

## RECENT LONDON EXCAVATIONS.

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### I.—BISHOPSGATE STREET.

Mr. Wm. C. Edwards reports that on August 25th, 1921, he investigated an excavation of about 5 ft. by 4 ft. and 15 ft. deep, on the north side of No. 108, Bishopsgate. Here workmen found, at a depth of 3 ft., Roman work, 3 ft. thick and 4 ft. wide, with large hard stones and well rammed clay 3 ft. lower, resting upon 3 ft. or more of nearly reddish sandy loam. The Roman masonry appeared to be part of a wall, about 5 ft. thick, running east and west, and apparently of contemporary date with that of the Wall of London. "As it does not run in a line with the wall of 'circumvallation' north to south, it is part of the ancient Porta or city gate,"\* Mr. Edwards thinks. Among the cement and stone work could be seen brilliant claret-red course tiles as well as dull yellowish brown fragments, showing that many localities supplied the materials for this wall.† The stones were apparently "squared" with a hammer to a size of 10 to 15 ins. surface, and to 6 to 9 ins. in thickness, although marks of tooling were not visible, but packed with clay the whole mass formed a solid foundation for the wall above.

### II.—FENCHURCH STREET.

In regard to the Roman remains in Fenchurch Street, Mr. Edwards, who had been watching the telephone excavations, states that the trench was cut through 15 ft. of soil, comprising 9 ft. 6 ins. of earth, debris and tiles, followed by 5 ins. of rag, 10 ins. of red tiles, 2 ft. of blue rag and cement, a further 5 ins. of red bonding tiles, and, lastly, 26 ins. of blue rag and cement. On November 19th, 1921, he had expected to find a wall at the intersection of Gracechurch Street, Lombard Street and Fenchurch Street, but the ground here had been too often disturbed. When the cutting turned north along Gracechurch Street he found a wall running east and west, in a line with the north side of Lombard Street, about 12 ft. below the surface. The fragment was about 54 ins. thick, and it had apparently been cut down to allow Gracechurch Street to cross it; indeed, four or five road levels, indicated by lines of mortar, could be discerned,

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\* The site is marked in Ogilby's map, about 9 ft. north of the building line of the premises.—ED.

† The building of the City wall was doubtless done without stopping, and the diversity of materials used, and the difference of the colours of the tiles, would seem to indicate that every brickfield was employed upon this enormous undertaking, and would seem to testify to the prosperity of the City.—W. C. E.

and the debris of the wall appeared scattered upon the brown clay-like soil at the depth indicated. Mr. Edwards infers that Gracechurch Street is a comparatively late Roman thoroughfare leading to London Bridge. On November 21st the Fenchurch Street section of a wall appeared in view, some 60 ft. to the east, and on the north side of the street, and in order to lay the telephone wires it has been necessary to cut away 15 ins. of the south face of the wall. In a cutting only 40 ins. high the wall was seen to lie upon three rows of chalk flint embedded in Roman cement, with three rows of thick Roman bonding tiles. "Alongside on the south two or three ft. away," he writes, "ran a brick sewer, the laying of which, no doubt, destroyed much of this interesting wall. As to the date of the Fenchurch Street wall, we found a small piece of 1st or 2nd century water-jug and a coin of Nero (A.D. 53-68.)" A large number of fragments of roofing tiles an inch or more in thickness were found, together with bonding tiles, some of which were claret-red in colour, and others red outside and black inside, and several yellow tiles, which later perhaps came from Suffolk. One of the yellow tiles upon breaking disclosed a few nodules of red.

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Dr. Martin's report on the Fenchurch Street discoveries is based upon a visit paid on November 22nd, 1921. He writes, under the heading "At the level of Roman London":—

"At the crossing of Gracechurch Street with Lombard Street and Fenchurch Street, tunnelling was progressing at at rapid rate for the laying of telephone cables. Opposite the north pavement of Lombard Street and adjacent to the 'refuge' at the crossing, a shaft had been sunk to a depth of 12 ft. 6 ins. This depth, I understood, was so stated by the contractor. (The total depth sunk later was 14 ft. 6 ins.) Thence, for a few feet south, a tunnel had been driven. In this tunnel, a wall of about 4 ft. or 4 ft. 6 ins. in thickness and about 3 ft. in height had been cut through. The wall was constructed near its base with three rows of bonding tiles embedded in cement of a yellowish colour. Various fragments of tiling were embedded in the cement above the tiles. The cement was of a loose character.

"It would seem that here was an undisturbed Roman foundation, probably the footing of some big building. The 'run' of the wall could not be ascertained, although it was probably upon the line which continued eastwardly the edge of the north pavement of Lombard Street. Extending

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\* "This report is based on the observation of a single visit," says Dr. Martin, "A second visit might modify to a small extent, and supplement, what is here stated."

northerly from the wall to the limit of the shaft there was to be seen in section a series of strata which, perhaps, were road-levels. Each stratum was completed with a layer of yellowish-white cement, not unlike that in which the tiles in the wall had been composed but of softer character, the layer of cement being of about 2 ins. or more in thickness. Four or five of these courses were visible. Between the courses the earth was made up of loosely-packed tiling, pieces of rag-stone, and other stones, together with a loamy soil. The depths between the courses varied in a short length. Where the courses were horizontal, the depth of each was, approximately, 8 or 9 ins. The level of one of the courses had been considerably changed, for, within a length of, say, 3 or 4 ft., it had descended to a short distance of the course beneath. The cause of this is not clear unless the inclination marked a sinking of the presumed roadway.

