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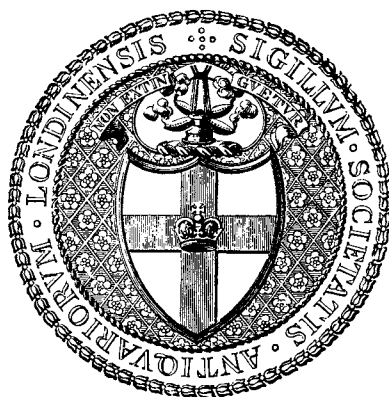
ROMAN BATH

By

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With sections by

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PREFACE

SIR IAN RICHMOND once wrote of the bathing establishment of Bath that it 'has not received the attention which it deserves'. This is true, but the blame must rest not with the relative inaccessibility of the monuments themselves, nor with the archaeologists who have visited them, but with the physical atmosphere of the town, for on arrival a distinctive lethargy descends and one becomes cocooned in the slow sticky air, barely capable of physical exertion and totally unable to indulge in constructive thought. The only answer is to commute daily from as far afield as possible. It may be that some succumb more easily than others; Francis Haverfield, however, having grown up in the town, became acclimatized and was able, with characteristic industry, to produce his masterly survey of the Roman settlement and its remains for the *Victoria County History* which has remained a standard work to the present day. But after that, with the notable exception of the pioneer work of W. H. Knowles, the archaeology of the town lay dormant until Sir Ian began his patient and elegant exploration of the East Baths in 1954.

In such a busy life, his work at Bath was necessarily restricted but within a few years he was able to say to a friend, 'You know Tom, I believe I've lit a candle at Bath'. This was, to say the least, an understatement for he had inspired a large number of followers in the town and had paved the way for the present enlightened attitude of the City authorities. In this new atmosphere growing awareness of the archaeological problems still remaining led to the formation of the Bath Excavation Committee, under Sir Ian's guidance, in 1963. From that time forward the Committee has taken the responsibility for research and rescue excavation in the City. Sir Ian visited the sites as much as his other more pressing work would allow, and was able to see the early results of the research carried out on the problems of the Temple of Sulis Minerva as well as to hear about the rescue excavations undertaken in various parts of the City. His help and advice were always available and his visits were a much-anticipated delight for us all.

By the time of his sudden death in the autumn of 1965, Sir Ian had seen that the Committee's activities were well under way but he had not been able to finish his own report on the Baths, which this Society had undertaken to publish. However, some months later, when the relevant papers were sent to the present writer to prepare for publication, it was evident that several sections of his essay were complete. It was therefore decided, in view of the growing mass of new material, to produce a research report on Roman Bath to include not only the Baths but also the temple and all other aspects of the Roman settlement, publishing at the same time the details of the most recent excavations. Sir Ian's descriptions of the central elements of the Bath suite have been retained as they were written, and are published below except for a few pages of an incomplete first draft on the western range of baths, which have been completely rewritten.

No report can recapture the atmosphere of an excavation, for personal details and evocative adjectives are largely irrelevant. Yet something must be said of the unusual working conditions at Bath. Most of the trenches were dug in cellars, lit by floodlights, below standing buildings and streets, whilst those dug close to the Baths and temple invariably ended up below water-table—some being copiously supplied with hot mineral water escaping from the spring. Other explorations were awkwardly sited between pipes, through which the mineral waters were pumped to the various modern baths, providing the excavators with the dubious benefit of centrally heated trenches. But perhaps the most invigorating site to be studied was that which lay beneath the cellar floor of the Pump Room, where the Victorian excavators had removed the soil covering the temple precinct only to cover it with concrete supported on occasional piers of rubble, leaving a space of between 3 and 5 ft. between the top of the Roman floor and the underside of the new. Work in such a restricted space was somewhat difficult, and at 90 per cent humidity and temperatures approaching 100 °F., it tended to become uncomfortable. After two weeks of this even the most dedicated digger must have thought longingly of green fields.

It is pleasant to remember those who have made this report possible. The Spa Director, Mr. J. W. Nunn, was at all times sympathetic to the needs of the excavation and took an active interest in the progress of the work. Mr. Michael Owen, Curator of the Roman Baths Museum, played many parts, serving as Secretary to the Excavation Committee as well as shouldering the entire burden of the administration, and yet still finding time to join in with the digging. To start with, excavation was carried out on a small scale, by Mr. Owen, the Revd. A. B. Norton and his wife, the Revd. M. Potter (all younger than their status might imply), and the writer. Later, in the Easters of 1967 and 1968, the team was expanded to include Susan Cook, Jo Draper, Rose Finey, Sarah Hayward, Rowe Holland, Judith Jones, Ruth Marris, Pam Owen, Anne Read, Jean Worby, Sam Coley, Alan French, Kevin Greene, Pat Greene, Nicholas Monsell, Chris Osborne, Nigel Sunter, Ian Townsend, and Gareth Williams. They not only removed soil but are all in some way responsible for the field surveys upon which many of the illustrations in this volume are based. To work with such an experienced and happy team made the task of co-ordinating the project both simple and a pleasure. Finally, I would like to thank those who contributed in other ways to the progress of the work, Mr. E. A. Shore and Mr. David Leigh for taking the photographs which illustrate this report, the various specialists whose individual reports are included in the text, my wife who dealt with the finds and translated an illegible manuscript into a relatively tidy typescript, and my secretary, Barbara Angell, who typed the final version.

BARRY CUNLIFFE

Southampton
May 1968

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ABBREVIATIONS

<i>Ant.</i>	<i>Antiquity</i>
<i>Ant. Journ.</i>	<i>Antiquaries Journal</i>
<i>Arch.</i>	<i>Archaeologia</i>
<i>Arch. Journ.</i>	<i>Archaeological Journal</i>
<i>BFC</i>	<i>Proceedings of the Bath Field Club</i>
<i>BMC</i>	H. Mattingly, <i>Coins of the Roman Empire in the British Museum</i> (London, 1923 ff.)
<i>JBAA</i>	<i>Journal of the British Archaeological Association</i>
<i>JRS</i>	<i>Journal of Roman Studies</i>
<i>Min. Soc. Ant.</i>	<i>Minutes of the Society of Antiquaries</i>
<i>Proc. Bath and Dist. Branch</i>	<i>Proceedings of the Bath and District Branch of the Somerset Archaeological and Natural History Society</i>
<i>PSA</i>	<i>Proceedings of the Society of Antiquaries</i>
<i>P. Som. Arch. Soc.</i>	<i>Proceedings of the Somerset Archaeological and Natural History Society</i>
<i>PUBSS</i>	<i>Proceedings of the Bristol University Spelaeological Society</i>
<i>RIB</i>	<i>Roman Inscriptions in Britain</i> by R. G. Collingwood and R. P. Wright (Oxford, 1965)
<i>RIC</i>	H. Mattingly and E. A. Sydenham, <i>The Roman Imperial Coinage</i> (London, 1923 ff.)
<i>TBGAS</i>	<i>Transactions of the Bristol and Gloucestershire Archaeological Society</i>

I. THE NATURE AND SITING OF AQUAE SULIS

THE Roman settlement of Aquae Sulis grew up on a spur of land a little to the north of the spot where the Fosse Way forded the River Avon. Several subsidiary roads converged here. The road leading from London through Silchester and Mildenhall joined the Fosse two miles north of the crossing and branched off again just north of the town in a westerly direction, leading eventually to Sea Mills close to the mouth of the Avon. Another, less well-known, road came in from the south-east, leading apparently from the region of Poole Harbour. Although communications would have been an important factor in the growth of the early settlement, the development of its splendid buildings was due entirely to the presence of the hot mineral water springs which then, as now, burst through the surface of the ground at a temperature of about 120 °F. and at the rate of more than a quarter of a million gallons a day. The spur of land upon which the Roman settlement is concentrated slopes up from the river to a more or less level platform at between 90 and 110 ft. (27 and 33 m.) above sea level; the platform is in fact the remains of the 100 ft. (30 m.) terrace of the Avon. Beyond this the ground rises again, first gradually and then steeply, to the limestone uplands of Lansdown. The mineral springs emerge below the terrace between 70 and 80 ft. (21 and 24 m.) Ordnance Datum level. The site of Bath, therefore, consists of two distinct parts: a southern area around the springs, and a northern area of fairly level well-drained ground stretching along the line of the Fosse.

The origin of Aquae Sulis is still a matter of great uncertainty. Nothing is known of the pre-Roman use of the spring, but this is hardly surprising since the massive engineering works carried out by Roman builders would have removed all trace of earlier occupation. It is, however, likely that the springs were frequented by pre-Roman peoples, for the very existence of the deity Sul, later to be conflated with the Roman Minerva, supposes that the Iron Age inhabitants revered the waters and may even have erected a shrine on the spot. The place of Sul in Celtic mythology is obscure but there is much to suggest that he was linked to the worship of the sun. How far back in time such associations went it is difficult to say, but it may be that the early Bronze Age gold 'sun-disc' found in a barrow on Lansdown was in some way connected with the god who presided over the waters.

Rome's first contact with the springs would have come in A.D. 44-5, when the legions commanded by Aulus Plautius fanned out across the west, establishing by A.D. 47 a frontier zone based on the line of the Fosse Way, strengthened by forts placed at intervals. Normal military practice would demand a garrison at the Avon crossing. It must, however, be admitted that no firm evidence survives for military occupation in the neighbourhood of Bath, but several suggestive scraps of information hint at the possibility of a

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fort site lying north of the springs on the level platform close to the junction between the Fosse Way and the road leading to the early military base at Sea Mills. At several points in the area pottery and coins of Claudian and Neronian date have been recovered, together with a number of tombstones, of which four are relevant. Two (nos. 5.5 and 5.6) commemorate auxiliary cavalrymen, one of whom, L. Vitellius Tancinus, served with the

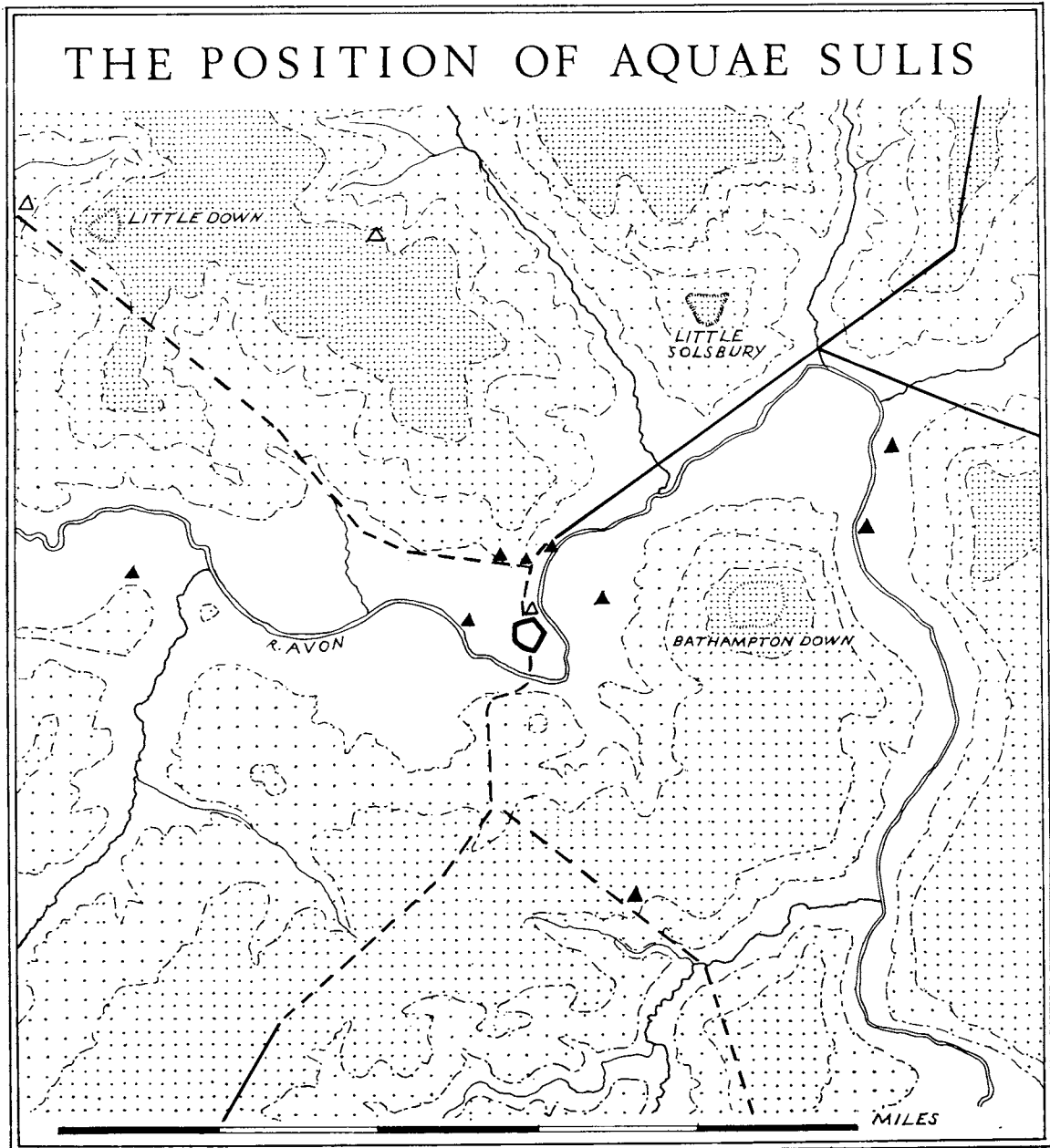


FIG. 1

ala Vettonum; the other two (nos. 5.4 and 5.7) were put up for soldiers of the Twentieth Legion, M. Valerius Latinus and Antigonus, whose other names are unrecorded. It would be wrong to base too much on the tombstones, but all four were very probably of first-century date and the absence of the words *Valeria Victrix* after *Leg XX* on the legionaries' tombstones might suggest a pre-Flavian date, even one before the Boudiccan rebellion of A.D. 60 in which the legion may well have won its honours. Against this it could be argued that the soldiers concerned were the first of a group of settlers who came to the springs either to worship or be cured, men such as Gaius Murrius Modestus of the *Legio II Adiutrix*, Julius Vitalis, an armourer of the *Legio XX Valeria Victrix*, G. Curiatius Saturninus, a centurion of the *Legio II Augusta*, and M. Aufidius Maximus, a centurion in the *Legio VI Victrix*. This may be so, but it is extremely unlikely that the springs had been fitted out in a manner suitable for bathing or worship in the pre-Flavian period when Latinus, Tancinus and Antigonus, and the other cavalryman were present in Bath—it seems far more probable on present evidence that they died whilst stationed in a fort nearby or, as in the case of Antigonus, whilst living in retirement in an adjacent *vicus*. The existence of a fort at Bath then is likely but unproven. Until modern excavation can be undertaken in the Walcot area the problem will remain unresolved.

It is clear that the attractions of Aquae Sulis developed rapidly during the Flavian period; several monuments suggest as much. The colossal head of a woman, probably for a large funerary monument, wears a Flavian hairstyle, Modestus would probably have arrived at about this time before his unit, *Legio II Adiutrix*, was withdrawn from Britain in about 87, and an inscription mentioning Vespasian was found cut into the cornice of what appears to be a small altar. Moreover the style of the buildings themselves strongly suggests first-century work. The simple grandeur of the early baths, for example, closely echoes the style of the Flavian Coliseum in Rome, whilst the two-part Corinthian capitals of the temple and several other of its decorative details can best be paralleled among first-century Mediterranean work. The construction of a great bathing establishment, a temple, and possibly a theatre, around the sacred spring would be a project very much in keeping with what is known of Flavian Romanizing policy. At present this period presents the best context for the vast building programme which converted a marshy hollow into a group of monuments without parallel in the country.

The nature of Aquae Sulis in the second and third centuries is difficult to untangle in detail, but certain facts are beginning to emerge. The baths clearly flourished and the facilities offered to bathers were soon extended and improved. Some time probably during the latter part of the second century the Great Bath and the rooms adjacent to it were completely re-roofed with massive vaults. A visitor to the centre could now swim in the thermal bath, take a hot steamy Turkish bath, sweat in an intensely hot dry room, and then plunge into a cold pool or sit immersed to the neck in hot or cold curative baths. Such a range of facilities would have been difficult to find elsewhere in western Europe; it is hardly surprising, therefore, that visitors from far and wide were attracted to the spa. Apart from the soldiers mentioned above, the list includes an unnamed decurion from

Gloucester; Priscus, a stonemason from Chartres; Peregrinus from Trier, and Rusonia Aventina from Metz. They came to worship or be cured: those for whom the visit was successful set up altars, the others are commemorated by their tombstones.

Outside the main group of central buildings there were others of a monumental nature. The Hot Bath spring was furnished with a range of baths similar in structural detail to the Great Bath. The spring at the Cross Bath was also used, but in what form is uncertain—it may have been simply a well with dedications, one of them to the healing deity Aesculapius, placed around the top. There seems also to have been another sacred spot, the *locus religiosus* referred to in an inscription found with others somewhere in the south-west quarter of the town, but nothing more is known of this place and its exact site is uncertain. Even more uncertainty attaches to the siting and form of the building to which the fragments of a huge cornice, twice the size of that of the temple, belongs. The pieces were found to the north of the temple, but further details at present elude us.

There can be little doubt that the presiding deity was Sulis Minerva: the very name *Aquae Sulis* given to the site in the *Antonine Itinerary* implies as much. Furthermore, of the thirteen dedicatory inscriptions known, ten are to Sulis or Sulis Minerva. The remaining three, to Diana, the Suleviae, and Mars Nemetona, simply reflect deities introduced by visitors. It may be significant to note that they were found on sites outside the main temple area.

The temple itself is now sufficiently well known to show that in most respects it closely resembled classical prototypes, but provincial peculiarities such as a surrounding free-standing colonnade were not lacking. The pediment, too, with its Celtic Gorgon in an otherwise classical design is a strong reminder that Bath was on the fringe of the Empire where native tradition still remained vigorous. Yet the religious rituals may well have been organized on purely classical lines. The presence of a high-ranking augurer, the *haruspex* L. Marcius Memor, shows that *Aquae Sulis* was a religious centre of some distinction and we know of a priest of Sulis, Gaius Calpurnius Receptus, who died at the age of 75 and whose tombstone was erected by his freedwoman-wife Calpurnia Trifosa. It is clear, then, that the religious life of Bath flourished in the early Roman period, but how the settlement fared at the hands of the Christians in the early fourth century is less certain. The inscription above the Façade of the Four Seasons refers to repair and repainting, implying that this was necessary because of excessive age. A possible context for the new work might have been the pagan religious revival in the latter part of the century. If this inscription suggests peaceful neglect during the period of Christian dominance, the altar raised by Gaius Severius Emeritus, the centurion in charge of the region, gives a more violent view, for it refers to the restoration of a 'Holy Place wrecked by insolent hands'. The evidence for temporary Christian interference in the religious life of Bath may not yet be impressive but the little we have is suggestive.

The non-religious development of the settlement is much less clear, but it is becoming apparent that the nucleus, of about 23 acres (9.5 hectares), was probably surrounded by defensive works consisting, by the end of the second century, of a rampart with a wall in-

serted in front later. If this interpretation of the scanty facts so far available is correct, Aquae Sulis would seem to have followed the same pattern of development as that shown by other Romano-British towns. Twenty-three acres, much of it occupied by the monumental buildings, is hardly an adequate area for a town of normal type, nor is there any evidence to suggest that Bath ever served as a seat of local government, but a glance at a map emphasizes very strongly Bath's important position as a market centre. The nearest towns of Cirencester, Caerwent, Ilchester, and Mildenhall are all more than 25 miles away, while within a 10-mile radius of the town thirty villas cluster. Add to this the fact that it lay at the centre of an important pewter and stone-quarrying industry and may also have been a collecting base for corn from the farms of Salisbury Plain, and its economic importance becomes obvious. It is in no way unusual or incongruous for a great religious site to become a market centre, and there are many similar examples in the Roman world. Indeed, it would have been surprising if Bath had not developed in this way. Physical evidence of market sites within the town is not extensive, but the outer precinct of the temple could well have housed traders and there is a strong possibility that separate market buildings remain to be found.

Of urban development we know a little more. The area north of the walled region has produced quantities of occupation material dating principally from the late first to early third centuries. Excavations within the walls tend to present a different picture. Very little material of the first or second century has been found, and on several sites there is clear evidence that they were open at this time, but there must be houses of this period still to be found, some belonging to the staff of the temples and Baths, others serving as hotels for visitors. Some time in the late third or early fourth century, houses began to be erected within the walls, frequently on virgin sites, and the impression gained from the evidence we have at present is that these new buildings were being densely packed into the limited space between the walls and the Public Monuments. Some of the houses underwent frequent repair during the fourth century and at least nine of them are known to have had mosaics. The wealth of the small urban community can be matched only by that of the villa owners living in the surrounding countryside. What pressures caused the nucleation of the settlement cannot with certainty be defined. The need for protection in the late second or early third century probably here, as elsewhere, led to the construction of the earthen rampart around the monumental buildings, and thereafter there seems to have been a gradual drift to within the defended enclosure. The city wall, if indeed it is of Roman origin, was added later, but how much later is unknown. The re-use of inscribed stones, both from the cemetery and from public buildings, might suggest a late date—perhaps even in the fourth century—but it remains a possibility that the sections of wall in which the Roman stones were used were rebuildings of late Saxon or medieval date. It may, however, be relevant to point to the neighbouring small settlements of Gatcombe and Mildenhall, both of which were protected by walls in the fourth century. The weight of the evidence is in favour of Bath being walled at this time.

