

TWO ROMAN PUBLIC BATHS IN LONDON

by
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1. SUMMARY

The two Roman bath buildings found on sites in Cheapside and Huggin Hill (Fig. 1) were probably built during the late first century, their size indicating that they were public buildings. Both seem to have been extensively modified during the second half of the second century and were demolished before the end of that century.

Both baths had been built near the west end of the city as it stood during the second century A.D., and the Cheapside bath may have served the Cripplegate fort. The Huggin Hill baths were located on the waterfront in a district which seems not to have been particularly residential, but where there is some evidence of other 'public' constructions, suggesting that it was an area used for public gatherings and possibly entertainment.

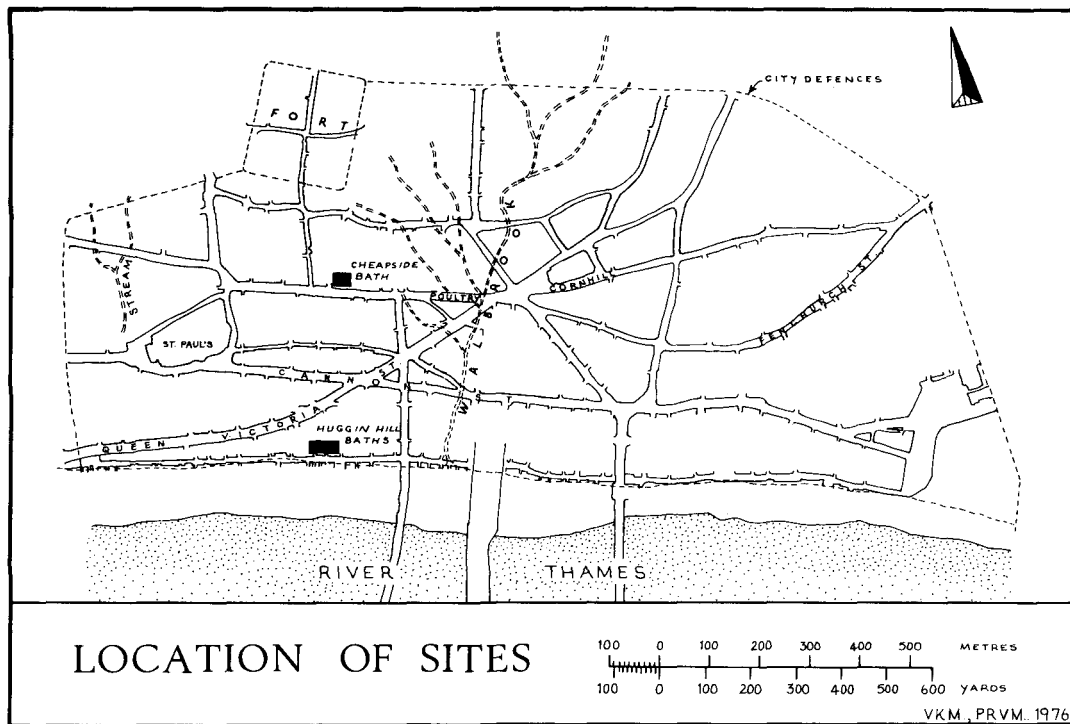


Fig. 1 Location of the Roman bath sites.

The demolition of the baths during the late second century at the earliest was perhaps due to the reorganisation of the city when the defences were built; the short life of each building and their distance from the civic centre of Roman London suggesting that these were not the main baths. The reason for the demolition of the baths was not so that they could be replaced by other public buildings, for no later Roman buildings of substance were noted overlying the Cheapside baths, and only poor quality masonry walls were recorded overlying the Huggin Hill baths. It is possible, however, that the demolition of the latter was connected with the hillside terracing which occurred almost immediately to the west, though the date of the terracing is not established.

2. THE HUGGIN HILL BATHS, UPPER THAMES STREET, 1964–69

(a) Introduction

The Roman public bath building, identified in 1964, was situated on either side of the lower end of Huggin Hill, beside Upper Thames Street. Previous discoveries in the area had given no indication of the former presence of this enormous Roman public building, probably because the walls of the baths had been constructed on terraces cut deeply into the hillside. During the nineteenth century various Roman remains were reported in the neighbourhood of Queenhithe¹ while in 1845 sewer excavations revealed two Roman walls beneath the lower end of Huggin Hill, and two more below Bread Street Hill.² In 1929–30 Dr. G. C. Dunning, an archaeological investigator for the Society of Antiquaries, recorded some well-preserved Roman chambers during the rebuilding of Nos. 10–12 Little Trinity Lane,³ which are now identified as large water storage tanks and heated rooms of the public baths.

No further discoveries were reported until the summer of 1964 when, during site clearance prior to rebuilding immediately west of the south end of Huggin Hill, the apsidal wall of the western *caldarium* (Room 18) was revealed, and the baths were provisionally identified. This, fortunately, occurred immediately prior to a Bank Holiday, and for the next three days an extremely intensive programme of excavation was carried out by volunteers under the direction of the writer for the then Guildhall Museum. Although many volunteers assisted on an individual basis, the main support came from the Wandsworth Historical Society through Nicholas Farrant, and from the West Kent Border Archaeological Group through Brian Philp. This revealed the main hillside retaining wall of the baths, the western *caldarium* (Fig. 3, Room 18), and the cold plunge bath (Room 1), as well as various additional features. Subsequently further Roman structures were revealed and recorded during the rebuilding of the site, while at weekends when building operations had ceased, limited volunteer investigation was undertaken under the supervision of Nicholas Farrant. It was from the volunteers on this site that the City of London Excavation Group, later to become the City of London Archaeological Society, was formed and for the next six years this group of keen amateurs was to continue operating in the City of London under the direction of the writer for the then Guildhall Museum.

During 1969 another modern rebuilding operation was started on the site of the eastern half of the Roman baths to construct the Fur Traders accommodation building. During the pause between demolition and commencement of rebuilding it was possible to carry out further archaeological excavations under the direction of the writer (Fig. 7). Grateful thanks are extended to the many volunteers who assisted on this site, and in particular to the members of the City of London Archaeological Society, who provided the labour.

Arising from these discoveries the Corporation of London, the freehold owner of the Fur Traders' site, preserved as much as possible of the Roman structures on that site, covering some of the walls, particularly of Room 30, with polythene and burying them in sand to protect them beneath the new building. In addition the entire baths site was subsequently scheduled under the Ancient Monuments Acts, thus securing the long-term preservation of the site.

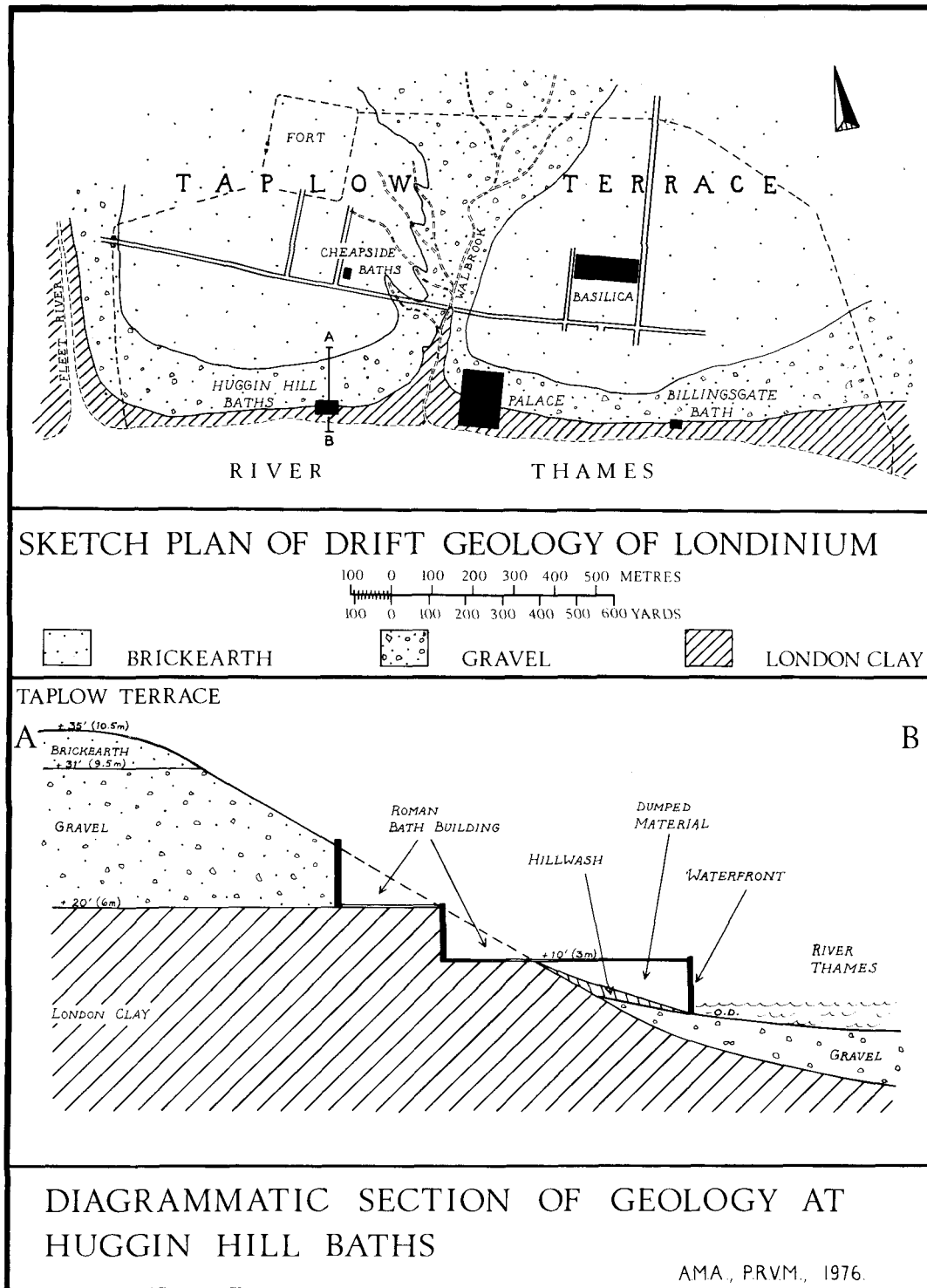


Fig. 2 Geology of the site of London, and the Huggin Hill baths site.

(b) Location and Geology of the Sites (Fig. 2)

The sites to be considered in this report are located to the east and west of the south end of Huggin Hill, immediately north of Upper Thames Street and on the west side of Little Trinity Lane. This lay very close to the Roman waterfront in the south-western quarter of the walled city area.

The Huggin Hill Roman Baths were situated on terraces cut into the steeply sloping hillside between the Flood Plain terrace (at about Ordnance Datum level), where the Thames now lies, and the Taplow Terrace, the natural surface of which lay at about 10.66m above O.D. (Fig. 2).

The succession of geological deposits below the Taplow Terrace is crucial to understanding why the baths were placed here, for the baths were clearly located on a spring line. The upper natural surface of the Terrace is composed of brownish brickearth, below which there lies a thick deposit of river terrace gravel, the bottom of which lay roughly at 6m above O.D. Below the gravel there lies the London Clay, formed during the Eocene period. The actual spring line lay at the junction of the river gravels and the impervious London Clay, and it was at this level that the main heated bathrooms were situated.

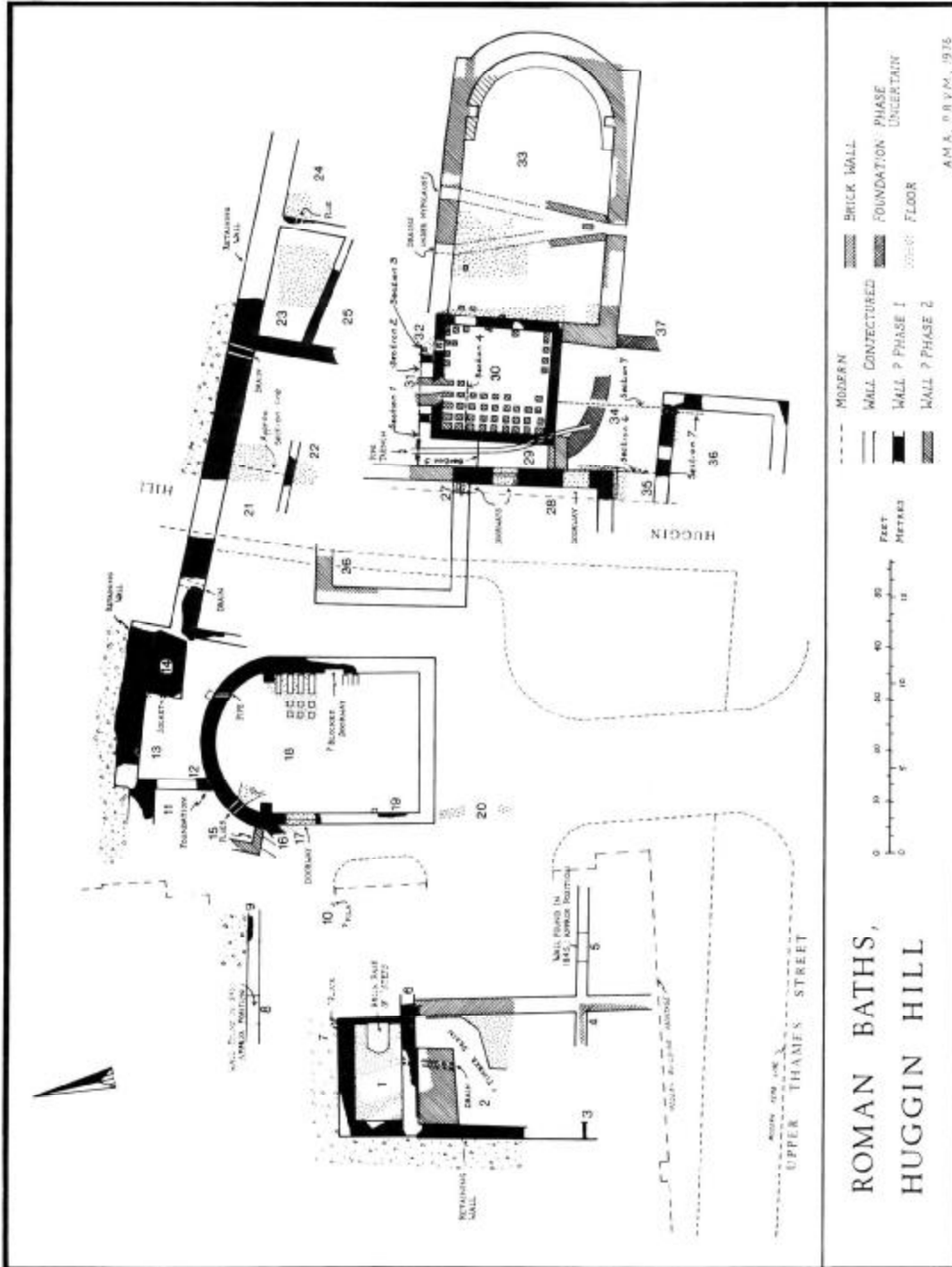
The Huggin Hill bath is not the only Roman building in London built over and utilizing natural spring water. To the east of the Walbrook the floor of the great pool in the Roman palace was situated just below the spring line,⁴ and no doubt was filled by the ground water. Further east the small private bath house at Billingsgate lay a little below the spring line, and during its recent re-excavation the actual spring itself was found still flowing with considerable force, though the rebuilding of the site has now diverted the natural ground water.

(c) Description of the Excavations

The Roman structures on the Huggin Hill sites were incompletely and for the most part hurriedly excavated in advance of redevelopment, to gain the maximum amount of archaeological information. Clear evidence of several building phases was found in different parts of the site, but due to incomplete study the interpretation and understanding of many of the recorded features is uncertain. Under these circumstances it has proved difficult to correlate the various phases, and to avoid possible confusion the remains of the Roman baths have been described feature by feature, following a sequence of numbers applied to individual walls, rooms, etc. The baths were filled mostly with dumped clay at the demolition stage, so any feature in or under the dumped deposits is assumed to be part of the baths phase. The only structures separately described are the walls and foundations overlying or cutting into the dumped deposits for these seem to be the remains of subsequent Roman buildings, and are described as the post-baths phase.

(i) The Bath Building (Fig. 3)

Room 1 This small room, which is identified as a probable cold water bath, measured internally 5.87m by 3m. Since its walls had been destroyed almost to floor level little is known of their construction, but the north and west walls were 0.9m thick, and the south wall 0.7m thick. Only the construction of the north and south walls seemed fairly clear, and they were faced on the inside with bricks laid horizontally, the outer part of the walls being of ragstone with, below the floor level, courses of bonding tiles on the north face of the north wall. The west wall was damaged by later disturbances, and only ragstone was visible at floor level. The east wall was built of bricks at



A.M.A., R.B.V.M., 1975

Fig. 3 Plan of the Huggin Hill baths building.

floor level, the wall being 0.3m thick, but against its east face was a very hard foundation of ragstone and white mortar at least 0.68m thick, the eastern side of which had been destroyed by the sewer excavations under Bread Street Hill in 1845. A straight joint separated the brick built east wall of Room 1 from the ragstone foundation, and it seems that two phases of construction are represented here.

The floor of Room 1 lay at about 6.7m above O.D. and was composed of pink mortar 0.19m thick overlying a layer of tiles 0.04m thick, which in turn overlay an extremely hard foundation of ragstone and white mortar at least 1.98m thick. The floor surface of the room curved up against the faces of the north and west walls of the room, but at the base of the east wall there was an 0.076m quarter-round moulding. In the middle of the east end of the compartment there was a tile base 1.17m wide and 1.8m long, which overlay the floor surface and the quarter-round moulding, and was apparently the base of a series of steps from a higher level to the east.

The narrow width of the east wall of the chamber indicates that this was not a load bearing wall, and indeed its purpose might well have been merely to contain the water of the bath. This, together with the conjectured steps, indicates that the entrance lay to the east, and as the cold water bath was normally located adjacent to the *frigidarium*, it is likely that this was the function of the area immediately to the east of Room 1.

Room 2 This chamber lay on the south side of Room 1, at a considerably lower level, but although some detail was recorded during the rebuilding excavations, not enough was found to enable the purpose of the room to be identified.

Abutting and supporting the south wall of Room 1, but separated from it by a straight joint, was a massive buttress mostly constructed of bricks, but with a small core of ragstone. Its foundation was also built of ragstone.

Passing through the buttress from north to south at about 2.5m below the level of the floor of Room 1 was a drain built of flat tiles, 10.3m wide and 0.35m high. It had an arched roof of horizontally laid flat tiles and a floor of tiles. It would seem most likely that this was used to drain the bath water in Room 1, presumably through an opening in the south wall of that room.

On the south side of the buttress was found what appeared to have been a timber drain constructed in the London Clay a little below the adjoining mortar floor level. Unfortunately, the archaeological record of the area of Room 2, at the baths phase, could only be made while the area was being mechanically excavated. The conjectured drain was dug out by the excavator and all that was seen were broken planks and small wooden posts, as well as some dark silt or clay which presumably filled the construction.

South of this timber construction and at about the same level was a floor of pink cement whose surface lay at about 3.8m above O.D., and this was situated adjacent to a Roman wall on its east side, which had a foundation of ragstone, while the wall above, which stood only about 0.9m high, was constructed of flat tiles. In the north-east corner of the room, however, the eastern wall of the room was built of ragstone (Feature 6), and the internal corner had been rendered with plaster which was painted white. This rendering was observed at about 6.7m above O.D. The west wall of Room 2 was a retaining wall set in the natural gravel, and was constructed of ragstone with courses of bonding tiles.

The purpose of this sunken chamber is not at all clear. The drains were evidently important not only for emptying the cold water bath, but also for relieving the damming effect of the bath-house in the hillside by allowing a constant flow of water through the building in a special channel, similar to other tiled drains in the building. No where else in the baths is a timber-lined drain known, and the interpretation of the function of this timber structure in Room 2 may be incorrect. It may have been an open rather than a closed drain.

The two building styles, of ragstone with courses of bonding tiles, and walls constructed almost entirely of flat tiles, suggest two phases of construction, the earlier probably being the wall of ragstone with bonding tiles. If this is the case then it would seem that the buttress and the east wall of Room 2 will be of the second phase, which, in addition, would explain the existence of the narrow edge of pink mortar floor adjacent to the east wall. The reason for the angular edge of the pink mortar floor on its north and west sides is uncertain, but apart from apparently abutting against a timber drain, it is possible that at an early stage there was another construction, possibly

of masonry, which lay beside the floor, and that its demolition or removal then left the floor with a curious angular shape.

Wall 3 A Roman wall exposed during the mechanical excavation of a trench, and although it was seen in section, its exact location could not be fixed. It was constructed of ragstone 1.07m thick, and, although wider than the west wall of Room 2, there is little doubt that it was a continuation of that wall, and served as a retaining wall on the west side of the baths complex.

Wall 4 In another mechanically excavated trench the cores of two other Roman walls were revealed, the walls presumably lying at right angles to each other. The north-south wall was on the line of the eastern wall of Room 2, and was probably a continuation of that wall. Like the east wall of Room 2 it was built of horizontal flat tiles, four courses only surviving, and it seemed to be resting on a foundation of ragstone and mortar.

It is unlikely that the east-west wall continued as far west as Wall 3, indicating that there was probably an opening giving access to Room 2.

Wall 5 A wall, probably of Roman date and presumably part of the bath building, was recorded in 1845 on City Sewers Plan 373 crossing Bread Street Hill in about this position.

Wall 6 In a somewhat complex area of Roman constructions the earliest phase, presumably that of the baths, was represented by a wall of ragstone, which was mostly seen in plan only, no courses of bonding tiles being observable. The wall evidently formed the north-west corner of a room located south-east of the cold plunge bath (Room 1).

The west and south sides of this room were probably formed by the east wall of Room 2 and, possibly, Wall 5. Unfortunately, the area between Wall 6 and the large western *caldarium* (Room 18) could not be investigated to establish if the wall extended continuously from Wall 6 to the *caldarium*.

Floor 7 A small portion of white mortar 'flooring' was found attached to the north side of the north wall of Room 1, its surface level being 0.12m below the floor level of the cold water bath—i.e., at about 6.7m above O.D. It is just possible that this mortar deposit was part of the Roman wall construction, though as the properly faced work of the foundation of the north wall of Room 1 extended far below 6.7m above O.D., it is difficult to see how this mortar layer could have occurred.

It is likely that this was a small remnant of a room which existed on the north side of the cold bath, though little trace of it remained as the natural gravel had not been deeply terraced here by the Romans. Its north wall was probably formed by Walls 8 and 9.

Wall 8 A wall, probably of Roman date, was found approximately in this position in 1845 during the construction of the sewer under Bread Street Hill.⁵

Wall 9 The north face of a Roman wall was uncovered during the builders' excavations. It was overlaid by rubble and yellow clay and its surviving top lay at about 5.5m below O.D. The southwards slope of the hillside was observed on its north side, and filling the area between the wall and the slope was a Roman dump of yellow clay and rubble, indicating that it acted as a northern retaining wall for the baths. The surviving construction of the wall comprised at the top two courses of tiles, and, below, three courses of ragstone, all set in buff-yellow mortar. The north face of the Roman wall was not rendered, and its base was not found. It is likely that this wall was an eastward continuation of Feature 8.

? **Pila 10** A deep, small excavation revealed the corner of a structure comprising four courses of Roman bricks. It was not possible to decide whether they had been mortared together, or whether this was the corner of a wall or of a hypocaust *pila*, but the latter interpretation seemed more likely.

Wall 11 A Roman retaining wall was found, the topmost level of which was built of ragstone, though its construction is presumed to have included courses of bonding tiles as did the nearby wall, Wall 12. The wall had been dug into the hillside gravel deposits, and consequently while its north side was only roughly laid, the south side was properly faced with squared blocks of ragstone. The wall construction on its south face was mostly invisible as the wall had a rendering of plaster which had been painted white. The level base of the plaster was indicative of the level of a floor, at about 6.7m above O.D., which had been destroyed, probably during the Roman period.

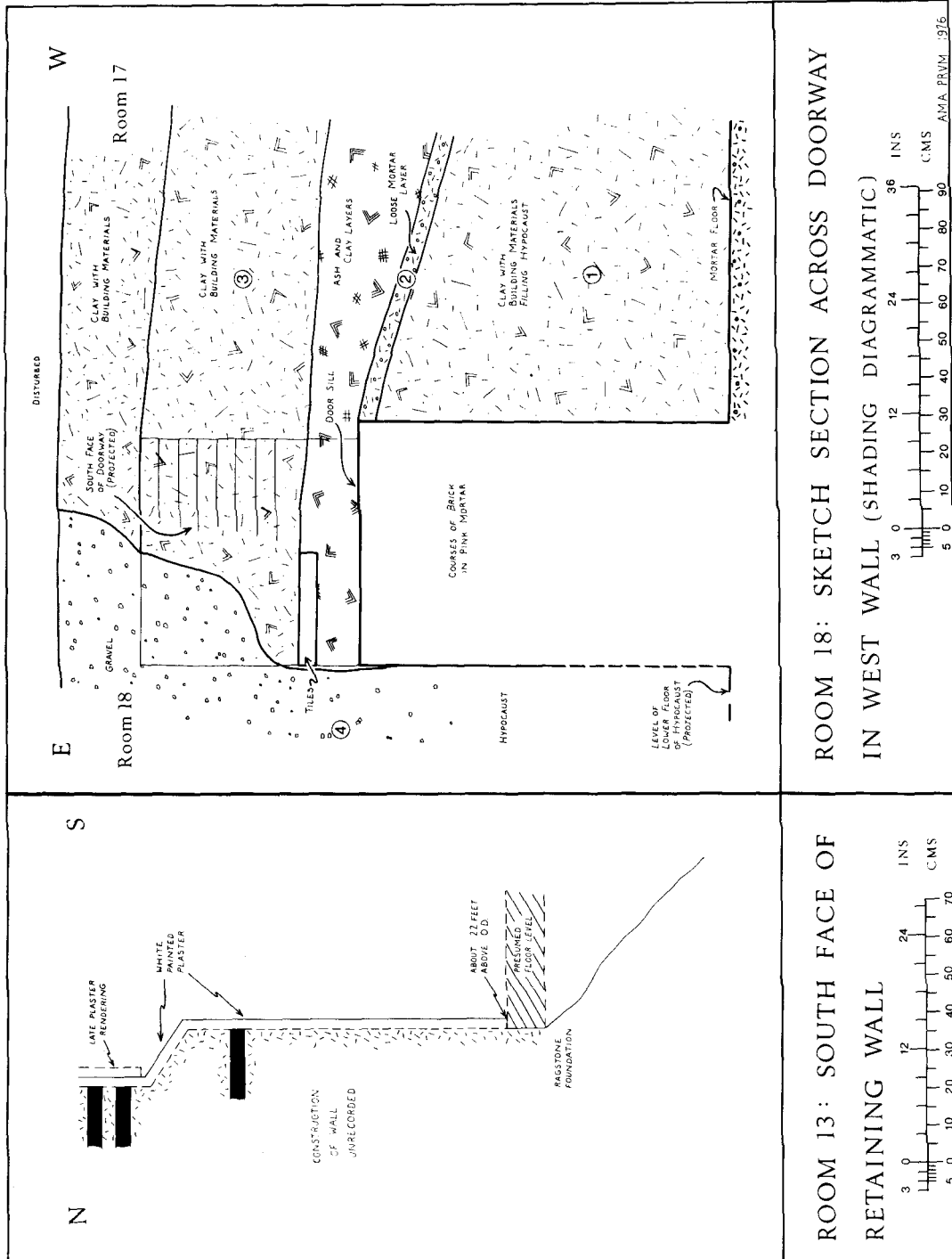


Fig. 4 Huggin Hill baths: sections in Rooms 13 and 18.

Wall 12 The stump of a ragstone wall, 0.45m wide, and part of its foundation were found separating the rooms bounded on their north sides by Walls 11 and 13. The separating wall was bonded into Wall 11, and both foundations were level, indicating that the floor of the room bounded by Walls 11 and 12 extended horizontally to the *caldarium* (Room 18).

Wall 13 (Fig. 4) This was a continuation of the Roman retaining Wall 11, the actual junction of the two lengths of walling being destroyed by the intrusion of a chalk-lined well of medieval or later date.

The retaining wall had been cut into the natural gravel of the hillside, and had been built of ragstone set in a hard, pale yellow mortar with courses of red bonding tiles at intervals. Once again the construction of the wall was unclear in detail as it was mostly obscured by a plaster rendering on its south side. The plaster surface was in a poor state of preservation, and although areas of white painted surface had survived no trace could be found of any decorative lines or colours.

The base of the plaster rendering was horizontal and lay at about 6.7m above O.D. and it seems that this was the general level of a destroyed floor. This floor level was also indicated by the existence of the wall foundation a few centimetres below this level, and by a small portion of *opus signinum* flooring which had survived at the junction of Wall 13 and Buttress 14.

The lower part of the wall stood vertically above the floor level, but at a height of 0.86m there was a chamfered offset 0.15m deep which had also been painted white. The plaster rendering above this offset had been renewed at some later stage, but no painted surface remained.

The east end of Wall 13 had been incorporated into a later wall of ragstone and thin red tiles which was probably built during the middle ages or in the sixteenth century.

Buttress 14 A massive buttress construction of ragstone and a scatter of Roman tile fragments set in pale yellow mortar, lay on the south side of the retaining Wall 13, and was separated from it by a straight joint. The original form of this buttress is only known in its ground plan which may not reflect its plan above that level. Indeed, it is even possible that it supported a staircase giving access to the hillside north of the baths. The southern edge of the buttress had been largely destroyed, though where it abutted the retaining Wall 13, the white painted plaster rendering of the wall was found to continue on to the west face of the buttress. In the corner of the junction of Wall 13 and Buttress 14 there lay at the base of the wall plaster a small portion of *opus signinum*, the only surviving fragment of the floor of this room, at about 6.7m above O.D.

About midway along the west face of the buttress and at a point where it had been destroyed to the Roman floor level, a 'socket', carved in Purbeck marble, was found set into the mortar of the buttress wall (Fig. 23, No. 36). It is difficult to judge the purpose of this unless it was for the door post of an entrance to the baths which had been built into the buttress and gave access to the hillside area to the north.

Room 15 A trench dug outside the west side of the *caldarium* apse (Room 18) revealed a small chamber which is interpreted as the furnace, since two flues extended from it, one clearly taking heat to the *caldarium*. The east side of Room 15 was bounded by the apse wall of the *caldarium* in which there was an egg-shaped niche of unknown purpose (0.73m wide, 0.76m high, and 0.4m deep) which was lined with mortar, and the bottom of which lay 0.78m above the floor of the furnace. The south and west walls of the room were of ragstone, but straight joints between these and the *caldarium* wall showed that they were a later addition. The composition of the floor of Room 15 was not revealed, though it was found to be at the same level as the lower hypocaust floor of the *caldarium* (about 4.36m above O.D.), for an arched flue passed through the *caldarium* wall linking the two rooms.

A second arched flue, its base also level with the *caldarium* floor, was found passing through the south wall of Room 15 perhaps to link up with the *tepidarium*. This second flue was traced underground for a length of 1.5m at which point excavation had to cease. It is interesting to note that the length of the flue was much greater than the thickness of the south wall of Room 15, possibly indicating a complex underfloor heating system.

The excavation of this room had to be carried out very quickly and it was not possible to recover much detailed information about the various structures. Nevertheless a period of change of use was clearly indicated by the discovery of a square timber-lined drain which crossed the floor of Room 15, and passed down the centre of the flue in the south wall. The drain was 0.7m wide at its

base, and its vertical sides were built of boards 0.04m thick which had been nailed to the base board. The wooden drain gently sloped down southwards.

The internal faces of the walls of this room were not rendered in plaster, though the external faces of the west and south walls, which formed an L-shaped corner, were rendered in plaster. However, it was not possible to establish any trace of a painted design.