“ Above the uppermost course there was a curious change in the character in the earth. This earth, although containing much tile-fragment, large and small, showed no signs of systematic deposit. It was as though after the laying of the uppermost road-surface the road had been abandoned and the space above it filled with casual debris. This superincumbent deposit continued up to the foundation of the modern road.

“ If one might theorise, it would seem that after the destruction of the Roman building which stood here, a road was laid over the foundation of the building on its way to the site of old London Bridge. and that this road was repaired from time to time. The road was then abandoned in favour of some other route, and soil almost alluvial in character allowed to drift into this situation until the modern road was placed on its surface. The shallow depth at which the Roman level was found is remarkable.

“ The second shaft which Mr. Edwards and myself descended was approximately opposite the pavement on the south of Fenchurch Street. From this shaft a tunnel had been driven down Fenchurch Street. This tunnel ran alongside a small sewer. Beyond the sewer the tunnel had taken away about 1 ft. 6 ins. of the face of a wall apparently of Roman character, for in the wall bonding tiles were seen, and a core composed of flints and tile-fragments set in soft, friable cement. No flints had been seen in the other wall, although they might possibly have been present. It was fairly clear that this wall, which ran approximately east and west, had no connection with the other wall. As far as it was inspected, it reached the space below the roadway in Fenchurch Street almost opposite Barclay's bank.

“ Mr. Edwards informed me that a coin of the time of Nero was found near this spot in an adjoining excavation. The usual oyster shells and fragments of bones, together with small pieces of charcoal or rotted wood were met with in both of the excavations.

“ The shafts and tunnels were of the smallest dimensions. The inspection was carried on mainly in a crouched position owing to the absence of head-room. The illumination was that afforded by a candle carried in the hand.

“ Excavations such as these deserve close investigation, and a good deal more observation and measurement than can be given them during the interval of a busy day. The contractor and his men gave every facility in their power.”

### III.—CORNHILL.

The excavations along Gracechurch Street were very carefully investigated by Mr. Edwards and Dr. Martin during the progress of the work. “ On Monday, the 19th of December, 1921,” writes Mr. Edwards, “ we had to give up all hope of finding the wall which we expected to meet with a little South-East of St. Peter’s Church, Gracechurch Street. Only a small sort of pocket of debris near St. Peter’s Alley was met with and we must assume that the large wall got destroyed many years ago at this point when the sewer was made some 20 feet below the present road level. Apparently they tunnelled through parts of the street and thus the pieces already described escaped. There remains, however, the magnificent fragment in the cellar of Messrs. Rowe & Sons’ shop on the north-east entrance to Leadenhall Market.”

On the same day, however, a notable discovery was made, for at the north end of Gracechurch Street the excavations brought to light the site of the famous well of “ The Standard upon Cornhill,” from which so many southern milestones measured their miles. Through the kind facilities offered by Mr. Howard Farrow, Mr. Edwards was enabled to explore the site and prepare the plan which accompanies this note. The well was discovered about 4 feet below the road level arched over with a dome. In its upper section it was about 4 feet in diameter, but some 7 feet lower appeared more cone-archwork of brick, after which the well remained open for another 6 feet, and then the diameter contracted to about 3 feet. At this point, some 18 feet below the roadway, was the top of the ancient well, 30 inches in diameter, now completely choked with earth. Upon this was built the well-known “ Standard.”

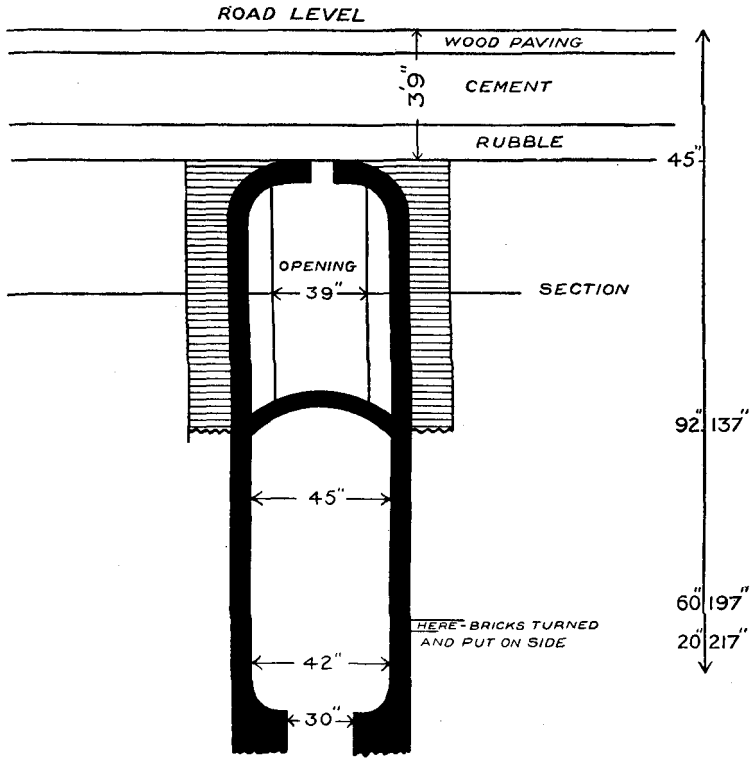
Mr. Edwards adds : “ In the year 1582 Stow tells us that Peter Morris, a Dutchman (in another place he calls him German),