The end came slowly, the Baths and the temple being first to go. Ever-increasing

problems of flooding, which had previously been tackled by expensive refloorings, became more serious as the water-table rose and eventually the Baths had to be abandoned. Thus the drainage system soon fell into disrepair and the mineral water, unable to drain away, ponded up, allowing silt and mud to clog both the temple and the Baths. That occupation still continued is clear from the quantities of late fourth- to early fifth-century pottery and rubbish which were thrown into the marsh, and indeed in one part of the town there is ample evidence of extensive rebuilding which must date to the very end of the Roman period. Yet robbed of its religious importance and later, as Roman civilization crumbled, of its economic significance, the settlement could not have continued on the same level for long. Nevertheless it was still listed as a town in 577, when Bath, together with Cirencester and Gloucester, passed into the hands of the Saxons.

II. THE TEMPLE OF SULIS MINERVA

1. INTRODUCTION

IN the centre of modern Bath, between 10 and 15 ft. (3-4.5 m.) below the present surface, lie the remains of the Temple of Sulis Minerva, a fine, richly ornamented, tetrastyle building set within a spacious precinct. Although the famous Gorgon's Head Pediment has often been published and described, it is seldom realized how much can be deduced of the temple building, its associated monuments, and its surroundings. In the following pages an attempt has been made to summarize the evidence now available and to offer a reconstruction of the complex as it is thought to have been.¹

The third-century writer Solinus is the first to refer to the temple.² In his *Collectanea rerum memorabilium*, in which he describes certain natural curiosities, he mentions hot springs in Britain 'furnished luxuriously for human use' and goes on to say that 'over these springs Minerva presides and in her Temple the perpetual fire never whitens into ash but as the flame fades, turns into rocky lumps'. The reference to hot springs leaves little doubt that he is describing Bath—subsequent archaeological discoveries have confirmed this view. A later, though less certain, reference to the temple appears in the eighth-century poem known as 'The Ruin', which describes in vivid terms the shell of a decayed Roman city 'now fern-tufted and lichen-spotted'. The identification of the city with Bath depends entirely upon an internal reference to baths served by hot springs: *Aquae Sulis* is the only site in Anglo-Saxon England to fit the description.³ Lines 60 and 61 in Earles's translation are rendered: 'Therefore these halls are a dreary ruin, and these picture gables'. If 'picture gables' (*teafor geapu*) is translated as 'sculptured pediments', it might imply that the temple was still standing, albeit in ruins, when the poem was written. The argument is tenuous, but possible.

The work of Solinus was evidently available to Geoffrey of Monmouth in the twelfth century, since he makes use of the description of the temple and springs, and is quite clearly of the opinion that Solinus was writing of Bath.⁴ In this way the knowledge of the Temple of Minerva at Bath passed into the minds of medieval historians. Medieval tradition embodied in the works of later topographers, including Camden, Guidott, and Stukeley, placed the temple site beneath the Abbey Church, but it was not until the centre of Bath began to be extensively rebuilt in the late eighteenth century that positive evidence of its actual position came to light. In the autumn of 1790 the western part of the Pump Room, including its Stall Street frontage, was rebuilt on a somewhat extended scale. The soft nature of the soil hereabouts demanded deep footings, the trenches for which were eventually

¹ For recent accounts see Richmond and Toynbee 1955 and Cunliffe 1966.

² Solinus, *Coll. rerum mem.*, ed. Mommsen (1895), p. 102.

³ For an excellent discussion of this point see Leslie 1961.

⁴ *Geoffrey of Monmouth*, ii. 10.

dug down to a solid Roman pavement at a depth of 12 ft. (3.66 m.) below the existing surface. Englefield, who was able to visit the site, informs us that 'on it the foundation of the present new building is laid; and it will of course be for a long time covered from future excavation' (Englefield 1792). In addition to the pavement a wall with an attached pilaster, a flight of steps, and large quantities of sculptured stonework were recovered. The structural remains were ill-recorded but the sculptured stones, including the famous Gorgon's Head Pediment and the Four Seasons Façade, received a detailed treatment in the publications of Pownall, Englefield and, later, Lysons. The remains were clearly those of a temple, and since they were unlikely to have fallen far they implied that the building lay close by.

James Irvine, employed by Gilbert Scott to superintend his restoration of the Abbey, was convinced that the temple lay beneath the Old White Hart Hotel on the west side of Stall Street, opposite the discoveries of 1790. In 1864 his theory led him to carry out a small and inconclusive excavation in the cellars of the building, which was by then derelict. Three years later the old hotel was demolished and work began on the construction of the new Pump Room Hotel. During this period, 1867-9, Irvine visited the works regularly and produced highly accurate and detailed accounts of the remains he saw, including part of the temple podium with a surrounding wall and pavement, the north and west sides of the portico bounding the temple precinct, and several architectural fragments. He clearly understood the remains for what they are, but unfortunately published no detailed account of them.

Between 1878 and 1896 much of the great bathing establishment, south of the temple, was uncovered by the City Engineer, Major C. E. Davis, but only occasionally did the excavation stray north and impinge upon the temple area. In 1879-80 the wall on the north side of the reservoir was examined, but most of the work north of the baths was carried out between 1893 and 1895 and it was during this time that Davis uncovered the remains of the entrance to the temple precinct north of the reservoir, which he neither understood nor planned. Finally, in 1896, he examined the bath below Stall Street, at the extreme western end of the establishment. It was in connection with this work that the southern portico of the temple precinct was discovered. The shortcomings of Davis's later recording were to some extent made good by the superb plans, commissioned by the Society of Antiquaries, and produced in 1900 by Richard Mann, a builder whom he had originally employed. Unfortunately Mann does not appear to have had access to the results of Davis's later investigation of the temple area, for he left much of this part of the plan blank.

By 1906 Haverfield had gathered together most of the surviving evidence on the existence of the temple for inclusion in his article on Roman Somerset, published in the first volume of the *Victoria History of the County of Somerset*. Although he published a copy of Irvine's plan of the 1867-9 discoveries, he was surprisingly scathing of Irvine's work, giving little weight either to the quality of his recording or to his interpretations. Nor did he attempt to interpret the remains planned by Mann to the north of the reservoir

and Great Bath. Taylor's plan, first published in his guide *Catalogue of the Roman Remains at Bath* in 1906, adds a few further details to this important area but offers no comment on them.

There the matter rested until 1955, when Professors Richmond and Toynbee published their paper on 'The Temple of Sulis-Minerva at Bath' (Richmond and Toynbee 1955), which deals in considerable detail with the tympanum, cornice, and columns of the temple front. As to its position, they were of the opinion that it lay immediately north of the reservoir and faced south across the sacred spring, so that it could be viewed from the hall in which the circular bath was later built.

In 1959 the site of the Pump Room Hotel again came up for redevelopment, but this time modern building methods forbade the leisurely examination which Irvine was allowed a hundred years before. In spite of considerable difficulties, however, the Camerton Field Club, under the direction of Mr. W. Wedlake, were able to record a number of details confirming Irvine's observations, and adding to them the line of a wall parallel to the north side of the podium and a hypocaust chamber beyond its south-west corner.

When, in 1963, the Bath Excavation Committee was formed it was clear to the present writer that the siting and nature of the temple constituted one of the main outstanding problems within the city. After studying the reports of previous discoveries and completely re-surveying the surviving structures, a campaign of limited excavation was undertaken within the cellars of the Pump Room. The results of this work, which took place from 1964 to 1968, are published below (p. 44 ff). Together with the earlier discoveries they have made it possible to compile the survey offered in the following pages.

Before describing the temple and its environment some indication must be given of the sources upon which the study is based. It has been thought advisable for the sake of clarity, and in order not to clutter the descriptive text with too much detail, to state the evidence, both documentary and from excavation, in a separate section in which each discovery is arranged individually in an order based on the year in which it was made. This means that in order to refer to a particular find it is sufficient to give the date of its discovery. The plan of the temple (fig. 26) has been constructed from a number of sources. The part below Stall Street and to the west has been taken directly from Irvine's minutely detailed manuscript plans, now preserved in the Bath Reference Library (whence the less accurate plan, in Haverfield 1906, fig. 9). The remainder is a collage of many fragments, using the cellar plan prepared by the City Surveyor as a base. Mann's plan of 1900 has produced most of the details of the reservoir and surrounding features. The building to the east of the temple has also been taken from Mann's details, checked against those features which still project above the concrete floors of the Museum. Much of the east portico of the temple precinct now lies beneath piles of rubbish behind the present Museum façade; this has been re-surveyed and the details incorporated. The most important part of the surviving remains is undoubtedly the south-east corner of the temple precinct excavated by Davis in 1893-5. The area remains uncovered but lies at present between 3 ft. 6 in. (1.07 m.) and 6 ft. (1.83 m.) below the modern concrete cellar floor of this part of the

building, where it can be reached through two small manholes. The constricted space and the lack of light and air, combined with the intense humid heat and the presence of mineral water-impregnated mud over everything, makes surveying difficult, but two weeks' work at Easter 1967 carried out by volunteers has provided much that is new. Finally, the recent excavations in the cellars beneath the northern and western parts of the Pump Room and below the Information Office have yielded many important facts.

A plan compiled from such a patchwork of information is likely to contain some inaccuracies, but those which occur are very slight. Its biggest shortcoming is that, with a few exceptions, it is difficult to point to the sound evidence for alterations made during the life of the complex and it is impossible to date those which can be recognized. With these provisos in mind we can now proceed to a description of the Temple and its surroundings.

2. DESCRIPTION OF THE TEMPLE (figs. 26, 27)

It is now known that the temple building stood slightly eccentrically on an east–west axis in the western part of a colonnaded precinct measuring 260 ft. (79 m.) east to west by 170 ft. (51.5 m.) north to south, and that into the south–east corner of the precinct projected a rectangular enclosure wall surrounding the spring and reservoir. This enclosure, and the Baths to the south, were so arranged that a north–south building axis was created, passing through the reservoir and crossing the east–west axis at right-angles. At the point of crossing was sited the sacrificial altar. The features constituting the Temple complex are therefore: the Temple building, the spring, the surrounding colonnades, and the precinct with its many smaller monuments.

The Temple (figs. 2–5)

The temple was built on a podium of concrete originally faced with ashlar masonry, most of which has since been removed by medieval and more recent robbing. The much-mutilated fragments of this structure seen by Irvine (1867–9) and Wedlake (1959) survived to a maximum height of 4 ft. (1.22 m.) above the surrounding contemporary surface. Originally it may have been about 6 ft. (1.83 m.) high. None of the original facing now exists in position, nor is there any trace of the cap moulding of the podium, but a small part of a simple chamfered base plinth was seen by Mann at the front of the northern cheek wall in 1883 and again in the excavations of 1967 (fig. 19).

The steps ascending the east front were first discovered during the building work of 1790, and the lowest of these was again uncovered in 1964 (pl. xxviii*b*), but space was then so restricted by the 1790 building that further exploration was rendered impossible. Unfortunately, the exact form of the steps is rather difficult to untangle from the inadequate descriptions published at the time of their first uncovering, but a note in the Minutes of the Society of Antiquaries states that there were 'three steps to the east downwards

towards the King's Bath and four steps upwards to the west towards Stall Street'.¹ It would be reasonable to interpret this as a flight of seven steps, rising up to the podium at the west side, broken perhaps, after the third, by a platform.

It is a sad fact that the western half of the podium is now embedded in the concrete basement of the new Arlington House, while almost the entire east front and steps were incorporated in the west wall of the 1790 Pump Room. Only the centre section remains unencumbered below Stall Street, and even this will have been gashed by innumerable sewers. Yet in spite of the present lack of visible remains belonging to the sub-structure, the records made by the early observers, principally by Irvine, enable the size of the podium to be estimated quite accurately as 33 ft. (10.05 m.) by 67 ft. (20.4 m.), the length therefore being approximately twice the width, proportions of which Vitruvius would have approved.² These measurements provide one vital clue to the restoration of the building, while others come from a consideration of the many carved fragments found in 1790 and later, which constitute the front of the temple.

Of the columns of the main front only one small piece remains (no. 1.1);³ it is part of a solid fluted shaft 27 in. (0.67 m.) in diameter found in the reservoir in 1879. Judging

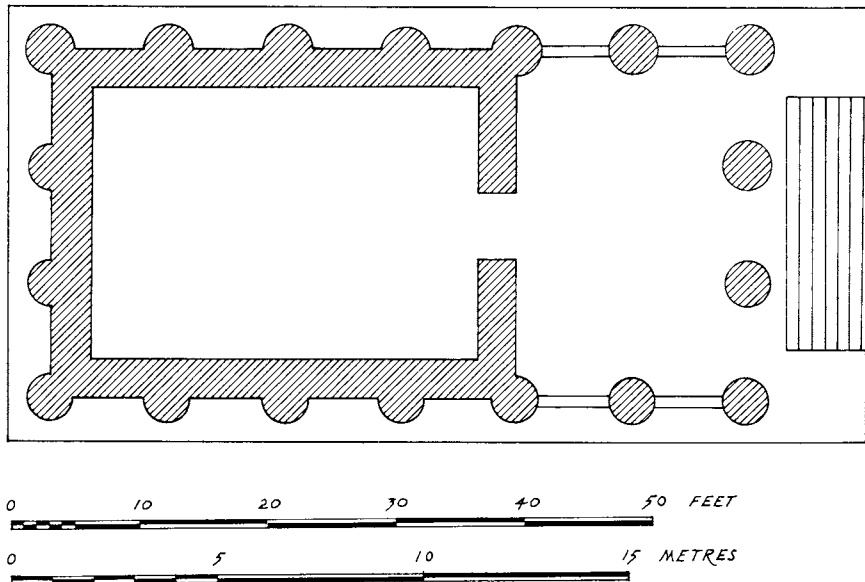


FIG. 2. Reconstructed plan of the Temple podium

from the diameters of the cap and base described below, this section would have come from high up the column quite close to the cap. It is perhaps surprising that only one fragment from the front columns has so far come to light, but a possible explanation may be that these columns stood for some considerable time after the rest of the entablature

¹ *Min. Soc. Ant.* xxiii. 416.

² *Vitruvius*, iv. iv. 1.

³ Each architectural fragment has been numbered

consecutively and all are listed in the section below, beginning on p. 183.

had crumbled into the marsh, and were thus prey to later stone robbers. Fortunately, however, six fragments of hollowed columns were found during the 1790 building operations (nos. 1.2-7). They comprise two parts of an Attic base 3 ft. 9 in. (1.14 m.) in diameter, two sections of shaft and two parts of a Corinthian capital. All have been hollowed out from the back, the surviving thickness being as little as 5 in. (0.13 m). Clearly therefore they could not have supported the entablature and must be regarded as parts of engaged half- or three-quarter-columns standing against the cella wall.

This hint of a pseudo-peripteral treatment is converted into certainty by a consideration of the width of the entablature. The tympanum and cornice described below demand an entablature about 31 ft. (9.4 m.) across. Now knowing the width of the podium to be 33 ft. (10.05 m.), it is evident that the front was tetrastyle. Moreover to suit these proportions the cella would need to be about 27 ft. (8.23 m.) in width, thus allowing a ledge 3 ft. (0.91 m.) wide on each side between the cella wall and the edge of the podium—that is, just sufficient to take engaged half-columns which would project a little under 2 ft. (0.6 m.) from the wall face. If we follow the Vitruvian principle that the length of the cella should be about $1\frac{1}{4}$ times its width, and modify this slightly to fit the column spacing of about 5 ft. 4 in. (1.62 m.) which the present tetrastyle example requires, the length of the cella would be approximately 36 ft. 4 in. (11.07 m.) thus taking five engaged columns, including those at each corner. To balance the structure the porch would need to be just over 18 ft. (5.5 m.) deep and would therefore allow space for one column to be inserted on each side between the actual front and the fore-wall of the cella. The hollowed capital fragments may be part of either half or three-quarter engaged columns, but the Attic base must have stood at one of the external forward angles of the cella, for it is grooved to receive a low balustrade which would have run forward from the cella corner between the freestanding columns. A ground-plan (fig. 2) may therefore be offered with confidence.

Above the columns, which would have stood to a height of about 26 ft. (7.93 m.), was the architrave and frieze, of which practically nothing is at present known. One fragment, however, may be relevant here (no. 1.8); it is a small piece of an architrave, broken on all sides. Two fasciae are represented; on the lower, which is slightly concave, are two letters of a well-cut inscription $4\frac{1}{2}$ in. (0.11 m) high reading]VM[. Above is a narrower un-inscribed fascia (fig. 5). Such an unequal arrangement, though unusual, can be paralleled on the architrave of Regia at Rome.¹ Although we cannot be certain that the fragment belongs to the temple, its size and the quality of the lettering would allow the possibility. It is indeed tempting to read the inscription as part of the word 'templum', referring perhaps to the Temple of Sulis Minerva. Of the frieze above nothing is known, except that we may assume it to have been elaborately decorated.

The nature of the cornice is well known from the ten blocks found in 1790 (nos. 1.9-18) and the single fragment found in 1867 actually on the podium at its west end. The mouldings on all the known pieces are very similar, consisting of a cyma decorated with acanthus leaves, a plain fascia and a cavetto soffit, lacking modillions, and decorated with

¹ F. Toebelmann, *Römische Gebälke* (1923), fig. 7.

finely carved scrolls, sprigs, flowers, and bunches of fruit (pls. xxxi–xxxii). Below the soffit is an ovolo and below this again a broad and shallow cut dentil. There is no apparent distinction between the design of the horizontal and that of the racking cornices but on one block (no. 1.16), the lowest section of the right-hand racking cornice, that part of the soffit, ovolo, and dentils which would have been obscured when the section was in position, has been omitted.

With the exception of the block found by Irvine in 1867, the others have all been sawn diagonally across the back at an angle of 42°. Richmond and Toynbee considered this to imply that the surviving pieces were replacements for an earlier weathered cornice. Although this is certainly a possibility, it should perhaps be borne in mind that the sawing, which is often irregular, could have taken place after the initial discovery, simply to lighten the weight of the individual exhibits. The block found in 1867 has not been sawn.

The great Gorgon's Head Pediment, which is represented by six blocks (nos. 1.20–5) discovered in 1790, does not require a detailed discussion here, since it has received an exhaustive treatment in a recent article (Richmond and Toynbee 1955). Suffice it to say that the blocks constitute a tympanum measuring 26 ft. 4 in. (8.0 m.) in length and 8 ft. (2.44 m.) in height. In the centre, held aloft by two winged Victories, is a circular shield bearing a spirited rendering of a fierce, moustached Gorgon's head surrounded by two concentric wreaths of oak leaves.¹ The Victories rest their feet on globes beyond which, in each of the lower angles of the tympanum, is a sea creature thought to represent a Triton. In the triangular space between the lower edge of the shield and the flowing drapery of the Victory on the left side is a helmet beaten into the shape of a dolphin; the corresponding place on the right-hand side was probably filled with another helmet, upon which is perched an owl with wings outstretched, standing between two clenched fists (pls. xxxiii–xxxv and fig. 3).

One final detail remains: part of the cornice above the main temple door survives (no. 1.26), though where and when it was found is unknown. It was clearly meant to match the main cornice, but differed from it slightly in size and in that it lacked dentils and ovolo.

The happy chance that Bath was situated in the centre of an area in which good building stone was common, combined with the formation of a bog, at the end of the Roman period, into which the superstructure tumbled, has meant that sufficient of the temple façade survives to enable a detailed restoration to be made (fig. 3). Accurate elevations have been offered on several occasions in the past by Lysons (Lysons 1813, pl. v) reproduced here as pl. 1, Irvine (Irvine 1873, pl. 13) and others. That offered here differs from its predecessors only in matters of detail. It shows to what a remarkable extent the main features of the Temple front can be deduced.

It was in all probability this building to which Solinus was referring when he said that 'in her [Minerva's] Temple the perpetual fire never whitens to ash but as the flame fades,

¹ See A. Ross, *Pagan Celtic Britain* (London, 1967), pp. 90–2, for a general discussion of the religious significance of the piece.