Wall 16 A Roman wall 0.68m thick extended obliquely south-west from immediately north of the doorway in the west side of the *caldarium*. This wall evidently belonged to an early phase in the Roman baths for it was bonded into the west wall of the *caldarium*, but had been demolished down to the level of the sill of the doorway into that room, the rough core of the wall above being plastered over and painted white.

Room 17 (Fig. 4) Deep excavation immediately west of the west wall of the *caldarium* revealed a mortar floor at the same level as the lower hypocaust floor of the *caldarium*—between 0.9m–1.2m below the sill of the doorway in the *caldarium* wall. It was clear that a hypocaust lay here, and that its upper floor, which was presumably level with the door sill, had been destroyed. The brick structure, *Pila* 10, was probably a *pila* in this room, and the room is best interpreted as the *tepidarium*.

Room 18 (Fig. 4) This heated room was undoubtedly a *caldarium*, the destroyed upper floor of which was originally situated at about 5.48m above O.D.—about 0.9m below the rooms immediately north of the apse. The room, 8.2m wide and more than 10.97m long internally, had an apsidal north end acting as a retaining wall, and a doorway in its west side possibly giving access to the *tepidarium* (Room 17).

The walls were generally constructed by alternating three courses of ragstone and three courses of flat tiles, but in areas of complex construction such as the internal buttresses and the jambs of the doorway, bricks alone were used.

The upper floor of the hypocaust had been destroyed, and only the lower floor of white mortar remained, on which were *pilae* and low walls of bricks which originally supported the upper floor. The lower hypocaust floor surface lay at about 4.36m above O.D., but the level of the upper floor was indicated by an internal offset of about 0.08m at 1.15m above the lower floor, and by the level of the doorway sill.

The doorway in the west wall of the room was about 1.67m wide, the sill apparently being built of courses of bricks set in pink mortar. The purpose of the recess in the east wall of the *caldarium* south of the apse is uncertain as it could not be fully investigated, but it is likely that this was a blocked doorway.

The western end of the apse wall immediately above the lower hypocaust floor was pierced by an arched brick flue (Plate 1) by which heat was originally introduced into the *caldarium* from the furnace chamber, Room 15. The arch, 0.5m wide by 0.55m high, was roughly built into the neat wall construction around it, and was apparently a later insertion. Immediately inside the apse were found flue channels built of bricks, whereas the *pilae* were found in a deep excavation beside the east side of the room. It is possible that the apse contained a hot water bath and that this was supported on flue channels rather than *pilae*.

The suggestion of a hot water bath is supported by the level of the water supply which was introduced by a circular terracotta pipe 0.1m in diameter, inserted through the apse wall at about 0.76m above the lower hypocaust floor (i.e. about 5.13m above O.D.). Because this was about 0.35m below the probable upper floor level of the *caldarium* it seems likely that a sunken pool lay within the apse, the floor level of which must have lain below the water pipe.

The water supply to this room was itself ingeniously and simply arranged. The *caldarium* apse wall, built as a partial retaining wall in the hillside, evidently acted as a dam for the ground water in the natural gravel behind, and this constant clean source was tapped by the terracotta water pipe. The back-fill of the Roman excavation into the hillside on the north side of the apse was generally of yellow-brown brickearth which, no doubt, helped to seal off the *caldarium* hypocaust from ground water seepage through the apse wall. The back-fill adjacent to the terracotta pipe was of gravel, through which the ground water could percolate to reach the pipe. In order to prevent sand and silt from washing into the bath, a small box formed of unmortared bricks and a flat stone was built around the pipe entrance as a filter.

On the inner face of the upper part of the apse wall were found many iron nails or clamps, the heads of which had been corroded. These had been driven into the wall in horizontal and vertical rows, spaced at intervals of 0.2m apart. It seems likely that they once held box-flue tiles to the wall face. A broken box-flue was found to fit exactly the spacing of the nails.

The southern limit of the *caldarium* was not found, though its approximate position can be conjectured.

Wall 19 A small excavation revealed a portion of the west wall of the *caldarium* near its south end, standing only about 0.4m high and composed of four courses of flat tiles above courses of ragstone. A brick *pila* was revealed against the wall, and immediately south of this was found a brick structure, roughly stepped down to the south, the purpose of which is uncertain, though it seems to have been part of the heating system. It is clear that the south wall of the *caldarium* was located somewhere between this point and Floor 20, where no southward continuation of the west wall of the *caldarium* was found.

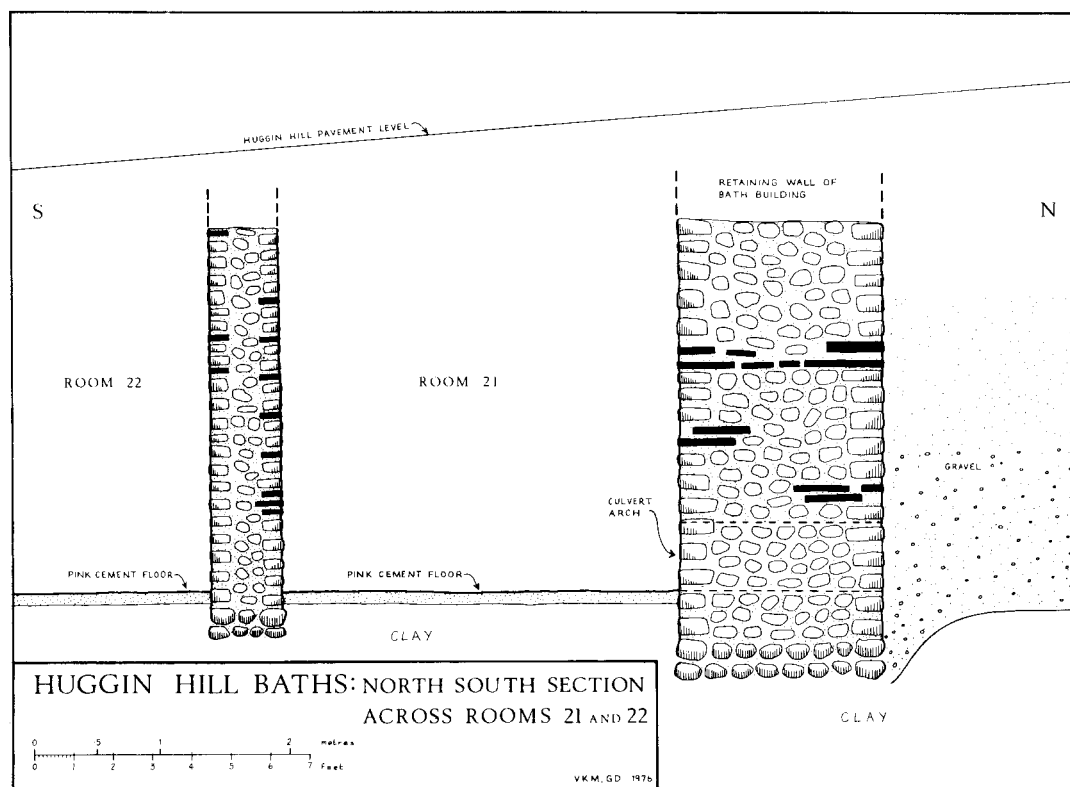


Fig. 5 Huggin Hill baths: section across Rooms 21 and 22.

Floor 20 Two small trenches were dug in an unsuccessful attempt to find the south wall of the *caldarium*. It seems likely that these excavations were to the south of that room, for they both revealed a pink mortar floor. In the northernmost trench a loose fragment of red tessellated pavement was found lying on the floor.

Room 21 (Fig. 5) This large chamber, probably 16m long and 3.2m wide, is perhaps to be identified as either a very large storage tank of cold water or a swimming pool. Its north wall was a retaining wall built of ragstone with courses of tiles, which was set into the hillside, and pierced by at least two culverts to admit ground water into the chamber.

The main part of the chamber east of Huggin Hill on the site of Nos. 10–12 Little Trinity Lane

was recorded by Dr. G. C. Dunning for the Society of Antiquaries in the autumn of 1929. With regard to Room 21, Dr. Dunning reported:

"The north wall of this room passed under Huggin Lane (now Hill), and was traced eastwards for a length of 36ft. (10.97m). The greater part of the wall had been destroyed previously down to 6ft. (1.8m) from the foundations, but remained to a height of 11ft. (3.35m) under Huggin Lane. The wall, 5ft. 3in. (1.6m) wide, was built of rag set in yellow mortar and faced with squared stones. The foundations were laid in the brickearth (at this level it was probably London Clay) at a depth of 14ft. (4.26m) below Huggin Lane. A bonding course of red bricks, measuring about 17in. (0.43m) by 11in. (0.28m) by 2in. (0.05m), was carried through the wall at 8ft. (2.43m) above the base, and 2-3ft. (0.6-0.9m) below it were lacing courses of bricks on both sides of the wall. A similar rag wall, 2ft. (0.6m) wide, with facing bricks at various heights, was partially uncovered to 10ft. (3m) south of the main wall, but could only be traced to a length of 6ft. (1.8m). The east wall of the chamber, 26ft. (7.92m) from the Huggin Lane frontage, was built up against the face of the

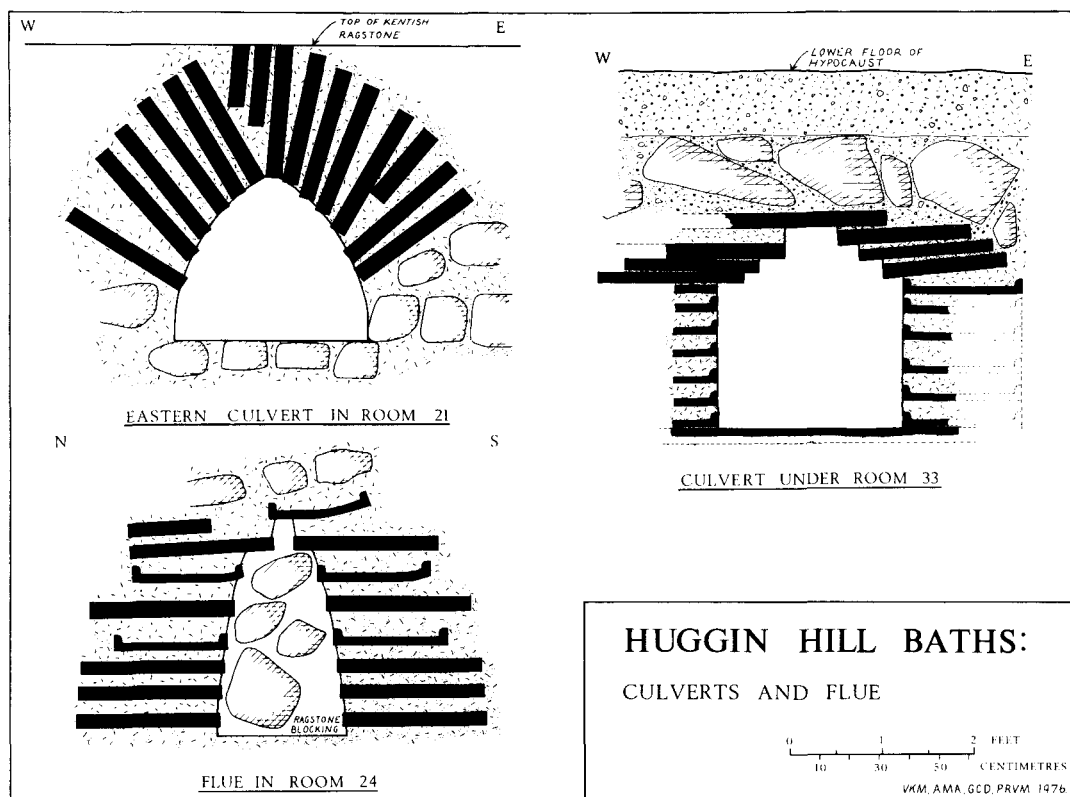


Fig. 6 Huggin Hill baths: elevations of culverts and flue.

north wall. It was 3ft. (0.9m) wide with a rag core, and faced with triple courses of large bricks alternating with two layers of dressed stones. The floor of this chamber was a layer of pink cement 3in. (0.08m) thick at a depth of about 12ft. (3.65m) below the level of Huggin Lane. In the north-eastern corner of the chamber the north wall was pierced above the floor by an arched culvert 21in. (0.53m) high by 24in. (0.6m) wide, built of voussoirs, 17in. (0.43m) by 6½in. (0.16m) above large rectangular bricks" (Fig. 6).

The walls forming the north-west corner of Room 21 were uncovered in a small excavation in 1964 and, although the excavation did not reach the floor of Room 21, the character of the walls

was found to be similar to the structures recorded in 1929. In this case the west wall was found to be separated from the north wall by a straight joint, and close to the corner the west side of an arched culvert similar to that found in 1929 was revealed at a low level in the north wall. The excavation also revealed that the floor of this room lay considerably below 6.7m above O.D., and was sunken in relation to the area immediately to the west.

Room 22 (Fig. 5) A room on the south side of Room 21 was partly recorded in 1929 by Dr. Dunning who noted that immediately south of its north wall there was a floor, 3in. (0.08m) thick, of pink cement at the same level as the floor of Room 21. The south face of the wall was not rendered in any way, and in view of the narrowness of the wall, which may not have been sufficient to support the pressure of water inside Room 21, it is possible that Room 22 may also have been part of the pool.

Room 23 This chamber was recorded in 1929 by Dr. Dunning who reported that it lay on the east side of Room 21, and was limited on the north side by the retaining wall, and on the west side by the thick wall between it and Room 22.

“Only one face of the east wall was exposed in a modern trench along the south side of the building site. The wall was of similar character to the others and was pierced by a narrow culvert or flue (Fig. 6), 27in. (0.68m) high by 16in. (0.4m) wide, built of flanged roofing tiles 14in. (0.35m) wide, above the ordinary larger bricks. The opening was blocked by rough pieces of ragstone, piled loosely on top of one another. The south wall of the room was examined for a length of 16ft. (4.87m). Its west end was built against the north-south wall, and was faced with pink plaster continuous with that on the west wall. The south wall made an obtuse angle with the west wall, so that the room (23) was quadrilateral in shape, measuring about 21ft. (6.4m) long by 9ft. (2.74m) and about 12ft. 6in. (3.8m) wide at its sides. This room was paved with large red bricks, measuring 17in. (0.43m) by 11in. (0.28m), bedded in a 3in. (0.08m) thick layer of coarse yellow cement mixed with gravel and crushed brick. The level of the floor was 18in. (0.46m) below the floor level of the rooms to the west” (Rooms 21 and 22).

The arched opening in the wall between Rooms 23 and 24 suggested that they were both heated, the hypocaust *pilae* and the upper floor of both rooms having previously been destroyed.

Room 24 Only the west end of this room was found and recorded by Dr. Dunning in 1929, and the wall separating this chamber from Room 23 has been described above. It was noted that the floor of Room 24 was composed of yellow cement only.

Room 25 This lay immediately south of Room 23, but no details were recovered to indicate the nature and level of its floor.

Wall 26 This was the north-west corner of a room, the floor of which lay below 6.7m above O.D., and was not uncovered. It is likely that Wall 27 formed the south-east corner of the room. Only the upper part of the walls were exposed, constructed of courses of Kentish ragstone set in pale yellowish mortar. The internal faces had been rendered with plaster and painted white, in contrast to the north face of the north wall which was not plastered. This suggested that either the floor level north of the room lay above the floor level of the room itself, or that the north wall of Room 26 formed the southern edge of the deeply sunken Room 22, the wall faces of which were not rendered. The size of Room 26 is uncertain, but it is likely that Wall 27 may form its south-east corner, thereby giving an almost square room. No wall flues were found either in Wall 26 or 27, suggesting that the chamber was unheated.

Wall 27 (Fig. 7; Plate 3) This formed the south-east corner of a room, the north-east corner of which was perhaps formed by Wall 26. The east wall was constructed of ragstone and pale yellow mortar with a double course of bonding tiles, and its west face was rendered with plaster and painted white. The floor of the room had been destroyed but the lower edges of the painted plaster seemed to indicate that the destroyed floor probably lay at about 5.36m above O.D.

This room had been built up against the north side of Room 28, access to which was through a doorway in the wall dividing the two rooms (see below, Room 28).

Room 28 (Fig. 7; Plate 3) Only the eastern side of this room was excavated, and although little of its interior could be uncovered, it is clear that it was an unheated chamber measuring 7.46m from north to south internally. Its walls were constructed of ragstone set in pale yellow mortar, with, at about floor level, a double course of bonding tiles. At its south-east and north-east corners, the

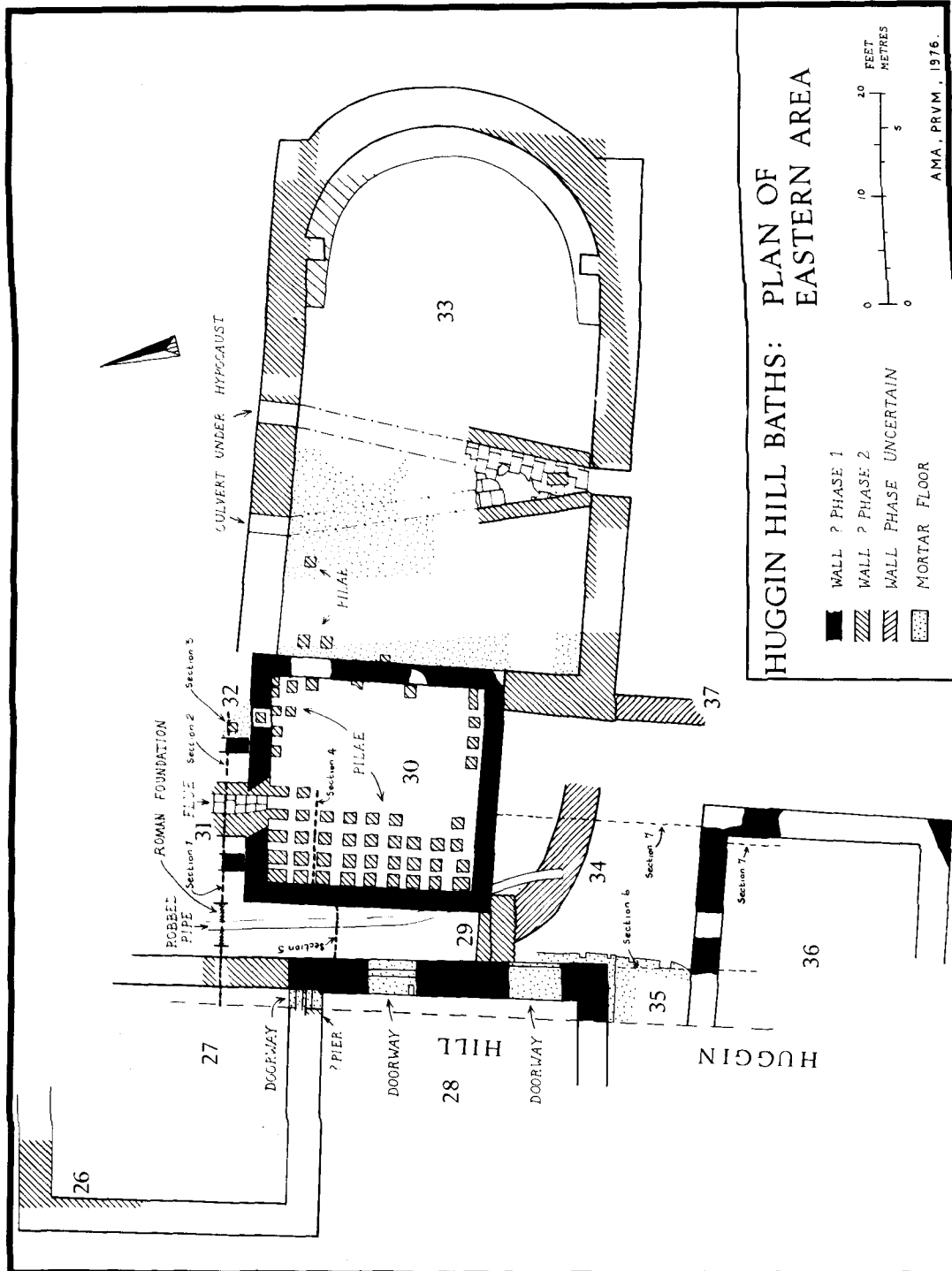


Fig. 7 Huggin Hill baths: Plan of eastern area.

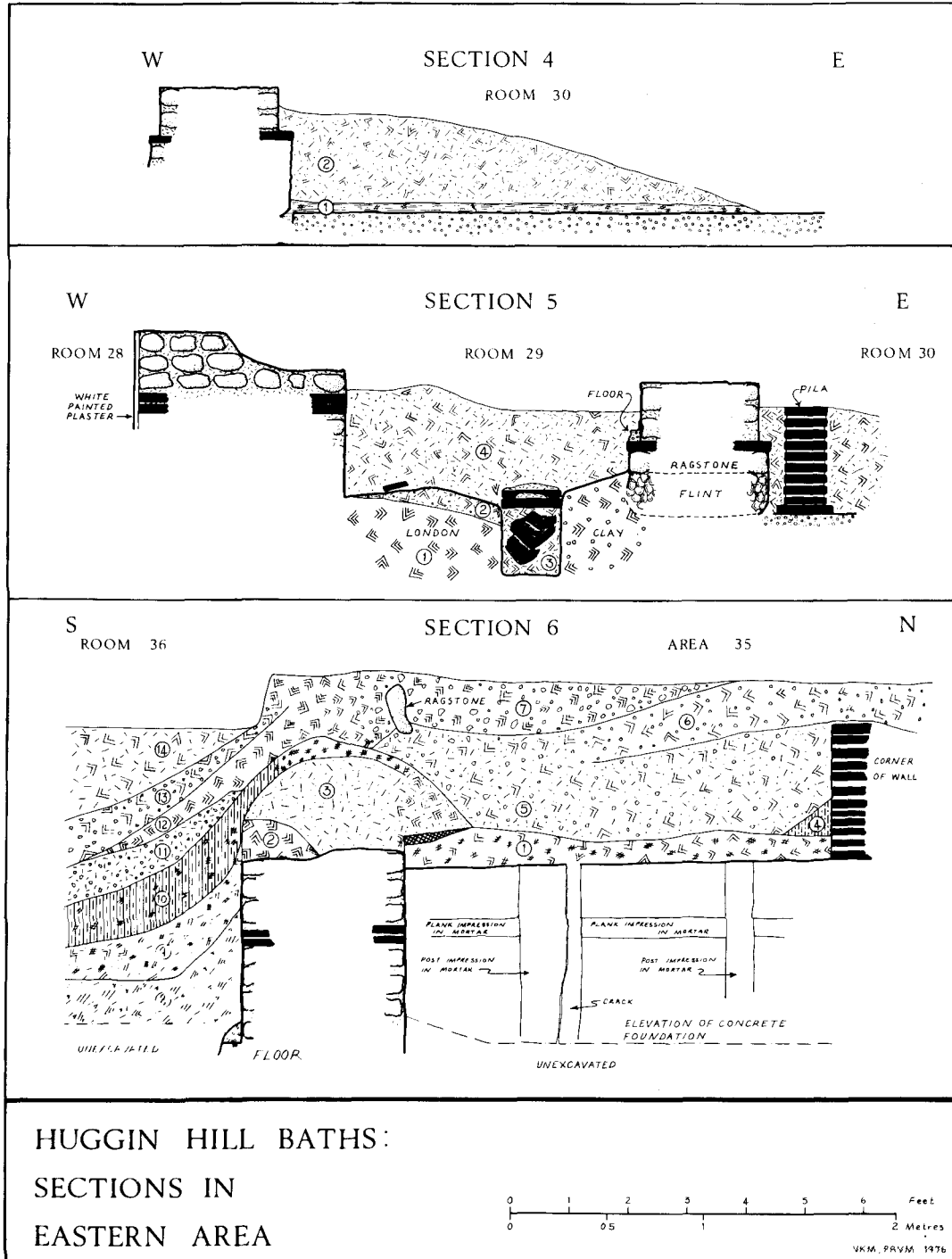


Fig. 8 Huggin Hill baths: sections 4, 5 and 6. Key as in Fig. 9.

latter where it abutted the neighbouring room (Wall 27), the wall was constructed entirely of flat tiles set in mortar. The internal faces of the room were rendered in plaster and painted white.

Three doorways were found in this room. That in the north wall, in the north-east corner of the room, gave access to the neighbouring room partly formed by Wall 27. In each of the three doorways there seems originally to have been a wooden door frame and sill which had been set into the wet mortar, for the impression of the decayed timber had clearly survived. In the northern doorway the mortar of the door sill retained the impression of two doorway sill beams. At some later stage in the Roman period this doorway had been partly blocked by a pier of mortared tiles which had been rendered in plaster on its north, east and south sides. The remaining opening on the east side of the doorway was only about 0.53m wide, suggesting a changed purpose in the use of the doorway, which perhaps occurred when the room (Walls 26 and 27) was added to the north side of Room 28.

The northern doorway (1.5m wide) in the east wall gave access to the corridor, Room 29. Once again, the mortar of the sill contained the impressions of timber sill beams, and also of a timber door post.

The southern doorway in the east wall was 1.6m wide, and most of the sill was sunken as if to take a timber sill, though the outer or eastern edge was at a higher level.

A Roman wall is recorded as being found under Huggin Hill about 1845⁷ in approximately the position of the south wall of Room 28. No further details are known.

Room 29 (Fig. 7; Fig. 8, section 5; Fig. 9, section 1; Plates 2–3) This was a corridor 1.5m wide separating the cold room (Walls 26 and 27) and Room 28, from the heated Room 30. At its south end the corridor was blocked by a foundation which presumably contained a door giving access to Area 34. The floor of the corridor had been almost completely destroyed when the baths were demolished; but at about 5.38m above O.D., immediately above an offset in the wall forming the east side of the corridor, there was a portion of possible flooring of buff coloured concrete. It is evident that the reason for the removal of the floor was to facilitate the salvage of a pipe, perhaps made of lead, which ran down the centre of this corridor, except at the south end where it swung eastwards under the corner of Room 30 (Plate 3). It is probable that this pipe drained water from the cold water pool or tank (Rooms 21 and 22). The foundation closing the south end of the corridor was roughly faced on its north side as if to suggest that the corridor floor lay below the ground level of Area 34. It is not certain if the walls had been plastered, but this seems unlikely. Instead, the mortar pointing around the rough ragstone facing stones of the western wall had been cut with incised lines to simulate ashlar blocks.

Room 30 (Fig. 7; Fig. 8, section 4; Plates 3, 4–5) This room had been extensively modified during the Roman-period, and it seems likely that initially it was not a heated chamber. This is suggested by the absence of any flues set into or attached to the surfaces of the walls, and by what seems to have been a doorway built in the north wall at an oblique angle. If this is the case then the probable floor level of this primary phase lay at the base of the carefully faced part of the wall, about 5.36m above O.D. This would have meant that the floor of this room was at the same level as the floors in the corridor (Room 29) and the two cold rooms to the west (Room 28 and Walls 26 and 27).

The walls of the room were constructed on a foundation of flints in buff mortar above which, at the probable floor level, there was a single course of flat tiles. The wall was reduced to 0.6m in thickness above this, and was constructed of courses of ragstone in buff mortar with double courses of bonding tiles. The walls survived to their greatest height in the north-east corner, and both the faces of the north and east walls were particularly well preserved (Plate 4). No evidence could be found to suggest that the walls had ever been rendered with plaster and painted. Instead the mortar pointing between the irregular ragstone blocks had incised lines cut into them, in a similar fashion to the walls of the corridor (Room 29), to simulate ashlar blocks (Plate 6). This form of wall rendering is unusual in Roman London, and the fact that the same technique was used in Rooms 28, 29 and 30 does suggest that their building was contemporary.

The only variation in the wall construction was at the sides of the doorway opening in the north wall for these were built entirely of flat, red bricks set in buff mortar. East of this the inner face of the wall contained what may have been a small opening, blocked with bricks (Plate 6) immediately above the floor level of the early phase.

The room was changed in its final phase from a cold to a heated room, perhaps to become a *tepidarium* adjacent to the eastern *caldarium* (Room 33). To achieve this a hypocaust had to be inserted. The original floor was completely removed, and the interior of the room excavated. A new floor of buff, pebbly concrete was laid at a lower level (4.92m above O.D.), 0.4m below the earlier floor level and at the level of the base of the wall foundations. Brick *pilae* were built upon this floor, their greatest surviving height being about 0.55m. At the eastern end of the north wall a flue channel had been roughly cut through the wall so that the heat in Room 30 could pass into Room 32, and since this flue lay not more than 0.6m above the lowest hypocaust floor of Room 30, it is unlikely that the upper floor of Room 30 was less than 0.91m above the lower floor. Fragments of *opus signinum* found in the hypocaust debris of the room indicated the probable nature of the upper floor.

The final alteration was the construction of a furnace in Room 31 to heat Room 30 by a flue built in the former doorway (Plate 5).

Room 31 (Fig. 7; Fig. 9, section 2; Plate 5) This seems to have been a small chamber located between the two walls (3.04m apart) which extended northwards from Room 30. Both of the north-south walls appeared to have been built against the north wall of Room 30 and, as they did not relate in plan to the oblique doorway of that room, it is possible that they did not form part of the original construction. The flue channel was built in the final phase and the actual furnace position, to judge from the amount of burning and ash in the flue, lay just north of the limits of the excavation where later intrusions had destroyed the Roman features.

The flue itself (Plate 5) was built of flat red bricks set in yellow clay, both of which had been considerably burnt. It widened to the north, no doubt to accommodate the fire, and on its tiled floor was found a layer of white ash (Fig. 9, section 2, layer 3). It is possible that when the flue was built the west wall of Room 31 was demolished to its foundation, perhaps to allow access to the furnaces from the corridor (Room 29).

Room 32 (Fig. 7; Fig. 9, section 3; Plate 6) Only a very small portion of the south-west corner of this room had survived. It lay adjacent to Rooms 30 and 31 and its floor was located 0.55m above the lower hypocaust floor of Room 30. The floor of pink concrete was somewhat uneven, and on this there was found a brick-built *pila*. It is probable that this hypocaust belonged to a phase of rebuilding in the baths because a hole forming a flue had been roughly broken through the north wall of Room 30 to allow heat from the hypocaust of that room to pass into the hypocaust of Room 32. In order to strengthen the opening a brick *pila* had been built in the flue opening.

Room 33 (Fig. 7) This room, to judge from its form (Plate 7), was another *caldarium*, of even larger size than the western *caldarium* (Room 18). It measured 15.95m long and 8.81m wide and was, like the western *caldarium*, rectangular in plan with a large apse at one end, which perhaps originally contained a hot water bath. Only the foundations of this room had survived, but these clearly showed that the room had been added to the east side of Room 30, the foundations of the rooms having been separated by straight joints. The *caldarium*, especially its south side and the apse, had been largely destroyed by deep modern cellars, but enough had survived to make its plan clear. Its foundations had been constructed of ragstone and buff concrete, though, as the room lay east-west along the hillside it is clear that the architect of the baths was concerned about the dam-like effect that the *caldarium* would have on the natural flow of ground water, and the consequent effect on the building. To keep the water table north of the room as low as possible two underground culverts (Plate 8) were constructed leading through the foundations of the room and beneath the lower floor of the hypocaust. The culverts had been built of flat bricks, and as under the hypocaust floor the western culvert had been roofed with flat tiles (Fig. 6; Plate 8), it may be presumed that the eastern culvert, the roof of which had been destroyed, had been similarly roofed. The culvert openings in the foundations themselves were incomplete but, judging from what had remained, it seems that they had been arched over with tiles. The incline of the floor of the western culvert was very gradual, but it is clear that it was intended to take water from north to south, the incline being a drop of 0.1m over a distance of 7.62m (Plate 9). The eastern culvert opened at its north end into the gravel subsoil, some of which had been disturbed during the construction of the baths, but the opening of the western culvert had been destroyed by a post-medieval cess pit.

The lower floor surface of the hypocaust lay at 5.56m above O.D., and the floor was built of

buff, pebbly concrete of unknown thickness. Upon this in the north-west corner of the room were found the lower tiles of just four *pilae* which were spaced about 0.3m apart from each other. The level of the completely destroyed upper floor is uncertain, but presumably lay about 0.91m above the lower floor (i.e., at about 6.47m).