covenanted with the City to arrange for a water wheel in an arch of London Bridge to operate what he calls an artificial forcier, which with the run of the tides turned wheels which pumped water up as high as the top of St. Magnus Church and through pipes to the houses and so on to the Standard which thus ran with water for the inhabitants through four spouts, and the overflow helped to cleanse the four ways 'Bishopsgate, Aldgate, The Bridge, and the Stockes Market.' To make this new Conduit the well was apparently filled up with earth to within about 8 feet of the top and then arched over. An opening 34 inches was made for entry of the pipes of Morris. The brickwork on the outside was much enlarged and a new Standard built. The new works did not, however, continue for very long, and somewhere between the first edition of Stow's Survey and the last (1598 to 1603) the water ceased to arrive and no doubt the obstacle to traffic was swept away and the famous Standard was forgotten until the spade of the excavator almost stumbled upon it."

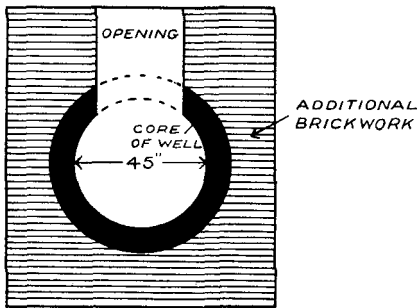
The section of the excavation now reached near St. Peter's, Cornhill, promised to be of very great interest. "For some days," writes Mr. Edwards, "considerable portions of pinkish cement (*opus signinum*, *i.e.*, mingled with red portion of broken tile) gave evidence of a tessellated pavement being near at hand. On the 27th December, 1921, we found the remains of a floor 4 inches thick and lying 10 feet 6 inches below the present road level, but no sign of any tesserae although we sought for them very diligently. On the 3rd January, 1922, 7 feet south of the north-east corner of St. Peter's, Cornhill, the workmen struck, at about 13 or 14 feet below the road level, the great wall for which we had been long seeking, a splendid specimen of Roman work running East to West, having a footing of four rows of Ragstone, in all 16 inches, and then five courses of bonding tiles, making 18 inches, and then again three courses of Ragstone work, making 14½ inches in all; then running North and South of it and at right angles to it a plastered wall plainly of a different style and a later date. The footings were of Ragstone and the wall covered with 1 or 2 inches of plaster, 9 inches of beautiful white cement, the upper portion painted a yellowish colour with lines in imitation of alabaster, and above this two panels\* in black lines and above these panels apparently running alongside this wall (*i.e.*, abutting on it) 63 inches above the footings of this room but independent of it, a piece of tessellated pavement in red brick, the pavement being clearly laid down long after the wall had been painted. We may suggest

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\* Further excavations have disclosed two other panels, and also show that the great wall once only mortar plastered was plaster-painted and panelled in the same style as the S. wing wall—mainly with alabaster painting and white panels in black mitred framing.—W. C. E.



N.B. THE WELL HAS BEEN RE-LINED ABOUT THE YEAR 1700 WITH BRICKS



Site of the Well of "The Standard in Cornhill."

that there was formerly a painted hall or room built on to the Great Wall here, and that something happened long after and that room was destroyed, the pavement taken up, and another and inferior pavement was put down at a higher level."

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In regard to this section of the excavations, Dr. Martin's report, under the heading "Along the Roman Level of London," is as follows:—

"On 3rd and 14th January, 1922, I was again favoured by Mr. William C. Edwards who conducted me to the continued trenching for the laying of telephone cables along Gracechurch Street, at the east end of the Church of St. Peter's, Cornhill. At the base of the shaft—a datum level—13 feet below the wooden surface of the road above, a transverse wall of considerable strength and plastered had been encountered. At right angles to this wall, *i.e.*, a little to the east of the centre line of the road above, another wall, running parallel with the street, (*i.e.*, North to South), was met with. The surface of this wall, the wall being to the east of the shaft and of the tunnelling which ran southwardly, was covered with a fine plaster upon which simple rectangular patterns had been plotted upon a yellowish background. The background was adorned with brush-marks representing marble or alabaster. The shaft and the tunnelling southwards for, say, 6 feet, had penetrated a tessellated pavement which abutted upon the plastered wall, but which was not bonded into or articulated in any way with the wall. The pavement was at a depth of 8 feet from the surface of the roadway. Further south, the western line of the vaulted chamber was entered, the crown of the vault which was not quite visible being estimated to be beneath the east pavement of Gracechurch Street. Beyond the vaulted chamber, which may have been 30 feet long, the tunnelling continued. On either side could be seen the sections of two strata. The upper was composed of broken brick, of flint, and mortar rubbish, the stratum being about 6 inches in thickness. The lower stratum was separated by a depth of about 2 feet 3 inches, the intervening space containing moist black earth with fragments of hard concrete, pottery, nodules of chalk, and stones. This lower stratum had been 'made' as opposed to the upper stratum which had been formed apparently of dumped material. Whether these strata represented floorings of buildings or roadways was not apparent.