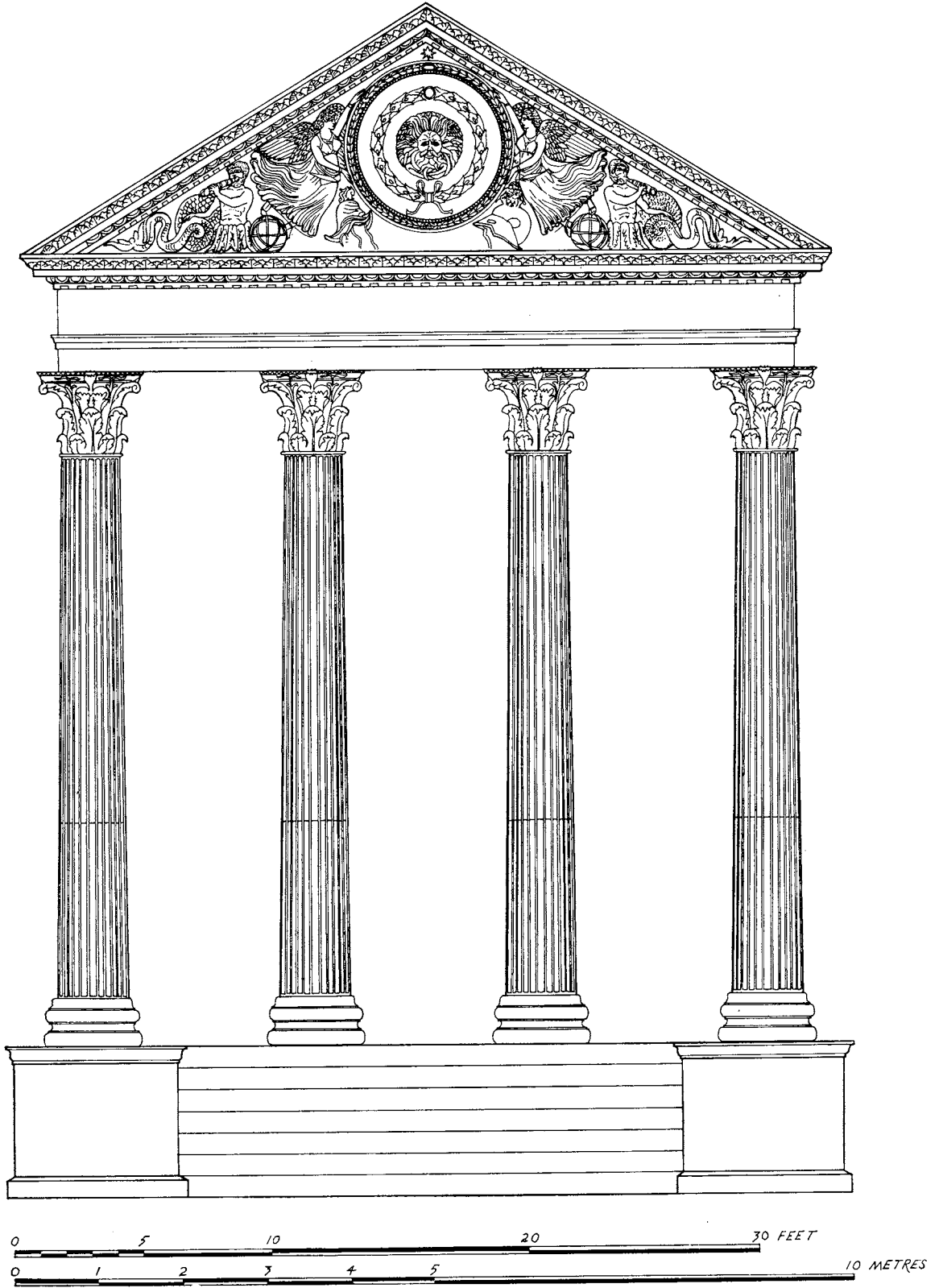


FIG. 3. The front elevation of the Temple

turns into rocky lumps'—clear reference, many archaeologists have thought, to the use of locally mined coal on the altar fires. Although no evidence to support this attractive view

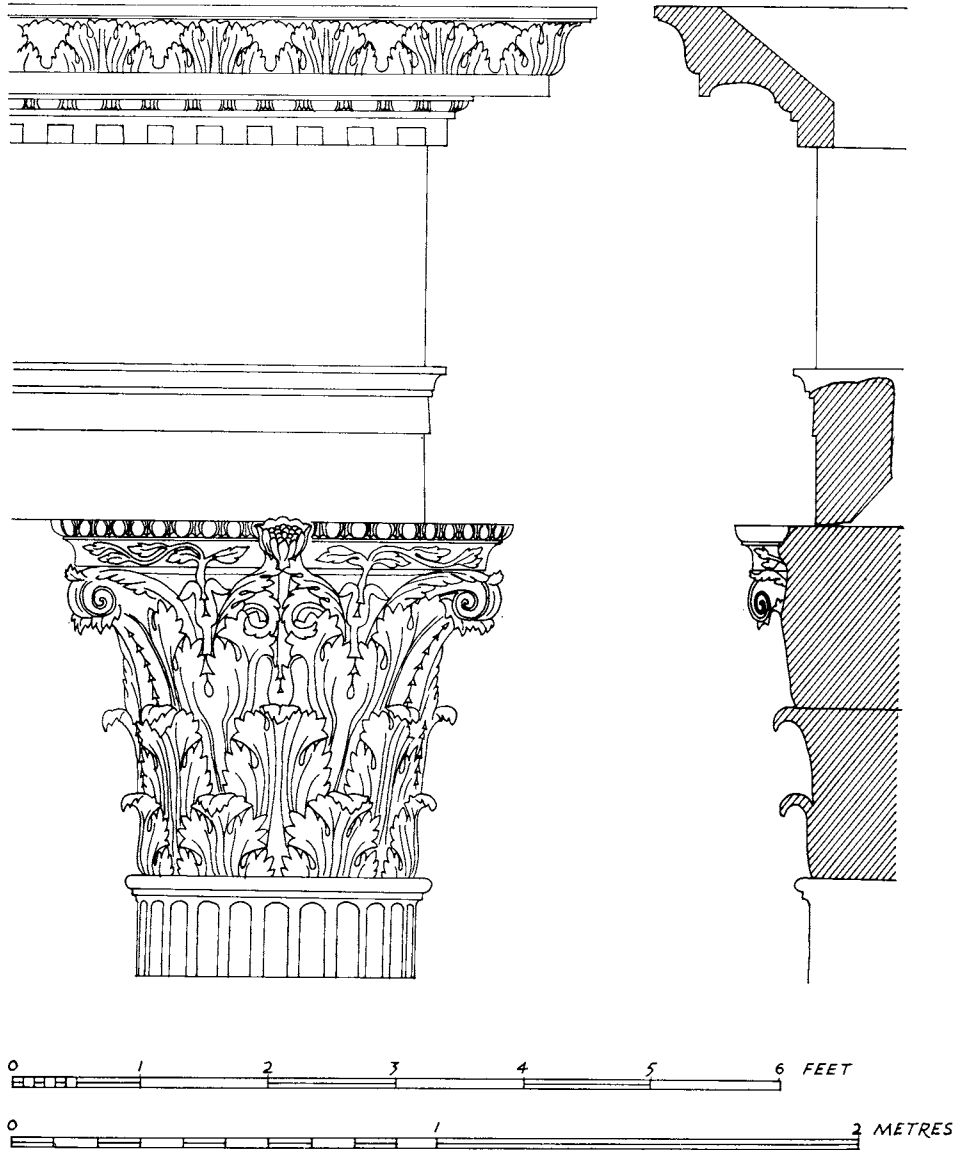


FIG. 4. The entablature of the Temple (after Lysons with amendments)

has been found in the recent series of excavations, Irvine's manuscript contains a sketch of the extreme north-west corner of the precinct, together with a note stating 'A quantity of coal ashes at this spot and thrown on it a large Roman cap. Found Nov. 21 1868.' There

is no reason to doubt the Roman date of this deposit—perhaps Irvine was observing the rakings from the altar fires.

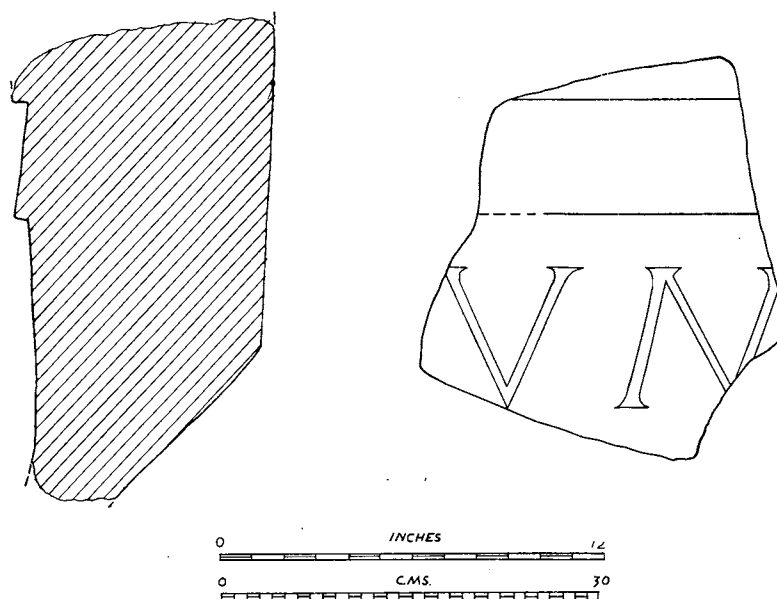


FIG. 5. The architrave of the Temple

3. THE SPRING AND THE RESERVOIR (fig. 26 and pls. VIII-x)

The spring and its surrounding reservoir were excavated, under the direction of Major Davis, between 1878 and 1880, only to be covered almost immediately by a concrete floor, which now serves as the base of the present King's Bath. The modern floor-level is about 9 ft. (2.74 m.) above the bottom of the Roman reservoir and on the rare occasions when the bath and reservoir are drained it is still possible to examine the Roman structure below, but intense physical discomfort makes survey difficult, and indeed mineral encrustations have obscured all points of detail. For these reasons, in describing the remains we must rely on the observations of those who first saw the Roman structures laid bare. The excavator, in a paper read before the Society of Antiquaries on 24 June 1880 (Davis 1880), provides a fairly detailed account of the work. Fortunately, this was considerably augmented by a number of meticulously detailed plans, sections, and sketches of the area made by Richard Mann and now preserved in the Society of Antiquaries' Library (pls. VIII-x). Together, these two sources allow a tolerably complete description of the structures to be offered.

The first stage in construction of the reservoir would have been the removal of the silt and mud filling the original spring, in order to expose the solid bedrock, consisting at this

point of very hard liassic clay penetrated by the many fissures which allow the hot mineral waters to spurt through. The major springs were then surrounded by an irregular, but roughly octagonal, wall enclosing an area of about 50 ft. (15.2 m.) by 40 ft. (12.2 m.). The wall, 3 ft. (0.9 m.) thick, appears to have been built entirely of large stone blocks (pl. x) which could have been assembled more quickly than ordinary ashlar masonry—a considerable advantage when it is remembered that the builders had to cope with the mineral waters bubbling up at a rate of about a quarter of a million gallons a day. Mann notes that a temporary vent had been left, low in the east wall, to take the overflow. When, later, it was no longer required it had been plugged with an oak bung, 1 ft. (0.3 m.) across. Three other vents, similarly blocked, were found higher up in the wall. When the wall had reached the height of $6\frac{1}{2}$ ft. (1.98 m.) above the top of its foundation offset, the inner face was lined with sheets of lead between $\frac{5}{8}$ and 1 in. (c. 0.02 m.) thick and 6–7 ft. (c. 2.0 m.) wide. The lower ends of the sheeting were embedded in a concrete step, 3 ft. (0.9 m.) wide, which ran round the base of the enclosure wall and which was itself capped with tiles, whilst the upper edge of the lead was turned back into the masonry. Above this the wall was continued in height for at least three more courses (about 3 ft. (1.0 m.)). The vertical joints between the sheets were made by overlapping adjacent sheets by 6–7 in. (0.16 m.) and pouring molten lead on the exposed edges. When first uncovered, much of the lower part of the lead lining was still in position, the upper edges having been removed in antiquity, but Davis had the remaining lead, between 20 and 30 tons (20–30,000 kg.) of it, torn out and carted off to be sold to furnish ‘sinews for the excavators’.

During the removal of the contents of the spring Davis discovered a large number of stone blocks, 12 in. (0.3 m.) thick, with a semicircular moulding 11 in. (0.28 m.) wide along their upper edge: the blocks varied in length up to 3 ft. 5 in. (1.06 m.) long. Placed end to end those recovered would have measured about 100 ft. (30.5 m.), a fact which reasonably suggests that they formed a coping around the top of the reservoir wall (a length of 150 ft. (45.7 m.)). One of the surviving blocks and another drawn by Mann, but no longer traceable (pl. x), show the semicircular moulding ending against a vertical projection which might be interpreted as the side frame of a large open window. The impression given by these fragments, then, is that the top of the reservoir wall was finished with a frame-like façade, the lower sill of which bore a semicircular moulding. The width of the reservoir wall is 3 ft. (0.92 m.), but the copings are only 1 ft. (0.3 m.) wide. Fortunately, one of Mann’s sketches suggests a way over this difficulty: it shows a coping block attached to the upper face of a horizontal slab about 3 ft. (0.92 m.) wide, in the surface of which has been cut a shallow gutter (pl. x). Presumably, therefore, the top of the reservoir wall had been furnished with gutter slabs of this kind before the moulded coping was added. The gutter would have drained off water formed by either condensation or rainwater, perhaps both. It is impossible to say whether it lay on the inside or the outside of the coping.

The reservoir wall butted up to the north wall of the bathing establishment, but both elements must have been built largely at the same time. It seems probable, too, that the

waste water culvert would have been constructed as part of the initial layout, but the means by which the excess water from the reservoir emptied into the drain is unfortunately no longer clear and the original accounts make no mention of the problem. The nature of the outlet leading to the Great Bath is similarly unrecorded, but on a plan dated 1886 Davis records a lead pipe leading out of the west side of the reservoir; this must have served another bath, of which no further details are available.

At a later, but undefined, date the reservoir was surrounded by a massive outer wall, $5\frac{1}{2}$ –6 ft. (1.6–1.8 m.) thick, which butted up to the north wall of the baths, thus containing the original reservoir within a rectangular enclosure measuring internally 65 ft. (19.8 m.) by 43 ft. (13.3 m.) This wall was built of ashlar masonry with tile courses at intervals; its foundation, on the west side at least, was taken on large stone blocks, some of which appear to have been re-used (pl. ix). At the point where the west wall of this new enclosure crossed the culvert, the original vault of the culvert had been removed and its sides strengthened with large blocks of masonry capped by a single monolithic lintel. Immediately above was an arch carefully constructed of stone and tile voussoirs (fig. 6). A relieving arch in this position would hardly have been necessary, and we can only suppose that the function of the feature was to create an effect—to give the impression of a steamy cave at the entrance to the underworld wherein the waters originated. Even today visitors find this spot impressive.

In the centre of the north wall is a door, 4 ft. (1.22 m.) wide, which provides access from the temple precinct to the reservoir (pl. ix). Evidently it had been much used, for its original sill was considerably worn; so too was the later sill added after the precinct floor had been raised and repaved with pennant slabs. The implication must be that the door provided a much-frequented thoroughfare. But, as the plan shows, once through the door one would have been on the extreme edge of the reservoir and it would have been a matter of some difficulty to squeeze round into the awkward space between the reservoir and its enclosure wall. The problem would, however, have been considerably relieved had there been a platform projecting out over the spring. That such a platform might in fact have existed is suggested by the three columns which were found by Davis to be standing on the tile surround (pl. ix). They could quite easily have supported a platform, and indeed they are difficult to explain in any other way. The excavators also found, within the reservoir, three piers 3 ft. (0.92 m.) square, one on the north side and two on the south. The northern pier could have been an additional support to the supposed platform: the function of the southern piers is less certain unless it is supposed that a platform or gangway ran around the entire circuit of the reservoir. Such an arrangement would have afforded visitors a close view of the sacred spring, but the suggestion is beyond proof.¹

The filling of the reservoir removed by Davis was mainly 'sand and decayed vegetable matter, nuts, sticks and so on' (Davis 1880) mixed up with between 20 and 30 tons of

¹ It is perhaps relevant here to draw attention to the structure, often considered to be a temple, built over 'le bassin de réception' at the sanctuary of Diana at Nîmes. It

was supported on twenty-five piers. For a convenient summary see Grenier, *Manuel d'Archéologie Gallo-Romaine*, iv, pt. 2 (1960), fig. 158 and pp. 500–2.

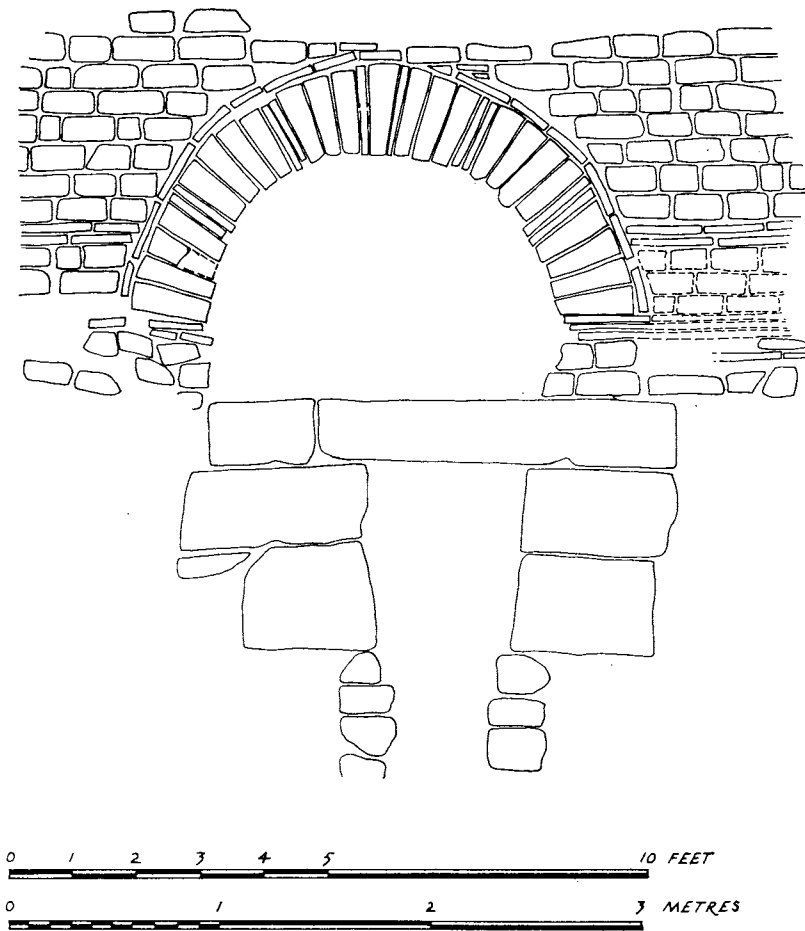


FIG. 6. The east wall of the Reservoir enclosure

masonry, including column drums 12, 28, and 32 in. (0.3, 0.7, 0.8 m.) in diameter, moulded bases of pilasters, a fluted portion of a column (no. 1.1), a circular well head, and 'a piece of a frieze that must have held a metal table' (no. 2.14). In addition to these a number of small votive objects were recovered which are listed, so far as is possible, below (pp. 65-88). A considerable mass of box-tiles, evidently from a vault, was also recovered from the reservoir and from the area to the north, implying that at one time the spring had been roofed with an enormous barrel-vault similar to that which in a late phase covered the Great Bath. The vault would have been open-ended to allow the steam to escape. Superficially the plan might suggest that its axis lay east-west, but if so, enormous pressures would have been placed on the south wall, shared in common by the spring and the Baths, and already considerably weakened by the great windows which had been set within it. It is probable, therefore, that the vault lay north-south and it may even have been carried forward on the two masonry projections described below, thus protecting the door leading to the reservoir and offering a far more imposing appearance when viewed from the

precinct. With the roof in this position, it is easy to explain the mass of collapsed box-tiles, lying 2 ft. (0.61 m.) thick, which were found in the 1965 trench, for when the vault fell apart much of its northern end would have toppled forwards, smashing down over the altar. The 1965 trench did, in fact, produce part of the external facing of the intrados.

4. THE ENCLOSING COLONNADE AND RELATED STRUCTURES (figs. 26 and 27)

The precinct is enclosed within a blank wall, continuous apart from an eastern and a southern entrance, and at the south-east corner where the wall of the reservoir enclosure is utilized. On the north, west, and south sides the wall was fronted by a continuous colonnade represented now only by the foundations upon which the stylobate was once supported. At one point on the south side, examined in 1964 (trench 3), three of the stylobate blocks were found to be *in situ* and a shallow robber trench on the outside defined the original position of the ground-level gutter which would once have surrounded the precinct. A second group of trenches dug in 1968 (trenches 27 and 31) 30 ft. (9.2 m.) to the west confirmed this general arrangement but here the stylobate blocks had been robbed. On the north side of the precinct a trench dug in 1967 beneath the Information Office (trench 15) sectioned the rubble foundation for the stylobate, which here had been removed in antiquity, and also produced evidence of the robber trench for the gutter. Substantial parts of the north-west corner of the precinct were seen by Irvine in 1867, but no trace of the stylobate or gutter were recorded.

The 1964 trench across the south side of the colonnade sectioned the outer enclosure wall at a point where the wall had been replaced by two very worn stone blocks, presumably representing a subsidiary southern entrance. It may be that other minor entrances occurred, but no others have yet been recognized.

The principal entrance lay in the east wall opposite the temple front and on the main east-west axis. Only part of it is now available for study and later Roman alterations have no doubt obscured much of the original structure, but even so the main features are still evident. The entrance way, originally about 22 ft. (6.7 m.) wide, was flanked, on the south side at least, by a short length of stylobate still supporting the base of a column. The stylobate terminates on a large mass of masonry approximately $6\frac{1}{2}$ ft. (1.98 m.) square, the top of which was surfaced with thick slabs of limestone. The edge of a second masonry foundation of similar width was found 9 ft. (2.74 m.) to the north. If these masonry bases were laid out symmetrically about the east-west axis, as might be expected, the plan would imply that the northern mass was central and that another $6\frac{1}{2}$ ft. (1.98 m.) square block remains to be found still further to the north. This plan is highly suggestive of the base of a double arch, similar perhaps to the Gaulish arches at Saintes¹ and Langres² though of course smaller. Unfortunately there is little evidence to go on. The southern

¹ A. Grenier, *Manuel*, i. 569 and fig. 223.

