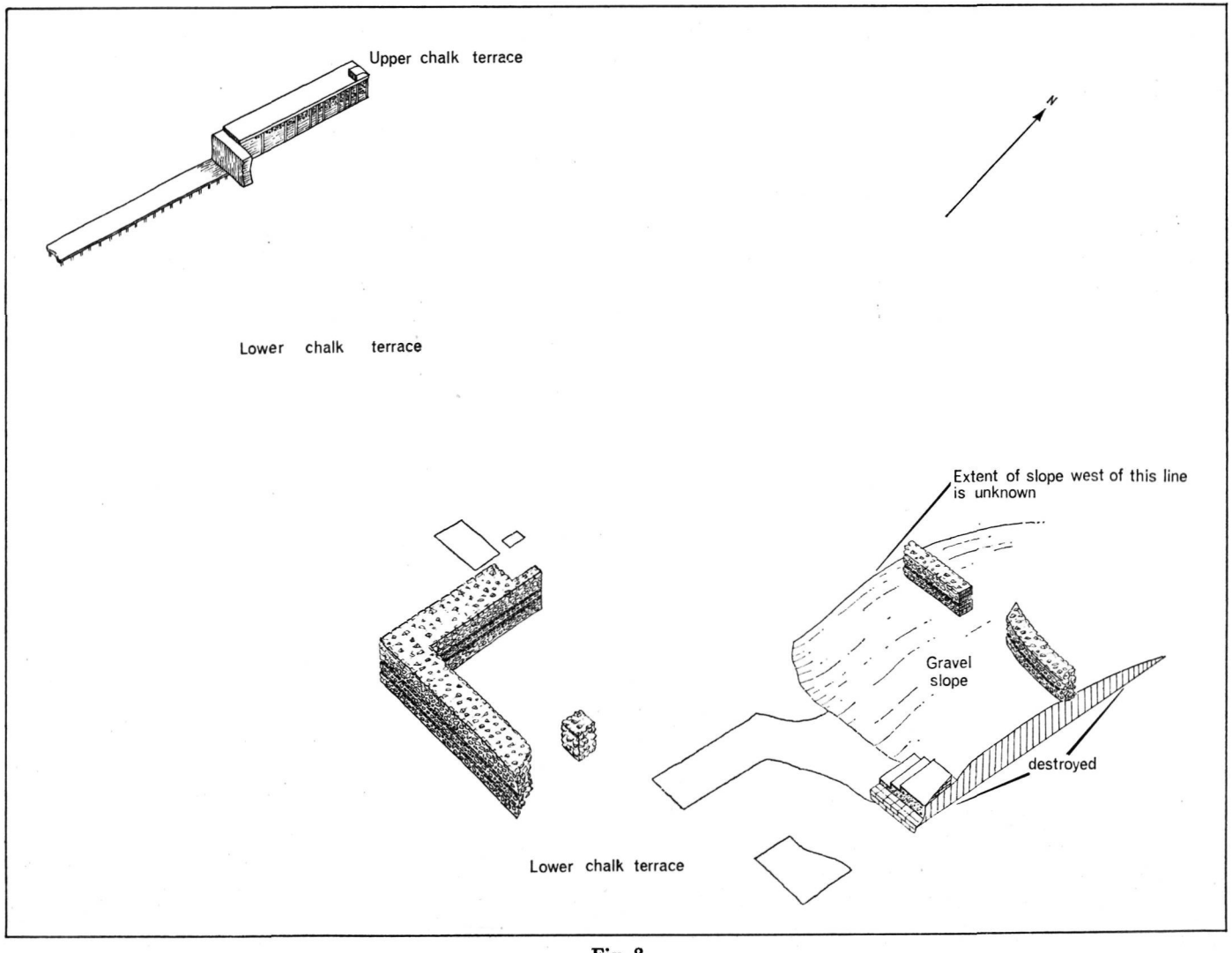

Fig. 3
Perspective view of Roman structures of period 2, discovered on the Salvation Army site during 1961–2