"The sides and roof of the excavations were everywhere supported at intervals by props, boards, and stagings, the soil being of a loose character."

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The following are further details concerning the foregoing :—

“As regards the massive transverse walling which had been broken into but which had not been penetrated, there was up-standing from the base of the excavation a footing of four courses of ragstone, 16 inches in total height. The face of the wall showed signs of having received a thin facing of cement or plaster. A set-back of the wall was here seen. Above the set-back five layers of bonding-tiles each 11 inches in length and 13 inches in breadth, and  $1\frac{1}{4}$  inches in thickness, appeared. The mortar between the tiles was in places as much as  $2\frac{1}{2}$  inches thick. The depth over the courses was approximately 18 inches. Above the bonding there were three rows of ragstone with wide joints, some  $14\frac{1}{2}$  inches over all. Above this level, the walling ceased. The superincumbent earth was of an alluvial character.

“The thickness of this wall is yet to be discovered.\* The wall, from its strength, could scarcely have been built as the foundation of a house. It is probable that it represents the remains of a fortification which here stretched east and west. It is to be noted that this spot is reputedly the highest spot in the City. The old parish division approximates here to the line of the wall, deviating from it not much more than by a few feet.

“The relation, if any, of this wall to the wall of even greater strength in the cellar of Messrs. Rowe & Sons, Drapers, No. 90, Gracechurch Street, is yet to be determined.

“As regards the plastered decorated wall, this passed northward and abutted against the transverse wall, there being no bonding of the one into the other. The face under observation was from the cross wall to the vaulting, mentioned above, approximately 12 feet. Standing above the floor of the excavation, there were 23 inches of ragstone before the white plaster was reached. At the place measured, the white plaster, or plaster painted white, was 9 inches in depth. The colour then changed to a yellowish-red, upon which ‘alabastering’ had been crudely brushed in. At a height of 36 inches from the floor of the excavation, rectangular panelling had been outlined with a brush, mitreing at the corners leading to a second rectangle adjacent to the outer linings which were white. The rectangles, of which two in line were visible, were 16 inches in length with a space of 6 inches between them. The lowermost lines of the panelling were thicker than the other lines and were  $\frac{1}{2}$  inch in thickness. Over the decorated surface a coating of cement of about  $\frac{3}{8}$  inch had been placed.

“With respect to the pavement, the tesserae were to be seen in

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\* To-day, [5-1-22,] Mr. Edwards informed me that the thickness has been found to be 59 inches, and the foundation goes to depth. At 5 ft. below the bonding tiles the bottom was not found.—W. M.



section on three sides, *i.e.*, East, West and South, around the excavation. They were bedded upon a white cement. Each tessera was of red tile and, on an average, was an inch square, and  $\frac{3}{4}$  inch in depth. From the floor to the pavement measured 63 inches. As mentioned above, the pavement in no way was incorporated with the plastered wall. It marked therefore the third of a series of operations to be met with here, a fourth stage perhaps being represented by the plastering on the decorated wall.

“With respect to the vaulting, Mr. Philip Johnston, F.S.A., who had accompanied us, pronounced the bricks to be of date about 1720, and suggested that the vault might have been designed for burials.”

#### IV.—THE WALLBROOK.

At the request of the Council, Mr. Edwards and Dr. Martin visited the excavations at 176–177, Upper Thames Street on 7th June, 1921, with the object of ascertaining the course of the ancient stream. The following is Mr. Edwards's report, accompanied by a plan, which shows the site to be roughly 66 feet on the north side, 82 feet on the west, 69 feet on the east, and 46 feet on the south. In a letter to the Architect, Mr. A. W. Moore, F.R.I.B.A., it was pointed out that—

“This site is quite a ‘crucial’ point for those interested in ancient London. If it can be fixed absolutely where the outfall of the Wallbrook was, I think it fixes the boundary of the ancient Roman city. It would appear that this site is really built upon the site of the brook. Of course it has been very much reduced owing to the diversion of the stream first into the City moat off Moorfields, and finally into the culverts made for it at Dowgate. Would it be troubling you too much to ask you to watch this matter very closely, and give us permission to look at the site? The main point is to find out what the maximum width of the stream was, and what the approximate depth, to which it went as shown by the mud. If these facts could be put on record now they would be of great use perhaps in later years to link up with other observations. It strikes me also that all round the site there are elements of ancient buildings, perhaps of the ancient wall itself, and if you could do us the favour of not only allowing our members to see the site, but yourself watching very closely the indications which are there, and marking them on your plan, the Society would be exceedingly grateful to you.”