² *Ibid.* 555-7 and fig. 216.

foundation was neatly capped with stone slabs which could have formed a basal course, or plinth, but no trace of marking out lines could be found on its surface, nor are there surviving any blocks which could have belonged to the superstructure of an arch. Nevertheless the plan of the surviving foundations and its important axial position are strong indications of the possible existence here of a monumental arch.¹

Between the entrance-way in the precinct wall and the west front of the masonry bases the ground sloped down, the slope being reduced by two steps, now very worn. One step ran between the west edges of the bases, the other to the east of them stopping on the stylobate. The sloping area between the two steps had originally been paved with limestone slabs, only fragments of which now remain.

Along the eastern, that is the outer, side of the eastern wall of the precinct ran a colonnaded walk, part of the stylobate for which still survives, returning at its southern limit to meet the enclosure wall. The outer edge of the stylobate was flanked by a ground-level gutter which would have collected rainwater running off the veranda roof. The gutter, seen by Mann, has since disappeared but part of its southern continuation is still visible, running beneath a later paved area towards the main drain, into which it would once have emptied. The features to the south of the stylobate are confused by modern building but excavation has allowed several phases to be recognized in the development of this region (see pp. 57–8.) In the first stage a revetting wall ran slightly diagonally, east to west, across the area. How it related to the reservoir enclosure wall cannot now be demonstrated, but one of Mann's unpublished drawings suggests that it preceded the construction of the enclosure wall and abutted the north-east corner of the reservoir itself. Later the line of the wall was continued east by a further length of revetting wall which overlapped the end of the earliest structure. Later still this rather untidy corner was made more presentable by the construction of a new east–west revetting wall in front of the old, returning at its eastern extremity to meet the south-east corner of the colonnade. The function of the wall was clearly to retain a platform which could be reached by two steps from the level of the colonnade. A further flight of more massive steps led from its south-west corner down to the point at which the main drain issued from the enclosure wall of the reservoir. There can be little doubt that these arrangements were made to allow visitors to get sufficiently close to the water so that they might drink from the stream. The water gushing from the gap in the wall would also have provided a dramatic spectacle, as inspiring then as it is today.

An interesting point of sequence is raised by the possibility that the earliest revetting wall pre-dated the wall of the reservoir enclosure, because it would seem not unreasonable to suppose that the culvert, which ran beneath it, took the water from the gutter carved into the lias slabs of the precinct floor on the north side of the reservoir. If these two suggestions are correct, the conclusion must be that the gutter preceded the enclosure wall. Unfortunately the matter is now totally beyond proof one way or the other.

¹ For an arch of similar proportions, see Frere's second tentative reconstruction of the arch at Verulamium. S. S. Frere, 'Excavations at Verulamium 1961', *Ant. Journ.* xlii (1962), 158.

5. THE TEMPLE PRECINCT (figs. 26 and 27)

The precinct was divided into an inner and an outer court by means of a wall enclosing three sides of the temple, and a step around the area of the altar. Of the outer court practically nothing is known: Irvine must have seen much of its surface exposed during the building work of 1867-9, and since he does not comment on it we may assume it to have been largely featureless. In 1959, however, Wedlake saw and partly excavated a hypocaust, evidently a late structure incorporating much re-used material, built close up to the south-west corner of the inner court wall. Its construction date could not be defined, but it may well represent a late colonization of the outer court by western extensions to the bathing establishment. The 1964 excavation of the south colonnade certainly implies that rooms belonging to the baths spread over this area, but further definition of their extent is not at present possible. In 1966-7, by means of discontinuous trenches cut in the cellars of the Information Office, an almost complete section was obtained across this northern part of the outer court from the stylobate footing in the north end to the step at the south. The section confirmed the tentative view obtained elsewhere that the outer court was devoid of structures. Only a rough make-up, possibly for paving slabs, since robbed, was observed.

The inner court, or precinct, around the temple itself was delineated by a wall 2 ft. (0.61 m.) thick, seen several times by Irvine and recorded by him with some precision. Irvine's sections do not show the wall projecting more than a few inches above the contemporary ground-surface (fig. 14), and although, of course, the superstructure could have been destroyed, it remains a distinct possibility that the surviving masonry formed only the foundation for a stylobate or a dwarf wall which might have supported a free-standing colonnade.¹ Unfortunately there is no opportunity to examine the matter further and all must remain conjectural. Between the western wall and the end of the temple podium Irvine discovered the remains of a paving of pennant slabs which may have completely surrounded the temple. There is no record of any underlying lias limestone slabs belonging to an earlier period as is the case elsewhere, but if they once existed in this area it is possible that they had been removed before the pennant paving was laid.

The eastern part of the inner precinct, in front of the temple, is fortunately better known. It was delineated on the west, north, and east by a single, but continuous, step of lias limestone leading down from the higher outer level to the lower limestone-flagged floor which it encloses. The step on the eastern side, here very worn, has already been described in relation to the entrance area (p. 21). On the north side it was sectioned once (1966-7) in trench 9, where a close examination of its surface revealed traces of all-over weathering showing that at this point, on the main north-south axis overlooking the altar, superstructure, which might otherwise have obscured the view, was absent (pl. IIIa).

¹ Since I wrote this Mr. Wedlake has told me that two large stylobate slabs were seen by him in position on the wall, close to the south-west corner.

On the west side the step returns to meet the north-east corner of the temple. Much of this area was excavated in 1967 (trenches 11 and 12), exposing the surface of the step, which after careful cleaning showed clear signs of differential weathering (fig. 19 and pl. iv). In the southern end of the trench it was possible to recognize an unweathered rectangle, of which the north side was exactly aligned with the north edge of the temple podium and represents, in all probability, the position once occupied by the north-east corner of the cheek wall of the temple. A little over 3 ft. (0.9 m.) to the north a further unweathered strip marks the position of a narrow wall 9 in. (0.23 m.) thick which evidently ended in a pilaster. Between the north-east corner of the temple and the south edge of this wall was a heavily worn area suggesting, perhaps, a way through to the inner court surrounding the temple. Nothing definite is known of the arrangement on the south side of the temple front, but a description of the 1790 discoveries mentions 'a wall with an attached pilaster' which could conceivably have been found in this area. If so, the wall and pilaster would match well with that which would once have stood on the step on the north side of the temple front.

It would seem therefore that the front of the temple formed the central element in a façade incorporating a narrow wall of unknown height with attached pilasters. The possibility remains that the façade continued further to the north and south than we have allowed on the plan (fig. 26), and that it divided the entire precinct into an eastern and a western half, but unfortunately at the junction of the west and north steps the masonry has been robbed and nothing survives to indicate the form of the original arrangement.

The inner court defined by the step was paved, in the first period, with large slabs of carefully laid lias limestone between 7 and 9 in. (0.16–0.22 m.) thick. Paving of this kind has been seen against the north and west steps (trenches 9, 11, and 12), between the temple front and the altar (trenches 5–6), and in the area beneath the Pump Room cellar floor between the altar and the main entrance: Mann records that similar paving covered the area south of the altar and abutted the enclosure wall of the reservoir, but this cannot now be seen except for a small area sectioned in trench 23. Thus, initially, the inner court was floored at a uniform level with paving closely comparable to that surrounding the Great Bath. Two features are known to occupy the area. Towards the centre, at the crossing of the north–south and east–west constructional axes, was a raised platform of limestone blocks, measuring approximately 15 ft. (4.57 m.) by 20 ft. (6.09 m.). Its eastern side was recorded on the Taylor plan and can still be seen below the cellar floor, while part of the western edge was uncovered in 1965 (trench 7); against it an inscribed statue base had been placed (p. 28). A little to the east of the base, a shallow recess 2–3 in. (c. 0.07 m.) deep had been cut into the platform, but further excavation will be required before its function and extent can be defined.

Immediately in front of the reservoir enclosure wall a shallow gutter had been cut into the paving slabs, presumably in order to drain off rainwater accumulating on the precinct floor. Although not fully traced, the gutter seems to have run along the west enclosure wall and then turned east along the north wall, eventually passing out of the temple area

through a vent in the eastern wall of the precinct. Close to its north-west corner it received a subsidiary gutter running from the west. The section of gutter opposite the central door in the reservoir enclosure wall was overlaid by three substantial steps which led up to the door from the precinct floor below. Since, on present showing, the paving would seem to be contemporary with the enclosure wall and its door, it is reasonable to suppose that the steps were part of the original plan. The rest of the features within the inner precinct, however, are of less certain date.

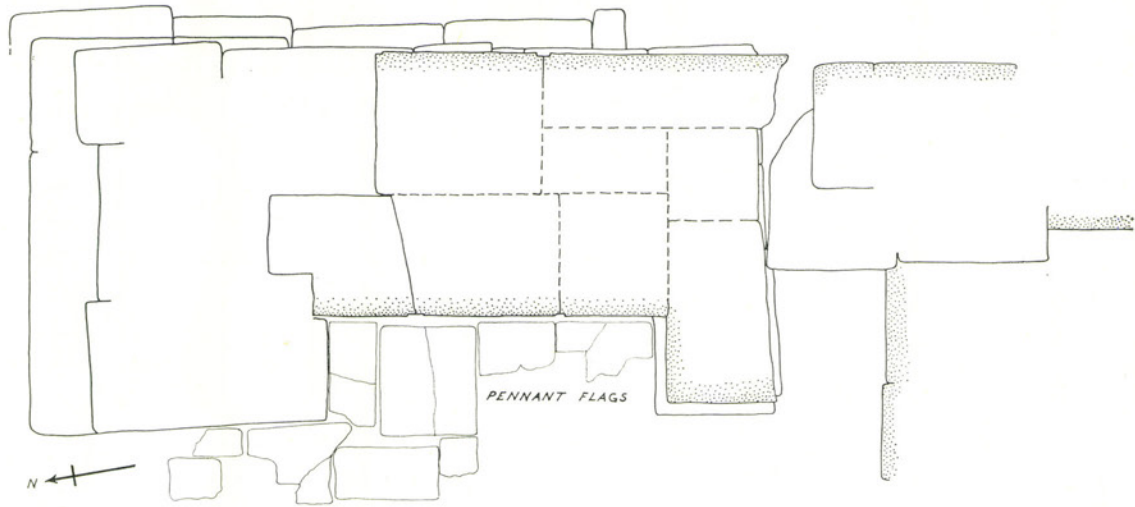
The steps were flanked with parallel rows of large stone blocks which, after defining a passageway 15 ft. (4.57 m.) long, turned at right-angles to form an east-west foundation parallel to the north enclosure wall. The function of this feature is obscure but a possible explanation is that the blocks represent a stylobate supporting either a freestanding colonnade or some other type of façade which would have given added elegance to the environment of the altar as well as emphasizing the north-south axis which ran through the passageway and across the spring. Dating is impossible but there is no structural reason to suppose these features to be secondary; they would have been perfectly in keeping with the scale and planning of the original layout.

At a later date a substantial alteration took place. The ground-level of the area in front of the reservoir was raised by about 20 in. (0.52 m.) and a new floor of pennant grit slabs was laid, obscuring not only the steps leading to the reservoir enclosure door but also the stylobate. The new high-level paving was revetted on its north side by a wall which curved back to meet the north-east stylobate block. Although the north-south arms of the stylobate were now sealed by the reflooring, and were thus functionless, the corner blocks immediately adjacent to them on the east and west respectively were capped by new blocks which projected well clear of the pennant floor. Both of the new corner blocks supported a single pier, with rebated angles and plain bases, the outer faces of which were tooled in such a way as to suggest additional contiguous masonry supports perhaps in the form of attached pilasters. These freestanding, unembellished, piers strongly suggest that an isolated archway now stood astride the north-south axis replacing the earlier more elaborate colonnade or façade. Elsewhere, possibly at this time, other reflooring took place, using pennant flags. The 1965 excavation (trenches 5-7) between the altar and the temple sectioned one such area, but repaving does not seem to have been widespread.

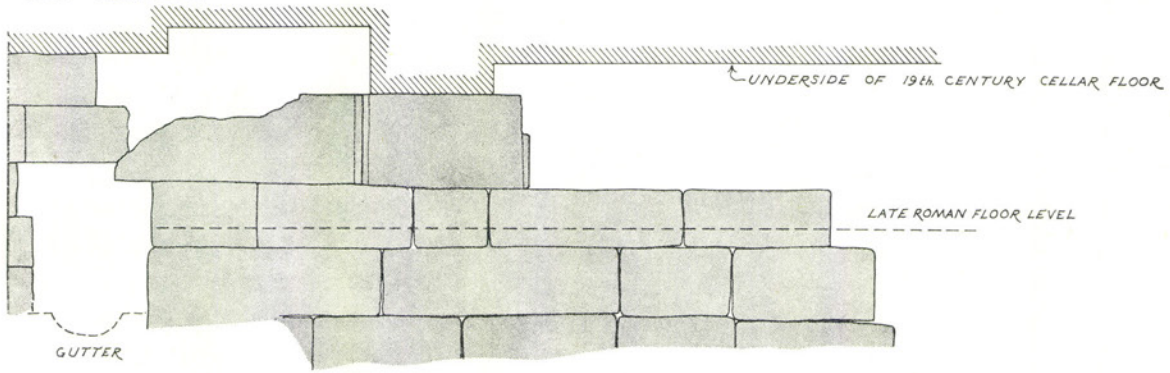
From the north and west walls of the reservoir enclosure project three large masses of masonry measuring up to 18 ft. (5.5 m.) long and 8 ft. (2.4 m.) wide. That attached to the north-east corner is still, with difficulty, accessible and provides a basis for description (fig. 7). It was built of courses of large limestone blocks, $1\frac{1}{2}$ ft. (0.46 m.) deep by between 3 and 5 ft. (0.9-1.5 m.) long, carefully tooled so as to fit tightly together. The lowest two courses are somewhat irregularly faced, but since they would have been below the contemporary ground-surface, this is hardly surprising. The third course, which might have just appeared above ground, is more finely tooled, whereas the wholly visible fourth course, consisting of individual blocks 2 ft. (0.61 m.) deep, was carefully chiselled at the joints to create the impression of rusticated work. The west face of the mass is recessed

THE TEMPLE PRECINCT, N-E MASONRY PROJECTION

PLAN



EAST ELEVATION



WEST ELEVATION

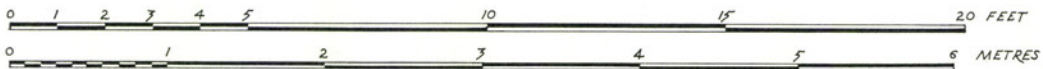
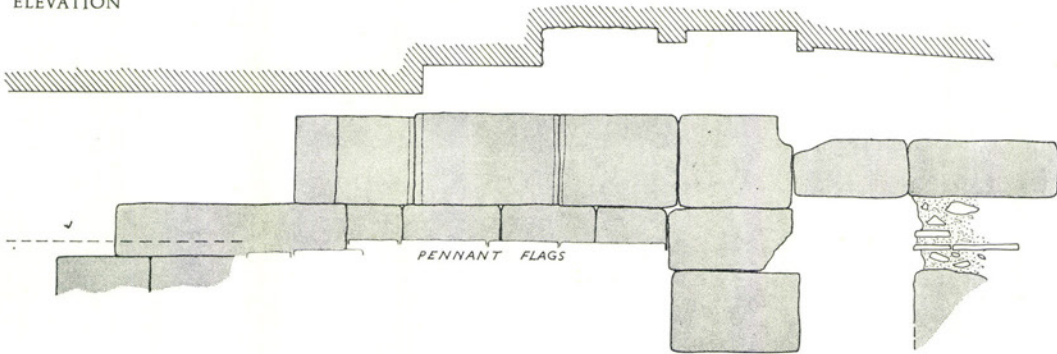


FIG. 7

to a depth of 2 ft. (0.61 m.), the recess appearing both in the foundation and the upper courses.

The relationship of the mass to adjacent structures is reasonably clear. The south end was carefully brought to an end to allow the gutter to pass unhindered, but the upper courses were taken further south and bonded in with the corner of the reservoir enclosure wall in a way which might imply a contemporaneity with the enclosure. A more likely explanation is that the mass is later and that its junction with the enclosure wall necessitated some rebuilding of the latter. Certainly, the ground-level from which the structure was built is close to that of the pennant flag repaving and paving of this kind is fitted neatly into the recess in the west face of the mass. On this evidence it might fairly be supposed that the reflooring and the building of the masonry masses were largely contemporary. That the mass is a late feature is further suggested by its relationship to the precinct wall: the awkward and useless space between them implies that the wall was the earlier, for had it been later it would surely have abutted the corner of the mass itself. How the masonry base flanking the entranceway (p. 21) related to the mass is uncertain, for the crucial layers were removed in 1878 when Mann cut a tunnel between the two.

Of the north-west foundation only part was seen by Mann in 1878 and nothing is now visible. The contemporary drawings, however, show that it survived to a height of two courses above the late floor-level and the trench dug in 1967 (trench 13) located its north end, showing it to measure only 13 ft. (3.96 m.) in length, 4 ft. (1.22 m.) shorter than the north-east mass. A tumbled heap of stone blocks found in trench 5 in 1965 presumably represents its collapse or deliberate destruction (pl. *va*).

The western foundation was still standing to a height of three courses when Mann saw it. A trial trench (fig. 18) cut across its west end in 1967 (trench 10) to examine the adjacent stratigraphy showed clearly how the foundation trench for the masonry had been cut through a substantial cobbled layer, which in this position might represent the original metalling of the outer precinct floor. A thin layer of loose chippings, continuous with the packing of the foundation trench, had been spread, possibly to form a base for new pennant slab paving. Thus we have clear evidence for this mass being a secondary feature, adding some support to the arguments set out above. The trench exposed only a small length of the face of the masonry, but sufficient survived to show that it was rusticated in a style identical to that exhibited by the north-east mass (pl. *iii b*).

The function of the three masses of masonry, projecting from the reservoir wall, is problematical. The simplest explanation would be that they served as buttresses for the wall, which as we have seen (p. 19) had to support a substantial barrel vault of masonry. If we are correct in supposing that the weight of the vault was taken on the east and west walls both would have needed support, but the arrangements of the existing colonnades would have made lateral buttressing difficult except at the north end of the west side. Nevertheless the two northward projecting masses would, to some extent, have compensated by absorbing the lateral thrust which would have tended to weaken the external corners of the enclosure.

6. THE ALTAR AND ITS ASSOCIATED FEATURES

(fig. 8 and pls. xxxvi–xxxviii)

The sacrificial altar occupied a central position north of the spring and east of the temple, at a point where the two main constructional axes of the building-complex cross. Tradition would lead us to expect it here and sufficient archaeological evidence can be amassed to make its presence certain. The raised platform, measuring approximately 15 ft. by 20 ft. (4.57 by 6.09 m.), has already been mentioned; somewhere upon it the altar itself would have stood but of its precise position nothing is known. All that now remains of it are three of the decorated corner blocks (nos. 1.27–9), and one of the slabs which would have served as its capping (no. 1.30). These are sufficient to show that the altar would have been about 4 ft. 9 in. (1.45 m.) high, but its other dimensions cannot, without further evidence, be estimated.

The three surviving altar corners are all closely similar in form and style but not in decorative detail. Each is carved from a single block about 4 ft. 2 in. (1.27 m.) high with a base 1 ft. 10 in. (0.55 m.) square. Two adjacent sides are carved with figures, the others being left blank but tooled carefully so that adjacent masonry could butt neatly up to them. Below the two carved panels are moulded plinths. The block discovered near to its original position in 1965 (no. 1.27) is the best-preserved of all. On one side is a naked male figure, evidently Bacchus, holding a thyrsus in one hand and pouring wine from a cup held in the other to a panther crouching at his feet. The other figure, by contrast, is a heavily draped female, presumably a fertility deity of some kind. In the crook of one arm she is supporting a cornucopia, whilst in the same hand she holds the base of an upturned ewer, from which a libation flows. Both figures are carved with considerable skill, particularly the somewhat stylized but effective drapery of the goddess. A second block (no. 1.28), found when the Pump Room was built in 1790, is rather more weathered, but the deities it depicts can still be readily recognized. The naked god is Hercules Bibax, shown with a lion's-skin cape thrown over his shoulders and knotted by its paws across his chest. His left hand rests on a great knobbed club which stands beside him on the ground, while in his right hand he holds a cup. His partner is clearly Jupiter, who wears a loosely draped toga and grasps a trident in his right hand. In the other he appears to hold a knobbed staff, whilst at his feet stands an eagle. The third corner (no. 1.29), now at Compton Dando, is far more weathered, having been exposed to the elements for several hundred years. The draped figure in this case is presumably Apollo, who seems to be seated and is supporting a lyre on one knee. The nature of the naked male on the other side is far less clear, but he is holding a club.

The position of the cramp-holes on the tops of these blocks and the carefully tooled edges to their blank faces leave little doubt that they were incorporated, as corners, into a solid monument. The nature of the panels between the faces, however, remains obscure, but they may have been quite plain, for such an arrangement would have heightened the

striking effect of the corners. One slab belonging to the capping of the monument was found in the 1965 excavation (no. 1.30), adjacent to the corner block. It, too, is a corner slab with a carefully cut moulding on two adjacent sides. The upper surface, which would have been exposed, is finely tooled. Presumably the entire working surface of the altar was composed of slabs of this kind.