The apsidal east end of the *caldarium* had been largely destroyed except for the bottom of the main portion of the wall. The north end of the apse was rather better preserved, and here the foundation of a buttress, similar to that in the apse of Room 18, was recorded. A second buttress at the south end of the apse may be inferred.

Area 34 (Fig. 7; Fig. 9, section 7) Due to its irregular boundary it seems unlikely that this was an enclosed chamber, but an open area giving access to various bath rooms at a level of about 5.18m above O.D. The area was not excavated deeply and it is likely that some structures were not located. Nevertheless, a southern extension of the pipe trench, found in Room 29, was seen to continue in a disturbed state south-eastwards across the Area, and to incline to the south. In addition a curving foundation of ragstone and buff mortar was found just south of Rooms 29 and 30, and it seems that this was the remains of a Roman structure which had been demolished prior to the general destruction of the baths. Not only had the foundation been overlaid by dumped clay, but also its level lay below that of the south sides of Rooms 28 and 33. It is just possible that some steps found overlying the curving wall in this area belonged to the baths phase, though in view of their poor construction, which included re-used tiles, it is more likely that they belonged to the post-baths phase (p. 23).

Area 35 (Fig. 7) On the south side of Room 28 was a massive foundation of concrete, which probably also contained ragstone, though none was visible on its surface. This provided a buttress between Rooms 28 and 36 which were on two terrace levels. The buttress had been built in a timber lined trench for the cement bore the impression of the square posts and the horizontal boards which had retained the sides. Only a small area at the east end of this buttress could be uncovered, but as there was no evidence of any walls having been built on it, it is unlikely that it was intended to support any constructions other than the south end of Room 28. In fact, an extension of the buttress with traces of the timber posts and shuttering continued northwards under the south-east corner of Room 28. Immediately on top of the buttress south of Room 23 were found deposits of black ash and stiff ashy clay (Fig. 8, section 6, layer 1) suggesting that this surface may have been associated with the heating system of the baths despite the fact that the immediately adjacent Rooms 28 and 36 were apparently unheated.

Room 36 (Fig. 7) This chamber was sunk below the general level of the baths, its *opus signinum* floor being constructed at 3.2m above O.D. The walls of the room had been built of ragstone and buff mortar, and in the north wall, which had survived to the greatest height, there remained a double course of bonding tiles. The floor of the room had been almost completely destroyed, though a little of the *opus signinum* had survived at the edge where it overlay the ragstone foundation.

The purpose of the room is uncertain, but located on a lower level than the rest of the bath rooms, it is unlikely to have been one of the main bath chambers.

Area 37 (Fig. 7) A wall, not bonded into the south wall of the *caldarium*, was found extending southwards from the south-west corner of the chamber. Unfortunately, the area was so disturbed that no indication could be found of its purpose, whether boundary wall or room. The wall, however, was built of ragstone and buff mortar and seemed to be of Roman date, though this is not fully certain.

(ii) Dating Evidence

Very little dating evidence could be recovered from deposits contemporary with the construction of the baths. The finds are catalogued in detail below, p. 53.

Room 13 Three sherds (ER. 949) were found in the gravel and rubble back-fill of the construction trench on the north side of the apse of the *caldarium* (Room 18). These sherds (Fig. 21, Nos. 1 and 2) are difficult to parallel on other sites, though they are probably of Flavian date.

Room 13 A few Roman sherds (not illustrated) of first century date were recovered from the earthy cement in the ragstone foundation of the retaining wall on the north side of Room 13 (ER. 911).

Room 33 Finally, several sherds (Fig. 21, Nos. 3–5) of late first century date (see also the samian ware report, p. 55–57) were recovered from the gravel back-fill of the arched north end of the eastern culvert under the *caldarium* (Room 33), these sherds, no doubt, having been introduced during the construction stage (ER. 1420).

Conclusion:

This is clearly insufficient evidence upon which to date the construction of the baths. Nevertheless, it does suggest that the probable primary phase of the baths is not earlier than the Flavian period, and that the addition of a second group of bath rooms to the east, including the *caldarium* (Room 33) could not have occurred before about the end of the first century.

Occupation of the Baths

Due to the systematic form of the subsequent demolition of the baths little remained of archaeological deposits representing the actual occupation and use of the building.

Room 30 A few sherds (not illustrated) were recovered from a clayey silt layer about 0.025m thick overlying the lower floor of the hypocaust in the western half of Room 30 (Fig. 8, section 4, layer 1). None could be closely dated, but they are probably of the first century A.D. (ER. 1419). In addition there was a corroded bronze coin possibly of Vespasian (ER. 1433). The silt had evidently accumulated gradually during the occupation of the baths, though the sherds and coin presumably arrived there at the time the hypocaust was being constructed. Overlying this silt deposit was a thick layer of demolition rubble.

Area 35 A deposit of dark grey ashy soil, overlay this mortar foundation (Fig. 8, section 6, layer 1), and was itself overlaid by the dumping following the demolition of the baths. In it were found a few coarse ware sherds (ER. 1388) dateable to the first half of the second century A.D., and also a samian ware sherd (Dr. 37) dated to c. A.D. 150–180 (see p. 55). The cause of the ashy nature of the deposit is not known, but it seemed that it was likely to have accumulated before the demolition of the bath building.

Room 31 A layer of ash and building rubble (tiles and concrete) lay between the inserted furnace in this room and the east wall (Fig. 9, section 2, layer 1), and in the deposit were several coarse ware sherds (ER. 1377) of the first or second century A.D. The deposit, which was overlaid by a thick layer of burnt clay associated with the use of the furnace, evidently pre-dated the insertion of the furnace.

(iii) Destruction of the Baths

At a date possibly in the latter half of the second century the baths were systematically demolished and the hillside was restored to its former sloping profile. Although only limited parts of the site were investigated some indications were found of the sequence and method of destruction.

The first step seems to have been to destroy the upper floors of hypocausts and to smash the box flues on the walls, all, no doubt, to remove the possibility of underground voids which might have caused subsidence. Evidence of this was particularly clear in Room 17 where, once the hypocaust floor had been removed, the hypocaust was filled by dumping clay and rubble to the level of the door sill between Rooms 17 and 18 (Fig. 4, layer 1, ER. 914). In Room 18 the apse once held box flues fastened to the wall by iron fittings, but in all excavated areas of the apse it was found that the flues had been broken off, together with any painted plaster rendering that may have existed. A considerable quantity of broken flue tiles and of red and white painted wall plaster which may have come from the walls was found in the dumped filling of this room (ER. 921, 922, 925).

Excavation at the south-east corner of Room 27 (Fig. 7) showed that the floor had been removed, its level indicated by the horizontal base of the wall plaster adhering to the east wall of the room. The floor at the east side of Room 28 was also absent, and had evidently been broken up and possibly removed. The removal of broken flooring was clearly indicated in Room 30 where, although much post-Roman grave digging had destroyed a considerable part of the archaeological deposits, enough remained, particularly in the north-west part of the room, to show that the destruction deposits contained few large pieces of the upper floor of the hypocaust.

It seems likely, therefore, that the floor, once broken up, had been carted away, possibly to be dumped down onto the lower terrace level.

The mortar floor of the corridor, Room 29, had been completely broken up and removed, except at one point where a small piece remained adhering to an offset on the east wall of the room (Fig. 8, section 5). Not only was the floor itself removed, but also the soil below had been excavated to a depth of about 0.3m, probably to search for underfloor services which were worth salvaging prior to the demolition of the building. It seems that a pipe, perhaps of lead, was robbed, for a trench 0.3m wide, filled with destruction debris, was found during the recent excavation (Fig. 8, section 5, layer 3; Fig. 9, section 1, layer 4; Plate 2). It is likely that the pipe led from the large water-tank or pool in Room 21.

Evidence of partial demolition and removal of rubble was also found in Room 31, for no trace was found of the upper part of the brick flue in the opening leading to Room 30, while in Room 36 most of the mortar floor had been removed (Fig. 8, section 6).

The second stage of the destruction was either the demolition or the dumping to make up the hillside slope, though it is not too clear which occurred first, for had the demolition occurred before the dumping then a definite layer of building debris would be expected. Instead there was much building debris but this was thickly scattered amongst the dumped clay and gravel deposits, and its source may not have been the bath building but demolished buildings elsewhere in the Roman City. Nevertheless, in spite of a general absence of a layer of building debris, some of the walls had clearly been demolished before the dumping occurred (e.g., the west wall of Room 18 (Fig. 4, section) and the north wall of Room 36 (Fig. 8, section 6)).

The dumped deposits generally comprised gravel and yellow brickearth which is foreign to the site, though the nearest natural deposits occur at the top of the hill (Fig. 2). The deposits contained a large amount of pottery and building debris, the source of which, like the clays and gravels, need not all have been from the bath building. With this in mind *caution* is required in associating all objects from the dumping with the demolition of the baths itself, and in view of the early date of the finds it is possible that the objects in the dumping only provide a date after which the demolition occurred. Nevertheless, the great concentration, large size and quality of much of the building debris in the dumping does suggest that most was probably derived from the bath building, and that demolition and dumping occurred at about the same time.

Following the demolition of the upper hypocaust floor in Room 17 the area formerly occupied by the hypocaust was filled with rubble and a great quantity of broken box flue tiles in a clayey deposit (Fig. 4, layer 1, ER. 914). The upper surface of this dump was level with the door sill, and it is clear that by filling the hypocaust access was possible across the rooms while demolition continued during which phase a loose mortar layer and an ash and clay deposit (Fig. 4, layer 2, ER. 919) were evidently deposited. Possibly at this time the constant passage of people through the doorway rendered the clay there soft and unsuitable, and was the reason for laying a layer of flat tiles above the yellow clay in the doorway.

Eventually, however, further demolition occurred while a dump of clayey material containing flanged roof tiles, and lumps of mortar, was deposited in the room (Layer 3; ER. 915 [bottom], ER. 920 [middle], ER. 923 [top]). Stratigraphically later than this, though occurring almost simultaneously, a quantity of gravel was dumped into the *caldarium* (Level 4).

Dumped deposits were found in other rooms: in Room 18 there was clay and gravel (ER. 921, 922, 925). Dumped brickearth was found overlying a pink mortar floor at Floor 20 (ER. 939). In Room 27 a layer of broken roof and flue tiles in building rubble (Fig. 9, section 1, layer 7) was overlaid by a dump of brickearth and broken wall plaster (Fig. 9, section 1, layer 6) indicating that the roof had been demolished before the dumping occurred. In Room 28 (Fig. 8, section 5) similar dumped deposits were found, and brickearth deposits filled the three doorways. In Room 29 the pipe trench was first filled with demolition debris (Fig. 8, section 5, layer 3; Fig. 9, section 1, layer 4; Plate 2), over which there was a dump of yellow-brown brickearth containing broken flanged roof tiles, bricks, some of which had mortar adhering to them, and broken pieces of mortar (Fig. 8, section 5, layer 4; Fig. 9, section 1, layer 5).

Small pieces of marble veneers and mouldings from the dumped deposits in this area suggest that re-usable architectural elements had been stripped out for re-use at an early stage in the

demolition. In Room 30 a dump of yellowish clay contained much Roman building debris (Fig. 8, section 4, layer 2) which included broken flue tiles, flanged roof tiles, broken *pilae* tiles, lumps of Kentish ragstone and much broken mortar (ER. 1422).

In Room 31 a pause between the demolition of the flue and the dumping of clay and building debris is suggested by two thin ashy layers which were deposited over the stumps of the flue walls (Fig. 9, section 2, layer 2). Above this were major dumps of debris which had clearly been deposited in quick succession, the different loads of dumped material evidently having been brought from several different sources. The lowest dump was of gravelly earth which contained building rubble and much broken mortar (Fig. 9, section 2, layer 7). Over this was a dump of brickearth which contained more building rubble (Fig. 9, section 2, layer 8). A dump almost exclusively of building rubble (flat bricks, flanged roof tiles, wall plaster, ragstone, and broken mortar) overlay this (Fig. 9, section 2, layer 9); while above that was further dumping of brickearth containing building rubble (Fig. 9, section 2, layer 10).

The single *pila* found in the south-west corner of Room 32 had clearly been removed, presumably in the demolition stage prior to the final dumping to fill in the bath building. Above this were the deposits of dumped material, with, at the bottom, a layer of broken building debris of tiles and stone (Fig. 9, section 3, layer 2). More broken building debris occurred in the overlying dump of gravelly brickearth (Fig. 9, section 3, layer 3). Above that was a dump of grey earth containing building rubble (Fig. 9, section 3, layer 5), and above that again a deposit of dumped brickearth containing more broken building material (Fig. 9, section 3, layer 6).

Evidence that debris was tipped from the higher to the lower terraces was found in Area 35 and Room 36 (Fig. 8, section 6), where layers 8–14 had been so dumped. At the east end of Room 36 further evidence of dumping in this way was found (Fig. 9, layers 1–6), following the partial demolition of the north retaining wall of Room 36.

At some stage the walls themselves had been graded to the hillside slope so that the northernmost walls on each terrace, which were those set deepest into the hillside, were left standing to the greatest height (e.g. the north walls of Rooms 18, 23 and 2); while those near the outer edge of each terrace (e.g. Wall 19, and the south sides of Rooms 29 and 30) stood to very little height at all.

(iv) Destruction of the Baths: Dating Evidence

• The dating evidence for the destruction of the baths is contained only within the dumped clays, gravels and building debris used to fill the terraces and return the hillside to its normal slope. Only a selection of the pottery is given as it cannot be too closely dated (Figs. 21–22, Nos. 7–34). The Excavation Register groups from these deposits of dumping may be consulted at the Museum of London. No coins of any dating significance were found in the dumped deposits; but the samian ware was particularly valuable. The dating range of the pottery as a whole extends from before the Flavian period to the middle of the second century A.D., the latest samian ware occurring in ER. 940 (mid-second century), and clearly the dumping occurred not earlier than that date.

The location of the dumped deposits from which dating evidence was recovered was as follows:

- | | |
|--|--|
| ER. 914 and 917: Pottery from the lowest dump of building debris in Room 17 below the level of the door sill (Fig. 4, section, layer 1). Coarse pottery illustrated (Fig. 21, Nos. 7,8), and samian described p. 57. | ER. 920: From the middle of the dumped clayey rubble deposit in Room 17 (Fig. 4, section, layer 3), above ER. 915. Pottery illustrated (Fig. 21, Nos. 12, 16). |
| ER. 915: From the bottom of the clayey rubble dump above ER. 914 filling the doorway to Room 18 (Fig. 4, section, layer 3). Coarse pottery illustrated (Figs. 21, Nos. 9–11). | ER. 923: From the top of the dumped clayey rubble deposit in Room 17 (Fig. 4, section, layer 3), above ER. 920. |
| ER. 916: From the black silt above the timber drain in Room 15. | ER. 924: From the lower part of the dumped clay in Room 15, at the level of the timber drain. |
| ER. 918: From the clayey dump in the arched flue in the apse wall of Room 18. Pottery illustrated (Fig. 22, Nos. 17, 18). | ER. 925: From the surviving upper part of the dumped brickearth inside the apse of Room 18, about 2m above the lower floor of the hypocaust. |
| ER. 919: From the black ashy deposits in Room 17 (Fig. 4, deposit between layers 2 and 3). | ER. 932: From a dump of grey, clayey soil adjoining and higher than the west wall of the <i>caldarium</i> , Room 18, at Wall 19. Lamp illustrated (Fig. 22, No. 19). |

- ER. 940: From the dump of clay immediately above the lower hypocaust floor of the *caldarium*, Room 18, at Wall 19.
- ER. 1372: From the dumped rubble in Room 31 (Fig. 9, section 2, layer 9).
- ER. 1373: From a clayey dump in Room 31 (Fig. 9, section 2, layer 8), underlying ER. 1373.
- ER. 1374: From a dumped deposit in Room 31 (Fig. 9, section 2, layer 7), which underlay ER. 1373.
- ER. 1375: From the grey, ashy soil in Room 31 (Fig. 9, section 2, layer 6), underlying ER. 1374.
- ER. 1376: From an ashy deposit in Room 31 (Fig. 9, section 2, layer 5), underlying ER. 1375.
- ER. 1385: From a dump of clay overlying the south wall of Room 28 (Fig. 8, section 6, layer 6). Samian ware described p. 57.
- ER. 1386: From the demolition rubble above the north wall of Room 36 (Fig. 8, section 6, layer 3). Samian ware described p. 57.
- ER. 1387: From a dump of rubbly earth in Room 32 (Fig. 9, section 3, layer 5). Samian ware described p. 57.
- ER. 1398: From a dump of brickearth below ER. 1397 in Room 32 (Fig. 9, section 3, layer 3).
- ER. 1407: From a layer of ash in the dumps of clay in Room 36 (Fig. 9, section 7, layer 5).
- ER. 1408: From a dump of clay (Fig. 9, section 7, layer 6) overlying ER. 1407 in Room 36.
- ER. 1409: From one of the lowest dumps of rubble and clay in Room 36 (Fig. 9, section 7, layer 2). Samian ware described p. 57.
- ER. 1418: From rubble filling in Room 29 (Fig. 8, section 5, layer 4). Coarse pottery illustrated (Fig. 22, Nos. 20–22).
- ER. 1422: From rubble filling in Room 30 (Fig. 8, section 4, layer 2). Coarse pottery illustrated (Fig. 21, No. 15). Samian ware described p. 57.
- ER. 1424: From rubble and clay filling of the robbed pipe trench in Room 29 (Fig. 9, section 1, layer 4; Fig. 8, section 5, layer 3).
- ER. 1425: From a rubble layer in Room 27 (Fig. 9, section 1, layer 7). Coarse pottery illustrated (Fig. 22, No. 34).
- ER. 1427: From a dump of gravel and clay in Area 35 (Fig. 8, section 6, layer 5). Samian ware described p. 57.

(v) Destruction of the Baths and later Roman use of the Site

With so much expense lavished on the building, it is difficult to understand why the Huggin Hill baths were demolished as early as the second half of the second century. Although it is possible that most of the dateable content of the dumps filling the bath is residual and does not really reflect the date of demolition, it is unlikely that the demolition occurred significantly later, as in that case a few later sherds might have been expected in the dumps. A serious difficulty in establishing the date of destruction has been the absence of deposits contemporary with the occupation and use of the baths due to the systematic methods of demolition used by the Romans.

The destruction of the baths was clearly not undertaken for the purpose of replacing it with another public building, since the fragmentary traces of later Roman stone buildings on the site were clearly of an insubstantial nature, with comparatively narrow walls and much re-use of building materials from the baths. Nevertheless, it seems likely that some parts of the public baths may not have been demolished, though there is no architectural evidence for this, and continued to be visible as late as the late ninth century when an ancient stone building on this site was known as *Hwaetmundes stan* p. 26.

(d) Later Roman Buildings

After the Huggin Hill baths had been demolished and the hillside apparently restored to its former slope, at least two new Roman buildings were constructed on the site. Only small portions of the buildings had survived and no satisfactory dating evidence for them could be recovered.

Building 'A'

This building is merely represented by three sides of a room situated over Room 2 of the former baths, the foundations of Building 'A' being fairly deeply buried below the contemporary land surface which had been destroyed. Clear evidence of a rebuilding of the room was recorded (Fig. 10).

Phase 1 The room had been built on the south side of the cold bath of the former public baths, and it is likely that the south wall of the cold plunge bath had been used as a foundation for the north side of building 'A'. Assuming that this was the case the room would have measured 5.3m from north to south, and 4.4m from east to west.

Only the foundations of the walls of the room had survived, and these were built of ragstone set in a soft brown mortar. The lower part of the foundations included reused material,

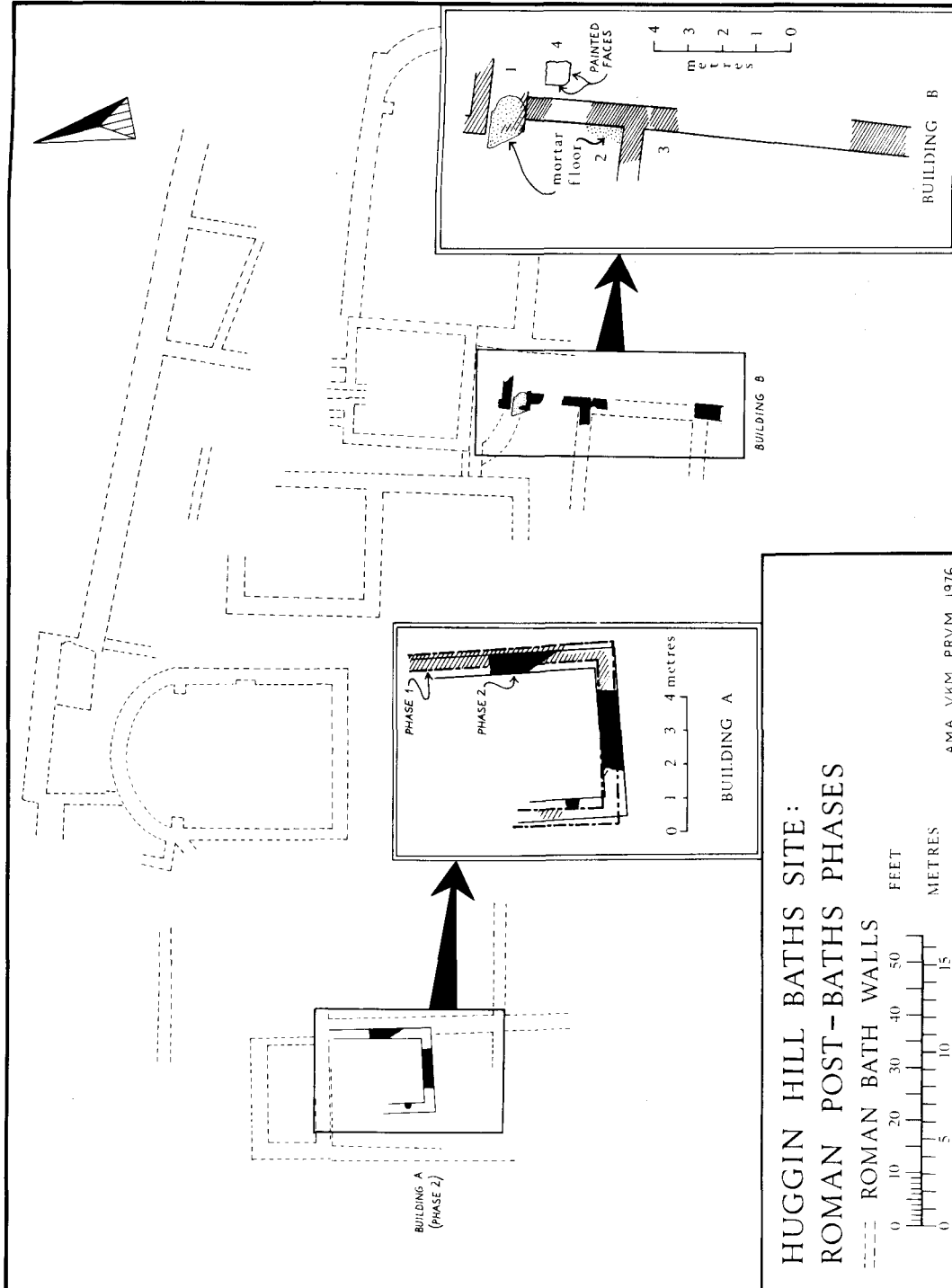


Fig. 10 Huggin Hill baths site: post-baths Roman buildings.

presumably from the bath building, in which were fragments of painted wall plaster and a fragment of mortar floor with small white tesserae (ER. 938).

Phase 2 The room was rebuilt during this period on a slightly smaller scale, and measured about 5.3m from north to south, and 3.6m from east to west.

The new wall foundations mostly overlay the Phase 1 foundations, and were well built with ragstone set in a hard yellowish buff cement. At the surviving top of the wall, at about 6.4m above O.D. there was a single course of bonding tiles. The faces of the walls of this room were extremely smooth due to the hollows between the facing stones and tiles being completely filled with mortar.

Building 'B'

A later Roman building was constructed in the region of the site formerly occupied by Area 34 and Room 36 of the bath buildings (Fig. 10). Its construction was extremely fragmentary and not too easy to interpret since its walls had broken through hillside subsidence (Fig. 9, section 7).

Step 1 At the surviving north end of the building were what seemed to be two roughly made steps with some paving of white concrete forming the surface of the lower step. Each step was built of ragstone and broken *opus signinum*, bricks and tiles evidently reused from an earlier Roman building. The mortar in the northernmost step was pinkish, but buff coloured in the lower one. The west end of each step returned northwards to enclose a deposit of brickearth fill in the step (Fig. 9, section 7, layer 10). The east end of the steps had been destroyed by later disturbances. The white concrete slab overlay the lower step and the northward return at its west end. It was clearly somewhat out of place, and could have been merely a loose piece of building rubble dumped on top of the step. Nevertheless, its northern edge lay so close to the face of the upper step that it seems more likely that it was the actual step surface, moved out of place, presumably by hillside subsidence.

Room 2 The hillside and the Roman building had subsided immediately south of Step 1, with the result that the original relationship of Room 2 to Step 1 was lost (Fig. 9, section 7). The east wall of this room, 0.45m thick, was built on a foundation of ragstone and buff mortar, above which the bottom of the wall was constructed of two or three layers of broken reused tiles. In fact, the wall also contained a fragment of reused Purbeck marble and reused portions of broken flue tiles; and like Step 1, was clearly not well-built.

At the south-east corner of Room 2 a little of the flooring remained at the level of the lowest course of tiles. Parts of two superimposed buff mortar floors remained, each one 0.025m thick.

Room 3 Only the north-east corner of this room had survived, the room having been badly damaged due to subsidence. Nevertheless, the wall construction was similar to that in Room 2, though none of the floor of Room 3 had survived.

Feature 4 This may have been a large loose piece of demolished wall of the bath building, though it occurred at the level of the wall forming the north end of Room 2 in dumped clay and gravel. Possibly it comprised the remains of a ragstone and mortar pier, the south face of which had been rendered and painted red, while the west face had been painted white.

Dating Evidence

No dating evidence of any apparent significance was found associated with Building 'B'. As the building overlay the dumped deposits filling the Roman bath it was clearly not earlier than the middle of the second century in date. But Building 'B' itself was covered by dumped gravel and clay following its own demolition, the composition and dateable pottery from which is indistinguishable from the dumped deposits that pre-date Building 'B'. The pottery itself was recovered from the following dumped deposits overlying Building 'B'.

Section 7, layer 17 — a dump of clay containing much broken mortar, and some sherds (not illustrated) of the first and second centuries A.D. (ER. 1403, 1405, 1406, 1432).

Section 7, layer 11 — a deposit of brickearth containing large pieces of mortar, which overlay the broken east wall of Room 2. The few sherds (not illustrated) of first to second century date included a reeded rim of the early second century, and a Flavian sherd of samian ware (see p. 57) (ER. 1389).

Conclusion

There is little to be said about Building 'B' except that it was built after the middle of the second century, and its narrow walls and poor construction, which includes so much reused building material, presumably from the public bath building, all suggest that it was not any form of public construction. Indeed, it has all the appearance of being a poor quality private building.

Historical Note on the Bath Site in the Saxon Period by Tony Dyson

Some small light on the uncertain nature of the final building phase at the Huggin Hill baths is provided by a rare and unexpected source, a late ninth century Saxon land grant. The charter, which comes from an early eleventh century copy in the reliable Worcester cartulary, records a grant made in 889 by King Alfred to Bishop Waerferth and the church of Worcester of a courtyard (*curtis*) for use as a market.⁸ The courtyard was here defined as an ancient stone building known to the citizens as *Hwaetmundes stan*, and was bounded at opposite ends by a public street and the city wall, respectively. Measurements in perches are also provided. This document lends substantial authority to a second charter, in itself apparently far less trustworthy, which records a grant made in 898–9 by Alfred to Waerferth and Archbishop Plegmund of Canterbury.⁹ This grant awarded to each of them adjoining properties at Queenhithe which abutted on a wall beyond which flowed the Thames. Elsewhere the properties were bounded by roads or 'lanes' (*semitae*), one of which ran between the two areas from north to south. It seems quite likely not that these two charters both relate to the same area, but that the Worcester grant of 889 was concerned with half the area of the Worcester–Canterbury grant of 898–9. What is important for the present purposes is that the proportions of the grant of 889, which is provided with measurements, exactly coincide with the proportions of an area, immediately north of Queenhithe, on modern maps. This is the area bounded by Thames Street to the south, Little Trinity Lane to the north, Bread Street to the west and Great Trinity Lane to the east.¹⁰

The fact that this area is divided north to south by Huggin Hill which the Roman Bath straddles, and that the charter of 889 describes it as a courtyard, and as an ancient stone building, is of great interest. As Ekwall commented of this charter; "since profane stone houses built by Anglo-Saxons were probably rare in this early period, the stone house may well have been the ruin of an old Roman house".¹¹ We know that, at least in isolated cases, evidence of Roman building survived in London. In 839, only fifty years before the charter, Bishop Helmstan of Winchester referred to "the illustrious place, built by the skill of the ancient Romans, called throughout the world the great city of London".¹² The O.E. '*stan*' in *Hwaetmundes stan* almost certainly records the pre-existing stone structures and could be compared with the name *Lundenestane* by which London Stone in Cannon Street, recently identified as possibly forming part of the principal gateway of the Roman Palace, was known in the twelfth century,¹³ or with *Staines* in Middlesex (O.E. *Stana*) the site of the Roman posting station of *Pontes*.

Thus it seems likely that the Saxon *curtis* of 889 represents the final stage of the Huggin Hill baths and that the positions of the numerous thoroughfares which are stated to have determined the area in 898–9, including Huggin Hill itself, were fixed by the nature of the surviving buildings. In particular the strange change of direction in Bread Street is explicable only in terms of some comparable obstruction which existed in the late ninth century just north of the Baths site, and which impeded the regular street grid discerned in this western area of the City,¹⁴ and whose attribution to the reign of Alfred is supported by this identification of the contemporary Saxon charters.

(e) General Discussion

An analysis of the structure of the baths indicates that there were at least three phases of construction though it is, of course, not possible to state with certainty that the three phases found in one part of the baths are necessarily of the same period as three phases found elsewhere. In spite of this, it is somewhat easier to suggest which walls belonged to the original phase of construction and which were added, though it must be remembered that the excavation of the baths is incomplete and that considerably more evidence will be available when further excavation becomes possible.

Bearing this in mind, however, it seems that the western part of the baths comprised the first phase of construction as a unified bath suite, and that at a later date a second series of bath rooms was added on the eastern side, which included not only the building of a large new *caldarium*, but also involved modification of some of the existing rooms to accommodate a hypocaust heating system. At some stage there appears to have been some reconstruction and modification of walls at the west end of the baths using only bricks, but this has not been dated.

Although the limited dating evidence is fully described later it seems likely that the original construction of the baths dates from the late first century, and that the addition of a second suite of baths occurred during the early second century A.D.

Phase 1 The baths were built during this phase on three terrace levels dug into the hillside. The lowest lay between 3.2m and 3.81m above O.D. and probably contained the entrance and exercise chambers and yards. The next terrace lay about 5.33m above O.D., and on this were located the main bath rooms, including the heated chambers; while above this the topmost terrace lay at about 6.7m above O.D. These rooms perhaps provided accommodation for the maintenance and administration of the baths.