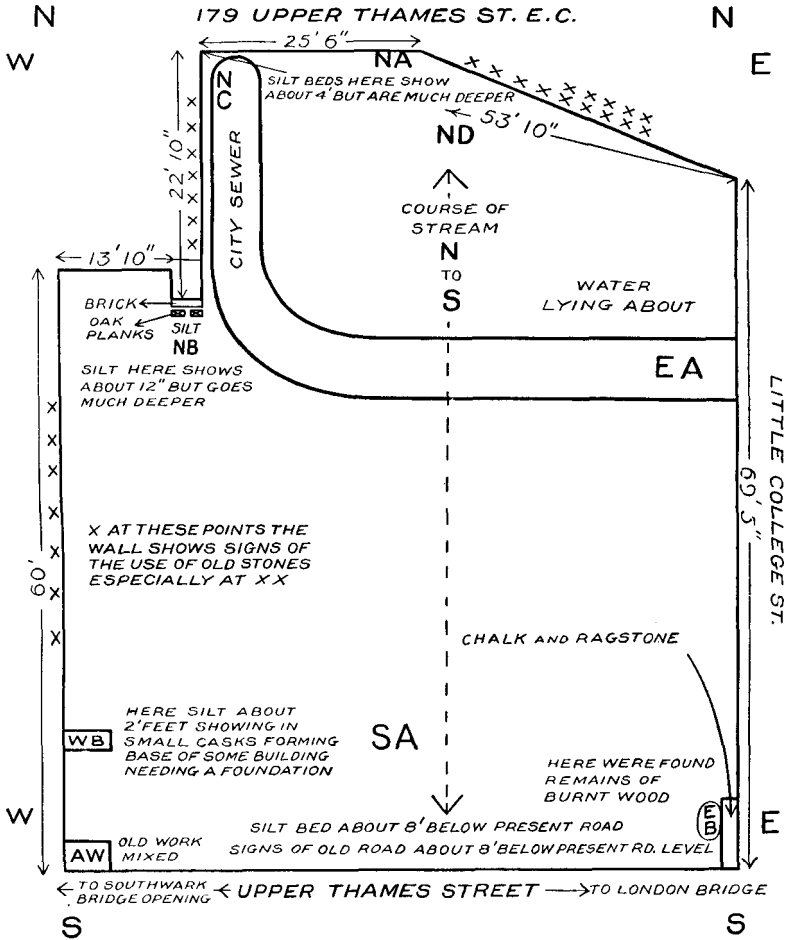
The following reply was received from Mr. Moore:—

“I am much obliged to you for yours of the 4th inst.,

and hasten to assure you and your Society of my sympathy and moral support in pursuing your investigations on any property I may be interested in, during building operations, provided these do not hamper the builder in any way, and that he is agreeable to assisting you. I have written to Mr. Wm. Downs, of Hampton Street, Walworth, S.E. 17, the builder, and forwarded your letter to me, at the same time asking him to afford you every assistance, and allow you and your friends to visit the site as and when they desire to do so in the interests of the Society."

Mr. Edwards reports that "On going to the site we were told that if we wished to do anything they would be quite willing for us to have a trial, or do anything, provided it did not interfere with the progress of the work. The foreman of the work, Mr. Chappelle, told us on this and former occasions that they had intended to go deeper, but at 17 feet came across water, and there is still a stream of pure water, which rapidly filled up their holes, so they decided only to put in one cellar, and cover with concrete. The brook runs right across the site, and it is exceedingly fortunate that one of the most important parts of the site will probably be left uncovered for the purpose of light and ventilation. At the beginning of the south side we found that about 8 feet was the ancient road, that is, the road which was made when the river was practically closed, perhaps at its diversion, but certainly a long time ago. On the south-west side there was a wall about  $31\frac{1}{2}$  inches wide, not of very great date, but containing what may be the elements of much ancient work. This is marked on the plan as A.W. On the south-east corner on the other side there was a wall, composed almost entirely of chalk pieces, 39 inches, in which appear one large stone of Kentish rag. This is marked on the plan as E.B. Mr. Chappelle showed us that about the mark S.A. we were still in the bed of the brook. On the east side there is what was Little College Street, but now called College Street, and about the mark E.A. there ran a culvert shown on the north side as N.C., which ran along the wall and turned round and came out into Little College Street.

"On the north side (N.A.) is a wall very much conglomerate of all sorts of stuff, and at N.B., wall of recent date, but yet probably of the 18th century, and built upon two open planks, probably about 9 by 3; they were put on the dry bed of the river and then built upon. The wall, which ran back from N.B., 22 by 10 feet, is also full of ancient material, about which nothing can be done, and at the side there is a culvert still marked on the plan of the Corporation as being a sewer, which ran right across the site, and emptied into a sewer which we presume ran down



Site of the Walbrook, Upper Thames Street.

Little College Street. On the part marked N.D. there is, of course, the highest bed of the river itself. There is black mud with piles at different points, about 4 feet high, and about 6 feet from the level of the street. The whole of the wall which backed on N.D. is full of very ancient work, but is all white-washed, and we cannot say what it is, but it ought to be examined. As to the width of the brook, it is quite difficult to estimate this, but I do not think it can have been less than 65 to 70 feet. At the point marked on the plan W.B. we thought we had such a height of silt that it must have gone back considerably more, and then we found out pieces of wall which belonged probably to a house before the fire, or to some structure or other, and apparently made up of small barrels about 2 feet\* filled with mud. We found nothing that could be called Roman, although some walls suggest that they are built of ancient materials."