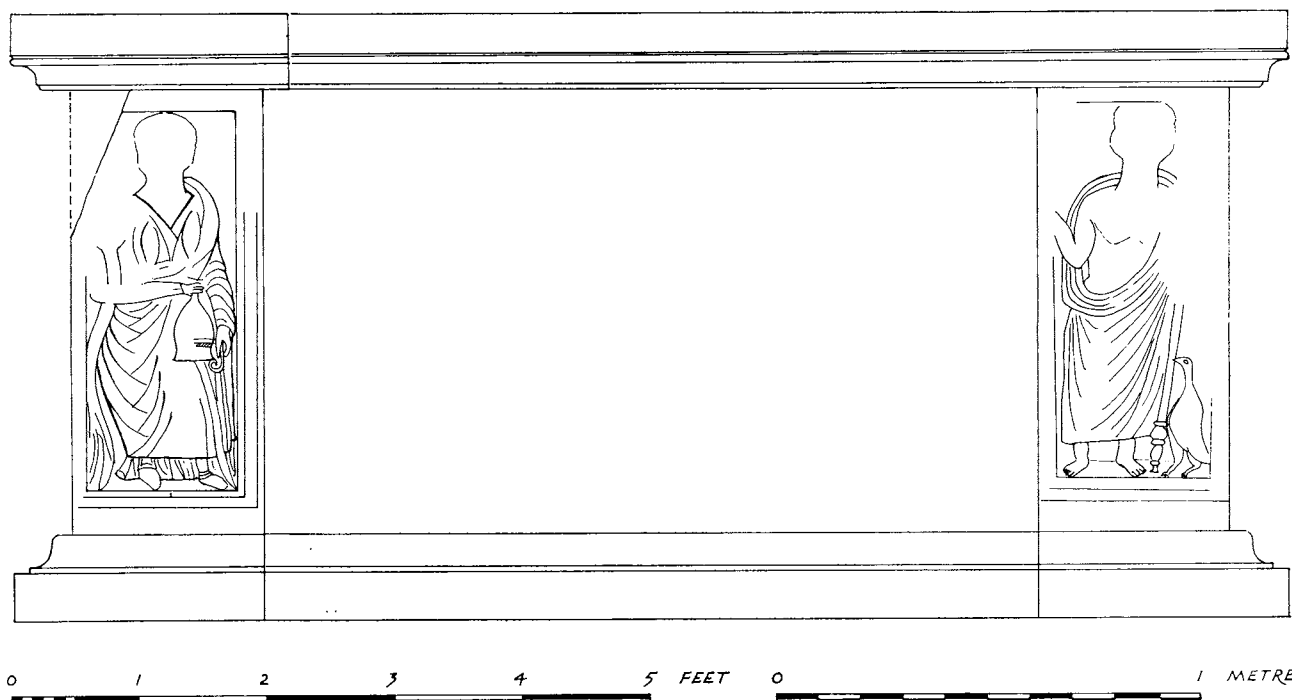


FIG. 8. Reconstructed elevation of the altar

In front of the altar, between it and the temple, stood a small inscribed base (no. 1.60) (pl. XLV) erected for the goddess Sulis by Lucius Marcius Memor, an augurer, who no doubt officiated in the temple ceremonies. One interesting detail is that his profession, *Haruspex*, was first abbreviated **HAR** and only later was the **VSP** added, presumably in order to make the title, so uncommon in Britain, a little more intelligible to users of the temple. The last line of the inscription *d(ono) d(edit)* implies that Memor offered a gift to the goddess, possibly a statue which would once have stood on the base. The base itself had been placed to one side of the hypothetical axis from the temple to the centre of the altar; this may mean that a similar dedication lay to the north to balance it. Visually two statues thus arranged would have provided an elegant frame to the altar, particularly when viewed from the temple steps.

7. OTHER MONUMENTS WITHIN THE TEMPLE PRECINCT

The loose sculptured stones found from time to time in the temple area are only a pale

and tantalizing reflection of the fine monuments which would once have graced the precinct. Fortunately the surviving remains allow several of them to be reconstructed, albeit incompletely.

a. The Façade of the Four Seasons (figs. 9 and 11 and pls. xxxix–xli).

The building work of 1790 brought to light fourteen fragments from a façade ornamented with fluted pilasters, between which were niches containing figures. A further stone belonging to the same monument was discovered a hundred years later by Davis, when in 1895 he extended his excavations to the area north of the reservoir, and another was found in trench 23 in 1968. The individual pieces have been listed below (pp. 186–8, nos. 1.31–50)

To reconstruct the Façade is extremely difficult, largely because of the incomplete nature of the surviving fragments. Three previous attempts have been made, one by Lysons (Lysons 1813, pl. vi), which, though correct in general terms, is too limited in scope; second by Irvine (Irvine 1873, pl. 14), and one by Haverfield (Haverfield 1906, fig. 14). Irvine's is ingenious and well-considered, Haverfield's is cautious; neither is completely satisfactory. Certain general features, however, are not in dispute. It is clear that the Façade was divided into at least four areas 47 in. (1.2 m.) wide, each separated from the next by a fluted pilaster at least 10 ft. (3.0 m.) high. In the upper part of each inter-pilaster was a rectangular niche containing a Cupid representing a season. The niche was evenly placed between the two flanking pilasters and across the space at the top, between the two pilaster caps, was a two-line inscription. This much is generally accepted. The biggest problem is how two fragments of shell canopy fitted into the general design. Each of the surviving fragments shows that the edge of the canopy butted up to the side of the adjacent pilaster, leaving no space between. Since the centre point of one survives, it is possible to conclude that, if the canopy was centrally spaced, the inter-pilaster would be only 35 in. (0.9 m.) wide. Irvine overcame this difficulty by suggesting that the canopies occupied an eccentric position immediately below the Cupids, but Haverfield dismissed his argument as unclassical and omitted the canopies altogether from his reconstruction. He did, however, overlook, or at least omit to mention, one significant point; above one of the canopies (no. 1.46) is the bottom of a square recess containing a foot. The edge of the recess is about 10 in. (0.25 m.) from the pilaster—exactly the same distance as between the pilasters and the recesses containing the Cupids. Moreover, the foot could easily belong to one of the Cupids. A glance at the illustration (fig. 9) shows that *if* the inter-pilaster containing the canopy was only 35 in. (0.9 m.) wide, the square recess above would be ridiculously narrow—only about 15 in. (0.38 m.) across. Surely then, Irvine was correct in supposing that the shell canopies eccentrically occupied the inter-pilaster beneath the Cupid panels.

Of the figures below the canopies we know very little—only three fragments (nos. 1.41–3), two depicting the feet of seated individuals, survive, together with part of a draped seated torso (no. 1.43) which probably belongs to the monument though neither

Irvine nor Haverfield thought so. Irvine was of the opinion that the figures sat wholly in the niches below the canopies, and he arranged his reconstruction likewise. Another possibility is that they sat beneath the canopies with their backs against a pilaster, and their feet so arranged that their toes almost touched the next pilaster. If this were so, the bulk of the figure would be below the canopy, but the legs would spread out beyond it so as to redress, in rather a pleasing way, the sideways spacing of the canopy top. This suggestion accords well with the surviving fragments and overcomes Haverfield's objection of lopsidedness. One problem remains: one of the canopies lies to the left of the inter-pilaster, the other is to the right. Were, therefore, the niches arranged alternately left and right, or were two facing left and two facing right? It seems more likely that they were arranged alternately, which would mean that the figures faced each other. There are several facts which point to this view. In the first place, the composition would be more satisfactory and better balanced. Actually the distance between the two canopies would be equal to the width of an interpilaster and if the Façade was imagined to represent a row of piers with an ornamented wall behind the effect would be most pleasing. Secondly, it will be evident from the reconstruction (fig. 9) and the illustrations (pls. xxxix-xli) that the thickness (i.e. the height) of the blocks differs in such a way as to suggest that the Façade was divided into two, perhaps by a central door. Autumn (no. 1.37) and Winter (no. 1.39) form one half, Spring (no. 1.38) and Summer (no. 1.40) the other. This implies that Spring faces Summer, reflecting presumably the positions of the seated figures below. Furthermore since the two surviving canopies fit best below Spring and Summer, we are forced to the view that the seated figures face each other.

It has just been suggested that a central door existed, on the grounds that the difference in the coursing of the blocks demands a vertical break in the Façade. A glance at the reconstruction will show that a break is essential, for the pilaster attached to the left of Autumn is clearly not the same pilaster as that attached to the right of Summer. Since, therefore, the Façade must have been divided into two halves, the most satisfactory arrangement would have been to have a door, or some other ornamental feature, the width of an interpilaster, in the centre.

There can be little doubt that the cupids in the upper panels represent seasons for each carries a seasonal attribute: Spring has flowers; Summer, corn; Autumn, fruit; and Winter, a billhook for cutting firewood. It is less clear who the seated figures below are meant to be. One possibility is that they, too, are seasons, but until more fragments come to light the problem must remain unsolved. In support of this view, however, it should be pointed out that the bud known to belong to the first alcove would be an acceptable attribute for Spring.

In each interpilaster above the cupid panels, and between the pilaster caps, was a two-line inscription. In only one case, however, does sufficient survive to allow it to be read: it says simply '*C. Protacius deae Sulis Minerva*', thus giving a clear indication that the monument was in some way connected with the deity.

The reconstruction of the Façade above the capitals is less certain but it seems likely

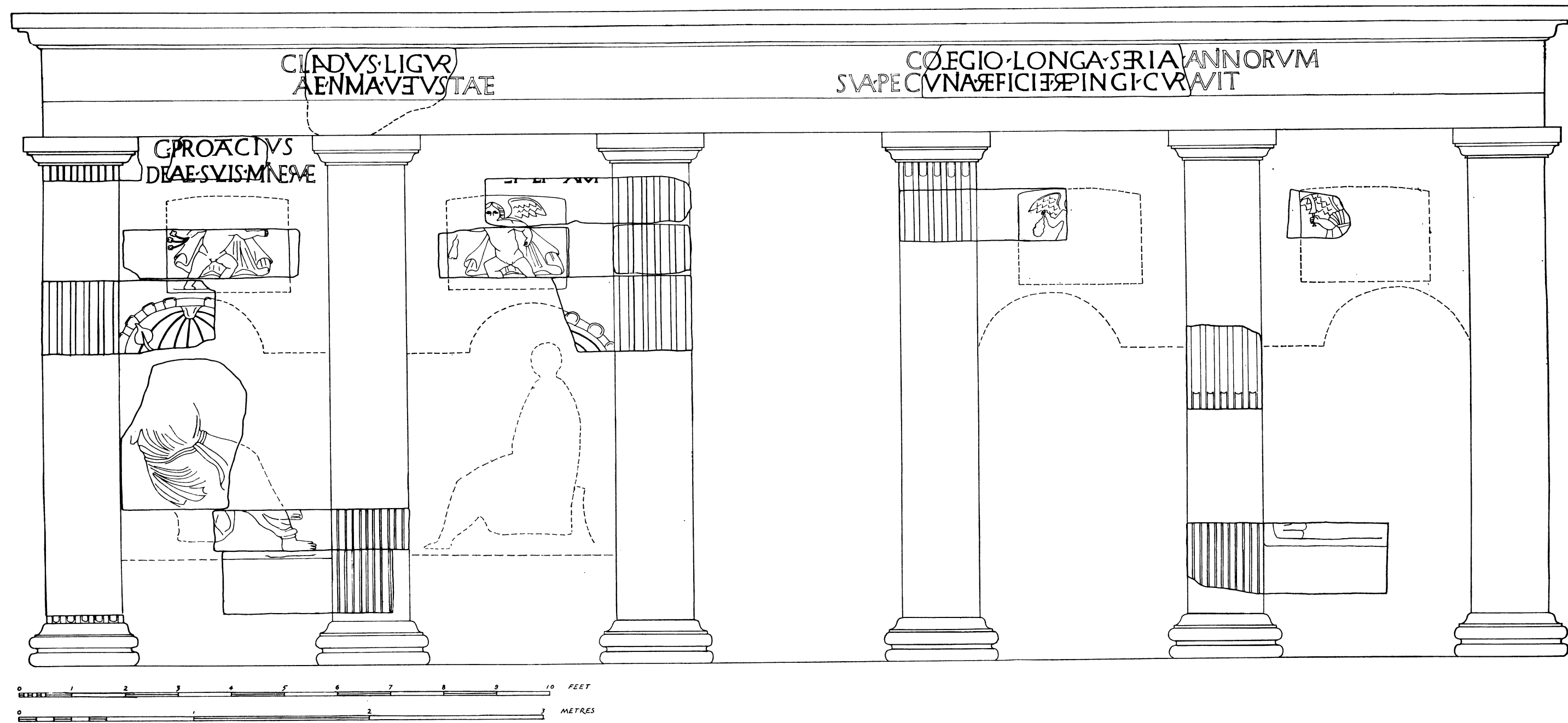


FIG. 9. The Façade of the Four Seasons

that Irvine, and later Haverfield, were right in supposing that the two fragments of inscription found in 1790 belonged to this monument (nos. 1.47-8). The inscription is laid out in two lines on slabs, of which the surviving sections are 33 in. and 58 in. long respectively. Lysons's illustration of the smaller fragment shows a depth of uninscribed stone below the inscribed area. This, he says, was later sawn off. Such an arrangement would be intelligible if the plain zone is thought of as an architrave and the inscribed area as the frieze. The general simplicity of this entablature would be in keeping with the style of the rest of the Façade. The first line mentions Claudius Ligur in connection with a guild of craftsmen, the second that a derelict building had been restored and repainted. This is almost certain to refer to the temple or its associated buildings, for *Dea Sulis Minerva* is mentioned in the interpilaster inscription and the letters JAE which appear on the second line may, as Haverfield pointed out, be the end of the phrase 'Templum Sulis Minervae'. One day perhaps more of the inscription will come to light.

Irvine suggested that two lengths of very simple cornice found in 1790 (nos. 1.49-50) capped the frieze. This may well be so, for such a cornice would be required and the mouldings in question match well with those of the main Façade. On the upper surfaces of both blocks is a chiselled setting-out line which, if this cornice does belong to the Façade, might indicate some form of attic storey. Indeed, the very proportions of the Façade would almost demand one.

Now in 1790 three blocks of stone were found (nos. 1.51-3) (fig. 10 and pl. XLII), together constituting part of a small pediment, 18 ft. (5.49 m.) long and 5 ft. (1.52 m.)

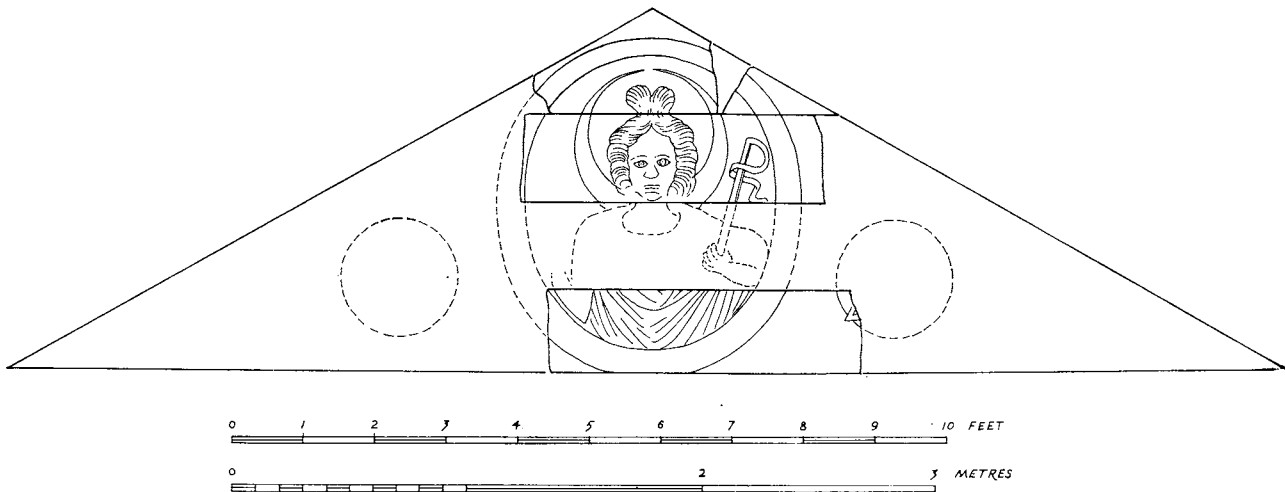


FIG. 10. The Luna Pediment

high, in the centre of which is a concave roundel containing the bust of a female deity shown full-face and carved in high relief. She is draped, with much of her copious hair piled high on top of her head, and in her left hand she carries a whip. Behind her head, in lower relief, is a crescent. Evidently the figure represents a moon goddess, perhaps Luna,

or less likely Selene. The right-hand corner of the pediment is occupied by an orb of some kind, but much of it is now broken away. The position of the Luna pediment has for some time been a matter for speculation, but most writers have assumed that it belonged to the same monument as the Façade of the Four Seasons. One possibility, which does not seem to have been previously suggested, is that the pediment comes from the attic centred above the doorway of the Façade. The diagram (fig. 11) shows that the resulting proportions would be visually far more acceptable than would those of the Façade itself. This reconstruction can, however, remain only a possibility, but a strong one.

One final question remains—where did the monument originally stand? To this there can be no firm answer, for the precise find-spot of the blocks was not recorded. However, the 1790 discoveries were probably made when the north, west, and east walls of the Pump Room were erected and the single block found in 1895 came from the area between the reservoir, the altar and the eastern wall of the precinct: another was found in 1968 immediately to the south of the Altar. The position of the 1895 and 1968 finds and the assumption that such an elaborate structure would not have been placed where it could have detracted from, or been dwarfed by, the temple, suggest that the 1790 blocks may have come from the foundation trench for the north wall of the Pump Room, and further

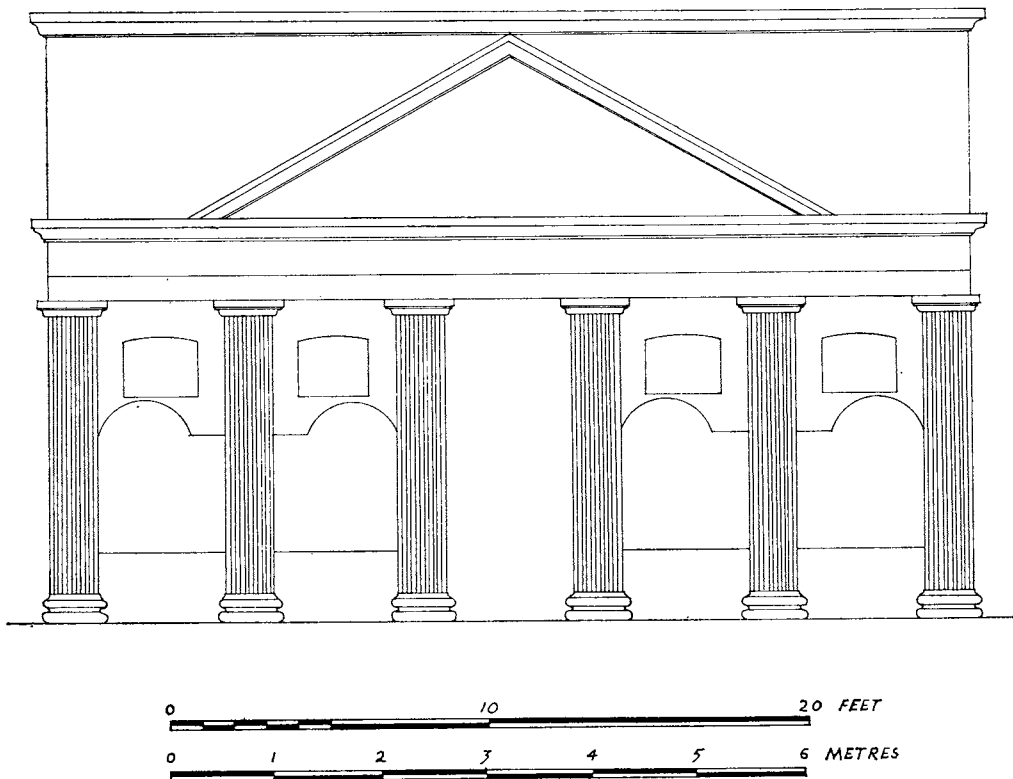


FIG. 11. Elevation showing suggested relationship between the Façade of the Four Seasons and the Luna Pediment

that the monument to which they belonged lay somewhere to the north of the altar, beneath what is now the Abbey yard. A further possibility is that the Façade was attached to the central part of the north wall of the reservoir, but there is no firm evidence for this and it is better to leave the matter open until it can be solved by further excavation.

b. Large Relief-decorated Monument (pl. XLIII)

While the area north of the reservoir was being uncovered by Davis in and after 1895, parts of two reliefs came to light, both depicting the waist and thighs of lightly draped female figures, one moving to the left, the other to the right. Although there is a general similarity to the Cupids on the Façade of the Four Seasons, these figures are considerably larger. The nature of the monument and its position are, of course, completely unknown. Another block (no. 1.55), found in 1968, depicting a plain pilaster and a niche close to it, may be part of the same monument.

c. The Niched Quadrangular Monument (fig. 12 and pl. XLIV)

Davis's excavations north of the reservoir also produced two carved stones from the top of a free-standing quadrangular monument about 6 ft. (1.83 m.) square. The sides of the monument were each hollowed out to form a semicircular recess, in which would have stood a figure carved in high relief. All that now remains is the helmet and spear of one of them. The corners of the monument were carved to represent engaged pilasters, so that each niche would appear to be flanked by two pilasters. The two surviving slabs come from the top course and show a delicately carved panel of flowers and leaves capping a cyma clad with acanthus.