Little is known about the rooms on the lowest terrace, though Rooms 2, 4, 5 and 36 were all situated there, and in each case the floors appear to have been of *opus signinum*. At only two points has the retaining wall been found between this lowest terrace and the higher terraces (the north sides of Rooms 2 and 36) and in both cases these walls were heavily buttressed. There is no certainty that the entrance would have been located on the lowest terrace, but as that terrace was probably of considerable width and extended to the quayside about 30.48m to the south, it is likely that here was the only space available for a portico entrance and for a *palaestra* for exercises. It is unlikely that the massive Roman wall found by Charles Roach Smith under Upper Thames Street in 1841,¹⁵ formed the southern precinct of the baths and of other official constructions to the west, since his discovery of many reused sculptured stones in the wall suggests that it is unlikely to be as early as the baths. The wall found by Roach Smith may have been a rebuilding of an earlier precinct wall of the baths, however, and it is perhaps significant that the wall was not found extending further east than Queenhithe—the eastern limit of the baths. The western limit occurred at Lambeth Hill where evidence of massive Roman constructions, presumably of a ‘public works’ nature, has been found from time to time.¹⁶

The main bath rooms were clearly situated on a terrace in the hillside at about 5.33m above O.D., a level no doubt dictated by the fact that the junction of the spring line of the Taplow Terrace gravels and the impervious underlying London Clay occurred at this point. As the excavations have shown, the baths did not apparently need a central source or aqueduct to supply water. Instead, the retaining walls built into the hillside provided dams for the spring water which it was possible to pipe to any part of the baths.

Since the sequence of bath rooms to be visited by the bather must have comprised the *frigidarium* (cold room), the *tepidarium* (warm room), and possibly a *laconicum* (hot dry room), it is possible tentatively to interpret the surviving plan of the baths. Room 18 has the typical apsidal end of a *caldarium*, and with doorways in its west and east walls there is little doubt that the *tepidarium* lay on one or other side. That the *tepidarium* was located on the west side of Room 18 is suggested not only by the great drop from the door sill in the west wall of the *caldarium* to the floor of Room 17, indicating that Room 17 contained a hypocaust, a view supported not only by the discovery of a flue pointing in

that direction from the furnace, Room 15, and by the finding of a possible *pila* (Feature 10), but also by the existence to the west of the cold plunge bath, Room 1, which was, no doubt, an adjunct of the *frigidarium*.

There are difficulties presented by this interpretation, not only because it is difficult to explain the curious wall (16) alignment on the west side of the *caldarium*; but also as access to the cold bath was clearly from the east and the *frigidarium* must have been situated in that direction, there is no room for both a *frigidarium* and a *tepidarium* between Rooms 1 and 18. The question, therefore, is where was the *frigidarium* situated? Clearly, only further excavation can resolve this matter with any degree of certainty, but the evidence suggests that it was possibly located as an upper floor, at, or above the floor level 6.7m above O.D., over Rooms 2, 3, 4, 5 and the area to the east. It is perhaps in this region that a staircase is still to be found linking the bath rooms with the lowest terrace.

During the first phase there were evidently several rooms, the purpose of which is uncertain, situated east of the heated bath rooms. Rooms 28, 29, 30, 31 and 32 all probably existed during this phase as unheated chambers. The simulated ashlar blocks forming the wall surfaces of the corridor, Rooms 29 and 30, suggest that they had a particular purpose which precluded them from having the usual painted plaster rendering. The need for an oblique opening between Rooms 30 and 31 is puzzling and suggests that the form of Room 31 in the early phase was not as it now appears. Similar diagonal openings were found in baths at Wroxeter, linking an *apodyterium* with the *tepidarium* and with the outside of the building.¹⁷ Equally puzzling is the significance of the curved foundation in Area 34. It is not certain if it dates from an earlier phase than Rooms 29 and 30 or if it was an appendage built on to Room 30.

The deep Rooms 21 and 22 are identified as parts of a large pool since the presence of culverts in the north retaining wall of Room 21 could only have drained water into the chamber. There is, however, no certainty regarding the period in which these were built. The pool could have been used either for swimming or as a storage tank source of water for the various bath rooms and toilets, though on the available evidence it seems more likely that it was a swimming pool because the prime bath rooms requiring water could not have been fed from it. Firstly, the cold plunge bath, Room 1, lay at a higher level than the pool at the west end of the baths complex. It is unlikely that it could have been supplied from the pool as the water would have had to be pumped both uphill and around the *caldarium* (Room 18). Also, as has been seen, the *caldarium* itself had its own source of water from a pipe set in its apse wall which tapped the hillside ground water. The southern extent of the pool is uncertain, for the wall separating Rooms 21 and 22 was so narrow that it is unlikely to have supported much water pressure on its north side, and was possibly part of a structure within the pool. Because the pool was sunk below the level of Room 13 there was no need for the wall at its west end to be of any great thickness. The wall at the east end was different, however, for some heated rooms (Rooms 23 and 25) lay at a low level just beyond, and it was necessary for the east wall to be somewhat thicker. Because there must have been a constant flow of fresh ground water into the pool it was clearly necessary to have a constant overflow of excess water, and this was presumably the purpose of the pipe which underlay Room 29 and Area 34. The fact that the pipe had been robbed out when the baths were demolished implies that it was probably of lead and salvaged for the value of the metal. There were no signs of robbing of any of the other building materials with the exception of the decorative marbles.

The rooms on the highest terrace have no distinctive form which enables them to be identified with any certainty, but it is perhaps significant that the extent of the rooms was limited, suggesting that they were not in general public use, and that access to the main furnace (Room 15) heating both the *caldarium* and the *tepidarium* was probably from here. A minor service entrance to the baths may have existed in the retaining wall (Feature 14).

Phase 2 The baths were considerably enlarged at the east end during this phase with the addition of a separate and very large series of bath rooms. The main identified chamber is an enormous *caldarium* (Room 33), one of the largest yet discovered in Roman Britain. Adjoining it were at least two other heated rooms—Rooms 30 and 32, one of which was presumably the *tepidarium*. The original floor of Room 30 was removed during the construction of Phase 2 and a hypocaust was built in its place, while a new furnace chamber to heat the room was built in Room 31. It is difficult to judge whether or not Room 32 originally contained a hypocaust, though it certainly did in Phase 2, for the heat was drawn from Room 30 through a flue roughly cut into the wall separating the two rooms. Thus it seems that Room 30 was hotter than Room 32, though the size of the former must have dissipated the heat. The furnace supplying heat to the *caldarium* has not been found, and neither was the furnace heating Rooms 23 and 24.

Judging from the arrangement of the rooms it seems likely that Room 28 was the *frigidarium*, Room 30 the *tepidarium*, and Room 33 the *caldarium*. The purpose of the heated rooms to the north of the *caldarium* is uncertain, though as they must have been heated by their own furnace it is likely that one or more may have been *laconica* (hot, dry rooms). No cold plunge bath was found, and presumably this lies beneath or west of Huggin Hill adjacent to the *frigidarium*; and no definite evidence of a hot water bath in the apsidal end of the new *caldarium* was located. Almost all but the lowest courses of stones of the wall foundations of that room had been destroyed in recent times by office development on the site. Nevertheless, at the north end of the apse the stump of a small square buttress, such as occurred in the earlier western *caldarium* (Room 18), was found, suggesting the probable limit of the conjectured pool.

Although much remains to be excavated, it is clear that the baths, when viewed from the river, must have had a somewhat jumbled appearance with the roofs, both tiled and presumably vaulted (though no voussoir box tiles for roof vaulting were found), being arranged in no apparent order. Its plan contrasts with the generally ordered layout of rooms in other public baths found in Britain, as, for example, at Leicester,¹⁸ Silchester,¹⁹ and Wroxeter.²⁰ The reason for this haphazard layout is largely due both to the need to accommodate the baths on the terraced hillside, and to the fact that the building was not of a single phase.

Double public baths are unusual, others in Britain having been found at Leicester and Wroxeter,²¹ though as few town baths in Britain have been completely excavated the rarity of double baths may simply be more apparent than real. In each case it seems that there were separate baths for men and women, though to judge from Leicester and Wroxeter it seems that the two sexes probably shared the *palaestra* or exercise court and the *frigidarium*. The introduction of separate baths may have been an innovation of Hadrian who, disturbed by scandals resulting from mixed bathing, decreed sometime between 117 and 138 that mixed bathing was to discontinue.²² In effect this meant that either a separate series of bath rooms had to be built, as occurred in the Huggin Hill

baths, or that bathing for men and women occurred at different times of the day.

Hadrian himself visited Britain in A.D. 122 when he instituted many reforms.²³ In Londinium there seems to have been activity occasioned by the visit which perhaps resulted in the setting up of a fine, larger than life, bronze statue to the emperor, probably in the eastern part of the city. The head of the statue was found in the Thames at London Bridge in 1834.²⁴ Amongst the public works may have been the completion of the forum,²⁵ and it would seem possibly also the construction of the second group of bath rooms in the Huggin Hill baths.

There is no evidence to show which group of rooms was used by men, and which by women; but in this connection it is interesting to note that amongst the demolition rubble found in the western *caldarium* (Room 18) were several fragments of wall plaster with parts of scratched graffiti, one of which on a piece of red painted plaster included the man's name QUINTUS (Fig. 24, No. 60).

3. THE CHEAPSIDE BATHS, 1955–56 (*with Ivor Noë -Hume*)

(a) Introduction

The site of the Sun Life Assurance Society in Cheapside between Milk Street and King Street was developed during 1955–56, and observations of the archaeological features were made by Ivor Noël Hume for the then Guildhall Museum. The new office building occupied the sites of several buildings, some of which had been bombed during the war (Fig. 11).

That there were once substantial Roman buildings in this area was indicated by discoveries recorded as early as about 1615, when a Roman pavement was found at a depth of 4.57m opposite the church of St. Mary le Bow.²⁶ In 1861 part of a Roman pavement of red and white tesserae was found at a depth of about 5.18m, and about 9.1m to the north was found a thick wall, apparently of Roman date.²⁷ As these two discoveries were made so close together it seems likely that they were parts of the same Roman building. Finally, north-east of these, a Roman pavement of red and yellow tesserae was found in 1836 on the site of All Hallows Church, later occupied by the City of London School, in Honey Lane Market,²⁸ but it is probable that this belonged to another Roman building.

In 1954–55, just prior to redevelopment, Professor W. F. Grimes excavated three trenches in the southern part of the site and, unfortunately, missed discovering the public baths by a few metres. One trench proved abortive and was abandoned, though the other two, situated just beyond the east and west sides of the bath house, revealed Roman masonry walls.²⁹

The redevelopment of the site started in 1955, and was initiated by the mechanical clearance of all archaeological strata down to the natural gravel. This process, carried out by drag line, was watched for the then Guildhall Museum, by Ivor Noël Hume, who recorded some of the main archaeological features, mostly during lunch breaks when there was a pause in the site excavation. As a result not only were there difficulties of investigation and interpretation of the archaeological features, but also it was not possible to plot exactly the location of many of the features.

(b) Location and Geology

The site lies on the north side of Cheapside, between Milk Street to the west, Honey

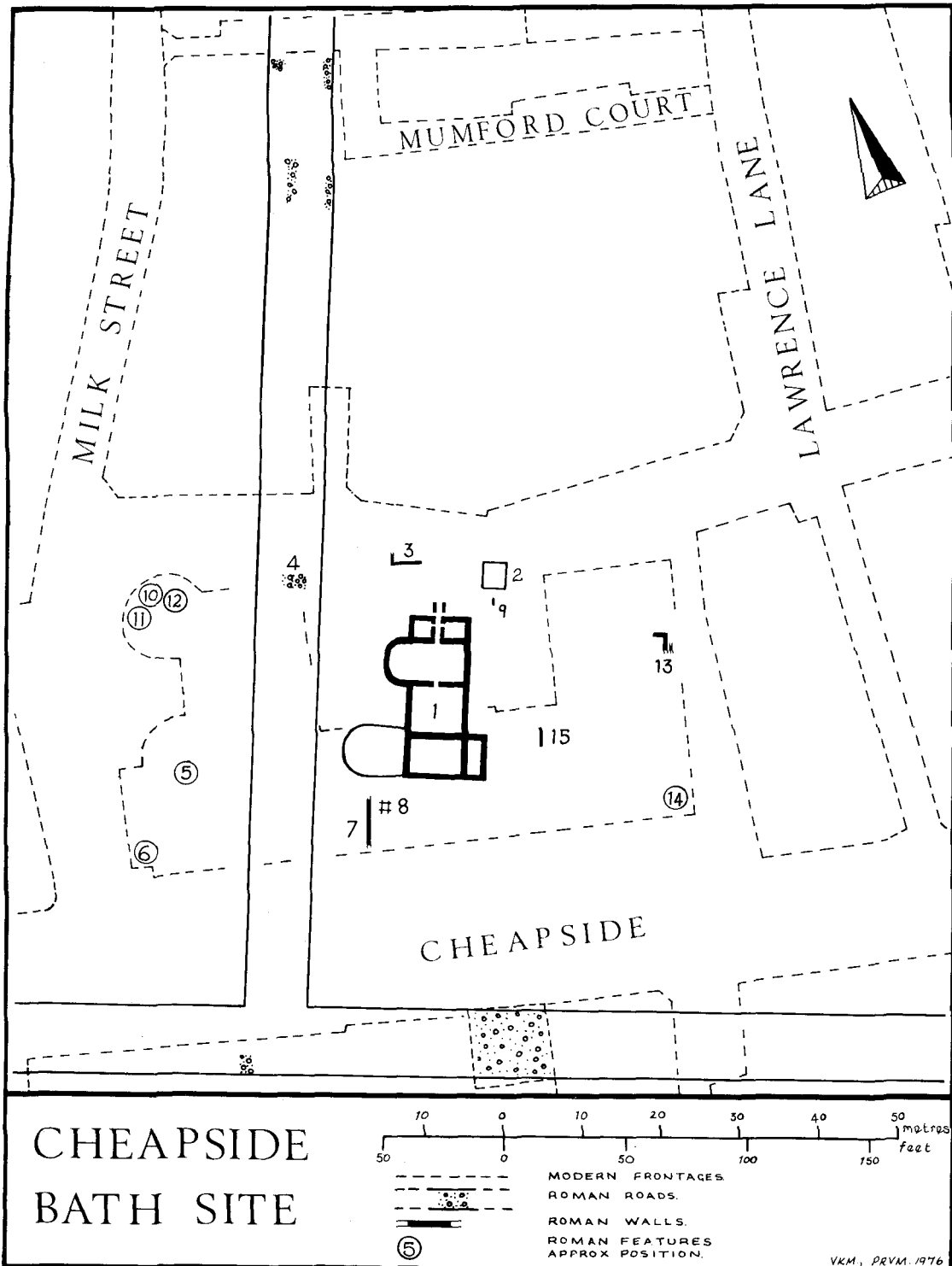


Fig. 11 Cheapside baths site.

Lane to the east, and Russia Row to the north. The area forms part of the plateau of the Taplow Terrace, and judging from nearby sites the natural surface must have lain at about 10.7m above O.D.

To the east of the site the plateau on which the Roman bath was built had been dissected by the Walbrook stream and its tributaries, while some distance to the west it had been eroded by the Fleet River; and the final result was that the baths were situated on the almost flat top of what would have been a low hill, the western slope of which now forms Ludgate Hill.

The bath building was situated close to one of the Walbrook tributaries to the east, and perhaps for that reason the water table was sufficiently close to the natural land surface in Roman times for the builders of the bath building to be able to use the natural water supply. To the east of the baths site the level of the natural surface dropped down to the main stream of the Walbrook where the Bank intersection now lies, the level of the stream bed being at about Ordnance Datum.³⁰

To the west of the baths the land gently rose by about 2.1m to reach one of the highest points on the plateau where the west end of Cheapside now lies. Even beyond this the land surface rose a little higher in one or two places to 13.4m above O.D., particularly between the branches of a stream located at the north-west corner of modern Warwick Lane. But this was exceptional and the natural surface soon sloped down west of this to form the valley of the Fleet river.

(c) Description of the Excavations

(i) The Bath Building (Fig. 11, No. 1)

The plan of the Roman bath building recorded by Ivor Noël Hume during the rebuilding operations on the site during 1956 is necessarily incomplete, but sufficient was recorded to show that it had a fairly simple layout, and had been the subject of at least one major rebuilding.

Phase 1 (Fig. 12) The overall size of the bath building during its primary phase was about 21.6m long by 13.7m wide, and it seems to have comprised a *frigidarium* (Room 1), a cold plunge bath (Room 2), a *tepidarium* (Room 3), a *caldarium* (Room 4), and probably a hot water bath (Room 6).

The construction of the building as a whole was very solid. The walls had foundations of flint and mortar; and at one point the foundation of the east wall of the building, at the junction of Rooms 3, 4 and 5, was found to be supported on a cluster of oak piles. Since timber piles did not generally underlie the foundations of the building, their location at this junction of rooms indicates that they were placed here to help support an area of particularly heavy wall construction. The walls above the foundations were about 0.6m thick and were built entirely of horizontal layers of flat tiles set in mortar. Evidence was found that Rooms 3 and 4 were heated, and it is likely that Rooms 5 and 6 were also heated from the beginning. This is suggested not only by the relationship of the rooms to those known to be heated, but also because when they were rebuilt in Phase 2 the replacement rooms, which followed the same basic plan, were heated. That they were heated is also suggested by their being built on a solid raft of flint and mortar concrete, as were the heated Rooms 3 and 4. This raft did not underlie either the *frigidarium* (Room 1) or the cold plunge bath (Room 2), and it is therefore likely that its purpose was to help support a hypocaust. Its extent is indicative of the area covered by the heated rooms. Where the raft was found, especially under Rooms 3 and 4, its upper surface was formed of two layers of flat tiles set in hard mortar.

Room 1 This was an unheated room (4.4m by 6.2m), which was evidently the *frigidarium*. Its floor was only recorded at the east end, as a brick or tile pavement laid in a herring-bone pattern. At the south-west corner, however, although the floor was missing, there was a dump of gravel at least 0.6–0.9m thick on which the floor was probably originally constructed. The walls of this



Plate 1. Huggin Hill baths: Flue from the furnace, Room 15, in the north-west corner of Room 18, viewed from the south. Scale of feet.



Plate 2. Huggin Hill baths: The corridor, Room 29, looking north showing robbed pipe, and dumped demolition debris. Scale in half metre divisions.



Plate 3. Huggin Hill baths: The eastern part of the baths viewed from the north, showing the square Room 30, and on its right the corridor 29. The *caldarium*, Room 33, is on the left. Scale of feet.



Plate 4. Huggin Hill baths: Room 30 viewed from the north-west.
Scale of feet.



Plate 5. Huggin Hill baths: North-west corner of Room 30 seen from the east showing hypocaust floor level with the flint foundation, and the flue inserted into the diagonal opening between Rooms 30 and 31.



Plate 6. Huggin Hill baths: North-east corner of Room 30 viewed from the south showing the 'mock ashlar' wall to the right of the flue containing a *pila* opening into Room 32.
Scale of feet.



Plate 7. Huggin Hill baths: Foundations of the caldarium, Room 33, viewed from the north.
Scale of feet.



Plate 8. Huggin Hill baths: The west drain beneath the lower hypocaust floor of Room 33. View looking north. Scale of half metres.



Plate 9. Huggin Hill baths: Junction of east and west drains below *caldarium*, Room 33. View looking south. Scale of feet.



Plate 10. Cheapside baths: Junction of the north end of *caldarium* apse (foreground), Room 5; with (right) stump of phase 1 cross-wall between Rooms 4 and 5; and (left) west wall of Room 6 of phase 2. View to east. Scale of feet.



Plate 11. Cheapside baths: The blocked flue 8 between the platforms 9 (right) and 10 for a hot water tank. View from the north. Scale of feet.



Plate 12. Cheapside baths: North-east corner of the timber-lined water-tank, Feature 2.

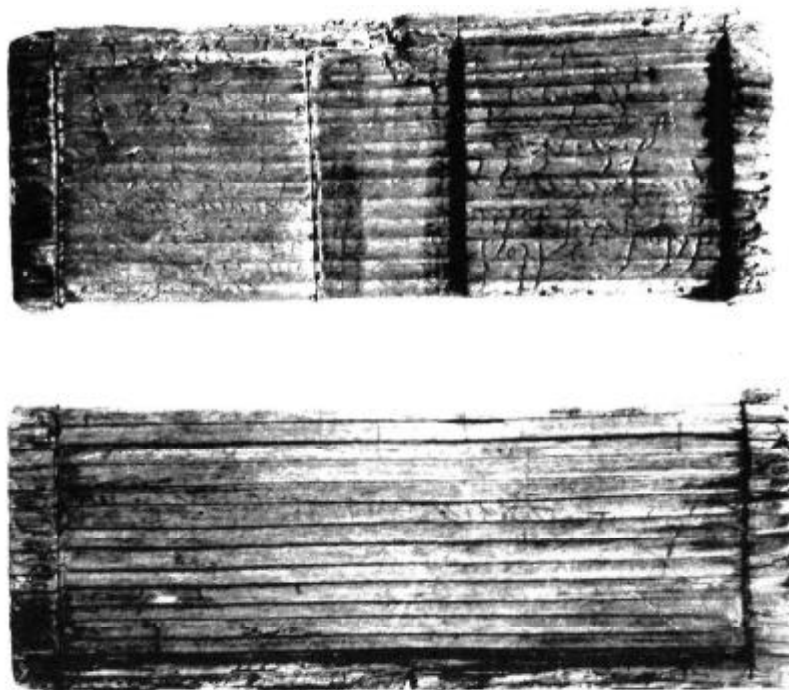


Plate 13. Cheapside baths site: Writing tablet No. 112, front (upper), back (lower).
See text, p. 66 for dimensions.

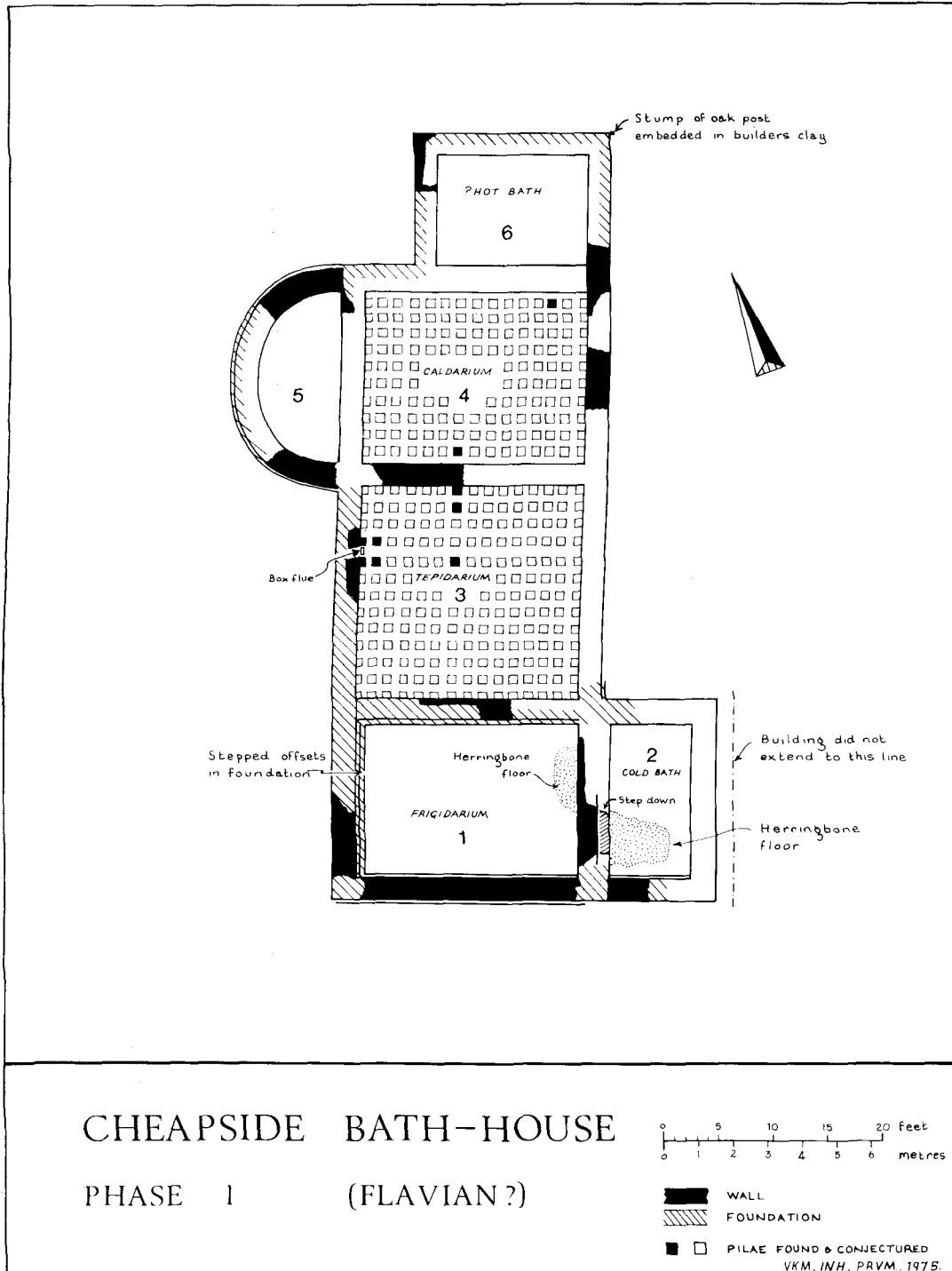


Fig. 12 Cheapside baths: phase 1.

room were well preserved, the south wall standing to a height of at least 1.2m above its foundation. There were traces of rich cherry red paint on the walls of the room.

Room 2 This small room (4.3m by about 2.3m), was unheated and the level of its floor was sunk below the general floor level of the bath building. As it was approached through an entrance from the *frigidarium* (Room 1) it must have been a cold water bath. The east wall of Room 2 was not found but its approximate position is established with a fair degree of certainty because it did not extend beyond the limit of the modern excavation. The entrance from the *frigidarium* was partly uncovered and was found to be a stepped arrangement. The floor of the cold water bath was a herringbone pavement which lay about 0.45m below the *frigidarium* floor and probably about 0.76m below the top of the sill of the entrance. It is clear from this that there was insufficient water for the bather to be immersed and that he must have cooled himself by being splashed with cold water.

Room 3 A heated room, identified as the *tepidarium*, and measuring about 6m square. Only the lower floor of the hypocaust remained, this being the raft of flint and mortar mentioned above, the upper surface of which was overlaid by two layers of flat tiles. The walls of the room above this level were constructed of flat tiles set in mortar, and as there seemed to be no flue channels set into the walls it is probable that box flue tiles were originally attached to the wall surfaces. At one point a hollow box flue tile had been mortared to the hypocaust floor at the junction of the floor and east wall, perhaps to help support the bottom of a vertical flue.

Room 4 This heated room was presumably the *caldarium*, and it measured about 4.9m by 6m. Its walls were of brick, and the lower floor of the hypocaust comprised two layers of flat tiles set into the upper surface of the flint and mortar raft which also underlay Room 3. Two brick *pilae* were recorded on the tile floor at the same level as the lower hypocaust floor of Room 3.

Room 5 An apse lay on the west side of Room 4. At its northern end was found a short length of brick wall or buttress (Plate 10), which suggests that there might have been a cross-wall separating the apse from the rest of the *caldarium*. If this is correct, then perhaps the apse contained a small bath of hot water. Unfortunately, the interior of Room 5 could not be investigated and it was not possible even to show that it was heated, though in view of its apparently standard *caldarium* form there can be little doubt that this was the case.

Room 6 This chamber could not be examined though its floor was supported on the flint concrete raft which also underlay Rooms 3 and 4, in turn suggesting that it too was heated. It seems to have measured about 3m by 4.3m internally, and it is possible that this room contained a hot bath.

Dating Evidence

No objects were found to date the construction of the first phase of the bath building.

Phase 2 (Fig. 13) Extensive modifications took place to the bath building during Phase 2 which involved the insertion of new floors and hypocausts within the existing rooms, except at the north end where Room 6 was completely rebuilt and a new furnace, perhaps on the site of an earlier furnace, was added. Possibly during this major rebuilding an additional structure was added to the west side of the building next to the *frigidarium*. Only its foundation remained and it is suggested that this may have supported a *laconicum*, or even an outside pool.

In spite of these extensive modifications the basic arrangement of rooms in the baths remained unchanged from the first phase. The rebuilding required new lower hypocaust floors to be constructed at about 0.9m above the level of the earlier, lower hypocaust floors, and much use seems to have been made of the debris to build up the level, especially broken flue tiles, from the first phase of the building. In general terms the new floors were of *opus signinum*.

Room 1 A new floor of *opus signinum* was constructed in this room above the herringbone floor of Phase 1, and as the chamber was unheated it is probable that this remained the *frigidarium*.

Approximately 4m east of the west wall of the room a step was recorded running north-south, and it is possible that this was the side of a drain channel, the rest of which had been destroyed by the mechanical excavator. It was assumed to be at or below the floor level of Phase 1, but no sign had then been found either of the herringbone floor or of the Phase 2 floor.

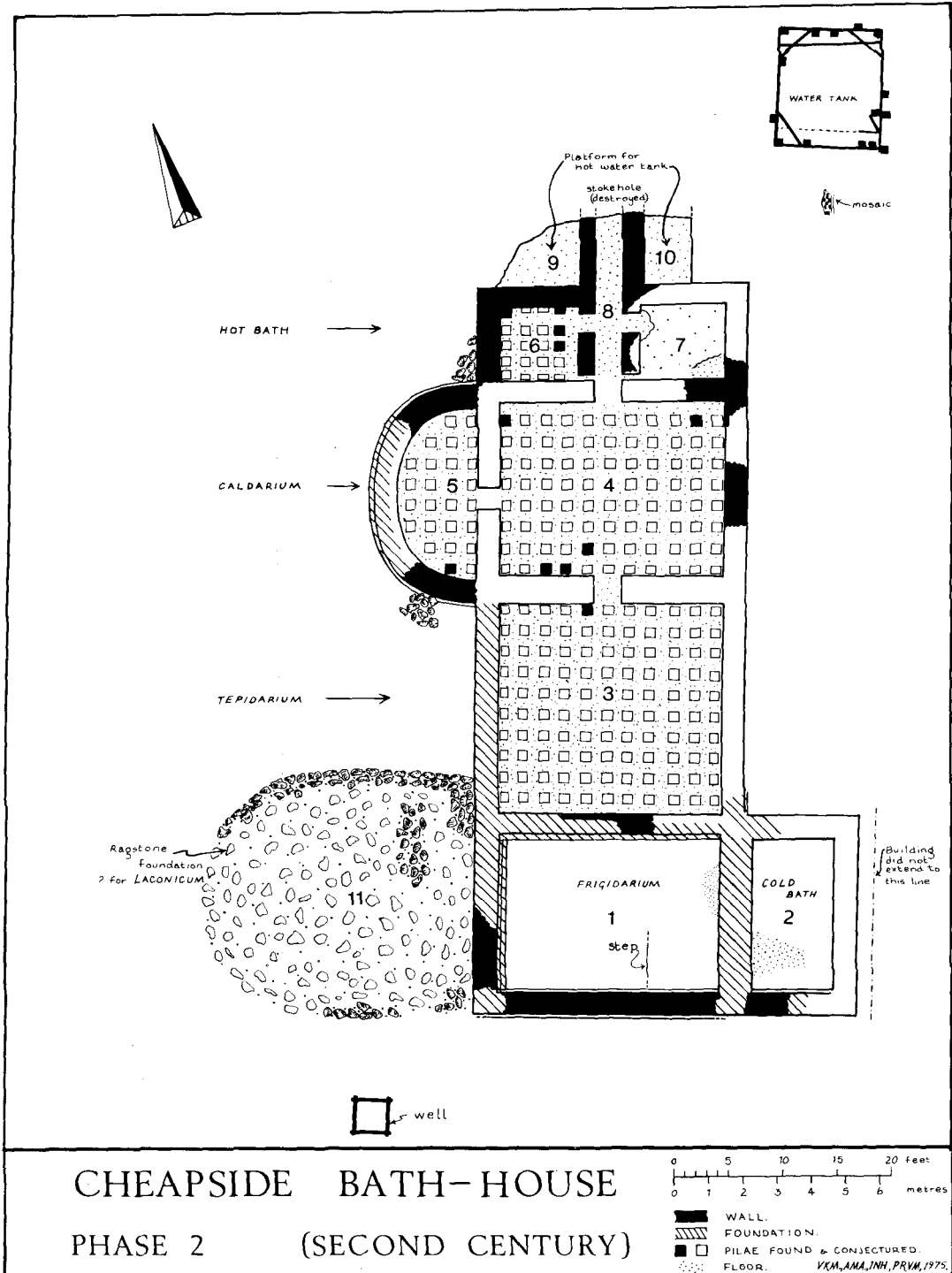


Fig. 13 Cheapside baths: phase 2.