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Dr. Martin visited the excavated sites of 176-7, Upper Thames Street on 7th, 14th and 17th June and wrote two reports, the first of which, dated 14th June, 1921, is as follows:—

"By reason of facilities secured by our member, Mr. William C. Edwards, I was enabled to examine, upon 7th June, 1921, in company with Mr. Edwards, and upon 14th June by myself, the sites of Nos. 176-7, Upper Thames Street, E.C. The sites are situated at the south-west corner of Little College Street and a few feet to the west of Dowgate Hill. In plan, the excavated area is approximately sectorial, the front, which is in Upper Thames Street, being about  $32\frac{1}{4}$  feet in length, the side which is in College Street being about 70 feet, and the northern boundary about 54 feet long plus the width, about 14 feet, of an intruding rectangle 23 feet deep.†

"As illustrated in the 'London' Volume of the 'Victoria County Histories' (Plan C), the right bank of the Walbrook passed across the site from north to south, while the presumed run of the Roman Wall along the side of the Thames is shown opposite the site and along the middle of the roadway in Upper Thames Street. Speaking from memory, Mr. Hilton Price's map of the area, as published in Mr. Price's *Bucklersbury*, showed the Walbrook to diverge on the site from west to the east before again flowing south.

"The result of my inspection of the area is somewhat disappointing, and on the whole is negative in character. The depth of the excavation, about 9 feet, was such that undisturbed soil was not reached. The soil removed and the soil which the exca-

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\* We took a sample of this.—W. C. E.

† See the plan above, page 343.—ED.

vation left *in situ* was almost wholly of 'made earth' and showed signs of much disturbance. In nature the soil was loose and blackened, and when mixed with water was of a sandy, clayey, mud-like character, although tolerably firm. At one position on the northern face of the excavation, the upper line of the blackened soil was not far below the present road-surface. The foreman in charge told me that silt stretched from north to south over the whole of the area and that the soil below, soil which he had not disturbed, was of a peaty nature. The south face of the excavation below Upper Thames Street had been lined with boards with the exception of about a foot in depth at the base. Here a section of the foundation of a road was visible at the approximate depth of 8 feet. This foundation consisted largely of lumps of ragstone and chalk blocks and was packed with debris of a miscellaneous character. The presence of the lining boards precluded an examination of the soil above the road-foundation, but where the section was visible no silt was seen. The road-foundation itself would account for the absence of visible silt. So far as I could judge, no silt was present above the road-foundation; it is probable, however, that within the excavated area adjacent to and north of the road-foundation there was the peaty soil to which the foreman had drawn attention.

"At the south-west angle of the excavation, blocks of Kentish ragstone of large dimensions were found, one piece weighing, in the opinion of the foreman, as much as 2 cwt. These blocks, which Mr. Edwards and myself had noticed on 7th June in position, were removed on 13th June. They showed no signs of carving. The foreman to whom I had suggested the keeping of a careful watch for the Roman Wall said that these blocks formed a part of the wall at that corner, but this is doubtful. No bonding tiles had been found, although I picked up at a spot a few feet away from this corner a portion of a thin roofing tile. Other fragments of Kentish ragstone had been met with on the site in various places. A small piece of highly iridescent glass I picked out of the soil. Mr. Edwards secured or drew my attention to rusty iron specimens of a miscellaneous character, such as nails, and to fragments of pottery, etc.

"A good deal of piling was encountered, some piles being driven vertically while other piles formed sleepers for walls, etc. Piling was found at the south-west corner; adjacent thereto a pocket of rather clean sand was present. I can not say with any degree of certainty what purpose the vertical piling served; but the foreman was of opinion that it had formed wharfing.

"The footings of adjacent premises which had been exposed were composed of chalk blocks with and without Kentish rag. Indeed wherever foundations were encountered, the mixture of chalk and rag was to be seen.

“ A culvert was discovered near the north-west corner of the area entering at an angle. A curving of the western arc of the culvert, as seen in plan, indicated here a change in direction of the culvert. The foreman said that the culvert had crossed the area to the other side and that it appeared as a disused culvert on a plan in the Guildhall. Two cesspools were broken down. One of them was at the site of a deeper excavation which had been made for the lift of the new premises. In this excavation, perhaps 5 or 6 feet deep, the water level was reached. From the cesspool portions of modern chinaware were found, the remains of a bowl of the willow-pattern having been cast into the pit. The foreman told me that a copper coin of 1776 was also found ; but I could not gather that any relic of great importance had come to light. This absence of finds the foreman thought was due to the shallowness of the excavation.

“ From the fragments discovered, one is safe in concluding that the Roman Wall had been drawn upon, although it is clear that the Wall itself had not been encountered. The position therefore of the Wall at or opposite this site is still conjectural. It is clear, too, that the excavated soil was alluvial in character, but whether its presence could be accounted for by the overflowing of the Walbrook or whether by infiltration of water into ‘ made earth ’ my knowledge of the subject will not permit me to express a decided opinion. In spite of inability to trace blackened soil on the southern face, as referred to above, it is reasonable to conclude that the site at one time was covered continually or periodically by the Walbrook.

To the Architect, Mr. W. Moore, and to the foreman in charge of the works, Mr. F. Chappelle, our thanks are tendered for permission to visit the excavated sites and for information which was so freely accorded.”

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In a “ Supplementary Report, with Corrections,” Dr. Martin, on 20th June, 1921, added the notes which follow :—

“ I again visited these sites on 17th June, 1921, in company with Mr. Edwards. Mr. Edwards drew my attention to additional relics, and gave me a copy of a memorandum prepared by Mr. Downs, the builder. He also lent me correspondence.

“ 1. *Mr. Downs's Memorandum.*—A dimensioned plan is shown in this memorandum and particulars of trial holes. Mention is also made of Mr. Todd's memorandum. The coin found on the site by Mr. Moore is stated to be a portion of a farthing dated 1733.