Both blocks show considerable wear on their upper surfaces and must therefore have been re-used, perhaps as paving slabs or steps. The original position of the monument is unknown.

d. Dedicatory Altars and Inscriptions

Within the precinct of the temple, as one might expect, several dedications were erected to the goddess Sulis Minerva by, or on behalf of, grateful worshippers—a religious practice which survives even today, as our cluttered cathedrals bear witness. One stone, that

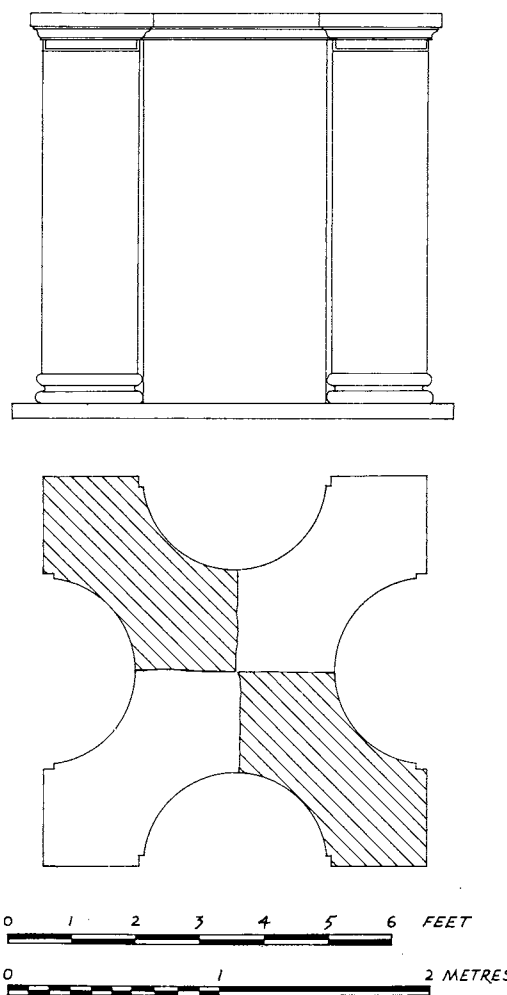


FIG. 12. Reconstruction of the Quadrangular Monument

put up by L. Marcius Memor, has already been mentioned but there are several others. Two, which certainly come from the temple area, were found in 1790–2 (nos. 1.61–2). Both were erected to *Dea Sulis* for M. Aufidius Maximus, a centurion of the Sixth Legion, one by his freedman Aufidius Eutuches and the other by another freedman M. Aufidius Lemnus, perhaps on the occasion of their manumission. Two other dedications to Sulis have also come to light from the general area of the Baths and temple; one was erected by Priscus, son of Tontius, a stonemason of the Carnutes, and the other by Quintus Pompeius Arecitus. Their precise find-spots are unrecorded. Finally, attention should be drawn to the altars described below (pp. 198–9). They were found, we are told, at the ‘lower end of Stall Street’ which is usually, and quite reasonably, taken to mean the south end of the street, but the possibility should be borne in mind that if one stands at the City bridge the ‘lower end’ just might imply its north end, that is the temple area. It is an outside possibility that should not be overlooked.

e. The Bronze Statue of Minerva (pl. 11)

The head of an almost life-size gilded bronze statue, generally assumed to be that of Minerva, was found in 1727 below Stall Street. Her dull but competently modelled face is surmounted by wavy hair combed out from a central parting; above this the head is unfinished, no doubt because the goddess once wore a separately cast Corinthian helmet of bronze. The ragged nature of the neck suggests that the head has been hacked off the torso, presumably in antiquity.

It was found on 12 July 1727, when the trench for a sewer was being dug along the centre of Stall Street. Though its precise find-spot along the trench is unknown, the Ordnance Survey map used to mark it near the corner of Beau Street but there appears to be no good evidence for this. It is, of course, quite possible that it was found within the precinct of the temple, through which the sewer trench also passed.

There can be little doubt that the head belonged to a statue whose place of display was almost certainly the temple or its precinct. It could even be that it once served as the cult-statue placed within the temple itself, but it is unlikely that we shall ever know more.

8. THE END OF THE TEMPLE

Evidence for the abandonment and destruction of the temple was first brought to light by the excavation carried out in 1965 in the north cellar of the Pump Room. Further excavations in the area have confirmed and extended the picture built up at that time. It is now apparent that some time, probably towards the end of the fourth century or after, the precinct was allowed to become waterlogged, resulting in the formation of 2 ft. (0.61 m.) of black peaty mud. During this time fragments of roofing slabs, perhaps from the roof of the colonnade, fell into the swamp together with surprisingly large quantities of animal bones and late Roman pottery (p. 59), the latter clearly implying that the temple

was abandoned before late Roman-style pottery had gone out of use and that the precinct, by now permanently waterlogged, was used as a tip for domestic refuse. Later, while the marsh was still accumulating, the concrete vault covering the spring collapsed, tipping forward over the altar area and subsiding into the muddy water; a little later parts of the surrounding walls began to crumble. Mud, deriving partly from sediment washed into the temple area and partly from wind-blown material, continued to be deposited, burying the rubble and lapping up to those parts of the structure which were still standing. This time no pottery or household rubbish was thrown into the bog, indicating that the spring and its surrounding marsh lay isolated in the centre of the sub-Roman or Saxon settlement. The area remained thus until, in the late-Saxon period, parts of it were sufficiently well-drained to be used as a burial-ground. Eventually, as drainage improved, the marsh was again colonized by buildings.

9. GENERAL DISCUSSION

Sufficient has been said above to show that *Aquae Sulis* possessed a fine tetrastyle temple with a porch two columns deep and with flanking columns arranged in a pseudo-peripteral fashion around the cella. The temple stood in a colonnaded precinct overlooking a central altar, the whole arrangement being part of a much larger concept which included the Baths to the south and another large monumental building, possibly a theatre (p. 148), to the east. In terms of what is known of British temple buildings, it may be said at once that Bath is unusual. Most of the British examples fall into two classes: the so-called Romano-Celtic buildings with small cellas and concentric ambulatories, or the basilican-style structures which served mainly the eastern mystery religions such as Mithraism and Christianity. A third category, the classical temples, to which the Bath example belongs, includes but few buildings. The great Temple of Claudius at Colchester and the smaller, less typical, temple in Wroxeter were, with Bath, closest to continental prototypes, the others being more generalized and of less certain character.

The temple itself is, in most aspects, indistinguishable from classical models; indeed its proportions fit well with the demands of the Roman architect Vitruvius. In general plan a close parallel is provided by the Late Republican temple of *Fortuna Virilis* at Rome, whose columns, though Ionic, are of the same number and arrangement.¹ Rather closer in decorative style is the *Maison Carrée* at Nîmes.² Although larger than the Bath Temple, and hexastyle with a portico three columns deep, its pseudo-peripteral form, general proportions, and Corinthian order of decoration give the two buildings a remarkable degree of resemblance. The principal difference lies in the fact that the podium of the *Maison Carrée* is almost twice as high as that at Bath is thought to be, and its flight of steps is in consequence much longer. The *Maison Carrée* also has a plain pediment. A more

¹ *Mitteilungen des Kaiserlich Deutschen Archaeologischen Instituts (Roemische Abteilung)* xxi (1906), 220-78.

² For a plan see Anderson, Spiers, and Ashby, *The Architecture of Ancient Rome* (1927), p. 73, fig. 17.

general comparison in form can be made with the Temple of Hercules at Cori¹ and the Temple of Augustus at Pola.²

The Bath temple is set, slightly eccentrically, within an enclosing wall which appears to end on a foundation aligned with the temple front. Such an arrangement is unusual but not unknown in Gaul. The closest parallel is undoubtedly the Temple of Mars Lenus at Trier;³ a similar but not identical arrangement occurs at Izernore.⁴ It is customary to think of this type of temple as being a hybrid between purely classical arrangements and the Romano-Celtic type with its surrounding ambulatory. At Bath such a reconstruction is impossible, for not only would the classical elevation, which the temple is known to have had, not fit with a surrounding ambulatory, but the enclosing foundation itself is not parallel to the base of the podium—a fact which would make any attempt at roofing difficult or unsightly. The most likely explanation is that the foundation supported either a stylobate or a dwarf wall which in turn took a freestanding colonnade. Such an arrangement would not detract from the building's appearance, but would divide the temple from the outer area of the precinct. The line of the enclosure wall was continued around the area in front of the Temple as a stylobate, which seems to have supported a façade of some kind; this again would have divided the religious structures around the altar from the areas beyond.

The same idea, of dividing the precinct into an inner and an outer area, recurs at Paris⁵ and Augst⁶ on a far grander scale where the outer court is surrounded by rows of shops opening on to an outer colonnade. In Bath, however, the arrangement is simpler; an inward facing colonnade occurs and the shops appear to be absent. The Gallic examples quoted are typical of the continental temple-forum-basilica plan which is unknown, apart possibly from Colchester, elsewhere in this country. In this type of arrangement the forum, divided from the temple by a cross street, was laid out, together with the basilica, symmetrically about the main temple axis. The buildings at Bath could be interpreted in this way, the buttressed wall east of the main temple area representing the corner of the colonnaded forum. Indeed, the similarity between this plan and the temple-forum layout at St. Bertrand-de-Comminges⁷ is striking, but such an elaborate arrangement would be out of place in a settlement like Bath, which does not appear to have been the administrative centre of a canton. A second alternative, that the buttressed wall may be part of a theatre, is far more likely in the present context, but until further evidence is available the matter must rest.

It is an unfortunate fact that no archaeological or epigraphical evidence survives to provide a precise date for the construction of the temple. Stylistically, however, Professors

¹ R. Delbrueck, *Hellenistische Bauten in Latinum* (Strassburg; 1912), pp. 23–36.

² *JRS* v (1915), pl. 1.

³ E. Gose and R. Krencker, *Arch. Anzeiger* (1938), pp. 231–2.

⁴ De Caumont, *Abécédaire au Rudiment d'Archéologie, Ère gallo-romaine* (Caen, 1870), p. 225.

⁵ F-G. de Pachtere, 'Paris à l'époque gallo-romaine' in

Histoire générale de Paris (Paris, 1912), pl. iii.

⁶ R. Laur-Belart, *Führer durch Augusta Raurica*, 3rd edn. (1937).

⁷ B. Sapène, annual reports in *Mémoires de la Soc. Arch. Midi de la France* xvi, and following volumes for 1930–3. For a plan of the temple see the 1931 report.

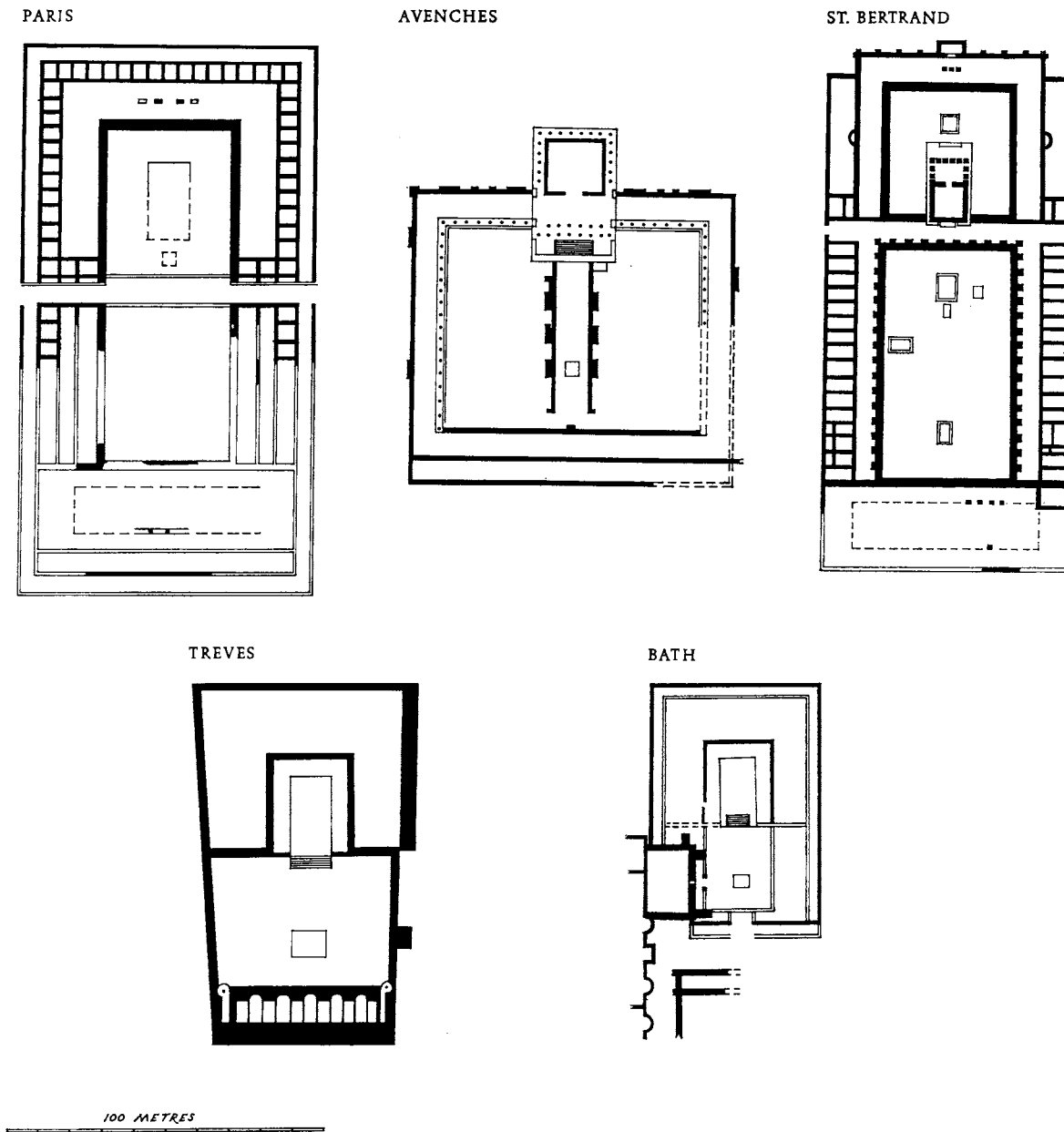


FIG. 13. Comparative plans of Gaulish temples

Richmond and Toynbee consider the pediment to belong to the third century, while admitting that the dating of so provincial a piece is extremely uncertain. Some of the decorative features of the entablature and capitals, however, suggest an earlier date: the two part capitals, the sprig spreading on to the abacus, and the wide volutes are all features which in Rome would not be out of place in first-century contexts, but how they should be dated in Bath is another matter. The case for a late first-century date is somewhat strengthened by a

consideration of the details of the cornice, some of which recur in southern Gaulish contexts in this period. Structurally, there is little that can be said of dating. Admittedly the precinct wall seems to post-date the reservoir enclosure wall, which is itself a secondary feature, but this need imply no more than that the enclosing of the precinct was a little later than the construction of the Baths. The temple building, which is set slightly askew to its precinct wall, may well pre-date it. Structural arguments are therefore of little use, but on the grounds of reason alone a third-century construction date seems to be too late, considering the number of alterations that occurred before the temple was abandoned during the fourth century. The inscription referring to the repair of damage caused by the lapse of time is a further indication of a long life. Moreover, it seems extremely probable that the temple, the Baths, and the theatre were all planned together (if not built at precisely the same time) and, since there is some indication of a first-century date for the Bath, a first- or early second-century date for the other buildings seems probable.

In summary, we can see that in the early Roman period Bath possessed a fine series of public buildings laid out for the pleasure of travellers who found their way to the site from all over the Roman world to enjoy the curative waters, to pay tribute to the Goddess Sulis Minerva who presided over the springs, and perhaps to attend religious and cultural performances in the theatre. This group of buildings is a remarkable example of the degree of romanization that could be experienced by the very fringes of the civilized world. Bath can now boast a temple better preserved and more complete than most similar sites in north-west Europe. Our knowledge of it at present is a remarkable return for the rather haphazard and limited work that has been carried out so far. Far more lies below the ground, and it can be only a matter of time before it is revealed.

10. ARCHAEOLOGICAL DISCOVERIES RELATING TO THE TEMPLE

From time to time during the last 180 years fragments and structures belonging to the temple have come to light. Sometimes the finds were accurately recorded, sometimes only a passing reference was made. In the following pages the evidence, including that obtained in the recent excavations, has been drawn together, each discovery being published under the heading of the year in which it was made.

1790. The Discovery of the Pediment and Other Sculptured Blocks

In the autumn of 1790 the western part of the Pump Room was built, between the old Pump Room and Stall Street. The foundations for this new work were deep, cutting through 12 ft. (3.66 m.) of overburden to a solid Roman pavement beneath. Of the structural remains recovered, no adequate drawing or notes were made, and all that now survives are brief references in several works written by visitors to the excavations. Since they tend to be confusing, the relevant sections are quoted here in full.

Englefield, in a paper read before the Society of Antiquaries on 3 March 1791 (Englefield 1791), states that 'At about twelve feet below the level of the present street the

workmen discovered a pavement of large stones, with steps fronting to the east. Of this pavement enough was not laid open to discover the form or size of the building to which it belonged. It appeared to extend under Stall Street. On it the foundation of the present new building is laid; and it will of course be for a long time covered from future investigation.'

Governor Pownall, in an article published a few years later (Pownall 1793), describes how on 10 and 11 September 1790, labourers came upon 'a Roman pavement formed of large square stones on the north front of that which is called the King's Bath. There were also up from these excavations part of a plain column, eighteen inches nearly in diameter. The circumference at the foot of the shaft is perfect, having an Attic base. Also parts of a wall in which was inserted a pilaster of the same dimensions. A fragment of an inscription, part of which is obliterated, cut in the naked part of the wall, runs in two lines between the capitals of the pilasters, more Tuscan than Doric.'

In Gough's *Addition to Camden* (Camden, Gough's edn., 1789) we learn that 'the pavement of this temple was about twelve feet below the level of the present street; the descent into it by three steps east to the King's Bath and four upwards towards Stall Street'. Finally, in Duffield's *Bath Guide* (Duffield 1811) we are told that 'an ancient paved way consisting of broad, free stones, with a channel at the extremity to carry off the water, was discovered. The pavement of this temple was about twelve feet below the level of the present street; the descent into it by three steps east to the King's Bath, and four upwards towards Stall Street.'

The above descriptions, then, indicate that a paved surface was seen 12 ft. (3.66 m.) below the street surface of the time (now about 15 ft. (4.57 m.) down) and that seven steps existed. Irvine (Irvine 1873, 383) points out that the best explanation of the latter is that 'on the east side of the trench to King's Bath side there were three steps down to pavement, and that on west side of trench four more could be seen on the side next the street', i.e. a continuous flight leading from the pavement up to the podium. Of the other structures mentioned, nothing more is known of the culvert, if indeed it ever existed, and Pownall's wall with a pilaster is so ill described that the pilaster could have been built into the wall as a piece of re-used masonry; alternatively he might simply have been referring to part of the Façade of the Four Seasons, which he saw lying loose in the soil (but see above, p. 23).

At the time of these discoveries between 50 and 60 inscribed or sculptured stones were found. Some of these were described with greater or lesser degrees of accuracy by the various writers mentioned, but the best and most meticulously illustrated account was that offered by Lysons (Lysons 1813). Further reference to individual pieces will be found below.

1864 and 1867-9. The Temple Podium and Surrounding Features (fig. 14)

In the early 1860s the Old White Hart Hotel, which occupied a site on the west side of Stall Street opposite the Pump Room, became vacant and between 1867-9 it was

demolished and replaced by the Grand Pump Room Hotel. Throughout this time J. T. Irvine, employed as Gilbert Scott's clerk of works on the restoration of the Abbey, kept a close watch on the building operations, recording what he saw in the form of detailed and highly accurate annotated sections and plans, now preserved in Bath Reference Library. His magnificent work was far in advance of that of his day. The discoveries of 1790 had suggested to him that the actual mass of the temple lay beneath the old Hotel, and in 1864 he and a Mr. Bates 'got leave to excavate in the cellars of the then vacant (and so for many years) Old White Hart Inn' in the hope of finding a marble floor. Their trench sectioned a pit which had been cut into the masonry of the podium. During the construction work of 1867-9 Irvine visited the site regularly and recorded in some detail the remains which were being exposed: they consisted of the walls of the portico bounding the north and east sides of the precinct, the podium of the temple, and a wall surrounding it.