Room 2 The cold plunge bath was modified by having a floor of hard mortar 0.15–0.2m thick laid above the earlier herringbone floor. The Phase 1 step in the west wall was filled by tiles set in mortar, no doubt to raise the step to the new floor level of the *frigidarium*, and the inside faces of the bath walls were rendered with a thick layer of mortar.

Room 3 The Phase 1 hypocaust of the *tepidarium* was filled with building debris, which included many broken box flue tiles which had probably been broken off the walls of the primary phase of the building, and over this rubble was laid a new floor of *opus signinum* which was to support the *pilae* of a new hypocaust. This new lower hypocaust floor lay about 0.9m above the lower floor of the Phase 1 hypocaust, and on it was recorded a single *pila* of square flat tiles.

Room 4 The wall separating the *tepidarium* from the *caldarium* during Phase 2 was not found, but it presumably lay on the Phase 1 wall. The hypocaust of the primary phase of the *caldarium* was filled with rubble, as was Room 3, and over this was laid a floor probably of *opus signinum* about 0.2m thick. At the north-east corner of the room, the east wall above the lower hypocaust floor of Phase 2 still retained part of its mortar rendering which presumably covered the inner surface of the walls of this room inside the hypocaust.

Room 5 The apsidal recess at the west end of the *caldarium* was definitely heated during Phase 2, for a brick *pila* was found resting on its *opus signinum* floor. It is possible that the recess may have contained a hot water bath, but no further details could be recovered.

Chambers 6 and 7 These two small heated ‘chambers’ and the flue from the main furnace between them were constructed after Room 6 of Phase 1 had been demolished. Although comprising three separate sub-floor chambers there is little doubt that they underlay a single room, probably the successor to Room 6 of Phase 1 and lying between the furnace and the *caldarium*. The identification as a hot water bath is fairly certain. The new walls of these hypocaust chambers, including the flue (8) were all constructed of flat tiles set in mortar, the walls on either side of the flue (8) being necessary to support the floor of the hot water bath.

The lower hypocaust floors of Chambers 6 and 7, and Flue 8, were all at the same level as the lower hypocaust floor of the *caldarium* (Room 4). The lower floor of Chamber 6 was fairly thick and comprised a layer of mortar overlying a foundation of mortared flat tiles laid in several layers. The *pilae* which overlay this were constructed of square bricks, and although none was recorded in Chamber 7, it too must have been heated as there were openings in the side of the main flue (8) for hot air to circulate beneath the floor of Chamber 7. It was in the north-west corner of Chamber 6 that the only surviving portion of the upper floor of the bath building was found still *in situ*. The upper floor was of *opus signinum* and was supported on large flat tiles used to bridge the gaps between the *pilae*. That the floor might have been tessellated is suggested by a number of loose white tesserae amongst the finds in the destruction debris of the hypocaust of Chamber 6, though it is more likely that these had been derived from elsewhere in the building. In addition, the debris in the hypocaust included a fragment of *opus signinum* with thirteen white tesserae still in position (ER. 337, not illustrated). The wall decoration, possibly of the hot bath, is perhaps suggested by a fragment of plaster with a red stripe on a white background (ER. 336, not illustrated).

Flue 8 The main flue channel linking the furnace with the *caldarium* (Room 4) passed beneath the middle of the hot bath (Chambers 6 and 7). Its side walls were 0.6m thick and were constructed of flat tiles mortared together. There was a straight joint between the flue walls outside the bath building and the north wall of the building, presumably due to the different function and construction of the flue. At some stage the inner face of the east wall of the flue had been repaired with square flat tiles set on edge (Plate 11).

Structures 9 and 10 Both east and west of the main flue and north of the hot bath, was situated a massive platform, about 0.9m thick, built of flat tiles horizontally laid in hard mortar (Plate 11); and although extensively damaged during mechanical clearance, enough survived to suggest that it may have formed the base of a hot water tank which presumably fed the hot water bath.

Structure 11 The lowest course of stone of a foundation of ragstone with some mortar bonding was found situated immediately to the west of the *frigidarium*. It appeared to have been added to the bath building, but as no trace of the walls that it supported was found its significance must remain uncertain. Nevertheless, the curving western side of the foundation indicates that the structure it supported was probably rounded, and although it is possible that it supported an outside pool this elaboration is unlikely in view of the small size and apparent simplicity of the

bath building. It is much more likely that it supported a circular *laconicum*, which, if its walls were 0.6m thick, as were the other walls of the bath building, would have been about 6m in diameter, and its entrance possibly from the west end of the *frigidarium*. The solid raft of ragstone concrete would, if this interpretation is correct, have supported a hypocaust, rather as a concrete raft was used to support the hypocausts of the Phase 1 bath building.

Dating Evidence

The date of the reconstruction is not closely established, and is based on one sherd of mica dusted ware dish (Fig. 25, No. 65) of the late first or early second century (ER. 346). This was found in the Phase 1 filling of the hypocaust in the *caldarium* apse (Room 5). The sherd is coated with mortar on its exterior and on one broken edge, suggesting that construction was being carried out in the bath building at the time of its loss. The loss could have been during the construction of either Phase 1 or Phase 2, but as much of the tile and ragstone which comprised the rubble fill of this hypocaust presumably belonged to Phase 1, and this also had mortar

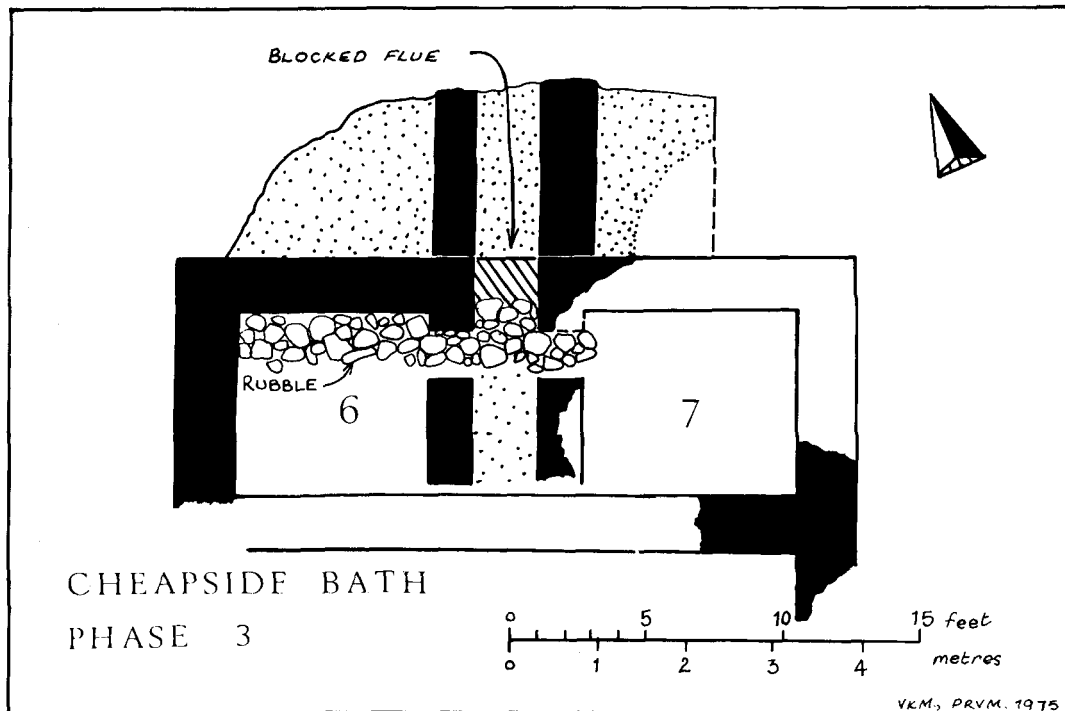


Fig. 14 Cheapside baths: phase 3.

adhering to it, so this sherd might have been coated with mortar during that construction phase. Whichever was the case, this single sherd suggests that the second phase of the bath building could not have been constructed before the late first century A.D., and indeed the rebuilding could have taken place considerably later.

Phase 3 (Fig. 14)

Flue 8 During the final phase of the use of the building the main flue channel between the furnace and the flue channel was blocked with mortared tiles (Plate 11).

Chambers 6 and 7 At the same time or later the upper floor of the hot water bath was at least partly removed, and a packing of tile fragments and ragstone was laid against the north wall of the hypocaust of the hot bath.

Discussion

It is clear that when the flue was blocked and the hypocaust was filled, the heating of the baths could not have continued in use, and thus the building must have ceased to function as a bath house.

Dating Evidence

Five small Roman sherds (Fig. 25, No. 66; p. 62) were recovered from the black soil between the ragstone lumps used in the packing in Chambers 6 and 7 (ER. 344). Only one of these, the rim of a grey ware jar of the type which is usually decorated with a lattice pattern on its body, is more closely datable and is probably of second or third century date, though the samian ware primarily dates from the latter half of the second century A.D.

Phase 4 The date and nature of the destruction of the baths is indicated by deposits which occurred in two completely different contexts. The first was the filling of the hypocausts which evidently occurred after the upper floors of the hypocausts had been removed; and the second being the deposits which had overlain the demolished walls of the bath building.

Deposits filling the hypocausts were found in the following chambers:

Room 4 Various broken flue tiles were recovered from the hypocaust at the north-west corner of this room. One of these flue tiles was decorated with a chevron pattern and the letters XTXA (ER. 342, not illustrated).

In the south-west corner of the *caldarium*, east of the apse, the rubble fill of the hypocaust contained several sherds (Fig. 25, Nos. 67 and 68; p. 62) including the rim of a coarse ware jar and the base of a Nene Valley ware jar, all of which probably date from the late second or third century (ER. 340).

Room 5 Fragments of flue tiles were found on the lower floor of the hypocaust within the apse (ER. 347). One of them had a chevron pattern and an inscription XP (?) (Fig. 26, No. 109). There were also two fragments of wall plaster of buff coloured mortar on a pink mortar base, one of which was painted red and had been over-painted with white, while the other was painted white.

Room 6 Fragments of tiles, a piece of window glass, a single white tessera, a block of *opus signinum* with thirteen white tesserae *in situ*, and some pottery dated to the third century A.D. were found in the hypocaust of this room (ER. 337, not illustrated). Additional objects (ER. 345) were later recovered from the rubble and burnt mortar filling of the hypocaust where it abutted against the ragstone packing of Phase 3 in this room. Finds include three white tesserae bearing traces of the pink mortar in which they had once been set, a fragment of flue tile, and two sherds of first century date (ER. 345, not illustrated).

Flue 8 From the flue channel below the hot water bath were recovered several sherds of second century date (not illustrated), a piece of white painted wall plaster with a red stripe, several white tesserae, and two box flue tile fragments (ER. 336, not illustrated).

Dating:

The hypocausts appear to have been filled in probably during the late second or the third century A.D.

Deposits overlying the Roman walls include the following:

Flue 8, and Structures 9 and 10 A light burnt deposit was found both in the flue (8) and overlying the concrete platform (Structures 9 and 10), and in this was a variety of objects including fragments of flue tiles, and pottery which included some early Nene Valley ware which has been dated to the second half of the second century A.D. (ER. 335, not illustrated).

Above the light burnt deposit was a black stratum (ER. 334) which overlay the main flue (8) from the stokehole, the tank platform (Structures 9 and 10), and also the north wall of the hot bath (Chambers 6 and 7) which had evidently been demolished before the stratum was formed. From this layer was recovered enough pottery to indicate a late second or third century date (Fig. 25, Nos. 69–79; p. 62). Broken flue tiles with a variety of key patterns were also found in this deposit (Fig. 26, Nos. 110 and 111).

Dating:

It would seem that the bath building had been demolished during the late second or third century A.D.

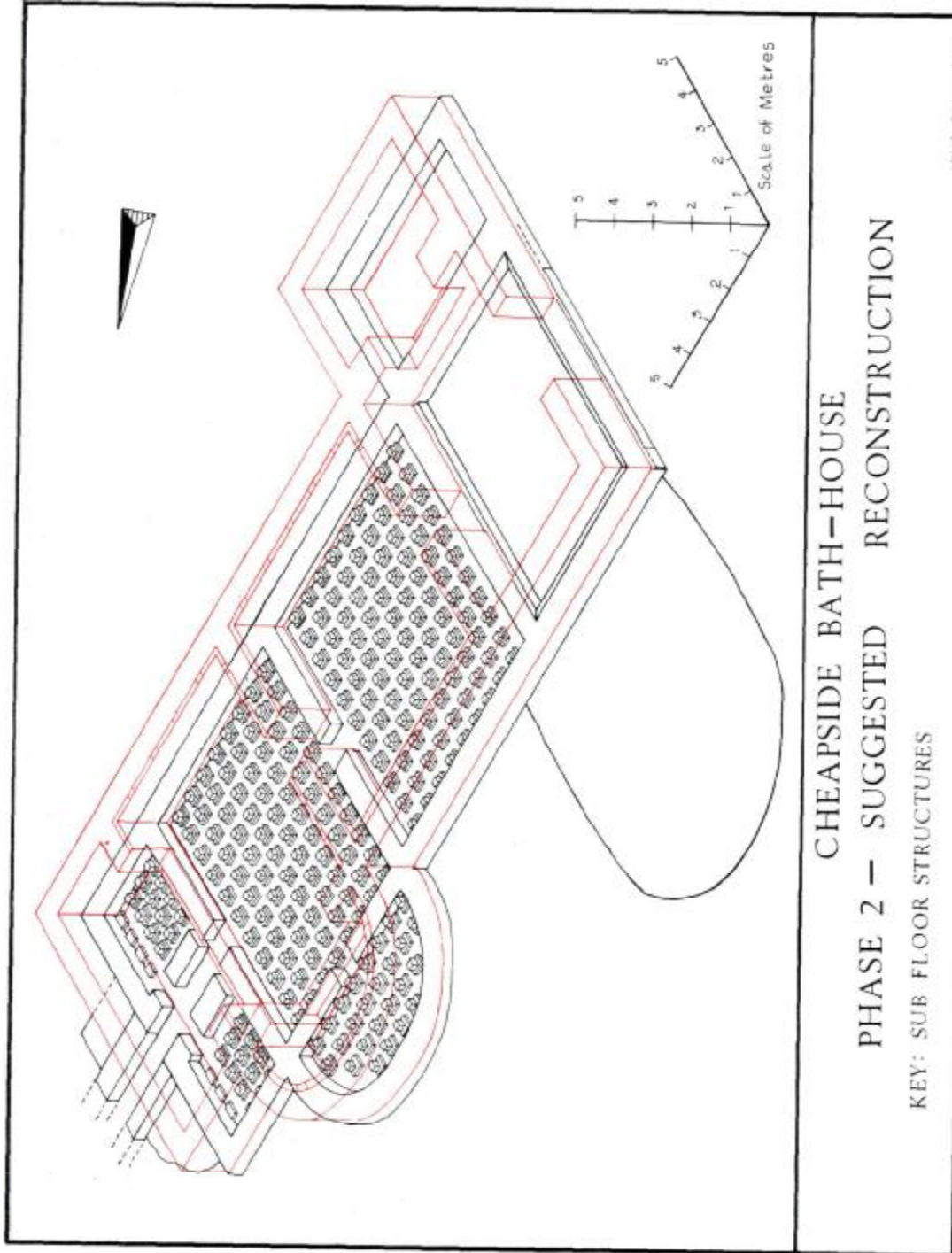


Fig. 15 Cheapside baths: suggested reconstruction.

(ii) Reconstruction of the Bath Building (Fig. 15)

Reconstructing the bath building is difficult as so little detailed information exists other than its basic plan, but on the basis of this and of other, more complete, bath buildings, a partial reconstruction is suggested in Fig. 15 (red). No trace of its main entrance was found, but this presumably lay in the south wall of the *frigidarium* where not only was it close to the main east-west street of *Londinium*, now partly beneath modern Cheapside, but also because the north, east and west walls of this chamber adjoined other rooms.

Traces of red painted wall decoration in the *frigidarium* suggest that this unheated room at least had a warm colour scheme. It is likely that it was also used as an exercise yard and a changing room, though its size indicates that not many people could have used the baths at any one time. No trace of a *palaestra* (exercise court) or of a separate *apodyterium* or changing room was found, and it is possible that these occupied the area between the bath building and the main east-west street. On the other hand the building was small and simple and it is unlikely that it would have included such pretensions. Its plan is fairly characteristic and is very similar to the small bath building of later Roman date which was found at Richborough.³¹ If the bath had no *palaestra* or separate *apodyterium* then it is more likely that the building was set back from the roadway simply because other buildings already occupied the street frontage.

In the circumstances of the rapid mechanical site clearance it was not possible to relate the floor level of the *frigidarium* with that of the *tepidarium* to establish if the floors were at one level or if there were steps up from the *frigidarium* to the *tepidarium*. The evidence of gravel dumping beneath the floor of the *frigidarium*, however, suggests that the floor was raised to the same level as the floors of the heated rooms. If this is correct it is likely that there were steps up to the bath entrance.

The nature of the floors of the bath building is extremely uncertain, except that in Phase 1 the *frigidarium* floor was a herringbone pavement, while later in Phase 2 the floor was of *opus signinum*. Although traces of *opus signinum* flooring were found elsewhere in the Phase 2 building, the discovery of a loose fragment of this flooring set with white tesserae does suggest that a more ornate flooring might have existed.

No evidence was found indicating the nature of the roof, and a study of finds from the site suggests that no box voussoirs for a vaulted roof were found. The absence of voussoirs in such a small collection is not significant, and reflects the conditions under which the investigation was conducted.

(iii) Other Roman Features

Timber-lined Tank (Fig. 11, No. 2; Fig. 16; Plate 12)

About 4.57m north-east of the baths was found a wood-lined tank measuring about 2.5m by 3.3m at its upper level, but near the bottom its north-south dimension was reduced so that the tank measured about 2.4m square. The total recorded height of timbering was a little more than 1.8m, but no doubt it was originally higher than this as it lay at the bottom of a broad excavation dug into the earliest Roman strata on the site, and even into the underlying natural brickearth and gravel.

The tank was made of oak, and the planks forming its sides were on average about 0.08m thick. At its upper level it was strongly supported inside by many upright posts each about 0.15m square, and also by horizontal cross-beams in the corners of the tank (Plate 12). Around the outside of the tank the timbers were firmly packed with clay, no doubt to help make the structure watertight.

The great size of the tank, together with the clay packing indicates that it was probably the main source of water for the public bath-house; and it is no doubt significant that the narrower lower part of the tank penetrated into the natural gravel, presumably to find a constant supply of fresh, clear water. No indications were found to suggest how the water was transferred from the tank to the baths, though amongst the finds was what might have been the roller of a winch, and two complex box-like wooden constructions of uncertain use (ER. 356B) (Fig. 26, No. 108).

Deposits within the tank

The tank contained two main deposits; the lower layers, probably of silt which had probably

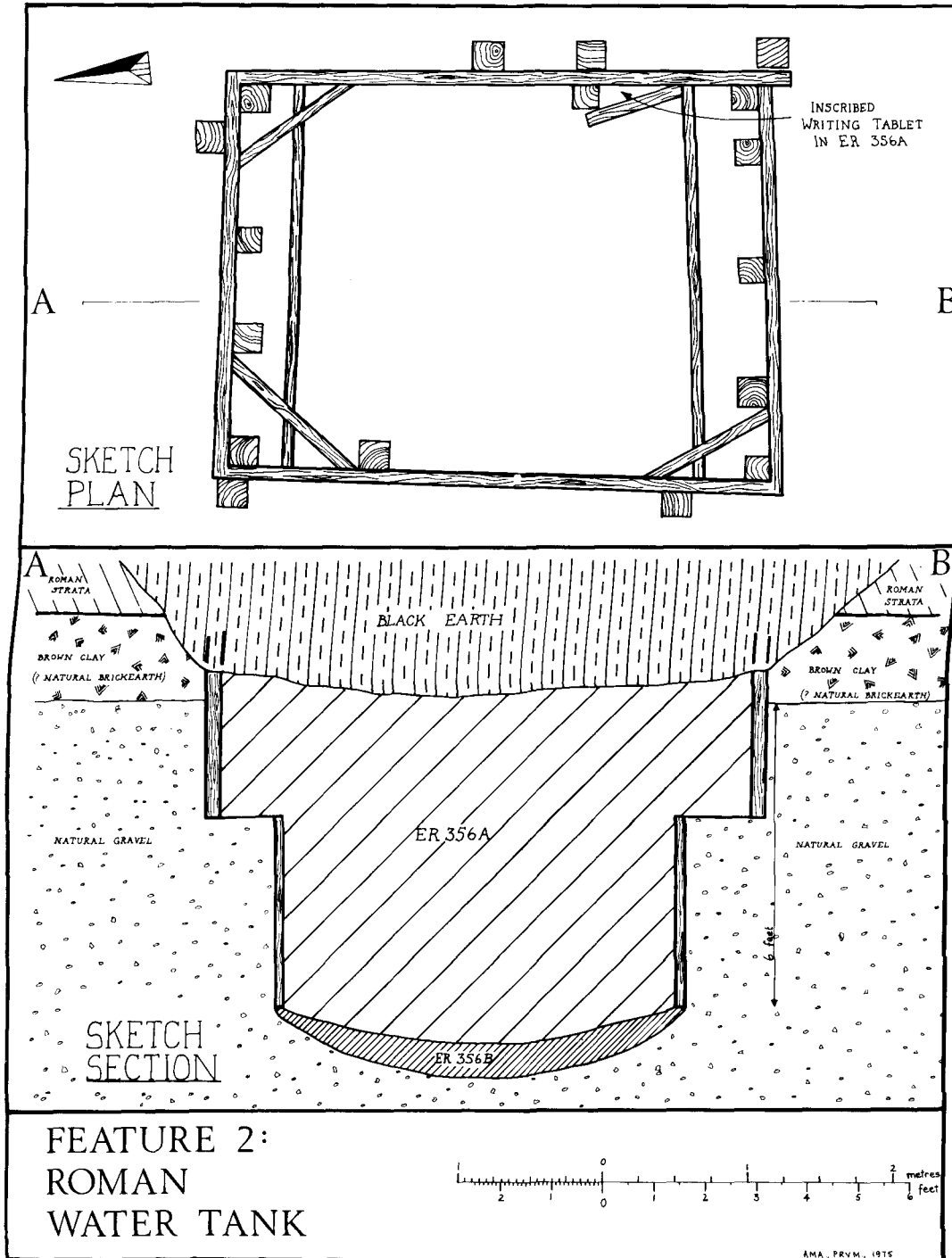


Fig. 16 Cheapside baths site: Roman water tank.

formed at the bottom of the tank during its use (ER. 356B) contained a complete early second century flagon (Fig. 25, No. 80); and above this were thick deposits of gravel and sandy silt, which presumably filled the tank after it had ceased to be used (ER. 356A). Amongst the finds in the upper filling were several objects (Fig. 26, Nos. 101 and 104) including some poorly preserved shoe soles (Fig. 26, Nos. 106 and 107), and one writing tablet (see p. 66; Plate 13). The pottery from the dump seems to date not later than the mid-second century A.D. (Fig. 25, Nos. 81–93; samian report, p.64).

Feature 3: Roman Building (Fig. 11, No. 3)

Phase 1 The south-east corner of a room was found north of the bath building, its walls being built of ragstone with occasional tiles, and a single course of bonding tiles. Three flat tiles had been mortared onto the face of the wall for some uncertain purpose. Immediately to the west of the north-south wall was found a burnt mortar floor on a foundation of ragstone.

Subsequent Phases

Traces of later constructions were found which may not all be contemporary. To the west of the north-south wall a ragstone construction, probably a wall, was found built up against the north-south wall and above the burnt mortar floor; while just west of this later construction was a deposit of burnt daub and building rubble.

Rebuilding was suggested, for the east-west wall of Phase 1 was found to be overlaid by a mortar floor which was associated with a wall of tiles with a clay (? daub) facing.

To the east of this a later depression 6.7m wide from rim to rim was found to have removed evidence of Roman building and was instead filled with black soil. It is presumed that this depression was a pond or stream.

Dating Evidence

Two sherds recovered from a Roman rubbish pit cut into natural brickearth, and sealed by the debris of the large building, Feature 3 (ER. 314, not illustrated), have been dated to the first century.

Roman Road (Fig. 11, No. 4)

An area of Roman gravel metalling was exposed in the north and south faces of a modern construction trench in the western part of the site, and seemed to be a Roman road aligned north-south. The feature overlay the natural brickearth, thus suggesting a first century date of construction, and also the filling of a small rubbish pit which had been dug into the natural subsoil. The gravel was much disturbed by rubbish pits at its east and west extremities, but nevertheless the width of the gravel spread seemed to be about 4m. A continuation of this road was more recently located in Mumford Court, Milk Street, by Nicholas Farrant and confirms the provisional interpretation of the discovery in Cheapside in 1955.³²

Roman Mosaic (Fig. 11, No. 5)

A small part of a mosaic pavement with a guilloche ornament was exposed by the mechanical grab at the west end of the site against Milk Street. Its location was only roughly recorded.

Roman Pits (Fig. 11, No. 6)

Excavations to underpin Milk Street at the south-west corner of the site revealed a layer of burnt daub in which was found part of a poppy-head beaker. Directly above this was a sandy deposit containing pottery of the second century A.D. (ER. 309, not illustrated).

Roman Buildings (Fig. 11, No. 7)

A trench dug by Professor W. F. Grimes revealed a well built stone foundation aligned north-south, and associated with it were traces of a possibly dismantled tessellated floor. Below this was a deposit of burnt clay, the burning clearly having taken place *in situ*, and below the clay were traces of a timber floor. Beneath the burnt layer was found a portion of a plaster faced 'clay' wall.³³

Roman Well (Fig. 11, No. 8)

A timber-lined well, measuring about 0.8m square internally, was found to the south-west of the bath building. Only its upper layers of filling could be examined, and these revealed fragments of roofing tile, animal bones in profusion, and some pottery of the fourth century A.D. (ER. 354; Fig. 25, Nos. 94 and 95). Clearly this was a filling made after the well had passed out of use, and the date of its construction could have been considerably earlier, though it is unlikely to have been contemporary with the bath building.

Roman Mosaic (Fig. 11, No. 9; Fig. 17)

A small portion of a patterned mosaic pavement of poor quality was revealed by the mechanical excavator just east of the bath building. The decoration of the fragment included alternating black and white squares each about 13mm square. Immediately east of the mosaic was a border of smooth *opus signinum*. A deposit of burnt daub overlay the pavement, and above this was a

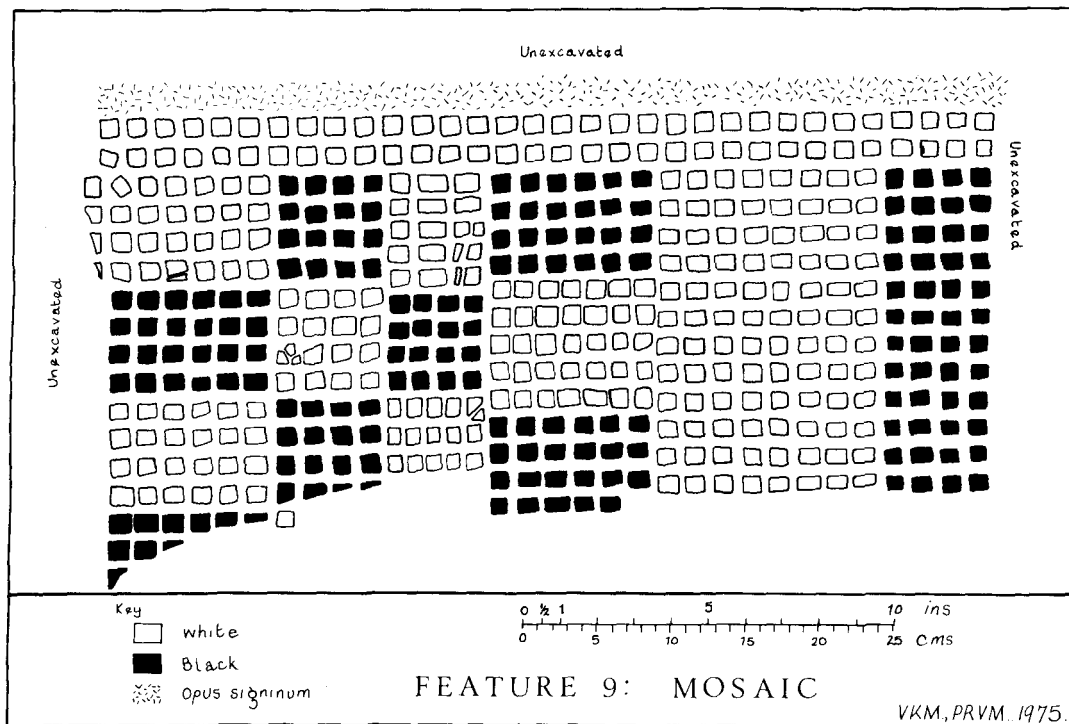


Fig. 17 Cheapside baths site: Roman mosaic.

stratum of black earth in which were found a few sherds not later in date than the second half of the second century A.D. (ER. 355, not illustrated). In view of the small size of the group the black deposit could be considerably later in date than that indicated by the pottery, and thus does not provide certain indication of the date of the mosaic fragment.

Pit (Fig. 11, No. 10)

A rubbish pit situated 0.91m north of Feature 12 in the north-west corner of the site was found to have been dug into the natural gravel, and in a stratum 0.15m above its bottom were recovered some sherds of the first quarter of the second century A.D. (ER. 329, not illustrated).

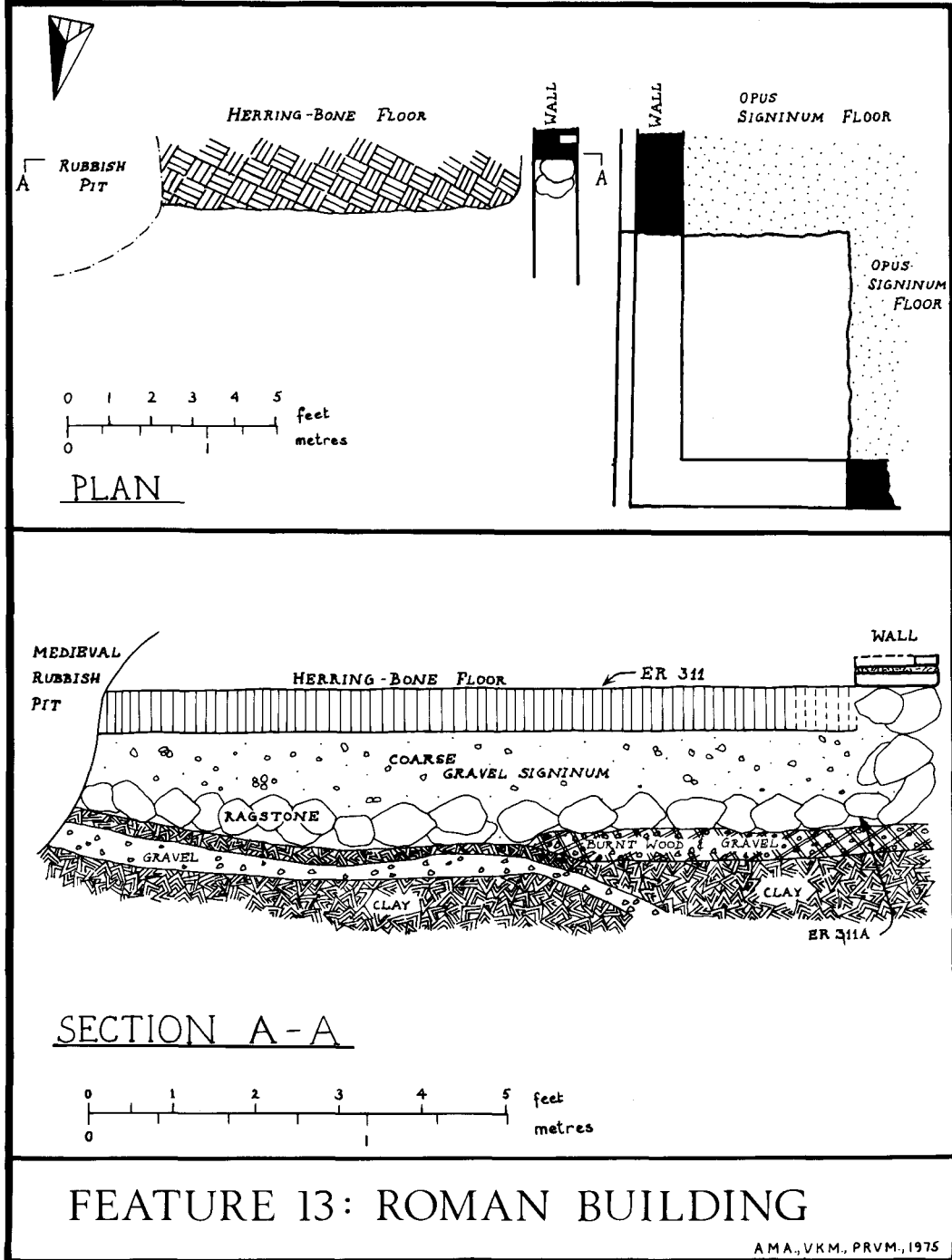


Fig. 18 Cheapside baths site: Roman building, Feature 13.