built of rammed chalk on a foundation of timber piles, lay at 15 ft. 9 in. below the pavement surface of Queen Victoria Street, or at 20 ft. 7 in. above O.D., and at what appeared to be the northern edge of the upper chalk platform was a large block of reddish-brown sandstone with a bevel, apparently part of a plinth (*Fig. 1*, 'E'). The upper chalk platform did not appear to extend as far east as Lambeth Hill itself, because a section through the previously undisturbed Roman strata under Lambeth Hill revealed the steeply-sloping natural gravel extending down to the northern edge of the lower chalk platform or terrace. Between the upper and lower chalk platforms at the west end of the site, there stood a retaining wall (*Fig. 1*, 'A') of re-used mortar set in cement, which contained at its base a beautifully tooled limestone block. This retaining wall must have originally stood to a height of about 9 ft. (the difference between the two terrace levels in the middle of the site) only 4 ft. of which remained. Both chalk platforms gently sloped down towards the river; and the lower chalk platform, near the Thames Street frontage at the west end of the site, was found to lie at about 9 ft. 4 in. above O.D., while to the east, just east of Lambeth Hill, it lay at 7 ft. above O.D.

The lower terrace or chalk platform was also built of rammed chalk one foot thick resting on numerous circular oak piles; and at one point two stone blocks, which may have been re-used, were found lying irregularly in the chalk. To the east of Lambeth Hill a wall (*Fig. 1*, 'B') was found resting on the lower chalk platform. This structure belonged to the second phase of building on the site. The remains of the first phase were covered by the chalk platform, and evidently were the foundations of buildings which were destroyed before the terracing of the hill. From its level above the lower chalk platform and its method of construction, it is quite clear that the southernmost wall recorded by the *R.C.H.M.* in Brooks Yard in 1924 (*Fig. 1*, 'C') was also a wall of the second period of this site. The plan of Roman London in the Report of the *R.C.H.M.* suggests that this fragment was a portion of Roach Smith's wall. It is, however, quite clear from the documents in the City Engineer's Department, that the sewer, and Roach Smith's wall, lay some yards to the south, near the middle of Upper Thames Street. It is hardly necessary to state that no sign of any sewer was found running along the southern frontage of the site on the line shown on the *R.C.H.M.* map.[9]

No clear evidence of any walls of period II were found to the west of Lambeth Hill, except the retaining wall above-mentioned, and after a careful search only one wall was found which fitted Roach Smith's description of a wall making 'an angle with the Hill and Thames Street'. This wall (*Fig. 1*, 'D') was found while excavating the site of the old Lambeth Hill in 1961, and it ran northwards up the centre of the carriageway of Lambeth Hill, from the new Thames Street frontage, which now runs across the bottom of the old street. It stood 7 ft. in height and had two thicknesses, for at the south end of the Hill more than 4 ft. 4 in. of thickness remained, although the west side, or face, of the wall had been cut away by the Lambeth Hill sewer, while at its north end, which was undisturbed by the sewer, its total width was only 1 ft. 6 in. It was built of ragstone with double courses of bonding tiles at intervals of 2 ft. 6 in., all set in white cement. At the south end, where it was wider, several rectangular limestone blocks were found at the base of the wall, similar in size to Roach Smith's 'hewn sandstones'. The base of the wall was level with the top of the lower chalk platform, but unfortunately the excavation was not deep enough to show whether it was built on a foundation of piles.

The western face of wall 'D', which had been cut away by the Lambeth Hill sewer, is

fortunately recorded on City Sewer Plan 378, where the western face of the wall is sketched in Indian ink and beside it is the note 'wall 8 ft. below surface' (*Fig. 2*). On this plan wall 'D' runs south into the centre of Upper Thames Street where it meets and forms a corner of the main wall (W.41) running along Thames Street as far as Queenhithe. This latter wall is sketched in pencil from the foot of Lambeth Hill as far as Brooks Yard, and beside it is the note 'wall 8 ft. below the surface'. Sewer Plan 315 has a confirmatory note beside the line of the Thames Street sewer at the foot of Brooks Yard, which reads '11 ft. 5 in. [?] made ground and old foundations 5 ft. deep. Length 20 ft., built of Kentish rag'. These sewer plans prove that wall 'D' is directly connected with the wall W.41, with which it forms an angle as Roach Smith states, and in addition they show the actual position of Roach Smith's 'river-wall'.