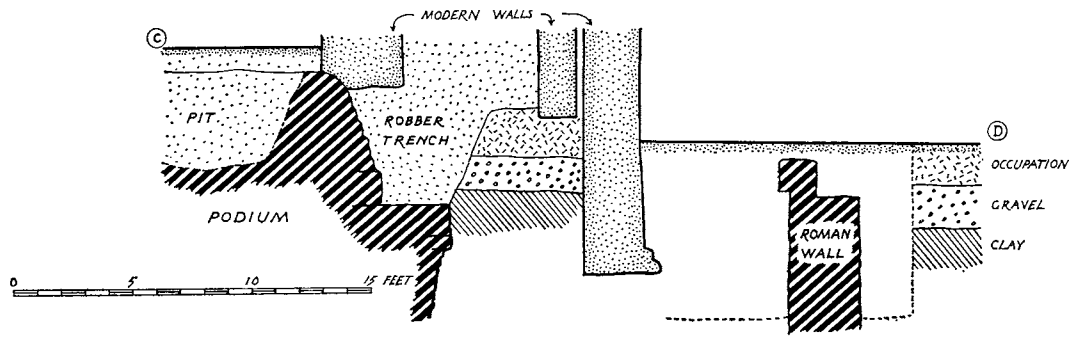
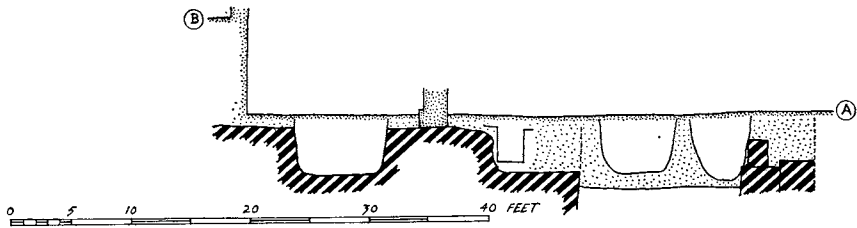
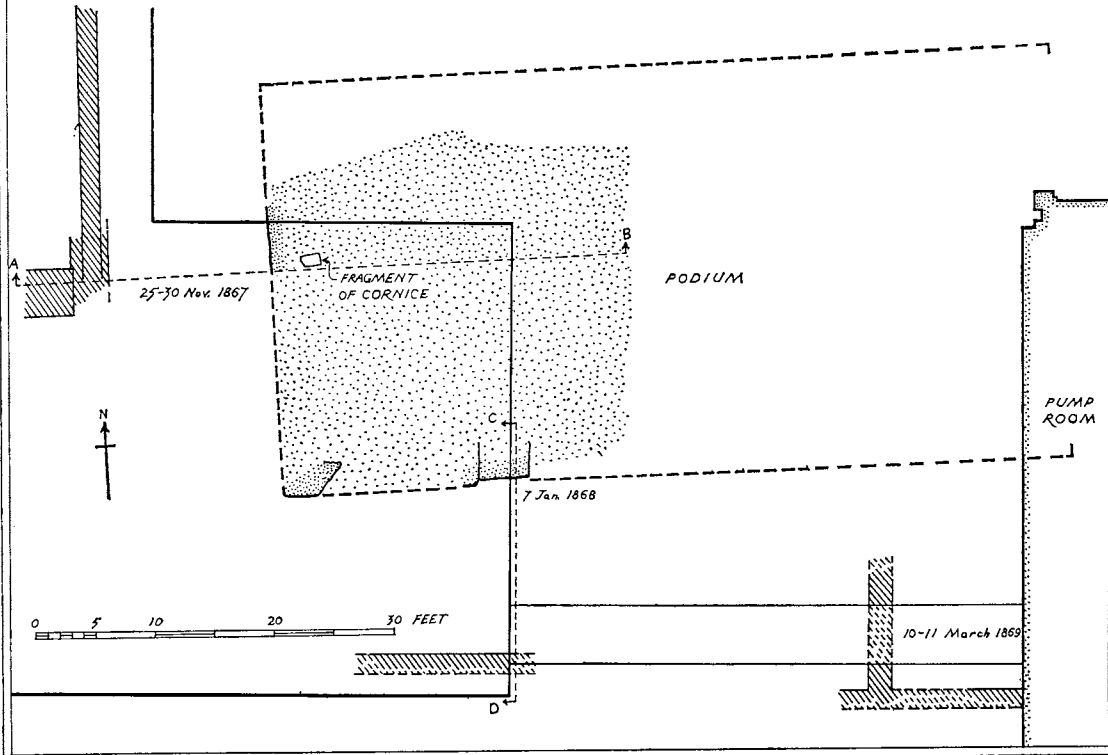
The portico (fig. 26) was represented by two masonry footings 10 ft. 6 in. (3.20 m.) apart. The outer footing appears from the drawn sections to have supported a wall standing to a height of several feet. The inner footing, which measures about 3 ft. (0.91 m.) across, showed no sign of superstructure and is most likely explained as the foundation for a stylobate although no blocks were seen in position by Irvine.

The podium of the temple came to light between November 1867 and January 1868. It consisted of a mass of concrete, more than 10 ft. (3.05 m.) thick, faced on the outside with massive stone blocks, most of which had been robbed to below the level of the surrounding ground surface—this much is clear from Irvine's admirable section, redrawn here in fig. 14. The somewhat irregular outline which the foundations have in plan is due to the fact that the plan was drawn at a level below that of the contemporary ground surface, above which the masonry facing would presumably have been more even. The maximum height of the podium above the surrounding gravel surface was about 4 ft. (1.22 m.) (the top being 8 ft. 2½ in. (2.50 m.) below the then pavement level). It is probable that the extensive pit digging in the medieval or later period which Irvine records (he calls them cesspools) removed the upper courses as well as penetrating the masonry mass. No trace of a floor surface was seen, but among the rubble lying over the eastern part of the structure was found a carved stone block belonging to the main cornice (see below, no. 1.19).

The podium was bounded by two masonry walls 14 ft. (4.27 m.) away from its east and south sides (fig. 14, sections AB and CD); no indication of the chronological relationship of the two structures survived. Between the east wall and the podium lay an area of pennant slab paving which would have just covered the eastern offset of the wall and would have been at about 3 ft. (0.91 m.) below the level of the top of the podium. In the centre of the east wall Irvine recorded a block of masonry, apparently butted up to its west offset and extending for an unknown distance into the precinct to the west.

By the beginning of 1869 building work was almost complete and there remained only details to be tidied up. In March a trench was dug across Stall Street to join the cellars of the Pump Room to those of the Grand Pump Room Hotel. During this time Irvine was

THE TEMPLE THE PODIUM



Memo J.T.I. 1867-9, Del BC 1865

FIG. 14

able to record two walls at right-angles to each other (fig. 14), the top of the north-south wall being 12 ft. 8 in. (3.86 m.) below the plinth of the Pump Room. In the north-east angle between the walls he found three fragments of colonnettes and a quantity of window glass.

Finally, at the beginning of April, levelling work in one of the cellars under Westgate Street, 48 ft. (14.63 m.) north of the temple portico, revealed a mass of tumbled masonry, among which were found four carved fragments (see below, nos. 3.1-4) lying on a bed of stone chippings. These were preserved by the site clerk of works.

1878-80. The Reservoir and the Area to the North (pls. VII-X)

The reservoir was discovered by Richard Mann in the autumn of 1878. Earlier in the year, whilst employed by Davis on the excavation of the Roman drain, he had begun to tunnel from the known part of the drain westwards towards the source, exposing the part of the drain, now much destroyed, which lies below the floor of the museum. Nearing the west wall of the reservoir enclosure he found that the hot water flowed so fast that he was forced to raise the level of his tunnel and turn north, gradually converging with the reservoir wall, parts of which he exposed. As the tunnel was continued northwards, it passed between the east precinct wall and the projecting mass of rusticated masonry which Mann faithfully recorded, reaching first its north-east corner and then continuing until he had measured its width. Since the masonry mass made a continuation of the tunnel difficult, a new shaft was dug through the Pump Room cellar west of the mass and from here, by means of new tunnels, he was able to examine the entire north face of the reservoir wall, carefully observing the doorway in the centre and drawing plans and sketches in sufficient detail to enable us to work out the nature of the later Roman alterations in the area (pl. IX). Having examined the north side of the enclosure, he turned his attention to the west wall and by means of further trenching and tunnelling was able to plan the certain structural details, which are now summarized on fig. 27.

The physical difficulties and dangers which Mann and his workers faced were enormous. Most of the work was carried out in narrow tunnels below the foundations of recent buildings, which had to be underpinned to prevent collapse, and at the same time many tons of mud, soil, and rubble had to be removed—all this in tunnels barely 3 ft. (0.9 m.) wide, using artificial light, and at temperatures of consistently above 90°F. Mann's own words serve to summarize his difficulties: '... we have been so hindered by the large (stone?) block in our way, which we are obliged to saw up, using it for pillars in front of the Roman wall, about 5 ft. apart to support the foundation over which overhangs it. . . . Then in line with we had another nearly 5 ft. long resting partway on the steps . . . you may just imagine what it was to undermine, clear our side, and drag it out in our small culvert.'

It soon became apparent that the Roman enclosure wall, virtually circumnavigated in the tunnelling operations, contained the spring which therefore lay exactly below the King's Bath. In 1879 the King's Bath was drained, its floor removed and excavation began (pl. VII). First layers of puddled clay, serving as a raft for the medieval buildings, had

to be removed before the excavations could reach Roman deposits. As the work progressed masses of tumbled stone, mud, and sand were met with, together with a number of Roman votive offerings which are listed below (pp. 65 ff). Eventually, when all the rubbish had been cleared away, the limits of the multi-sided reservoir were defined and planned. It was found to be unfloored, so that the mineral waters could bubble up unhindered, but its walls were lined with thick sheets of lead to prevent leakage. The reservoir is, beyond doubt, one of the most dramatic Roman monuments in the country, but its discovery seems to have aroused little attention, at least nationally, and the City Engineer, Davis, was allowed to strip off the lead for sale and then to cover in the structure with a concrete raft which now obscures everything.

The record of these discoveries is sparse. For many of the facts we have to rely on letters written by Richard Mann to J. T. Irvine throughout 1878; fortunately they are remarkably detailed and give a vivid personal account not only of the remains but also of the difficulties and the personalities involved. Mann also produced a series of beautifully executed plans, sections, and sketches, which are now preserved in the Library of the Society of Antiquaries. The man in charge of the work, Major Davis, wrote little and published less, but the Society of Antiquaries' Library possesses the manuscript of a paper which he read on 24 June 1880, covering much the same material as Mann but augmenting it in places with useful additions. In April 1967 a small team of students spent two weeks below the cellar floors cleaning and recording the surviving remains. Their records, together with those of Davis and Mann, are incorporated in the general description above.

1883. The North Cheek Wall of the Temple (fig. 19)

In July 1883 Richard Mann carried out an excavation beneath the floor of the cellar which extends north from the north-west corner of the Pump Room cellars. The only record of this work which can be traced is an annotated plan drawn by Mann, which was sent to Irvine on 14 March 1893, and is now preserved among the Irvine papers (the details are here incorporated in fig. 19). The features discovered consisted of the corner of a chamfered plinth, to the east and south of which was a paved area. The original plan gives the depth of the paving from the existing cellar floor: the figures range from 6 ft. 1½ in. (1.86 m.) at the north to 7 ft. 1¾ in. (2.17 m.) at the south. Near the angle of the plinth was a slot cut into the stone slab. The reason for the variation in level is probably, as Irvine suggests in a note on the plan, that 'traffic seems to have hugged the corner in passing', thus wearing away part of the paving. Although Irvine describes the structures as 'remains of the steps up to the temple platform', it seems more likely from their form and position that they represent the base of the northern cheek wall flanking the temple steps.

1893-5. The Area North of the Baths

The temple precinct north of Mann's excavations of 1878-80, and now below the floor of the Pump Room cellars, was cleared by Davis, presumably without Mann's assistance,

during the years 1893–5, exposing areas of precinct flooring, steps, and the base of the altar and of another monument. These details were never described, but selected features appeared on Taylor's plan of 1906. The replanning undertaken in April 1967 enables a full description to be offered above (pp. 22 ff).

To the east of these features lie the eastern colonnade of the temple and the foundations of a massive monument described below (p. 148) and thought to be part of a theatre. No description of their uncovering is known, but they must have been exposed when the eastern extension of the Pump Room, which now lies above them, was built during the period 1893–5. Fortunately, much of this area is incorporated in the present museum and those parts which were destroyed or covered were fully recorded by Mann on a manuscript plan now in the Society of Antiquaries' Library.

1959. The West End of the Temple

When, in 1959, the Pump Room Hotel was demolished prior to rebuilding, the Camerton Field Club carried out a rescue excavation under the direction of Mr. W. Wedlake. The west end of the temple podium was seen together with the wall surrounding it. Immediately to the south-west of the enclosing wall was a hypocaust built of re-used material including a column capital. No report has yet been published.

1964. The South Colonnade. Trench 3 (fig. 15)

Beneath the eastern pavement of Stall Street, where it borders the east front of the Pump Room, is a narrow passage containing the pumping apparatus and pipes responsible for distributing the mineral waters. At its southern end the passage opens into the vaulted cellar which protects the westernmost plunge bath of the bathing establishment. The bath appears on Taylor's plan, together with two foundations which are shown to cross the passage to the north of it. The foundations still survive beneath the rubbish filling the cellar and on inspection (June 1964) they proved to consist of massive stone blocks which could with some certainty be interpreted as the southern side of the portico surrounding the temple precinct. In November 1964 a trench was cut across the foundations to examine their structure and surrounding stratigraphy.

The Excavation. The ground surface at the beginning of the Roman period consisted of a black peaty turf-line (layer 13) lying above a greyish marl containing small waterworn pebbles and lenses of peat (layer 14). Above the turf-line were two layers of dumped material, layer 12 consisting of lumps of blue lias clay mixed with iron-stained clay and fragments of tile, and layer 10 composed largely of clay and broken limestone. Both layers would appear to represent building activity either associated with the construction of the Baths or with the consolidation of the land prior to the erection of the temple. It was from this level that two rough, trench-built masonry foundations were constructed, upon which were erected freestanding walls 1 ft. 9 in. (0.53 m.) high, each capped with large masonry blocks. The construction period is represented by a layer of cream pebbly mortar (layer 9). Above this were laid tips of make-up (layers 8, 7, and 3) intended, no doubt, to raise

the level between the foundations to that corresponding to the bottom of the large stone blocks. A small gully containing traces of burning (layers 4, 5, and 6) had been cut into the make-up; it may in some way have been connected with the construction phase. It would seem likely that the area between the walls was originally paved, but no trace of this now remains.

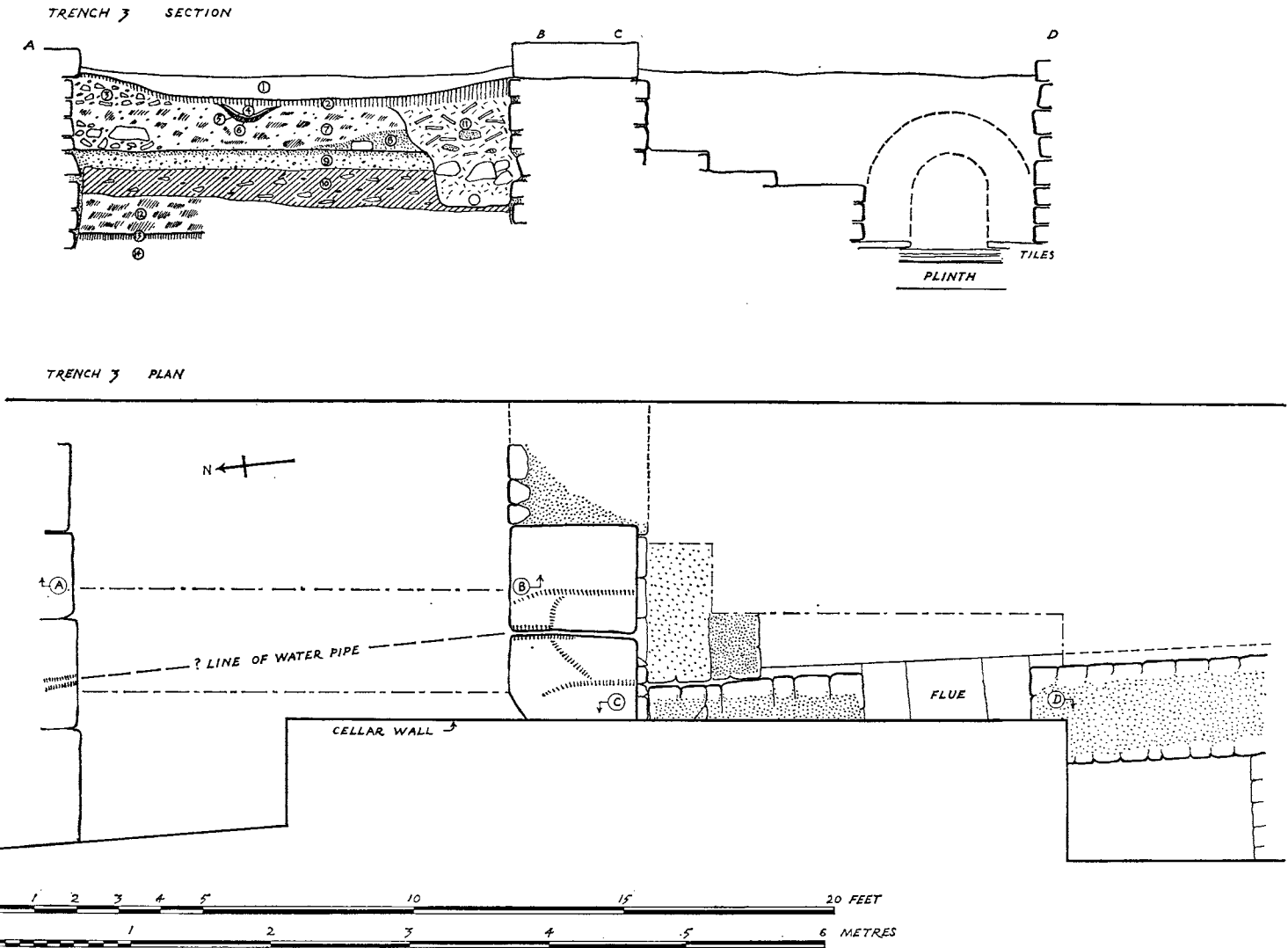


FIG. 15. Plan and section of the excavation across the south colonnade

Against the north side of the southern wall a trench was found, containing fragments of pennant slabs and large lumps of *opus signinum*. It had evidently been cut from a high level and probably represents the removal of a water-pipe or drain of late date laid, perhaps,

when the Baths were being extended to the west. The trench contained fourth-century pottery and had been sealed by a layer of trampled soil (layer 2).

The northern dwarf wall supported a stylobate, of which four large blocks remain in position. To the north of it was a shallow trench, presumably for a gutter, since removed. The southern foundation seems to have supported a wall of ashlar masonry to the east and two heavily worn stone blocks to the west. Precise interpretation is impossible with such limited evidence, but it is reasonable to suggest that the blocks represent the sill of a doorway opening through an otherwise plain wall. If so, the southern foundation can be seen as the boundary wall of the temple precinct, bordered inside by the northern foundation supporting a stylobate and a colonnade fronted by a ground-level gutter.

The trench, just described, was continued to the south across an area previously disturbed by earlier excavation. The masonry structures, discovered in position, were evidently part of the westerly extension of the Baths. They consisted of a north-south wall which joined the outer precinct wall at less than a right-angle, and through which had been built a now much-ruined flue (see section fig. 15). The filling to the east contained a number of box-tiles and soot, suggesting that it was once a hypocaust chamber. In the angle made between the wall and the precinct wall was a squared mass of ashlar masonry, perhaps part of the support of the hypocaust floor. The Taylor plan shows a similar structure in the corresponding south-west corner of the room. The robbed water-pipe or drain previously described may well have served the room. Furthermore a gully possibly for a lead water-pipe was traced across the stone blocks of both the north and south footing.

For a description of the pottery see below, pp. 59 ff.

1964. The Excavation of the Temple Steps. Trench 4 (pl. xxviii b)

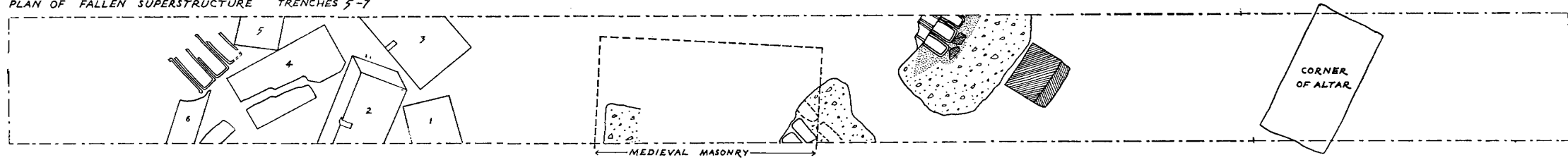
In December 1964, a trial trench was dug in the north-west cellar of the Pump Room against the west cellar wall to test the existence of steps said to have been found in this position when the wall was built in 1790.

At a depth of 6 ft. 6 in. (1.98 m.) beneath the cellar floor the top of a much-worn step of lias limestone was found with the precinct paving 6 in. (0.15 m.) lower, immediately to the east. The rough foundations of the Pump Room wall were laid directly on the upper step, the adjacent filling being completely disturbed at the time of 1790 building. Although only a small area was exposed, it seems probable that the higher step is, in fact, the lowest of the flight leading up to the podium and that the lower paving in front (i.e. east) of it represents the flagging of the precinct floor, similar to that seen further north in 1883 and further east in 1965 at a corresponding depth. The floor was covered with an undisturbed layer of rubble and peat about 6 in. (0.15 m.) thick.