Well ? (Fig. 11, No. 11)

A Roman timber-lined structure probably measuring approximately 1.4m by 0.9m was revealed just inside the north-west corner of the site, but was badly damaged by the mechanical excavator.

A small quantity of first century pottery was recovered together with lumps of vitrified industrial slag scattered through the moist organic filling (ER. 328, Fig. 25, Nos. 98 and 99). It is possible that this structure was a well.

Well ? (Fig. 11, No. 12)

A large timber structure, possibly a well, was partly revealed by the mechanical excavator about 1.2m south-east of Feature 12. The edges of the structure were maintained by the use of heavy, vertical posts which held the boards in place. Fragments of three coarse ware jars (ER. 330, Fig. 25, Nos. 96 and 97) suggest a date in the first century.

Roman Building (Fig. 11, No. 13; Fig. 18)

A well laid herringbone tiled floor was found associated with a Roman wall on its west side. The wall was 0.30m thick and was aligned approximately north-south. At its base just above the floor level were two courses of tiles which overlay a foundation of loose ragstone extending as a ragstone rubble layer beneath the pavement. A few sherds recovered from a greenish pebbly soil overlying the herringbone pavement are dated to the second century A.D. (ER. 311, not illustrated), while the rim of a small amphora possibly of Flavian date (ER. 311A, not illustrated) was recovered from a black burnt deposit below the ragstone rubble.

At 0.30m to the west of the wall described above was found another Roman wall built of tiles which formed the east side of a further room with an *opus signinum* floor. The mortar of the floor surface extended up the wall face to form a smooth rendering. Unfortunately, the wall could not be traced to a sufficient height to determine if this rendering was merely a skirting, perhaps in the form of a quarter-round moulding.

Roman Building? (Fig. 11, No. 14)

Sections through the Roman strata at the south end of the site, opposite the church of St. Mary le Bow, revealed much burnt building debris, and from the stratum below some pottery of the late first to early second century A.D. (ER. 322, not illustrated). A subsequent observation noted a stratum of wet clay containing sherds of the early second century A.D. (ER. 326, not illustrated) which overlay black discoloured gravel, and above which was a deposit of burnt daub 0.3m thick which contained small fragments of Roman wall plaster.

Wall (Fig. 11, No. 15)

A trench excavated by Professor W. F. Grimes in 1954-55 revealed a Roman wall approximately on a north-south alignment. The west face was rendered in whitish mortar. A succession of floor surfaces were also recorded, separated from each other by layers of 'make up' of a variety of materials, mostly clay. Some of the surfaces included traces of hearths as well as post holes.³⁴

(d) General Discussion

The fragmentary archaeological evidence indicating the changing forms of occupation on the Sun Life Assurance Society site severely restrict any interpretation of the history and use of the site during the Roman period. Nevertheless, a few tentative conclusions are possible. The relationship of the Cheapside baths to what is known of Roman London generally and of the location of other public baths and public buildings is discussed below (p. 46).

As is to be expected, no evidence was found of any major occupation prior to the Flavian period, for the site lay in the western half of what, in a later period of

development, was to be the walled city. Nevertheless, the site lay only 30m from the *decumanus maximus*, the main east–west street of the city, which passed through the later Newgate to link *Londinium* with western Britain.

By the Flavian period the site had evidently become part of the city area, and at an early date, a north–south street was built. During the late first century there was evidently some industrial activity in the area, and it was to serve this that the Cheapside baths may originally have been built. Such activity is suggested not only by the slag, probably of iron working, in the well (11), but also by the discovery by the writer of a quantity of blue frit, indicating enamelling or glass making associated with layers of burnt debris and pottery of the late first century at the north end of New Change House, and by the presence of a pottery industry in the region of St. Paul's Cathedral.³⁵ There is no evidence of the date of construction of the baths, but it is unlikely to have been before the Flavian period for it was then that the basilica was built on Cornhill, following the grant to the Roman city of the right to elect a town council and to administer its own affairs. This would have included the construction of public baths.

Just as the date of the construction of the baths is uncertain so is its rebuilding. The reason for the rebuilding, which perhaps included a *laconicum*, is uncertain, but it is possible that the building was being adapted for military use connected with the nearby Cripplegate fort. Indeed, it is possible that the bath building was originally constructed for military use, and that access for the troops was via the north–south Roman road (Fig. 11, No. 4) which probably linked up with the east gate of the fort. This military connection is not altogether certain, however, for it is not easy to understand why it was built beside the main street of Roman London, and at a distance from the fort. An alternative possibility is that the bath was associated with an inn or *mansio* which lay between the bath building and the main Roman street beneath Cheapside.

The date of the destruction of the baths is also uncertain, though such evidence as there is does point to a date not earlier than the end of the second century, when, incidentally, the fort defences were included in the Roman town defences and the fort itself may have been abandoned.³⁶

The site plan (Fig. 11) shows that several major Roman buildings existed on this site on both sides of the north–south Roman road and in close proximity to the baths. But in the absence of dating evidence it cannot be assumed that they were all contemporary with each other, and it is to be hoped that the trenches cut by Professor Grimes in 1955 may shed some light on the forms of occupation.

It is unfortunate that the bath building was totally destroyed by mechanical excavators in 1956 and that it will not be possible to check the many issues raised by this rescue investigation undertaken during building activity. Nevertheless, it does still represent one of the few reasonably complete known plans of a Roman building in the City of London.

4. DISCUSSION: THE PUBLIC BATHS OF ROMAN LONDON

It has already been established that the main phase of civic public building in Roman London occurred during the period c. A.D. 60–125, and that this, no doubt, reflected the period during which a city council was established in *Londinium*, and also during which the vigorous programme of public building was apparently actively encouraged by the provincial administration.³⁷ The Huggin Hill, and possibly the Cheapside baths,

therefore, must reflect the general policy of public building at that time which was also responsible for the reconstruction and extension of such works as the formal road system in the city, and the building of the huge basilica and forum which became the main focus of civic life.

The Huggin Hill and Cheapside baths form two very different types of building: the former a very large and complex establishment prominently sited on a terraced hillside overlooking the Thames; the latter a comparatively small and simple building inconspicuously located on flat ground and set back from the main street, perhaps hidden behind existing buildings. Thus the status of the two buildings must have been distinctly different even though the former lay well away from the arterial routes in the city, and the latter lay close to the main street.

It is difficult to find parallels for the Huggin Hill baths as its plan has been adapted to its hillside situation, and much more excavation is required to elucidate the layout of the entrance area and rooms, located on the lowest terrace. Nevertheless, its size and complexity clearly show that it was a major municipal bath building.

The Cheapside bath, by contrast, is small and has a distinctly military appearance, and may well have been the bath house for the Cripplegate fort. It lies some distance from the fort, perhaps because there was no suitable water supply any nearer to the high ground upon which the fort was built. The natural subsoil on the bath house site lay at about 10.7m above O.D., while the natural surface at the south end of the fort lay between 11.6m and 12.6m above O.D.—about the highest ground in Roman London. The suggestion that it was a military bath is based not only on its distinct similarity to other known examples, but also to the absence of evidence of any alternative candidate in London. Military baths were built for the benefit of troops in forts in Britain and these buildings tended to have a fairly uncomplicated layout of a progression of heated rooms. Even though they are small by town baths standards they do sometimes have circular, hot, dry *laconica* as in the baths at Gelligaer in Glamorgan,³⁸ and at Red House near Corbridge,³⁹ and this has been suggested for the Cheapside baths. The possibility that there was an exercise yard or *palaestra* between the *frigidarium* and the main street to the south in the Cheapside baths would not involve a degree of pretension that is entirely absent from military baths, for such enclosed yards have been found in baths at Castell Collen in Wales⁴⁰ and again at Red House near Corbridge.⁴¹

Notwithstanding this comparison with military baths, Roman towns, admittedly mostly in the Mediterranean region, sometimes had a scatter of minor baths or *balnea* tucked away amongst existing buildings in addition to the major baths or *thermae* which dominated the block in which they stood. At Ostia there were three *thermae* and fourteen *balnea* of varying dates and it has been suggested that the latter are probably the result of private enterprise—a possibility that cannot be entirely discounted in connection with the Cheapside baths.⁴² The likely sites of other baths in London are shown in Fig. 19, but there is little indication of how many were public and how many were private, the only certain private bath being that found at Billingsgate (Fig. 19, No. 6).

The location of the Cheapside and Huggin Hill baths in *Londinium* during the second century is of interest to the location of the cemeteries⁴³ (Fig. 19), which, under Roman law, had to be outside the city boundary. Thus it would seem that both baths were situated close to the edge of the contemporary city. The exact location and nature of the western limit of the city during the second century is not known, but its location is

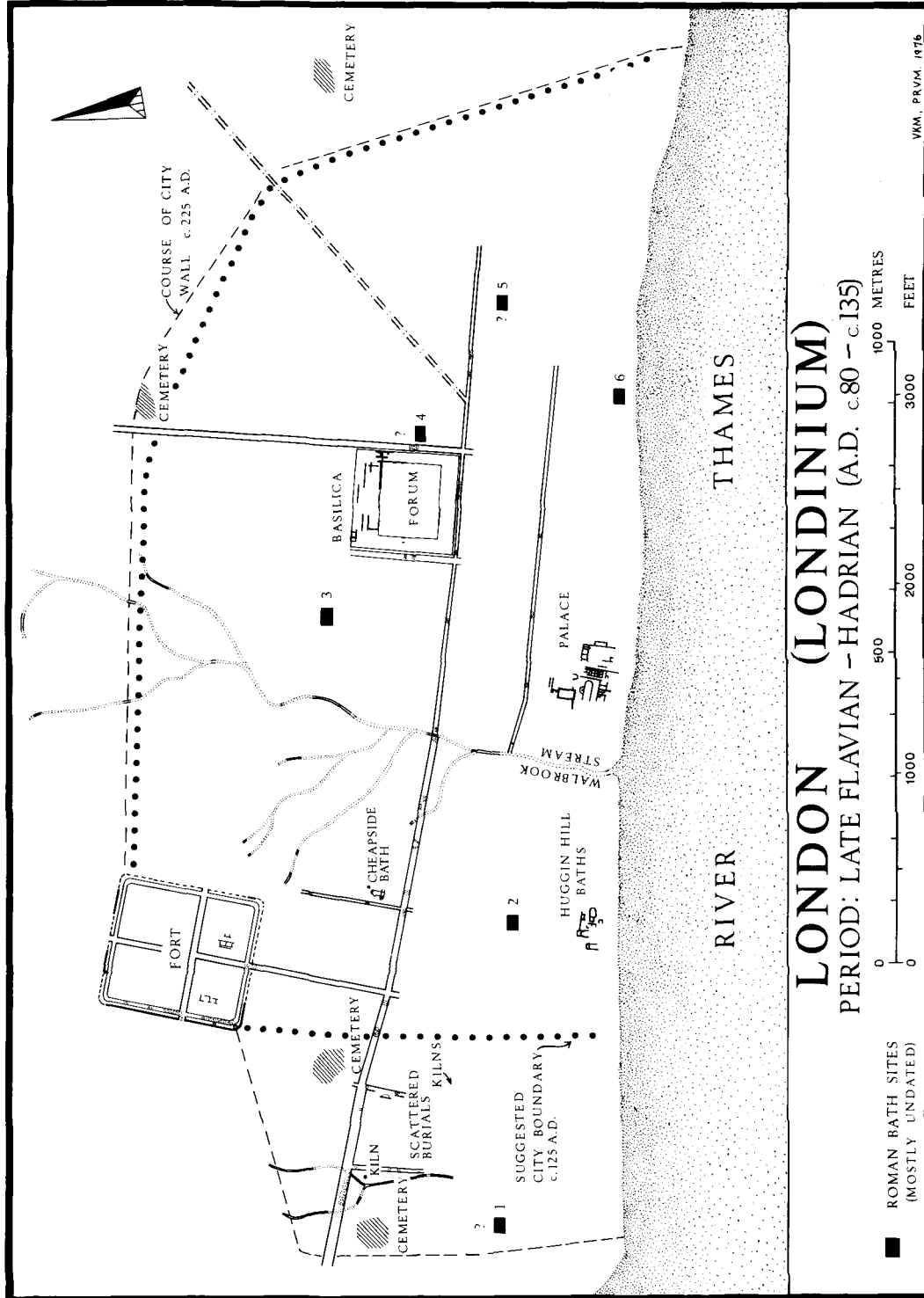


Fig. 19 London in the late first-early second centuries.

perhaps suggested by a slight change in the course of the Roman road where the west end of Cheapside now lies—a change which is still preserved in the modern street plan at the junction of Cheapside and Newgate Street.

Thus it is clear that when the Cripplegate fort was constructed during the early second century, it lay at the edge of the city, and that nearly a century later, when the defensive wall was built to encircle the city, the high ground around St. Paul's Cathedral where the cemetery lay was included, thus forming the deep re-entrant on the west side of the fort.

During the second century the basilica–forum building was fairly centrally placed within the city limits, and the Cheapside bath lay near the western edge of *Londinium* either serving the troops in the fort, or those travellers entering the city from the west. It is thus possible that the bath building was attached to an inn of some kind which, apart from the possible existence of an exercise yard, may account for its being set so far back from the main street.

The reason for the existence of the Huggin Hill bath was clearly different as not only did it lie away from any arterial roads, but also it was built into the steep hillside overlooking the Thames, where it was able to use the natural water supply that issued out of the springline all along the edge of the river in the City. One of the major problems concerns its great size, for this shows that a very considerable number of people must have congregated in this south-western corner of the city even though it lay away from the nucleus of *Londinium* across the Walbrook valley, and on the southern edge of the western hill. Indeed, the possibility that there was a substantial population in this area is reinforced by the fact that the baths were enlarged during the second century. Just what was that public attraction is difficult to judge though there are several possibilities. The first is that it perhaps served the dockland waterfront, though as there is very little evidence of an active commercial waterfront west of the mouth of the Walbrook in Roman London, this explanation is unsatisfactory. A second possibility is that the south-western part of the city might have been an area of public gathering and entertainment, as is suggested by the discovery of various massive and extensive Roman constructions, presumably of a public or semi-public character. Unfortunately, these buildings are largely undated, though two phases of 'public' building are clearly represented on some sites, the later phase buildings possibly continuing a form of civic land use in the area that began in the late first to early second century. The suspected 'public' constructions are as follows:

1. The two parallel walls formerly under Knightrider Street (Fig. 20) more than 178m long.⁴⁴
2. On the Salvation Army headquarters site, Lambeth Hill (Fig. 20) traces were found of massive Roman walls of an early phase underlying later Roman terraces.⁴⁵
3. Also on the Salvation Army headquarters site, Lambeth Hill, were extensive later Roman chalk terraces on which lay massive Roman structures which included large shaped stone architectural elements evidently reused from a monumental building or buildings of some kind situated, no doubt, in the area.⁴⁶
4. Many reused architectural stone elements were found in a massive Roman wall by Charles Roach Smith in 1841 beneath Upper Thames Street (Fig. 20) between Lambeth Hill and Queenhithe.⁴⁷ There is some evidence to suggest that the wall was contemporary with No. 3 above.

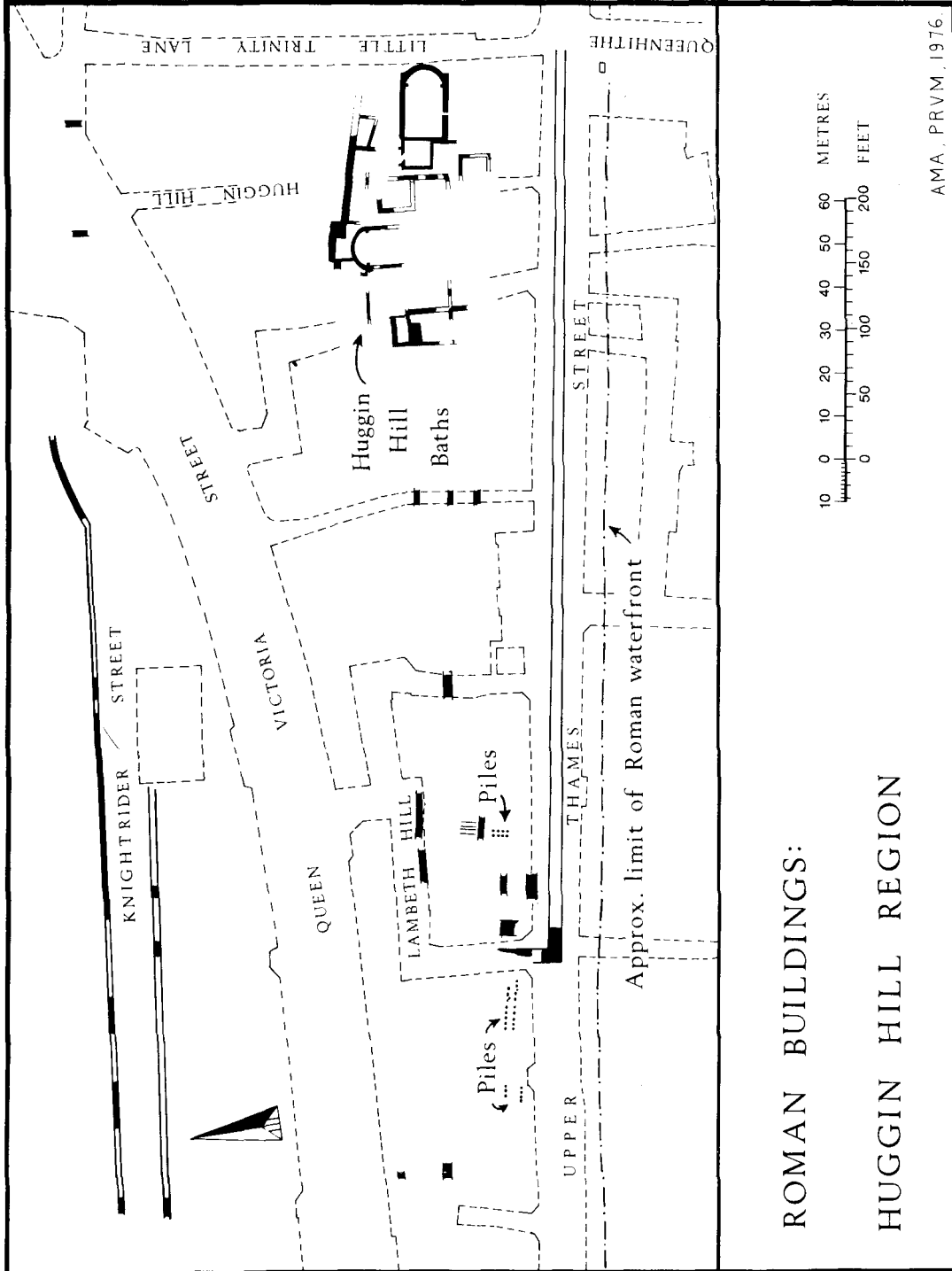


Fig. 20 Roman structures near the Huggin Hill baths site.

5. A massive Roman wall recently discovered on the site of Baynard's Castle and under Upper Thames Street, the south face of which had been eroded away, while its north face had several broad offsets.⁴⁹
6. Many sculptured reused architectural elements from an earlier monumental building or buildings found reused in a massive Roman wall, possibly of later date than No. 5, recently found under Upper Thames Street just west of the site of Baynard's Castle.⁵⁰

But whatever the reason, the Huggin Hill baths clearly formed a prestige building probably constructed with a provincial government subsidy as part of an attempt to create a capital city for the province. Its size, enormous by provincial standards, its prominent position on the hillside terraces, its separate large bathing rooms for men and women, and, if the fragments of building debris in the dumped deposits were derived from the baths following its abandonment, its tessellated floors and colourful frescoes on the walls (Fig. 23, Nos. 45–53), and its wall veneers and mouldings of imported marbles from Carrara in Italy, and from the Pyrenees, as well as the use of more local Purbeck marble (which contrast with the rough facing of some walls in imitation ashlar), generally indicate a lavish injection of finance in public building at a level suggestive of more than local planning. This view is supported by the presence of admittedly only a single, roof tile bearing the provincial stamp of the P.P.PR.LON type (Fig. 24, No. 55). As this tile was almost complete, it is less likely to have been a stray from elsewhere in the City. In addition, the apparently early demolition date must surely reflect an equal disregard for expense, suggesting that the Huggin Hill baths were not a necessary part of the city's civic amenities in the third century A.D.

Both the Huggin Hill and Cheapside public bath buildings, after being rebuilt or enlarged during the second century, possibly for the reasons that have already been given (p. 29), seem to have been demolished by about the end of the second century. Why this happened is unclear, though as in both cases it was evidently not to construct another major public building on the site, it must be assumed that the reason for the existence of the baths themselves on those sites must have changed. The dating evidence essentially gives the date after which demolition occurred, and it is possible that demolition took place some considerable time later than the evidence suggests.

The early demolition of two public bath buildings in London, together with their location near the western limit of the city, suggest that neither can have been the principal public baths in *Londinium*. It is to be expected that the principal public baths at least lay on the spring line at the edge of the eastern hill of the city beside the Thames, and probably close to the basilica and forum which formed the civic centre. Elsewhere in Britain public baths are frequently found to lie very close to the civic centre as at Exeter,⁵¹ Leicester,⁵² Wroxeter,⁵³ and Caerwent,⁵⁴ though that this is not an essential factor of Roman town planning in Britain as is shown by the public baths in Silchester not having been built close to the forum.⁵⁵ If we must look elsewhere in *Londinium* for the main public baths, then what alternative sites are possible? There are no certain candidates and judging from the sizes of the cold plunge baths mentioned below, many of these are probably too small for the role, though possible bath sites in London are shown in Fig. 19.

1. A Roman bath and 'aqueduct' are said to have been found in Ludgate Square after 1666.⁵⁶
2. A Roman cold water bath measuring 4.4m by 2.6m was found in Cannon Street in 1906.⁵⁷
3. A Roman cold water bath measuring 1.6m square was found in Threadneedle Street in 1895.⁵⁸
4. A rectangular room measuring 3.3m by 2.4m was found in Lime Street in 1932 and was believed to be part of a Roman bath.⁵⁹
5. A Roman bath or tank 1.5m wide was found in Mark Lane in 1935.⁶⁰

The bath building at Billingsgate (Fig. 19, No. 6) has now been completely excavated and is found to be a private bath associated with a dwelling.⁶¹

NOTES

- ¹ T. Milbourn 'The Vintners' Company' *Trans. London Middlesex Archaeol. Soc.* 3 (1869) 409.
- ² City of London Record Office, City Sewer Plan 373.
- ³ MS records by Dr. G. C. Dunning at the Museum of London.
- ⁴ P. Marsden 'The Excavation of a Roman Palace Site in London, 1961-72', *Trans. London Middlesex Archaeol. Soc.* 26 (1975) 6, 30-36.
- ⁵ City Sewer Plan 373.
- ⁶ MS records by Dr. G. C. Dunning in the Museum of London.
- ⁷ City Sewer Plan 373.
- ⁸ W. de G. Birch *Cartularium Saxonicum* 2 (London 1887) No. 561.
- ⁹ *Ibid.* Nos. 577-8. A full discussion of the authenticity of these charters is included in the documentary survey in C. Hill, M. Millett and T. Blagg, *The Roman Riverside Wall in London* (forthcoming in a London Middlesex Archaeol. Soc. *Special Paper*).
- ¹⁰ The close coincidence of the proportions of the land detailed in the Saxon charter with those on the modern map at Queenhithe is demonstrated, *ibid.*
- ¹¹ E. Ekwall *The Street Names of the City of London* (Oxford 1954) 37.
- ¹² Quoted by F. M. Stenton *Anglo-Saxon England* (3rd ed., Oxford 1971) 56.
- ¹³ P. Marsden *op. cit.* in Note 4, 63-4.
- ¹⁴ M. Biddle and D. Hill 'Late Saxon Planned Towns' *Antiq. J.* 51 (1971) 83.
- ¹⁵ R. Merrifield *The Roman City of London* (London 1965) 22; 222, Site 114.
- ¹⁶ P. Marsden 'The Riverside Defensive Wall of Roman London' *Trans. London Middlesex Archaeol. Soc.* 21 (1967) 149-54.
- ¹⁷ D. Atkinson *Report on the Excavations at Wroxeter in the County of Salop, 1923-27* (Oxford 1942, reprinted 1970) 30, Plate 6.
- ¹⁸ K. Kenyon *Excavations on the Jewry Wall Site, Leicester* Report of the Research Committee of the Society of Antiquaries, No. 15 (Oxford 1948) Plate 27; J. Wachter *The Towns of Roman Britain* (London 1975) 343, Fig. 80.
- ¹⁹ G. C. Boon *Silchester: the Roman Town of Calleva* (Newton Abbot 1974) Plan in back cover.
- ²⁰ D. Atkinson *op. cit.* in Note 17, 25-54.
- ²¹ J. Wachter *op. cit.* in Note 18, Fig. 9.
- ²² J. Carcopino *Daily-Life in Ancient Rome* (1956) 257-8 and sources there cited.
- ²³ S. Frere *Britannia: A History of Roman Britain* (London 1974) 148, quoting *Scripiores Historiae Augustae Vita Hadriani* 2.
- ²⁴ Royal Commission on Historical Monuments: *An Inventory of the Historical Monuments in London 3: Roman London* (London 1928) 44, Frontispiece and Plate 1.
- ²⁵ R. Merrifield *Roman London* (London 1969) 100.
- ²⁶ J. Leland *Collectanea* (ed. T. Hearne) 1 (London 1774) 74.
- ²⁷ *J. Brit. Archaeol. Assoc.* 17 (1861) 328.
- ²⁸ Merrifield *op. cit.* in Note 15, 205, Site 56; J. E. Price 'Roman Remains in London' *Archaeol. Review* 1 (1888) 278.
- ²⁹ W. F. Grimes *The Excavation of Roman and Mediaeval London* (London 1968) 136-141.
- ³⁰ *Ibid.* Fig. 23a.
- ³¹ J. P. Bushe-Fox *Second Report on the Excavation of the Roman Fort at Richborough, Kent* Rep. Res. Comm. Soc. of Antiq. No. 7 (London 1928) Plate 42.
- ³² N. Farrant 'A Roman Crossroads in the City' *London Archaeologist* 2 (1975) 300-303.
- ³³ Grimes *op. cit.* in Note 29, 1 38-140.
- ³⁴ *Ibid.* 140-1.
- ³⁵ P. Marsden 'The Roman Pottery Industry of London' *Trans. London Middlesex Archaeol. Soc.* 22 (1969) 39-44.
- ³⁶ Grimes *op. cit.* in Note 29, 39.
- ³⁷ Marsden *op. cit.* in Note 4, 71.
- ³⁸ V. E. Nash-Williams and M. G. Jarrett *The Roman Frontier in Wales* (Cardiff 1969) 166, 171.
- ³⁹ C. Daniels 'The Roman Bath House at Red House, Beaufront, near Corbridge' *Archaeologia Aeliana* 37 (1959) 117-122.
- ⁴⁰ Nash-Williams and Jarrett *op. cit.* in Note 38, 170, Fig. 89.
- ⁴¹ Daniels *op. cit.* in Note 39.
- ⁴² R. Meiggs *Roman Ostia* (Oxford 1960) 416.

⁴³ Royal Commission *op. cit.* in Note 24, 153–163.⁴⁴ Merrifield *op. cit.* in Note 15, 215–19, Sites 93–102.⁴⁵ Marsden *op. cit.* in Note 16, 151; Merrifield *op. cit.* in Note 15, 220–224, Sites 110–117.⁴⁶ Marsden *op. cit.* in Note 16, 150–4.⁴⁷ Merrifield *op. cit.* in Note 15, 222, Site 114.⁴⁸ Marsden *op. cit.* in Note 16, 149–151.⁴⁹ C. Hill *op. cit.* in Note 9.⁵⁰ *Ibid.*⁵¹ Wachter *op. cit.* in Note 18, 329.⁵² *Ibid.* 337.⁵³ *Ibid.* 361.⁵⁴ *Ibid.* 377.⁵⁵ Boon *op. cit.* in Note 19.⁵⁶ Merrifield *op. cit.* in Note 15, 195, Site 23.⁵⁷ *Ibid.* 214, Site 86.⁵⁸ *Ibid.* 243, Site 182.⁵⁹ *Ibid.* 259, Site 233.⁶⁰ *Ibid.* 294, Site 348.⁶¹ *Ibid.* 295, Site 353.

5. THE FINDS FROM BOTH SITES

The finds from the Huggin Hill and Cheapside bath sites are described here primarily as dating evidence for the buildings and other features on the sites, and also for the information that they give about the use of the sites. The detailed study of all the finds for themselves is not necessary for the publication of the sites, and should be the subject of specialist study in the future. Thus although only the key dating groups are described in detail, the Excavation Register references (e.g. ER. 1372) are given together with the archaeological contents of all other significant Roman groups. The entire collection of finds from these sites may be studied in the Museum of London on application to the Director.

ACKNOWLEDGEMENTS

Grateful thanks are extended here to Joanna Bird, Geoff Marsh and Brian Hartley for the report on the samian ware, to Juliet Clutton-Brock and Jennifer Gask of the Natural History Museum for the bones, to F. Dymes of the Geological Museum for the report on the stone samples, to Professor E. G. Turner and Hugh Chapman for the reports on the writing tablet, and to Ralph Merrifield for the identification of the coins.

(a) The Huggin Hill Baths Site

(i) Roman Coarse Pottery (Fig. 21)

Groups from the construction and occupation of the baths.

ER. 949. Foundation trench of Room 18 (p. 19).

1. Mortarium. Soft creamy ware with small scattered inclusions probably of brick fragments, up to 2mm across.
2. Flagon. Hard, sandy, buff-pale pink jug with a ring neck (cf. for type, Kenyon [1948, Fig. 28, No. 2], dated late first–early second century).

ER. 1420. Foundation trench of Room 33 (p. 20).

3. Bowl. Hard, sandy, pale grey ware with a light brown core, and with darker grey surfaces (cf. Bird [1973, Fig. 11, No. 88] dated Neronian or early Flavian).
4. Carinated beaker. Fine, hard, pale grey ware with darker pale grey surfaces (cf. Cunliffe [1971, Vol. 2, Fig. 89, Type 69] dated first century A.D.).
5. Cylindrical pot. Fine, pale grey, micaceous ware with a dark grey-black exterior slip. Decorated with zones of applied clay pellets over the slip.

ER. 1419. Silt filling of the hypocaust in Room 30 (p. 20).

6. Dish. Hard, sandy, buff ware, burnt on underside (cf. Cunliffe [1971, Vol. 2, Fig. 84, No. 20.2] this type being dated to the first century A.D.).