At the eastern end of the Salvation Army site it was found that the river gravel scarp extended further southward than it did at the western end, and that during period II this gravel had a retaining wall (*Fig. 1*, 'B') built around the west and south sides of it. The retaining wall on the west side of the gravel was aligned nearly at a right angle to the northern frontage of Thames Street, and had been built in broad steps, three of which were revealed (*Fig. 3*). It was built of ragstone and white cement, with double courses of bonding tiles at intervals, and immediately overlay the lower chalk platform. The southern retaining wall, which was aligned nearly parallel with the northern frontage of Upper Thames Street, and was partly bonded into the stepped retaining wall, was extremely interesting in that it was built of many large blocks of limestone—some definitely re-used. One of these was evidently a block from the limestone plinth, and it lay upside-down with its chamfered edge on the inside of the wall. It measured about 7 ft. long, 2 ft. wide, and about 1 ft. thick and, together with several other blocks of a comparable size, strongly recalls Roach Smith's description of massive re-used stones. The blocks found in 1962 were set in *opus signinum* like those in Roach Smith's wall. The walls and other remains of period II on the Salvation Army site are therefore remarkably similar in method of construction and level above O.D. to Roach Smith's wall, and it seems probable that the chalk foundation over the piles beneath the latter wall was a southward extension of the lower chalk platform.

In the light of the additional evidence of Sewer Plan 378 it is clear that Roach Smith's wall and the wall found in 1924 formed part of the complex of walls and terraces of period II found in 1961 on the Salvation Army site, which certainly do not seem to have had a defensive purpose. Roach Smith's wall was apparently about 700 ft. long, so it would appear that the period II walls north of Thames Street extended as far as Queenhithe. It is interesting to note that Roman walls were found in 1845 built on large hewn stones laid on wooden piles under the old Fish Street Hill, now the eastward arm of Lambeth Hill, about 95 ft. to the east of the Salvation Army site,[10] and that in 1962 Professor W. F. Grimes found two red sandstone blocks together, overlying the natural gravel (*Fig. 1*, 'F') in a cellar just east of old Fish Street Hill.[11]

W.42[12]

In June 1839, in deepening a sewer in Thames Street, opposite Vintners' Hall, there were 'discovered the perfect remains of an old Roman wall running parallel with the line of the river' at a depth of 10 ft. 'The wall was formed of alternate layers of flint, chalk

and flat tiles and offered considerable obstructions to the workmen, from the firmness with which the materials were fixed together.'[13]

The only comment one can make about this wall is that if it were Roman, it is surprising that it did not contain any ragstone.

W.43[14]

'In Thames Street, opposite Queen Street, about two years since, a wall, precisely similar in general character [to W.41], was met with; and there is but little doubt of its having originally formed part of [W. 41].'[15]

W.44[16]

In 1868 a wall, 200 ft. long, 10 ft. high and 12 ft. thick was found under Cannon Street Station, and the *R.C.H.M.* suggests that 'it may have formed part of the city-wall'. But the wall is clearly stated to have been 'running nearly in line with Bush Lane'[17] (*i.e.* aligned approximately north-south), and cannot therefore have been a river wall. It was presumably part of the great building found in Bush Lane in 1961.[18]

W.45[19]

'In 1927, between the ends of Bush Lane and Little Bush Lane, a foundation of chalk blocks was encountered and an indeterminate edge on the S. side seemed to trend more N. of E. than the line of the trench. This foundation may represent either the foundation of the river wall or the debris fallen outwards.'

The writers of the *R.C.H.M.* are clearly suggesting a comparison between this find and the chalk 'foundation' of Roach Smith's wall (W.41), which we have seen is almost certainly part of a terrace. Even if W.45 is part of a similar chalk platform or terrace, it is no evidence that the 'river-wall' was ever built here.