“ 2. *Mr. Todd's Memorandum.*—

“ ‘ Copy of the memo. taken at the time by W. J. Todd, District Surveyor, and given to Mr. Moore.

“ ‘ 176, UPPER THAMES STREET, 17/3/21.—Met Mr. Moore and Mr. Downs. Excavation (trial hole) down to 30 feet below pavement; ballast found at 32 feet below pavement. It is proposed to put in reinforced foundations (bottom) at level of 14 feet below pavement—designed so that pressure on earth will not exceed one ton to the foot. The earth at this depth is a peaty soil. Warned Mr. Moore that if this bottom were used, a settlement of the new building would not be surprising, but having regard to the great cost which would be involved in taking down the foundations to ballast, I should accept his proposal, it being understood that cracks in the new building might possibly result. (Signed) J. T.’

“ 3. *Letter, 8th June, 1921, from Mr. Moore to Mr. Edwards* :—

“ ‘ There is one point omitted from my letter, and that is, as this particular portion of the site is the Vintners' freehold we are under agreement with them—

“ ‘ ‘ that all fossils, coins, or other articles of value or antiquity or of archaeological interest which may be discovered in the course of the work, shall be deemed the property of the employers that the Vintners' Company as found on their respective sites, and are to be immediately delivered into the custody of the Architect.’

“ ‘ I shall be glad if you will kindly observe the agreement in your investigations.’

“ 4. *Letter, 9th June, 1921, from Mr. Moore to Mr. Edwards* :—

“ ‘ It has just come to my knowledge that nearly 20 years ago the building at the rear of No. 78, Upper Thames Street, immediately opposite our site, was built, Mr. Delissa Joseph, F.R.I.B.A., of 38, Coleman Street, E.C. 2, being the architect for the work. It appears that he encountered similar conditions as regards subsoil to myself, only worse, which indicates that the brook really ran straight through on the line of both properties, and crossing the street between to outfall in the river. If this interests you, Mr. Thompson, who is still with Mr. Joseph, and was on the job at the time, might give you some useful details. He would have more time probably than Mr. Joseph to explain.

“ ‘ Further to my memo. herewith, it seems to me that in 1898 the premises on the opposite side of Little College Street were rebuilt by Messrs. Berridge & Co., now in occupation, Mr. Douglas Mathews, F.R.I.B.A., being the architect, whose office is 10, Dowgate Hill, E.C. 4. I have heard of no exceptional difficulties having been met with by him in the matter of foundations, which, if correct, may mean that his site was more on the bank than the actual bed, which might serve to indicate the position of the eastern bank of the stream. It seems that now is the time to preserve these data if possible, while the people who had to deal with these works are accessible.’ ”

“ 5. *Massive walling at the lift excavation.*—At the north-east corner of the deeper excavation which, for the lift, had been made near the middle of the sites, an ill-defined mass of rough rubble was exposed. The length seen might be 6 feet long (north to south) by 2 feet or more thick (east to west). The mass which was imperfectly uncovered passed into the north and east faces of the lesser excavated portions. Mr. Edwards suggested that this might have been a pier for a bridge over the brook.

“ Against this mass, to the west, a brick wall was encountered—presumably a party wall between Nos. 176 and 177.

“ In addition, a raft-like mass of rubble and chalk, possibly 6 or 9 inches thick, extended along the east side of the lift excavation, the lesser (the larger) excavation having extended down to this ‘raft’ only.

“ 6. *Further excavation.*—A hole about 5 feet square, and about 8 feet north of the south face of the excavation was being dug out. There was no doubt as to silt here. The earth was black, smelling, damp, and mixed with remains of all sorts such as oyster shells, scraps of wood, and bones. In particular, numerous short lengths, not exceeding 5 inches of saplings, about 2 inches in diameter, with bark present, were picked out. One piece had a pointed end. The total depth of this further excavation was, roughly, 15 feet from the pavement in Upper Thames Street.

“ 7. *Inspection hole in Little College Street.*—The bottom of this hole was about the level of the excavation. Water was slowly running through the open drain at the bottom of the site.”

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Finally, in the report of 30th June, 1921, Mr. Edwards refers to the finding of posts in front of the wall of No. 173, Upper Thames Street. Mr. Herbert, who gave the information, stated that he well remembered the discovery, as he was engaged at the time under Messrs. J. D. Mathews & Son, of 11, Dowgate Hill, in re-



building Nos. 174-175 and the wall of No. 173 had to be underpinned. The first post found was 9 or 10 feet away from the Thames, and there was a space of 5 feet between the posts, which "obviously formed part of some kind of wharf." Nothing was found in the river bed exposed at No. 174 beyond the ordinary filth and rubbish already met with at Nos. 176-177. As No. 175 is shortly coming down for rebuilding, a promise has been given to the Society for the site to be examined in due course. Mr. Edwards concludes from the position of the discovered posts that "it is almost certain that the posts must have been about 10 feet away from the river bank on the east side, hence the stream must have been much wider than we imagine, for should the site of 177 mark the centre of the river, the river at this point must, when the shores were clear, have been 200 feet wide." Referring to the ancient stream, Mr. Edwards remarks :—

"The Walbrook, whatever the origin of its name, ran alongside a wall and was, in early times, an important landmark. In the *Liber Albus* for The Great Law which involved the trial for life, 18 were to be chosen from the east side of Walbrook and 18 from the west. The later Romans perhaps tried to make a sort of British Tiber of this Walbrook. The Brook was in its early days a magnificent defence, for even when comparatively dry it was a wide, deep, miry ditch, and when in flood after a storm, a mighty torrent tearing down to the Thames, and at one time having at its outflow, before it came to Upper Thames Street a depth of 20 to 30 feet (at 37 is found the old bed of the Brook) and when the tide came in it was capable of bearing barges. Stow speaks of it as having sweet water, and even now that is its character, and the water flowing at about 15 feet shows that it is fed by springs."