Dating: Judging from the coarse pottery these groups clearly date from not earlier than the late first century, but two samian ware sherds from ER. 1420 indicate a date at least at the end of the first century A.D.

Groups from the destruction of the baths.

ER. 914. Dump in Feature 17 (see p. 22).

7. Bowl with reeded rim. Hard, sandy, micaceous, brown ware with a thin, grey core. Traces of burning on the outside, and on the underside of the rim. This is a typical Trajanic–Hadrianic pot type in London (cf. Kenyon [1948, 88]).
8. Amphora neck with two handles (missing). Soft, pale buff ware.

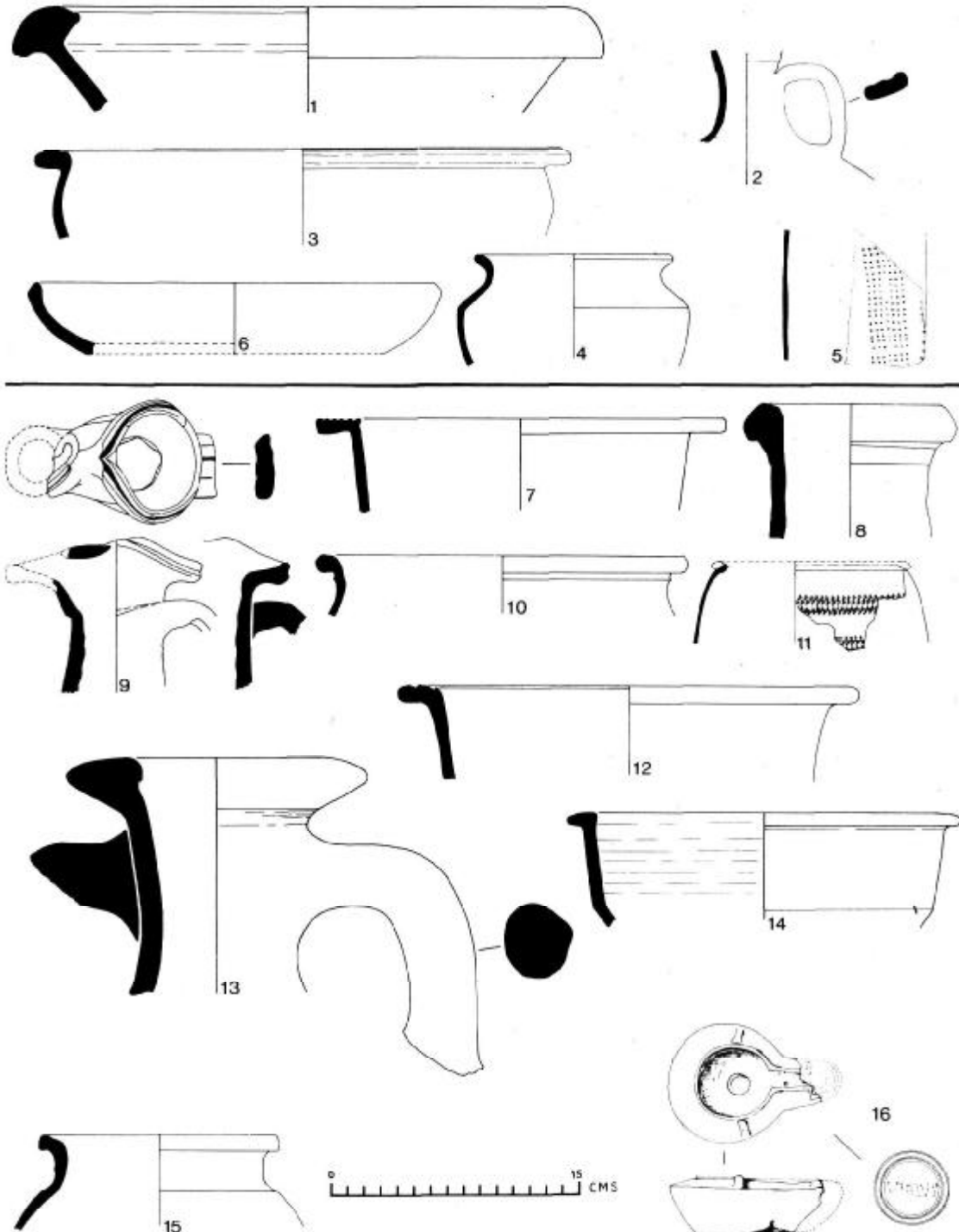


Fig. 21 Huggin Hill site: pottery. Nos. 1-6 from the construction of the baths; Nos. 7-16 from the destruction of the baths ($\frac{1}{4}$).

ER. 915. Dump in Feature 17 (see p. 22).

9. Flagon, with figure-of-eight spout. Hard, pale pink, sandy ware, the exterior slightly burnt.
10. Jar. Hard, sandy, buff ware, with pale pink core.
11. Beaker. Fine, hard, flakey, white ware, with an orange-brown slip on its inner and outer surfaces. Decorated with horizontal zones of rouletting.

ER. 920. Dump in Feature 17 (see p. 22).

12. Bowl with a reeded rim. Hard, buff, sandy ware. A little burning on the exterior, especially on the underside of the rim.
13. Amphora neck. Soft, creamy, buff ware with a pale grey core.
14. Bowl. Pale, pinkish buff, hard, sandy ware.

ER. 1422. Rubble filling of Room 30.

15. Jar. Fine, hard, orange ware. Late first-early second century type.

ER. 920 (see Nos. 12 and 13 above).

16. Lamp. Hard, fine, orange ware. Potter's name VIBIVS on the base. This is a first century type which occurs at Pompeii prior to the destruction of A.D. 79 (London Museum Catalogue No. 3 [1946, 63-4 and Fig. 15, Type 111B]).

Fig. 22.**ER. 918. Dumping in Room 18** (p. 22).

17. Flagon neck, figure-of-eight type. Hard, sandy, pale pink ware. Single handle.
18. Jar. Fine, hard, sandy, pale grey ware, with a very pale grey core.

ER. 932. Dumping in Feature 19 (p. 22).

19. Lamp. Buff ware, with an orange micaceous slip (London Museum Catalogue No. 3 [1946, 68 and Plate 28, No. 5, Type 111b] dated second century).

ER. 1418. Rubble filling of Room 29 (p. 23).

20. Bowl with reeded rim. Hard, pale brown, sandy ware, burnt on the outside and on the rim.
21. Bowl with reeded rim. Hard, pale pink ware, with some burning on the outside. (This type is characteristic of the late Flavian-Antonine period at Leicester, Kenyon [1948, 88-9]; in London it does not appear before the end of the first century cf. Bird [1973, 152-56].)
22. Flagon neck. Hard, fine, orange ware with a grey core. Mica dusted surface (cf. Sheldon [1974, Fig. 31, No. 248] dated first half of second century).

ER. 1424. Rubble filling of robbed pipe in Room 29 (p. 23).

23. Flagon neck, figure-of-eight type. Pale pink, sandy

ware. Single handle. The type originates in the pre-Flavian period but is unlikely to outlive the first century (cf. Cunliffe [1971, Vol. 2, 235, Type 301]).

24. Beaker. Poppy-head type. Fine, hard, brown ware with a dark grey slip.
25. Beaker. Poppy-head type. Fine, dark grey ware, with exterior grey slip and applied barbotine dots (cf. Kenyon [1948, Fig. 44, No. 33] dated A.D. 150-160. Poppy-head beakers appear in the late first century and are common to about the middle of the second century, Kenyon [1948, 103]; Cunliffe [1971, Vol. 2, 229]).
26. Bowl with reeded rim. Hard, fine, sandy, pale pinkish-buff ware.
27. Bowl. Fine, sandy, brownish-grey ware, with a grey slip outside, and applied dots.
28. Jar. Brown, soft, flakey ware with scattered burnt flint inclusions. The exterior surface is worn but still bears traces of a zone of decorative depressions. This is a common Flavian storage jar type (cf. for type, Bird [1973, Fig. 15, Nos. 194 and 195] dated Flavian).
29. Bowl. Fine, hard, sandy, grey ware (cf. Kenyon [1948, Fig. 29, Nos. 27 and 28] a type which occurs from about the mid second century onwards).
30. Bowl with reeded rim. Hard, dark grey, sandy ware with a pale grey core.
31. Jar. Hard, fine, sandy, buff-pale grey ware. Traces of burning on outside.
32. Jar with a bead rim: pale grey, hard, sandy ware with a darker grey exterior. Smoothed rim and shoulder (cf. at Fishbourne, Cunliffe [1971, Vol. 2, 212, Type 166] where the type is almost exclusively pre-A.D. 75. In Sheldon [1974, Fig. 29, Nos. 181-186] the type is common to the Flavian period).
33. Dish. Hard, sandy, pale pinkish-buff ware. Traces of burning (cf. Cunliffe [1971, Vol. 2, 218, Type 199] of Flavian or later date).

ER. 1425. Dumped rubble in Room 27 (p. 23).

34. Bowl. Pink ware with small flint inclusions. Some burning on the outside.

Dating: This is merely a selection of the pottery types from the many deposits dumped into the baths following the abandonment of the building, and it illustrates the general character of the dateable pottery. The bulk of the coarse pottery ranges in date from the Flavian to the Antonine periods, and it is of interest that the reeded-rim bowls are particularly common and characterize the date range of the groups as a whole. For closer dating the samian ware is especially important (p. 57) and shows a similar date range, though several sherds do date from around the mid second century (ER. 940). That the baths were not demolished until after A.D. 150 is shown by a samian ware sherd of A.D. 150-180 in a deposit pre-dating the destruction (ER. 1388).

(ii) Samian Pottery

by Joanna Bird and Geoff Marsh, with identification of potters' stamps by Brian Hartley.

(NB. These finds are not illustrated, but may be consulted at the Museum of London)

Deposits contemporary with the construction and occupation of the bath.

ER. 1388 (see p. 20).

Drag. form 37. Mould Stamp CIN[NAMIOF] amongst

the decoration by Cinnamus of Lezoux and Vichy. Not an early stamp of Cinnamus, this was used at both places. Date: probably A.D. 155-75.

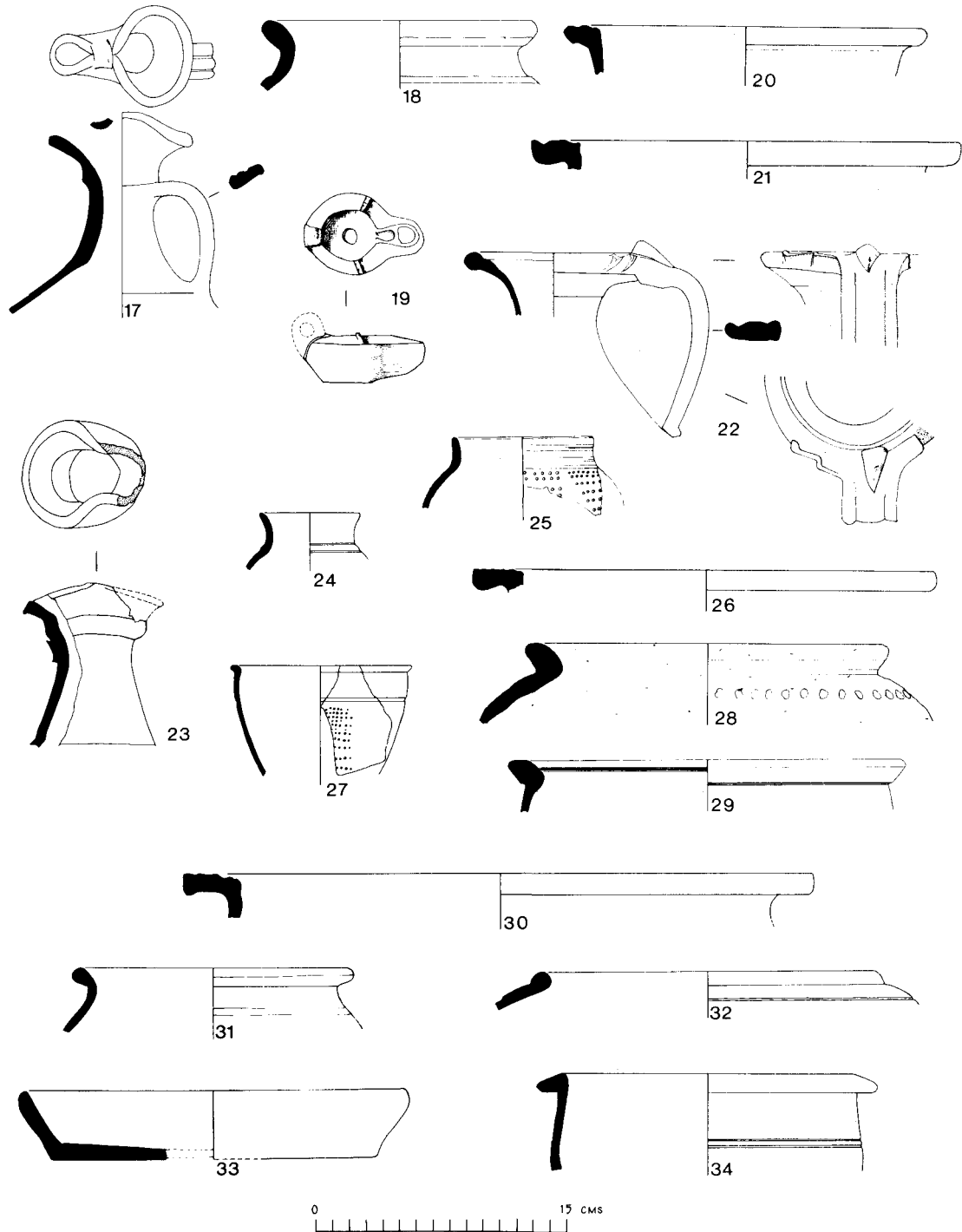


Fig. 22 Huggin Hill site: pottery Nos. 17-34 from the destruction of the baths ($1/4$).

ER. 1420. (see p. 20).

Drag. form 37. South Gaul. Trident ovolo, panels with leaf tendrils. Date: c. A.D. 80–100.

Drag. form 46. South Gaul. Date: late first century A.D.

Deposits contemporary with the destruction of the baths.

ER. 917. (see p. 22).

Drag. form 38. Central Gaul. Date: Hadrianic.

ER. 940. (see p. 23).

Drag. form 37. Stamped [QVIN]TILIANIM (Die 1b) in the mould below the decoration. The style is that of the Quintilianus group: the ovolo is shown on Stanfield & Simpson (1958, Pl. 68, 4) the seven-beaded rosette and a similar ramshorn on Pl. 68, 1; the deer 0.1752 A on Pl. 71, 25; the goat 0.1844 on Pl. 68, 7; the panther 0.1553 on Pl. 68, 5; and the wavy-line saltire on Pl. 70, 18. Date: c. A.D. 125–150.

Drag. form 37. Central Gaul. Broken rosette terminal. Date: mid second century.

Walters, form 79. Central Gaul. Date: Antonine.

Sherd of Central or East Gaulish pottery.

ER. 1385. (see p. 23).

Drag. form 37. South Gaul. Date: Flavian.

ER. 1386. (see p. 23).

Drag. form 18/31 rouletted (?). Central Gaul. Date: Hadrianic–early Antonine.

ER. 1397.

Drag. form 29. South Gaul. Burnt. Date: pre-early Flavian.

Drag. form 18. South Gaul. Date: Flavian.

Drag. form 18 rouletted, or 18/31. South Gaul. Date: Flavian.

Drag. form 27 (two sherds). South Gaul. Date: pre-early Flavian.

Two sherds of South Gaulish pottery. Date: late first century.

ER. 1409. (see p. 23).

Drag. form 37. South Gaul. The cupid (cf. Oswald [1936, No. 406]) in a triple medallion was used by Vitalis, Knorr (1919, 83.5). A closely similar bowl from Pompeii. Atkinson (1914, 60) has the cupid, large S-gadroons, leaf tendrils, dog, and wavy-line and arrowhead panel; it is tentatively attributed to Mommo. The ovolo is smudged, but probably has a trident tongue. Date: c. A.D. 70–90.

ER. 1418. (see p. 23).

Drag. form 15/17. South Gaul. Date: pre-early Flavian.

ER. 1422. (see p. 23).

Drag. form 42, dish with barbotine decoration. South Gaul. Date: Flavian.

Drag. form 27. South Gaul. Date: Flavian–Trajanic.

Drag. form 27. South Gaul. Date: Flavian.

Drag. form 18 (probably). Stamped (.) ERN.M. Also a sherd of South Gaulish pottery.

ER. 1427. (see p. 23).

Drag. form 18 rouletted. Stamped PASTORC.E.

Drag. form 27. South Gaul. Date: Flavian.

Drag. form 38. Central Gaul. Date: Antonine.

Deposits later than the demolition of the baths.

ER. 1389. (see p. 25).

Drag. form 18. South Gaul. Date: Flavian.

ER. 1405. (see p. 25).

Drag. form 33. Central Gaul. Date: Antonine.

Drag. form 31. Central Gaul. Date: Antonine.

Cordoned beaker (Stanfield [1929, Fig. 6, 30–33]). Probably Central Gaul. Part of this pot occurs in ER. 1406. Date: mid–late second century.

ER. 1406. (see p. 25).

Drag. form 18/31 or 31. Central Gaul. Date: mid second century.

ER. 1432. (see p. 25).

Drag. form 31. Central Gaul. Date: early–mid Antonine (two sherds).

(iii) Building Materials (Fig. 23)

Stone

The stone generally used in the construction of the walls was Kentish ragstone, probably from the Maidstone district of Kent. In addition there was some use of modular flints, evidently quarried direct from the chalk, which had been particularly used in the foundation of Room 30. Water-worn pebbles derived from river gravels, perhaps from the Taplow Terrace, were used in the concrete of the walls and floors.

Scattered in the destruction debris of the bath building were many small fragments of Purbeck marble, a few of the larger shaped pieces of which are illustrated and described below. Judging from these it seems that they were probably mouldings and veneers in the bath building, but the mostly small size of the pieces suggests that the marble facings were mostly salvaged for re-use elsewhere prior to the demolition of the bath building.

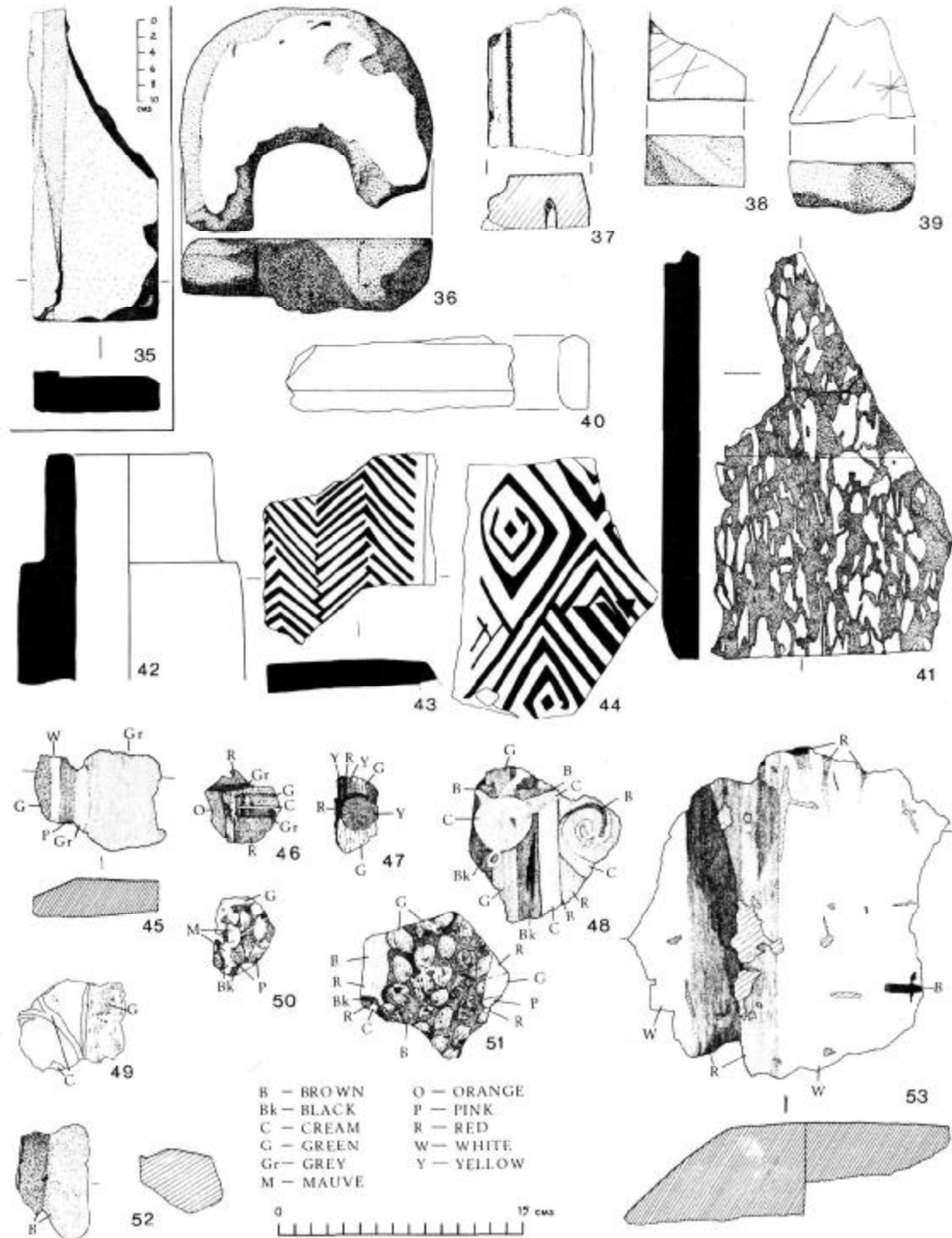


Fig. 23 Huggin Hill site: building materials, all (1/4) except No. 35 (1/8).

Marbles**Purbeck Marble** (Fig. 23)

35. Marble slab with raised panel. From Room 29, section 5, layer 4 (Fig. 8). ER. 1418.
36. Base of door post socket found set into the mortar of Wall 14 on the east side of Room 13 (Fig. 3). The stone is roughly tooled to shape, while the upper surface is polished, suggesting that the stone had been reused in the wall (ER. 907).
37. Moulding, somewhat damaged, the unmoulded sides having been roughly tooled. Point of a corroded iron nail is set in the underside of the fragment (as drawn) (ER. 1408). Discovered in a dump in Room 36 (Fig. 9, section 7, layer 6),
38. Corner of a stone slab with a polished upper surface lightly scored with lines. The remaining unbroken sides are roughly shaped and have pink mortar adhering to them. From Room 29, section 5, layer 4 (Fig. 8). ER. 1418.
39. Corner of a stone slab the upper surface of which is polished and bears incised lines. From Room 29, section 5, layer 4 (Fig. 8). ER. 1418.

Italian Marbles

40. Portion of veined grey and white marble with polished upper and lower surfaces; the edges all having been broken, the lower edge as drawn having been roughly tooled to shape. Found in disturbed Roman deposits, together with painted wall plaster, in the region of Room 13 (ER. 908). This is identified by Mr. Francis Dimes of the Geological Museum as Bardiglio (or Bleu Turquin, or Italian Dove) marble from the Carrara area, Italy. The Carrara quarries were much exploited during the Roman period. The Bardiglio is a 'bluish' grey marble usually found on the edges of the main marble masses. Its colour varies in tone and the nature of its markings leads to a considerable number of names being given to it. Its bluish-grey colour with varying tones and markings make it one of the most important coloured types of Tuscany, while its close-grained and hard wearing characteristics make it suitable for flooring and paving as well as for decorative purposes.

Tiles

42. End of a water pipe in a hard, red fabric, so shaped as to be inserted into the end of an adjoining pipe. Found loose, overlying the east wall of Room 2 (p. 6).
43. Flue tile, hard, red fabric. Roller chevron pattern applied to the surface. Lowther Group 9, Lowther (1948, 10, Fig. 18). From a dumped deposit in Feature 17 (ER. 914).

Painted Wall Plaster

45. Carinated plaster moulding with coloured bands in green, white and pinkish-grey. From dumped deposits overlying Wall 19 (ER. 935). The form of this piece of plaster suggests that it may have been derived from a splayed window opening.
46. Possibly the corner of a decorative panel, mainly in greenish-blue and brown upon a red background. From dumped deposits in Room 27 (ER. 1425).
47. Yellow, circular blob upon greenish-blue paint, which has been overpainted on a red background. From dumped deposits in Room 27 (ER. 1425).

Italian marble not illustrated includes a small fragment found in the dumped filling of Room 32 (Fig. 9, section 3, layer 5). This has been identified by Mr. Dimes as "a somewhat granular, white coloured marble, which, from the absence of grey markings (although it must be realised that the specimen may not be representative of the stone in bulk) is judged to be Statuario (Statue) marble from the Carrara area, Italy."

41. A flat piece of variegated green and white marble identified by Mr. Dimes as Campan Vert, one of the 'classic' marble types from the French Pyrenees. Found in Room 29, section 5, layer 4 (Fig. 8), ER. 1418. There are slight traces of pink mortar adhering to one end. Mr. Dimes describes this marble type as follows:

"The Campan group of marbles are and were produced from the Espiadet Quarries, Campan Valley, Haute Pyrenees. In the past the Department of the Haute Pyrenees was one of the most important centres for French marble. Much development took place during the reign of Louis XIV who used many of the marbles in his palaces. The quarries at Campan yield a number of varieties of marble which are amygdaloidal in character. They are not truly metamorphosed limestones and they probably originated from modules of limestone which were later cemented together with a mainly greenish, chloritic matrix. Pink, brownish and red colouration is also found and this often determines the name given to the marble. Campan Vert is perhaps one of the best known of the marbles produced in the valley. The dominating colours are light and dark green and the white markings are amygdaloidal in shape."

This marble type was used by the Romans in both Rome and Ostia, Gnoli (1971, 156, Fig. 207) and in Britain in the Roman palace at Fishbourne, Cunliffe (1971, Vol. 2, 17).

44. Flue tile, hard, red fabric. Roller diamond pattern applied to the surface. Lowther Group 5, a type that is plentiful in Sussex and London, though of limited numbers in Surrey and elsewhere. Lowther (1948, 8, Fig. 12). Found in dumped debris in Feature 17 (ER. 914).

48. Decorative panel of yellow, pink and pale green upon a red and black background. Found in Room 31 in dumped destruction debris (ER. 1423).
49. Green zone and cream lines painted over a red background. From disturbed Roman deposits in the area of Room 13 (ER. 908).
50. Leaf shaped decoration in varying shades of mauve over a black background, with green painted over red at one edge of the fragment. From dumped deposits in Room 27 (ER. 1425).

60

Peter Marsden

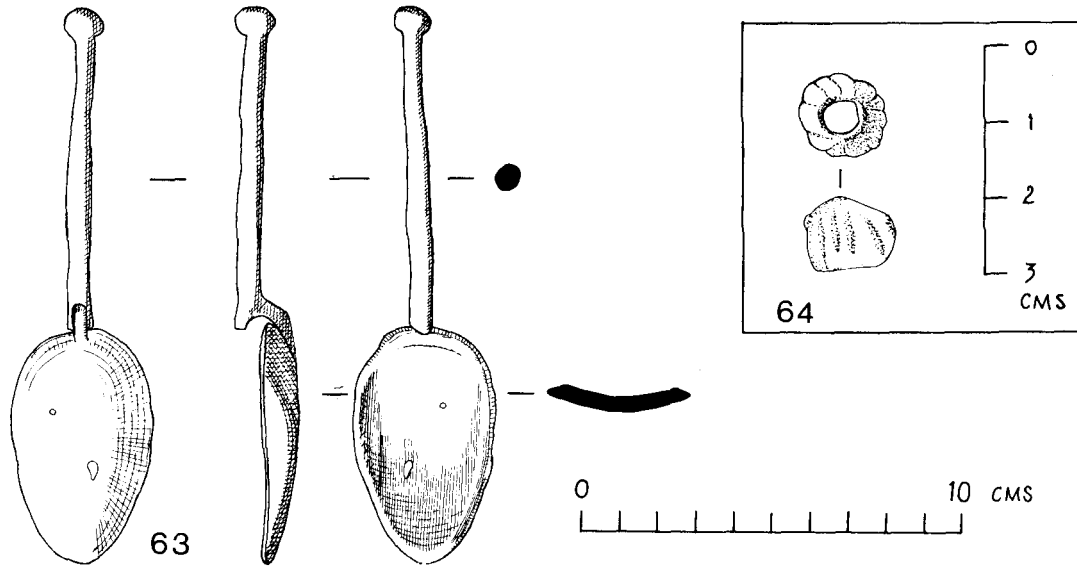
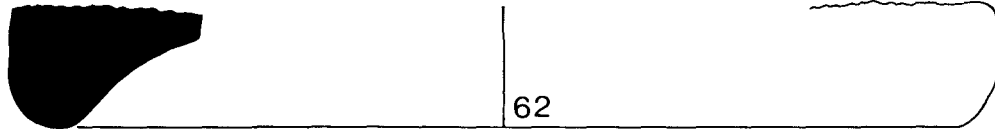
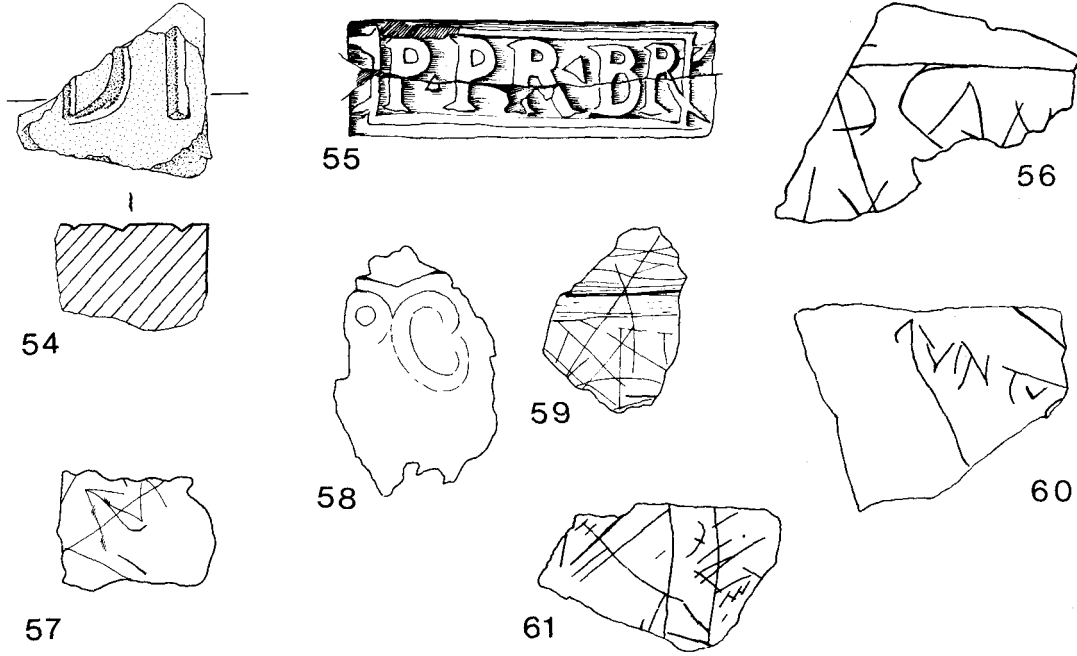


Fig. 24 Huggin Hill site: inscriptions and miscellaneous finds, all (1/2) except No. 64 (1/1).