W.46[20]

A fragment of what was supposed to be the river-wall was found at or near the south-eastern angle of Suffolk Lane.[21]

W.47[22]

Under the frontage-line of No. 125 Lower Thames Street and the adjoining pavement, a portion of a wall was exposed in 1911. The wall rested on gravel at a depth of 24 ft. below the present surface (about 1 ft. below O.D.).

'Large roughly-squared timbers, 12 ft. long and about 8 in. square, were first laid on the top of the ballast, across the thickness of the wall, these being held in place by pointed piles driven in at intervals . . . On these timbers were laid large irregular sandstones and ragstones bedded in clay and flints. Three layers of these stones showed in the face above which was a bond of two [the drawing shows three] rows of tiles. Some chalk with other stone formed the core, the whole being cemented with mortar. The total height of the masonry remaining was 3 ft. and its width 10 ft. Some of the stones were apparently re-used though no moulded stone appeared in the small piece uncovered.'[23]

W.48[24]

A Roman wall, 'of extraordinary solidarity and entirely formed of Kentish ragstone', was found in Lower Thames Street when the Roman building under the Coal Exchange was excavated in 1859. The plan shows that about 48 ft. of the length of the wall was uncovered and that it was only 6ft. 6 in. wide.[25] The construction of this wall differs

from the other fragments of the 'river wall' (where described) in that it was 'entirely formed of Kentish ragstone', from which it must be assumed that it did not contain courses of bonding tiles.

Conclusions

Between the Tower and Blackfriars, there are only five small fragments of Roman walls (W.42, 43, 46, 47 and 48) which might be used as evidence that a river-side defensive wall of Roman London ever existed. Clearly this is insufficient. The constructions of the only walls described in any detail (W.42, 47 and 48) vary so considerably that they cannot be regarded as part of the same structure.

It is true that Fitzstephen refers to a tradition, still surviving in the 12th century, that London once had a fortified wall in the south,[26] comparable with that in the north, and that this was destroyed by the Thames. Many years of archaeological investigation have failed to confirm this, however, and the continuing negative evidence makes it improbable that a fortified river-side wall, in any way comparable with the landward city wall, ever existed. No doubt there were river-side walls in many parts of the city at most times, but these were probably merely wharves and revetments of embankments like those which exist today.

NOTES

1 Hereafter abbreviated to *R.C.H.M.*
2 *R.C.H.M.*, p. 80.
3 *Ibid.*, p. 79.
4 *Ibid.*, p. 92.
5 The base of the Upper Thames St. sewer casing at the foot of Lambeth Hill is 19 ft. 6 in. below the surface of Upper Thames St. Information from City Engineer's Dept.
6 *Arch.*, **29,** 1842, p. 150; *Illustrations of Roman London*, 1859, pp. 18–19.
7 *V.C.H.*, London, I, pp. 69–70, plan C.
8 *R.C.H.M.*, p. 93.
9 *R.C.H.M.*, Fig. 43, p. 124.
10 *Brit. Arch. Ass. J.*, 1st series, I, p. 45.
11 Information kindly supplied by Prof. W. F. Grimes, C.B.E.
12 *R.C.H.M.*, p. 93.
13 J. T. Smith, *Streets of London*, p. 380.
14 *R.C.H.M.*, p. 93.
15 *Arch.*, **29,** p. 151.
16 *R.C.H.M.*, p. 93.
17 *Lond. & Mdsx. Arch. Soc. T.*, **III,** 1870, p. 213.
18 *Lond. & Mdsx. Arch. Soc. T.*, **21,** Part I, p. 72.
19 *R.C.H.M.*, p. 93.
20 *Ibid.*, p. 93.
21 *Arch.*, **40,** 1866, p. 48.
22 *R.C.H.M.*, p. 93.
23 *Arch.*, **63,** p. 309.
24 *R.C.H.M.*, p. 94.
25 *Brit. Arch. Ass. J.*, 1st series, **24,** 1868, p. 296.
26 John Stow, *A Survey of London*, ed. Kingsford, 1908, 1, p. 8.