Dealing next with the excavated site, Mr. Edwards reports as follows :—

"The site just uncovered at numbers 176, 177 and 178, Upper Thames Street was about the middle of the stream. At No. 174 some years ago was found, when rebuilding, two baulks of timber standing vertically 60 feet away, having around one cordage probably that fastened the last barge that came up the stream. If we take the site 176-178 as the centre, the stream would be 170 feet wide. It was by the present builders intended to have 2 cellars but it was found impossible to find foundations and to get below water level, and before we came upon the scene a great part of the site was already covered with concrete. Owing to the nature of the soil the whole site is now being covered with a reinforced cement raft of extraordinary strength. In about the centre we found a pier 6 feet 6 inches long, 3 feet 6 inches wide, carefully built of fine rag and cement,

with all the appearances of being a part of a bridge of which we know several spanned the brook, the north end being squared like a pier. Afterwards when the heaps of sand for making concrete had been used the men found a wall at the south end going at right angles east of the same. Strange to say, above this I found a stake in the top north end 4 inches above the pier which I cannot understand. In the south-east corner we found the remains of a similar wall much disturbed by a modern sewer, and at the south end of same a layer of chalk. At the north-east corner was another wall, but of inferior workmanship, of the same material, about 4 feet wide, which may have been part of the one of which a piece remains at the south-east end. On the south front we found, at about 14 feet below the present road level, the marks of an old road with cobble stones. On the north side some very old stones built in for a post-1666 wall and a rather old brick sewer that came in and turned east through the site, and another which was behind the north wall. On the west a small piece of ancient work probably made with still more ancient materials. Here we found a wide wall about 14 feet long and 4 feet wide that suggested a massive early wall, but unfortunately this was demolished whilst we were away. It yielded some fine stones of rag, and here was found a very massive oak pile,\* once vertical but since built in horizontally and part of the foundations, with a notched top for nailing or fastening with others in an ancient wall preceding the present one. At the end there were found the remains of small kegs which, filled with earth, had been used to form the foundation of a wall and this distinct from the foundation of the wall of the one adjoining west property which, underpinned, are found not to be very low down (14 feet) but laid with good Kentish rag, and these 'contained' with fine tiles laid in strong cement. Where this wall ended was found a clean piece of fine cement very white with tiles laid in. This had been thrown in and no doubt formed part of some Roman building, perhaps the site.

"The whole site has been a 'shoot' for all sorts of materials to fill up. At the north end we could, at 12 feet, see the black silt and peaty substances that once formed the bed of the ditch after it had ceased to be a river, and embedded therein piles for making good the foundation of walls. This was higher than the silt behind the wall on the piles of the east. Far and near we found remains of bones of pigs, sheep, etc., probably from the cookhouses of the district described by Stow. At about 14 feet below the road level were to be seen baulks of timber and boards upon which were built various walls, as on the west side. Three

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\* Vitruvius says, if I remember him rightly, that he formed foundations with piles fastened with chains, and this pile seems to have been formed for such.—  
W. C. E.

planks, 12 inches by 2 inches, were on the north side with pieces of oak, 9 inches by 9 inches, very solid, and these with pieces laid under like railway sleepers. The site has been cut up or was formerly cut up into three or four or more sites. Ogleby's map shows I think six sites, possibly only five. Our theory is that the order or permission had been given to cover in the ditch where once Walbrook flowed, and this had been done higher up. In the 11th year of the Reign of Edward III., says Stow, 'orders were given to make piles along the banks.' Fortunately the present builders had to uncover a part they had already cemented over in the north-east corner and this revealed what I believe to be these piles of 1338. I found them in a row six deep and about 7 or 8 feet wide and afterwards 4 feet more in front north-east to south-east. Here I found signs of tidal Thames deposits. On the top chalk was laid, and apparently Little College Street thus began. It is interesting to see on the modern Survey maps the plain story of these various works. First the banks were attacked and small strips being made into wharves, then another, and finally the centre covered completely. We found several cesspools and one at about 14 feet below road level with what appears to be the tiled floor of a closet that probably was destroyed in the fire."

Mr. Edwards concludes by saying that "except for demonstrating :

- " 1. That here we probably have the true centre of the famous Walbrook.
- " 2. That it was once, ages ago, as deep as 37 feet below the present road level.
- " 3. That it was perhaps 170 feet wide at this point.
- " 4. That once it had alongside of it most ancient remains going back to early times of civilisation.
- " 5. That it has been a dumping ground for building rubbish to fill in.

"I am afraid that not much has been discovered, but even these facts are not without interest and may yet go to show that the most ancient city was west of the Walbrook, and that the brook formed a magnificent defence not less important but even more so than the Fleet River, and later became the centre of the Romano-British city."