51. Green leaf shaped decoration upon a black background; zone with red on either edge upon which there is some green and a little black painting. From dumped deposits in Room 27 (ER. 1425).
52. Wall plaster moulding painted black. From dumped

(iv) Inscriptions, Tile Stamp and Graffiti
(Fig. 24)

54. Small fragment of Purbeck marble bearing part of two letters of an inscription. In each letter recess there are clear traces of red paint. Found in the dumped debris in Room 31 (ER. 1423).
55. Tile stamp P.PR.BR on an almost complete *tegula*. The inscription within a border with ansate terminals, is one type of the official tile stamps from London which also read P.P.BR.LON, and are believed to refer to the *procurator* of the Province of Britain, Merrifield (1969, 72), Marsden (1975, 68). Stamps of similar type in the Museum of London collection include those under the following accession numbers: 2180, 2181, 2183, 2183B, 2188. The stamped tile was found in dumped deposits in Room 29 (Museum accession No. 24855).
56. Graffiti inscription scratched on red painted wall plaster, interpreted by R. P. Wright as
... S CAM ... / ... IV ...
Wright (1965, 225, No. 21).
Found in dumped brickearth overlying Wall 19, at the

(v) Miscellaneous

62. Part of the base (?) of a limestone vessel. Identified by Mr. Dimes as Barnack Stone, Lincolnshire Limestone Division of the Inferior Oolite Formation, which is of Jurassic age. Bearing in mind that the Lincolnshire limestone is a very variable deposit in which similar stone may be found at different localities, it seems that this specimen came from the village of Barnack which lies between the rivers Welland and Nene. The hard shelly oolite was quarried here at least in the Roman period until the fifteenth century when the stone was exhausted. Found in dumped brickearth overlying the floors in Room 2 of post-bath Building 'B' (ER. 1401).

(b) The Cheapside Baths Site

(i) Roman Coarse Pottery (Fig. 25)

Bath building. Filling of Period 1 Hypocaust (ER. 346). Late first-early second century A.D.

65. Dish. Flakey, red-brown ware with a grey core, and a mica-dusted surface. Cement is adhering to the rim and outer surface, and also to one broken edge (cf. Cunliffe [1971, Vol. 2, Fig. 84, Type 19] where the type is dated up to the late first-early second century. In London mica-dusted dishes do not seem to date from much before A.D. 100, e.g., Bird [1973, Fig. 14, No. 162] dated Trajan-early Hadrian).

Bath building. Blocking of Period 2 hypocaust flue (ER. 344). Latter half of second century.

66. Jar with everted rim. Hard, grey-brown ware with dark grey burnished surfaces. Second century form. Samian ware from this deposit primarily dates from the latter half of the second century (see p. 64).

deposits in Room 27 (ER. 1425).

53. Carinated plaster moulding, perhaps from a splayed window opening, with a broad red band on the angle, and traces of red and brown decoration on one side. Found in destruction debris in Room 31 (ER. 1423).

south end of the eastern *caldarium* of the baths (ER. 935) (Museum accession No. 24493).

57. Scratched graffiti possibly cursive script, on red painted wall plaster, found as No. 56 above (ER. 935).
58. Scratched graffiti decoration of curvilinear lines upon Roman white painted wall plaster. Found unstratified on the site of the Roman bath building east of Huggin Hill (ER. 1428).
59. Scratched lines on a piece of red painted wall plaster, from dumped clay in the *caldarium*, Room 18 (ER. 940).
60. Cursive inscription, interpreted by Mr. R. P. Wright as the name QVINTVS, scratched on red painted wall plaster, Wright (1965, 225, No. 21). Found as No. 56 above (ER. 935) (Museum accession No. 24492).
61. Scratched lines on a piece of plaster painted red except for a white and green line at the edge. Found as No. 56 above (ER. 935) (Museum accession No. 24494).

63. Corroded white metal spoon, possibly of silver, from dumped deposits around Room 29 (Museum accession No. 25120).

Glass

64. Green glass bead of melon type. Found in the dumped deposits in the region of Room 29.

Other glass (not illustrated) mostly from the dumping into the baths include fragments of square green glass bottles, and green glass cups. There is also a little green window-glass, one piece of which is from the right-angled corner of a window pane.

Bath building. Filling of Period 2 hypocaust (ER. 340). Late second-third century.

67. Jar with everted rim. Hard, brown-grey ware with a grey core. The rim and exterior have a grey-brown slip.
68. Beaker. Fine, hard, white ware with metallic grey slip inside and outside. The outside is decorated with a zone of rouletting. ?Nene Valley. Probably third century. The latest samian ware from this deposit dates from after the middle of the second century (see p. 64).

Bath building. Overlying the demolished bath building (ER. 334). Late second-third century.

69. Jar with everted rim. Hard, grey ware with greyish slip on the exterior surfaces.

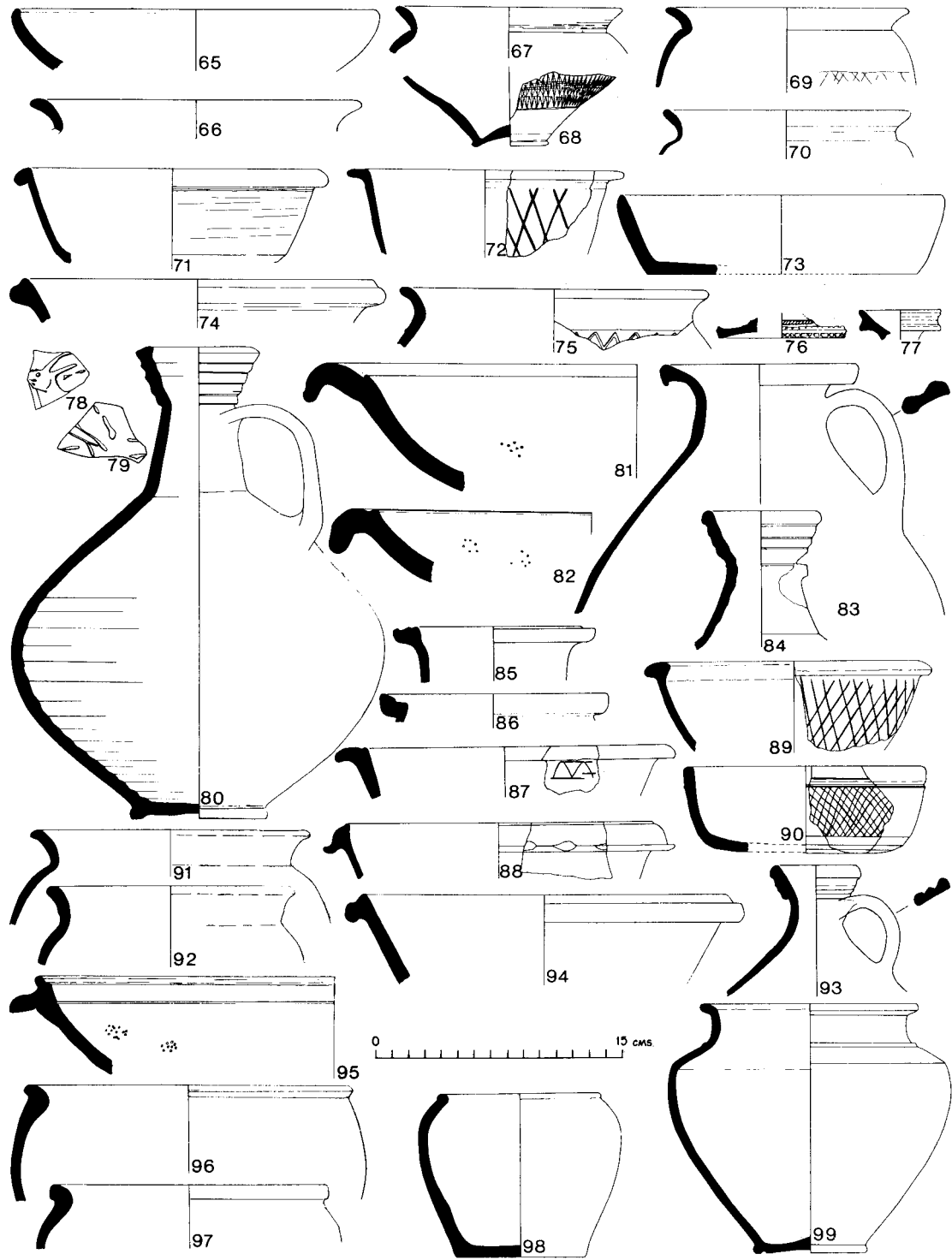


Fig. 25 Cheapside baths site: pottery (1/4).

70. Jar with everted rim. Brownish, sandy ware with black, polished exterior and lip.
71. Dish with moulded rim. Polished surfaces but no decoration. Hard, grey ware (cf. Kenyon [1948, Fig. 19, No. 1] dated second to early third centuries).
72. Dish with a plain, wide rim. Grey-brown, sandy ware with black surfaces. Lattice decoration on the exterior below the rim.
73. Dish. Hard, pale grey ware with a darker grey exterior. Interior coated with a black slip.
74. Flanged bowl. Hard, pale grey ware, with grey-white slip on inside and top of rim.
75. Jar. Hard, grey, sandy ware, with burnished rim. Lattice decoration below.
76. Tazza. Pedestal base. Orange ware with cream slip. Stabbed decoration.
77. Flagon. Fine, pink ware, with white slip on the exterior. (This is a mostly first century type cf. Frere [1972, Fig. 101, No. 57]).
78. Beaker of fine, white ware and a metallic grey slip. Barbotine decoration of a hunting scene of a stag or hare, no doubt being chased by dogs. (Latter half of second century A.D., cf. Frere [1972, Fig. 122, Nos. 791-3]).
79. Beaker of fine, white ware, perhaps part of No. 78. This includes part of a hunting scene and shows the two rear legs of an animal, probably a stag, and two front legs probably of a hunting dog. Samian ware from this deposit shows that it dates from after the later second century-early third century (see p. 63).

Bottom of water-tank, Feature 2 (ER. 356B). Second century A.D.

80. Flagon. Hard, fine sandy, white ware with a pale brown-grey surface. (Museum accession No. 22736) (cf. Kenyon [1948, Fig. 43, No. 10] dated c. 125-130 A.D.).

Main filling of the water-tank, Feature 2 (ER. 356A). Antonine.

81. Mortarium with a hooked rim. Hard, buff, sandy ware, with a greyish surface which on the rim merges to a light yellow in places. Interior surface is gritted with flint and brick. The lower part of the mortarium inside is burnt black (cf. Kenyon [1948, Fig. 18, No. 12] dated early second century).
82. Mortarium. Hard, sandy ware, with red exterior merging to a grey core, merging to a burnt dark grey interior surface. Flint grit on interior surface. First century type (cf. Kenyon [1948, Fig. 18]).
83. Flagon, probably originally having two handles of which one survives. Hard, pinkish, fine ware with a grey core and exterior buff slip (cf. Kenyon [1948, Fig. 28, No. 20] where the type is dated up to the early second century A.D.).

(ii) Samian Pottery

by Joanna Bird and Geoff Marsh

(NB. These finds are not illustrated, but may be consulted at the Museum of London)

ER. 334. (see p. 63).

Dr 37, with fragment of ovolo; Central Gaul, Antonine.
Dr 37, Central Gaul. The ovolo is not clearly impressed,

84. Flagon, with a single handle. Hard, buff, sandy ware.
85. Jar with reeded rim. Fine, hard, pinkish ware with a grey core and a mica-dusted surface.
86. Jar. Pink, sandy ware with a cream coloured slip.
87. Flanged bowl. Grey, sandy ware. Zone of decoration below flange (cf. Kenyon [1948, Fig. 19, No. 23] dated latter half of second century-third century A.D.).
88. Tazza (?). Hard, orange ware, with a cream slip, Finger pressed indentations on the rim.
89. Dish with moulded rim. Fine, grey ware, with black exterior slip, and lattice decoration (cf. Kenyon [1948, Fig. 19, No. 20] mostly Antonine and later).
90. Dish. Black, sandy ware, with polished surfaces. The exterior is decorated with a lattice pattern (cf. Cunliffe [1971, Vol. 2, Fig. 105, Type 201] dated mostly second half of the second century A.D.).
91. Jar with everted rim. Hard, grey ware with a metallic grey burnished rim and shoulder.
92. Jar. Grey, sandy ware with roughly polished exterior surface.
93. Flagon. Hard, pinkish ware with cream slip.
A considerable amount of samian ware from this deposit indicates that the filling occurred during the Antonine period (see p. 64).

Timber-lined well, Feature 8 (ER. 354). Fourth century A.D.

94. Flanged bowl. Grey, sandy ware with black slip on interior surface and on the rim.
95. Mortarium. Hard, fine, buff ware, with orange patches on rim. Interior has sandy grit. This is a characteristic fourth century type (cf. Kenyon [1948, Fig. 18, No. 25]).

Timber-lined well? (Fig. 11, No. 12) (ER. 330). First century A.D.

96. Jar with bead rim. Soft, brown ware with flint grit. Black, rough surfaces. Pre-Flavian type (cf. Cunliffe [1971, Vol. 2, Fig. 102, Type 166]).
97. Jar with bead rim. Grey ware with large pieces of flint grit.

Well? (Fig. 11, No. 11) (ER. 328). Flavian.

98. Jar with bead rim. Black ware with some shell grit; much burnt soot on shoulder (Museum accession No. 21759).
99. Jar. Hard, grey, sandy ware, with polished rim, shoulder and lower part of body (Museum accession No. 21758). This is a typical Flavian type (cf. Sheldon [1974, No. 73] dated Trajanic).

but is probably one used by Mercator (Stanfield & Simpson [1958, Pl. 146, 11 and 12] shows the rosette). The Venus is 0.331, the sea-beast similar

- to 0.33. Mid-late Antonine.
 Curle 11, South Gaul, Flavian-Trajanic.
 Ludowici Tg, East Gaul, Antonine; burnt.
- Dr 38, Central Gaul, mid second century; burnt.
 Dr 37, Central Gaul, Antonine. Three sherds, one burnt.
- Dr 32, Central or East Gaul, later second century.
 Dr 31, Central Gaul, Antonine. At least three sherds.
 Dr 18/31, Central Gaul, Hadrianic-early Antonine. Two sherds.
 Dr 33, Central Gaul, Antonine. Four sherds.
 Dr 33, East Gaul, Antonine. Three sherds.
 Closed vessel with barbotine decoration, cf. Oswald & Pryce (1920, Pls. 79 and 80), probably East Gaul and later second-early third century.
 Two Central Gaulish sherds.
- ER. 340.** (see p. 61).
 Dr 37, in the style of Cinnamus of Lezoux: his ovolo 1 with astragalus border, leaf, and circle, Stanfield & Simpson (1958, Pl. 160, 35). For a similar scroll with double medallion, cf. Stanfield & Simpson (1958, Pl. 162, 60, c. A.D. 155-175).
 Dr 36, undecorated; Central Gaul, mid second century.
 Dr 18/31, East Gaul, Hadrianic-early Antonine.
- ER. 344.** (see p. 61).
 Dr 37, Central Gaul, in the style of Iullinus. The corded border and circle terminal are shown on Stanfield & Simpson (1958, Pl. 127, 22, the panel with a stalk on Pl. 126, 11, and the leaf-spray on Pl. 126, 14; the foliage may be the trilobed motif on Pl. 126, 15). Mid-late Antonine.
- ER. 355.** (see p. 43).
 Dr 37, with a fragment of ovolo; Rheinabern, later second-early third century.
 Dr 31, East Gaul and perhaps Argonne; late second century onwards.
- ER. 356A.** (see p. 63).
 Dr 30, South Gaul, with trident ovolo. Flavian.
 Dr 37, Central Gaul; there is no apparent parallel for the ovolo. Probably Hadrianic-early Antonine.
 Dr 37, Central Gaul: a bowl in the style of Paterclus (Stanfield & Simpson [1958, Pl. 72, 38] has the leaves and gladiators, and may be from the same mould). The gladiators have no exact parallel in O. c. A.D. 125-145.
 Dr 37, Central Gaul, in the style of the Sacer-Attianus group. Attianus used the horse and rider, O. 251 (Stanfield & Simpson [1958, Pl. 85, 3], and the foliage is shown on Pl. 85, 1). The other figure is probably a panther, O. 1512. c. A.D. 125-150.
- Dr 37, Central Gaul, in the style of Sacer, who used the horseman with whip O. 246 (Stanfield & Simpson [1958, Pl. 83, 9 and 12]); the scroll and leaf are probably those on Pl. 83, 8, the ovolo that on Pl. 84, 2, in the Donnaucus-Sacer style. The bird is O. 2250A. c. A.D. 125-145. Slightly burnt.
- Dr 37, Central Gaul. The ovolo was used, with similar beads, by Sacer (Stanfield & Simpson [1958, Pl. 84, 16]. c. A.D. 125-145).
- Dr 37, Central Gaul. The figure is Vulcan (0.66), apparently lacking the tongs as on a bowl by Cinnamus (Stanfield & Simpson [1958, Pl. 159, 23]). Antonine.
- Dr 37, South Gaul. A closely similar bowl from Fishbourne, Dannell (1971, 20) is attributed to Passienus: it has the goose (0.2244), leaf, and scrollery. Early Flavian.
- Dr 37, South Gaul. Large saltire, and panels with a lion (0.1417) and boar (0.1690) separated by a leaf, and a deer (0.1701). The ovolo probably has a trident tongue. The animals are all shown on a bowl from Northwich (Wild 1972, 17), but the arrangement of panels on the Cheapside bowl suggests a slightly later date. c. A.D. 80-100.
- Dr 37, South Gaul. Spurred bud in a wreath festoon with corded tassel. c. A.D. 75-90.
- Dr 37, South Gaul. Tiny bird in a medallion. Flavian.
- Dr 37, Les Martres. The ovolo has no apparent parallel. c. A.D. 100-130.
- Dr 37, Central Gaul, Hadrianic-early Antonine.
 Dr 37, Central Gaul, mid second century.
 Dr 38, East Gaul, mid second century.
 Curle 15, Central Gaul, Antonine probably.
 Dr 37, Central Gaul, Antonine. Four sherds.
 Dr 33, Central Gaul, Antonine. Three sherds.
 Dr 27, Central Gaul, with the upper portion filed off to form a simple cup; first half of second century.
 Dr 27, South Gaul, Flavian-Trajanic. Three sherds.
 Dr 27, Central Gaul, first half of second century. Six sherds, one has an illegible stamp.
 Closed vessel, Central Gaul, mid second century.
 Dr 36, South Gaul, with unusually sharp angle of Oswald & Pryce (1920, Pl. 53, 20). Neronian.
 Dr 36, Central Gaul, first half of second century.
 Dr 36, East Gaul, mid second century.
 Dr 36, burnt: fabric not identifiable.
 Dr 42, dish with handles, Central Gaul, mid second century.
 Dr 29, South Gaul, with fragment of foliage; Neronian-early Flavian.
- At least 16 sherds of Dr 18/31, including at least two sherds of Dr 18/31R. Two are East Gaulish, the rest Central. One has a rivet hole. Hadrianic-early Antonine in general.

(iii) Miscellaneous Small Finds (Fig. 26)

100. Bone pin. From bottom of the timber-lined tank, Feature 2 (ER. 356B).
 101. Head of bone pin. From the main filling of the timber-lined tank, Feature 2 (ER. 356A).
 102. Writing tablet of coniferous wood, both shrunken and distorted in drying out. One edge is perforated

with two holes for thread to bind this to another tablet, while the border in the middle of each of the long sides is cut. The back of the tablet was evidently flat, and on neither side is there any trace of writing. Found in the bottom fill of the timber-lined tank, Feature 2 (ER. 356B).

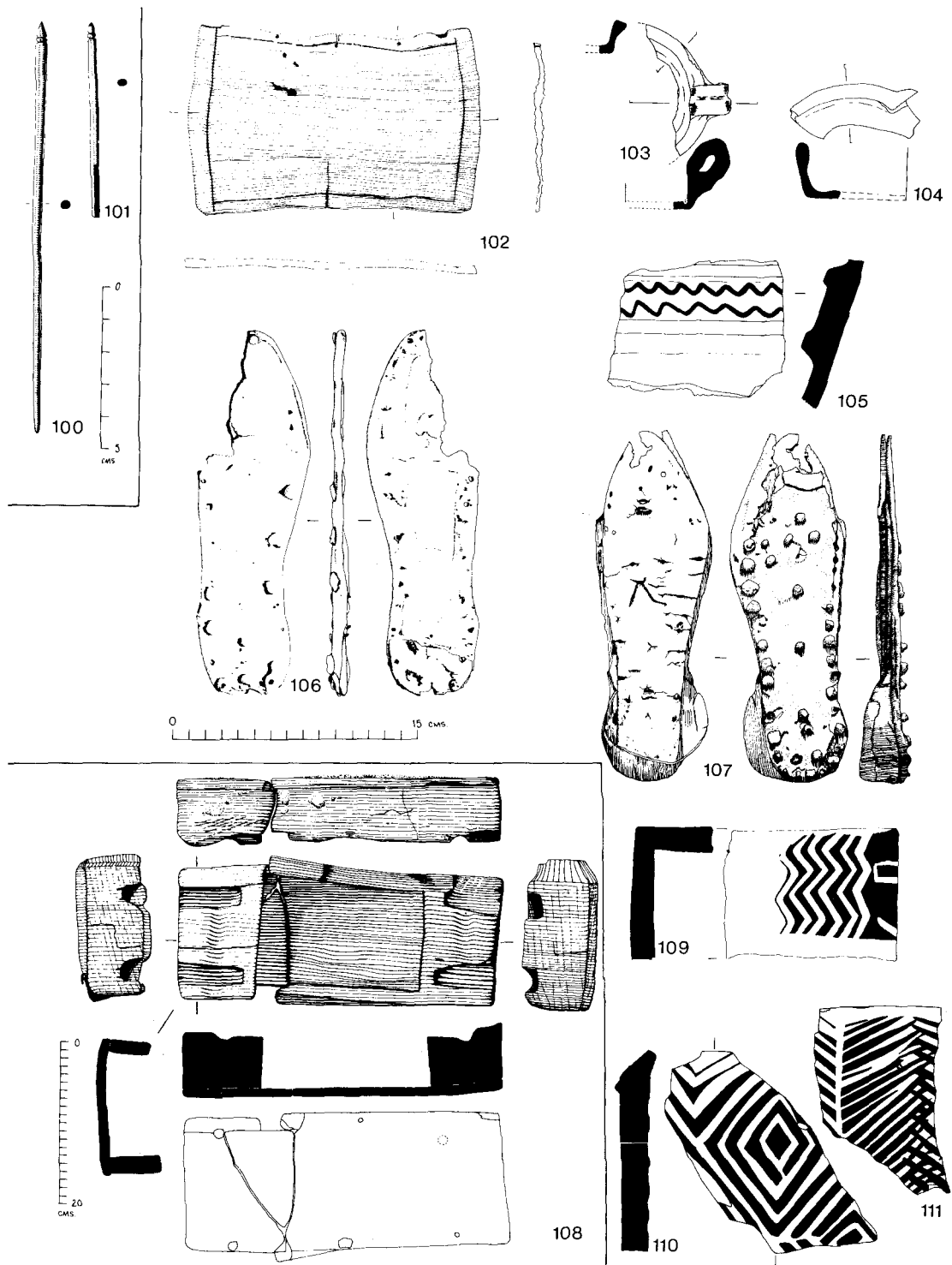


Fig. 26 Cheapside baths site: miscellaneous finds. Nos. 100-101 ($\frac{1}{2}$), Nos. 102-107, 109-111 ($\frac{1}{4}$) and No. 108 ($\frac{1}{8}$).

103. Open lamp or lamp holder with a handle. Soft, buff, slightly micaceous ware (cf. London Museum Catalogue No. 3 [1946, Pl. 29, No. 7]). Found in a brown stratum containing second century sherds, abutting against the exterior face of the east wall of the bath building at the junction of Rooms 4 and 7 (Fig. 13) at phase 2 hypocaust level (ER. 339).
104. Open lamp with projecting nozzle, the whole interior surface of the side of the lamp being heavily burnt. Hard, pink ware with a grey core and a cream coloured slip. Found in the main filling of the timber-lined tank, Feature 2 (ER. 356A).
105. Fragment of a large Roman storage jar. Red ware with a pale grey core. Scatter of flint grit inclusions. Unstratified find from the northern edge of the site (ER. 300, Museum accession No. 21302).
106. Roman shoe sole with iron hob nails, probably of a left foot. The insole is missing, to expose the impression of a piece of leather filling along the centre of the shoe. At the heel is a piece of leather packing. From the main filling of the wood-lined water tank, Feature 2 (ER. 356A).
107. Roman leather shoe sole of a right foot, the pointed toe of which is damaged. The insole is almost complete, and the heel support is intact. On the bottom the iron hob nails are distributed in a simple arrangement with a diamond pattern on the ball of the foot. Found in the main filling of the wood-lined tank, Feature 2 (ER. 356A).
108. Wooden box-like object, probably of oak, of uncertain purpose, made from two pieces of wood. The main part is a box with, at each of the long ends, three half complete drilled holes possibly to contain wooden pegs. The bottom of the box (as drawn) is covered with a flat board held by iron nails to the main part of the box. The top is all broken away, while on one side is a diagonal slit. Ivor Noël Hume suggests that as the opening in the centre of the box is the same size as the end of a box flue tile, then it might have been used as a damper to place over the open flue tiles at roof level on the bath building. The inside of the box is coated with a black, resinous substance which may have been condensed from wood smoke. Found in the bottom of the wood-lined tank, Feature 2.
109. Chevron pattern on a box-flue tile, with traces of lettering. This is not a type illustrated by Lowther (1948). This was one of several tiles found in the baths (ER. 347) and decorated as was this fragment, also with the letters TxTxP, these letters probably being the initials of the tile maker, the crosses being stops between the letters. The letters on No. 109 seem to be the upper half of the last two letters... xP. Found in the hypocaust of the *caldarium* apse (Room 5) of the Cheapside bath building, phase 2 (ER. 347).
110. Diamond flue-tile pattern, Lowther group 5, Lowther (1948, Fig. 12, No. 46). From black deposit (ER. 334) overlying the main flue and the tank platform of the bath building (see p. JJJ).
111. Plain chevron flue-tile pattern, Lowther group 9, cf. Lowther (1948, Fig. 18, No. 44). From the same deposit (ER. 334) as No. 110.

(iv) Inscribed Writing Tablet

by Professor E. G. Turner and H. Chapman

112. Inscribed writing tablet (Plate 13), Museum of London accession No. 20221, from the main filling

(ER. 356A), probably of Antonine date, of the wood-lined water tank, Feature 2 (Fig. 16).

Professor E. G. Turner reports on the tablet as follows:

“Front (Plate 13)

144mm wide, 54mm high. Rim at left, top, right, clearly broken at foot right across. Nick in centre top, to hold string. Rim of c. 10mm. Four vertical sawcuts go right to top edge of table. Central space hollowed, and a deeper cut (c. 28mm wide) in very centre, presumably for seals. Left hand and right hand panel contained wax, central depression indented for seal-impressions. The scribe's stylus went right through the wax, and left marks on the soft wood. A certain amount of dirt (? wax etc.) collected in these marks. Only the right hand panel has proved readable, and contains four names of Roman citizens (praenomen, nomen, cognomen), three in genitive (sc. ‘sigillum of N.N.’) and one in nominative. The left hand panel contains nine lines of writing (scratching) undeciphered.

Left

Right

. ub . . lifuri

Publili Furi? Publili is perhaps a dittography for Publi, which is a praenomen, while Publilius is a nomen.

. . . .

Secundi

L Octavius

Crescens

C probably good reading but top horizontal goes right across.

5 L Ca . . Gamimedi

Cati ?

Marci Semproni

Flori

Back (Plate 13)

Two lines of writing upside down in relation to front (i.e. raised rim is at foot). The writing (scratching) is at the top of the available space, and there seems to be nothing below it.

<i>traces</i>	du . s	<i>traces</i>
ret . .	<i>no trace</i>	quadr . . t . .
<i>blank</i>		

1. ? duos
2. Apparently not quadraginta. ? quadrantem

Note: no middle section cut out on this side."

Regarding the type and use of the tablet Hugh Chapman writes:

"This fragment of a tablet provides another example from London of a multiple leaved Roman legal or business document. Amongst a group of wooden writing tables recently recovered from a late second century pit in Southwark (shortly to be published) were three tablets that could be shown to have been originally hinged together to form a triptych. One side of the second leaf, i.e., page 4 of the complete document, had been incised with a broad, flat, horizontal groove similar to the Cheapside bath fragment. Comparison with a series of tablets from Pompeii, notably the private accounts of L. Caecilius Jucundus (*C.I.L. IV Suppl. fasc. 1. 3340 No. 1 et seq.*) indicated that such triptychs were used to record business agreements or similar transactions requiring the presence of witnesses. The groove received the seal-impressions of the witnesses, whose names were written alongside. Pages 2 and 3 of a 'business' triptych contained the main text of the document and were bound together with threads tied and held in the groove on page 4 by blots of wax bearing the seal-impressions. In this way an agreement between two parties was safely held

under seal and forgery prevented. On page 5 a resume of the main text was written to provide a quick means of checking the content of the document without breaking the seals. The Cheapside fragment is probably the second leaf of a triptych and bears the names of four Roman citizens who acted as witnesses to a business agreement or similar. It is a pity that no more of the document has survived."

(c) Identification of Bones from Both Sites (Table 1)

Animal Bones: Juliet Clutton-Brock, Department of Zoology, British Museum (Natural History).

Bird Bones: Jennifer Gask, Sub-Department of Ornithology, British Museum (Natural History).

As the bones from the Roman bath deposits on the sites can only be considered as casual finds due to the circumstances of their discovery, it would not be worth attempting more than identification of the samples. A fuller report may be consulted at the Museum of London.

With the exception of the one fragment of dog, the bones all appear to be debris from food, with ox, pig, sheep (and goat?), red deer, roe deer, and bird all represented; a surprising assortment of species considering the relatively small number of bones. There is much evidence of butchery and one piece of a lumbar vertebra of an ox (ER. 1425) shows chop marks on the underside of the neural arch, indicating that the method of butchery was probably by chopping downwards along the mid-line of the vertebrae with the carcass hung up by its hind quarters (Philip Armitage, personal communication). A high proportion of the bones comes from small domestic pig.

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6. ACKNOWLEDGEMENTS

Grateful thanks are extended to all who contributed to making this report possible, whether on site or in the drawing office. In the case of the Huggin Hill baths the excavations were carried out entirely by volunteers of the former City of London Excavation Group, and thanks are especially due to Nicholas Farrant who undertook supervision at weekends in addition to lending excavation equipment from the Wandsworth Historical Society. Special thanks are also due to

	Ox	Pig	Sheep	Sheep or goat	Dog	Red deer	Roe deer	Domestic chicken	Domestic goose
Huggin Hill Baths									
ER.									
911								1	
912		1							
918		1?							
930		2							
944		1							
1372		1		1					
1375	1?			1?					
1380	1							1	1
1381	1	1							
1388	1?								
1389									1
1391	2								
1392							1?		
1393	1								
1394				1					
1403								1	
1408	5?	3	1					1	
1409						1		1	
1412	4	1							
1413	1?								
1420	1?	1							
1422		3		1?				1	
1424		2	1						1
1425	2	1						1	
1431				2?					
Cheapside Baths									
334	2	1			1				
345			1						
356A		1							

Table 1. Bones from Huggin Hill and Cheapside baths sites.

Brian Philp and to the members of the West Kent Border Excavation Group who at very short notice abandoned their own project to assist in the initial investigation of the baths soon after it was discovered in 1964.

In the case of the Cheapside baths grateful thanks are extended to Ivor Noël Hume who has helped and advised in all stages of the preparation of that report. It was due to his working single-handed for the then Guildhall Museum, without any financial support or staff and equipment, and with a pressing need to watch other building sites, that it was not possible to publish fully the Cheapside baths at the time, though he wrote a useful descriptive booklet, produced by the Sun Life Assurance Company.

The final preparation of these reports had been carried out as part of the work of the Department of Urban Archaeology of the Museum of London, and thanks are extended to Vanessa Mead and Anna Amblin who undertook the drawings, their initials appearing on their work. Advice on the preparation and content of these reports was gratefully received from Hugh Chapman, Tony Dyson, Brian Hobley and Ralph Merrifield, while the typing was carried out by Diana Twells.

The Society is grateful to the Department of the Environment for a grant towards the cost of publishing this report.