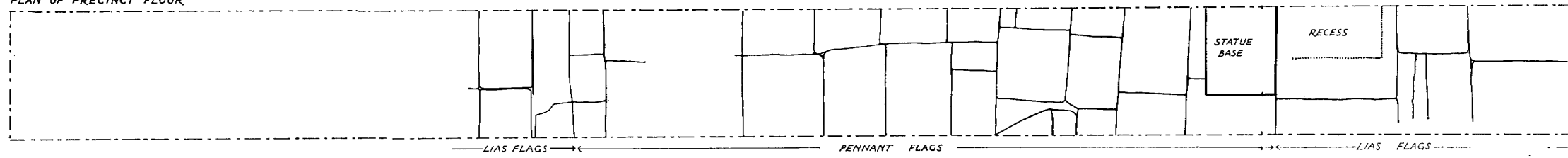
1965. The Temple Precinct. Trenches 5-7 (fig. 16 and pls. v and vi)

In the summer and autumn of 1965 a trench was cut through the floor of the cellar beneath the north side of the Pump Room. As the cellar is only 8½ ft. (2.59 m.) wide and close to the main north wall of the building, it was necessary to dig the trench in three

PLAN OF FALLEN SUPERSTRUCTURE TRENCHES 5-7



PLAN OF PRECINCT FLOOR



SECTION, TRENCHES 5-7

CELLAR FLOOR

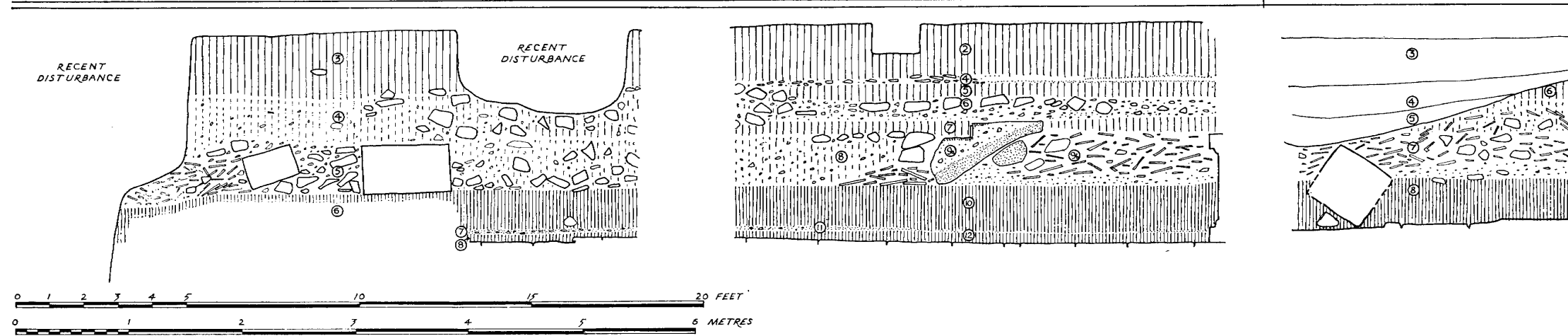


FIG. 16. Plan and section of the excavation between the Temple and the altar, 1965

sections, refilling the previous one before opening the next; a baulk was left between each trench. The trench lay slightly to the south of the main Roman east-west axis, between the temple steps and the position of the altar.

The Excavation. At a depth of approximately 7 ft. (2.13 m.) below the cellar floor lay the flagged floor of the temple precinct, showing two phases of construction. In the first phase the area had been paved with large slabs of lias limestone which at the east end of the trench stepped up 6-9 in. (0.15-0.22 m.) to a higher level. The explanation for this change of levels seems to be that the higher surface was part of the platform upon which the altar stood. A similar change in level can be seen in the remains preserved beneath the floor of the Pump Room further east. In one of the slabs a shallow recess, 1½-3 in. (0.04-0.07 m.) deep, had been cut. This, too, may have been part of the altar arrangements. In the second phase a considerable area of the floor was repaved with well-fitting slabs of pennant sandstone (pl. *vīa*) taken up to, but not over, the platform to the east. Standing on the pennant slab floor, immediately to the west of the step, was an inscribed statue base, still in its original position (pl. *xlv*), erected by L. Marcius Memor (no. 1.60, below).

The entire floor was sealed by a layer of black peaty mud, up to 1 ft. 6 in. (0.48 m.) thick, which must have formed under waterlogged conditions after the temple had gone out of use. Over much of the area a thin line of mortar and stone chippings had been deposited after about 4 in. (0.1 m.) of peat had formed. The exact origin of this material is not certain, but it may represent debris derived from the erosion or frost-shattering of some nearby structure: all that can safely be said is that the layer was deposited under water. In the upper foot or so of the peat a quantity of late Roman pottery, animal bones, and occasional pieces of pennant grit roofing slabs were found. Occupation material of this kind can only have got here as a result of the deliberate tipping of rubbish into the marsh at the end of the Roman period. Also embedded in the peat were found several worked stone blocks (pl. *vīb*), including the corner of the altar (no. 1.27), a cap-stone from the altar (no. 1.30), a moulded block (no. 1.75), a sculptured fragment showing a hand holding a spear (no. 1.68), and several other smaller architectural fragments. They must all have fallen, or been thrown, down whilst the peat was forming.

The deposition of the peat was temporarily halted by the collapse of superstructure from nearby or overhead buildings. Tumbled on to the mud in the eastern part of the trench were six large masonry blocks (pl. *vīa*) with worked faces and clamp holes in the centres of the long sides. Those which were complete enough to be measured were all about 3 × 1½ × 1 ft. (0.9 × 0.45 × 0.30 m.). They are identical to the masonry of the 'projections' to the north of the enclosure wall, and there can be little doubt that those found in the excavations were derived from the north-west 'projection' which lies directly south of the tumbled blocks. Much of the rest of the trench was littered with building debris containing a high percentage of box-tiles of a type used in the Baths for vaulting.

Several fragments of superstructure were found. A group of box-tiles, mortared together, lay in the rubble to the west of the large stone blocks. In the middle of the trench a solid

mass of cream-coloured concrete, faced on the underside with pink mortar, had fallen on to a bed of mortar and tiles (pl. *vb*). The under surface of the pink mortar was curved, but was so rough and eroded that any attempt to estimate accurately the curvature was rendered impossible. Two rows of small box-tiles had been bonded to the upper part of the concrete mass with pink mortar, no doubt to lessen the weight of the superstructure from which the fragment came. Nearby lay a pile of eight voussoir tiles, part of the facing of an arch. They had been rendered with pink mortar on their outer and under surfaces, and had been keyed into the rest of the structure by a tile (originally one of many) which projected beyond the back face of the facing and into the concrete of the superstructure behind. Unfortunately, it was impossible to study more than a narrow section across the debris. Had a larger area been available it would have been possible to have formed some definite conclusions as to the form of the superstructure and the nature of its collapse, but it is argued above (p. 19) that the rubble derived from the vault covering the spring, which fell forward over the altar region.

After the roof had fallen, the silt continued to form, only to be interrupted again by the deposition of a rubble layer containing blocks of lias limestone derived, presumably, from a nearby wall. After this, more black silt containing a thin discontinuous lens of rubble and crumbled mortar accumulated, this time to a depth of about 2 ft. (0.6 m.) No dating evidence survives for these layers, but some time later several burials had been inserted into the mud, their high level and east-west alignment suggesting that they may be part of the Abbey cemetery. Later still the buttress of a medieval or later wall was built across part of the area sectioned by the trench. Finally, a series of later disturbances marks the building activities of the eighteenth century, at the time when the Pump Room was being erected.

Summary. The excavation was important not so much for the discovery of the sculptured and inscribed blocks, which form a remarkable and interesting collection in their own right, but for the information it provided concerning the destruction of the temple buildings and the subsequent history of the site, about which nothing previously was known. The general results show that after the temple was abandoned, while Roman-style pottery was still in use, its precinct soon became waterlogged, giving rise to the formation of a thick layer of peat. It was only later, in the fifth or perhaps even the sixth century, that the great vaulted canopy which covered the spring crashed down into the mud. As the water-level continued to rise, more of the surrounding structures toppled, until by the late Saxon or early medieval period much, if not all, of it had completely disappeared below the rising marsh.

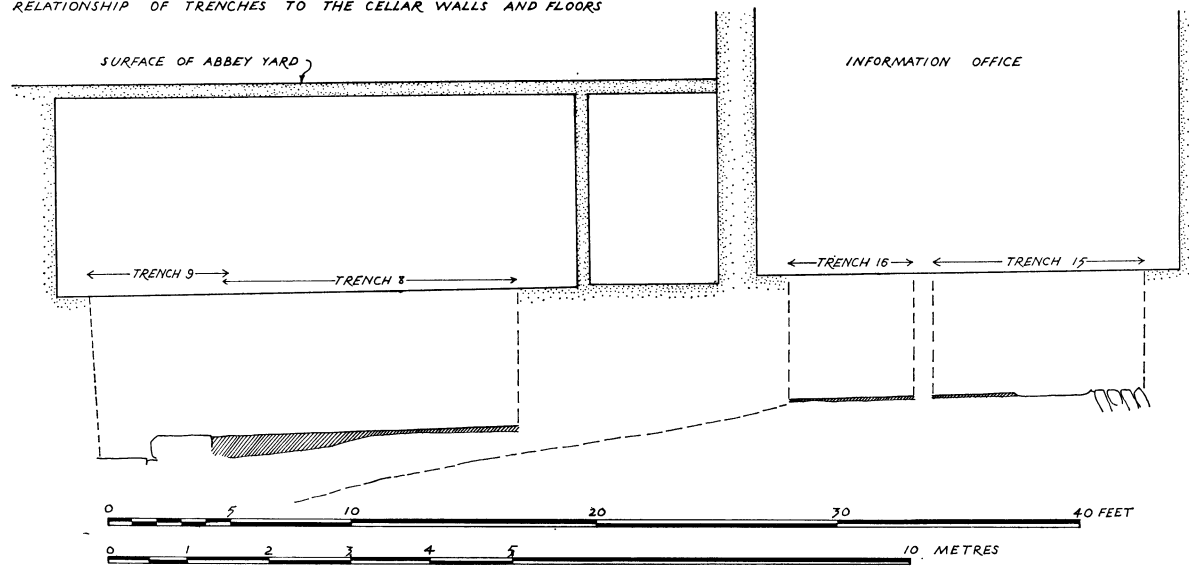
In addition to providing a detailed picture of the abandonment of the temple, the excavation also exposed a sample of the precinct floor and, for the first time, made possible the examination of the altar area.

For the pottery recovered see below, pp. 59 ff.

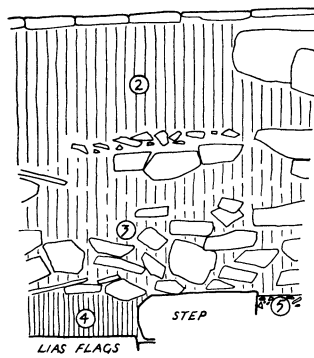
1966-7. *Excavation North of the Altar in the Cellars of the Information Office. Trenches 8, 9, 15, and 16* (fig. 17 and pl. IIIa)

The cellars of the Information Office lie above the north part of the outer precinct.

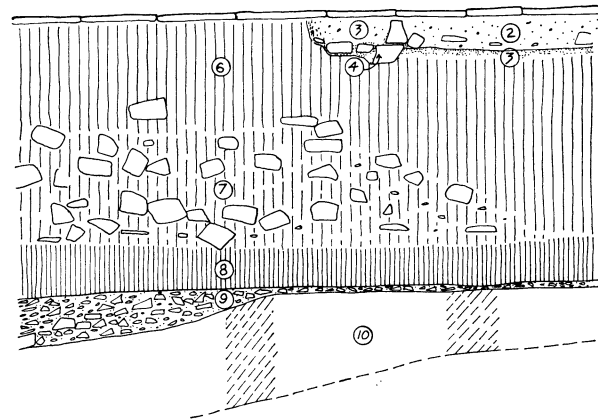
RELATIONSHIP OF TRENCHES TO THE CELLAR WALLS AND FLOORS



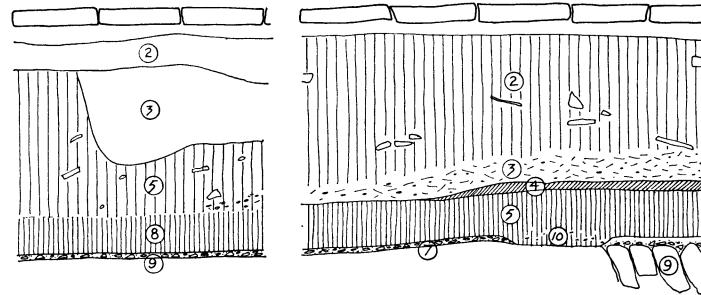
TRENCH 9 W. SECTION



TRENCH 8 W. SECTION



TRENCHES 16 AND 15 E. SECTIONS, MIRRORED



TRENCH 9 PLAN

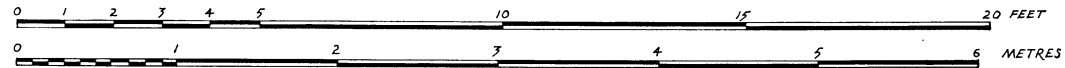
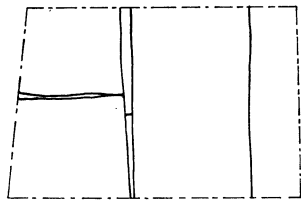


FIG. 17. Sections across the north side of the Temple precinct, 1967

Since nothing was known of the area it was decided to cut a series of trial trenches through the cellar floors. Trench 8 was dug in March 1966, trench 9 was begun in May 1966 and finished in April 1967, and trenches 15 and 16 were dug in April 1967.

The Excavation. At the beginning of the Roman period the natural liassic clay in this part of Bath sloped to the south at such an angle (fig. 17) that in order to create a relatively level precinct, the southern part of the area had to be made up with rammed limestone rubble (trench 8, layer 9), whilst it seems likely that some of the natural clay from the northern end was removed. Even so the floor still sloped.

Through the centre of trench 9 ran a step composed of a slab of lias limestone 9 in. (0.23 m.) thick, the surface of which had been uniformly weathered (pl. IIIA). South of the step, at the lower level, was found a continuous and well-preserved paving of lias limestone flags. The only other structure to be sectioned was the foundation, evidently for the stylobate enclosing the outer court, which ran across the north end of trench 15. It consisted of pitched limestone blocks tightly packed in a trench 15 in. (0.38 m.) deep. No trace of the stylobate survived, but in front of the foundation it was possible to trace the position once occupied by the ground-level gutter. The ground surface between the step and the stylobate had been consolidated by ramming into the clay chips of limestone. Possibly the area had originally been flagged, but no evidence for this survived.

Immediately above the Roman ground level, a grey-black layer of silty soil had accumulated to a depth of about 12 in. (0.30 m.) (trench 8, layer 8; trench 9, layer 4; trench 15, layer 5; and trench 16, layer 8). It contained a quantity of occupation rubbish and must represent a period during which the temple precinct no longer functioned as a religious area. On top of this, in trenches 8 (layer 7) and 9 (layer 3), lay a tumbled mass of masonry made up almost entirely of small square limestone blocks, usually about 9 × 9 × 4 in. (0.23 × 0.23 × 0.1 m.) in size; lying amid the masonry in trench 8 was part of a column drum 18 in. (0.46 m.) in diameter. The rubble had evidently fallen from a wall, standing nearby. One possible explanation is that the wall had been erected on the step—admittedly the weathered nature of the section seen in trench 9 would imply that there had been no wall at this point, but it may be that the wall was in the form of separate lengths constituting a discontinuous façade. The problem can only be resolved by the examination of a considerable length of the step's surface, which is not at present possible.

On the northern part of the site the stratigraphy is different. Here, after the first 12 in. (0.30 m.) of loamy soil had accumulated, a thin layer of compacted clay had been laid (trench 15, layer 4) upon which had accumulated a lens of occupation material incorporating oyster shells, animal bones, and pottery (p. 59). The clay may represent a floor-level and the layer on it is thus the latest stratified occupation material to be recovered from the temple area.

Then followed a period during which up to 3 ft. (0.91 m.) of black loamy soil accumulated, sealing everything below and containing no finds other than occasional derived pieces of Roman pottery or fragments of building material. Finally, in trench 8, a mortar

floor and a contemporary roughly built wall were erected representing the first building in the area since the Roman period. No stratified pottery was found, but it seems likely that the building was of medieval date.

1967. Excavations beneath the Pump Room. Trenches 10-13 (figs 18 and 19 and pls. III-IV)

Several trenches were dug in April 1967 beneath and adjacent to the cellars of the western part of the Pump Room. These will be described individually. (For the positions of the trenches see fig. 27.)

Trench 10. The space available for excavation was seriously limited by modern walls, sewers, and culverts, but even so it was possible to obtain a section through the layers against the west face of the massive masonry projection attached to the west wall of the reservoir enclosure.

The original ground surface was not reached, but the trench was dug to a depth of 12 in. (0.30 m.) into a make-up of grey silty clay, lenses of mortar, and odd fragments of tile (layer 19). On this was a very thin discontinuous layer of black silt (layer 18) which had been sealed by a 3-in. (0.076-m.)-thick layer of tightly packed cobbles, possibly representing the original surface of the outer precinct (layer 17). Upon the cobbles lay, first, a black silty lens (layer 16), which was in turn sealed by a mortary layer yielding a few fragments of nondescript Roman pottery and several small pieces of painted wall plaster.

The early layers just described had all been partly cut away by the foundation trench for the masonry mass. After the foundations had been placed in position the trench was filled with limestone chippings which had been spread out over the adjacent area (layer 13), possibly as a seating for paving, since removed. Of the masonry mass itself, four courses survived of which only the upper two would have been seen above the contemporary ground-surface. The joints of these blocks had been carefully tooled to give the impression of rusticated work. The upper courses of the monument had evidently been robbed in recent times, indeed one rusticated block, displaced from its original position, had been incorporated in the foundations of a nineteenth-century wall built on the Roman work (pl. III*b*).

Sealing the limestone chippings and butting up to the Roman masonry was a layer of black silty soil up to 20 in. (0.50 m.) thick, containing some blocks of limestone and a quantity of occupation material. The layer (layer 12) represents the accumulation following the abandonment of the temple area. Above this the stratigraphy had been disturbed in recent times.

Trenches 11-12 (fig. 19). Mann's limited excavation of 1883, in the cellar beneath the colonnade adjacent to the north-west corner of the Pump Room, prompted further work to be carried out in the area. Two trenches were dug immediately to the north of Mann's excavation to examine further the paving and step which he had partly uncovered.

On excavation it was found that the step seen in 1883 continued for some distance until stone robbing had removed it. The area to the east of the step was paved with large lias

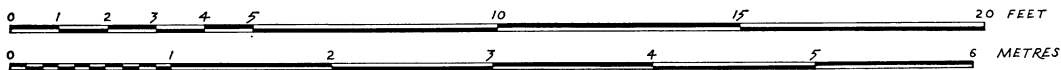
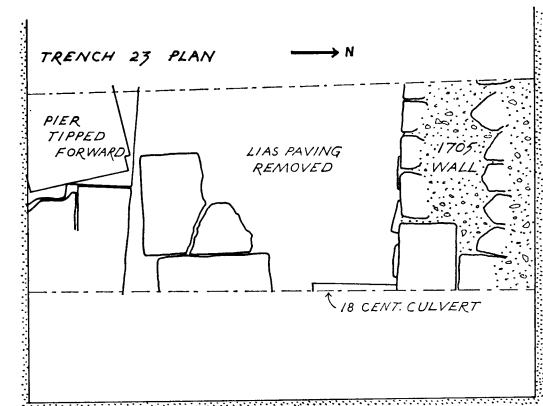
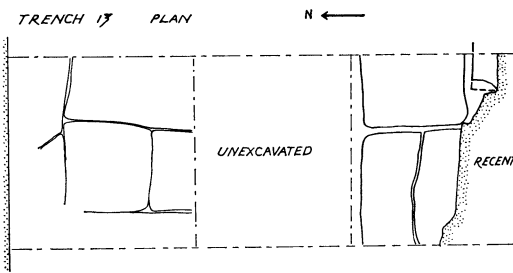
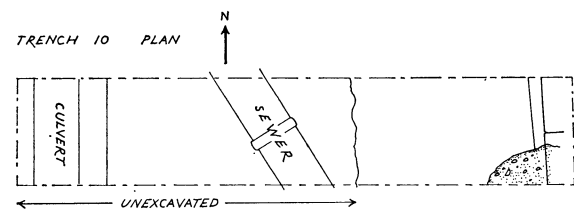
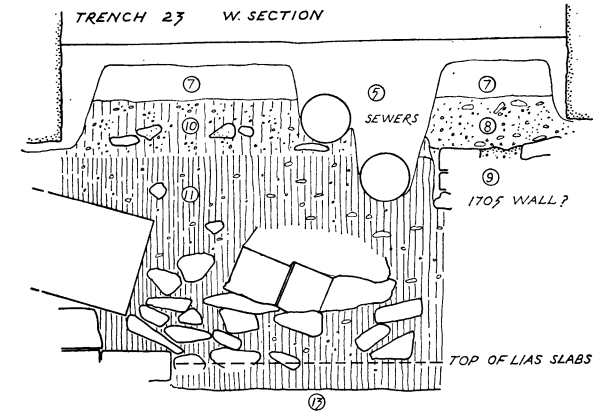
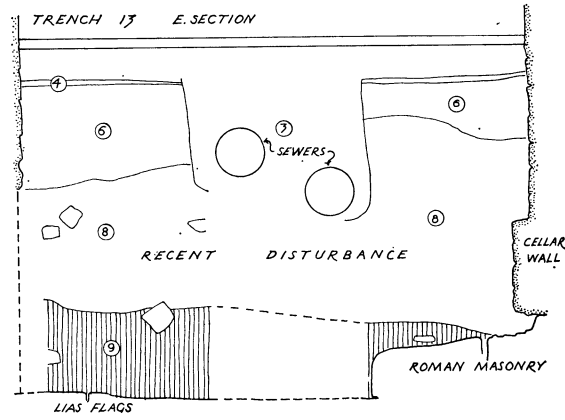
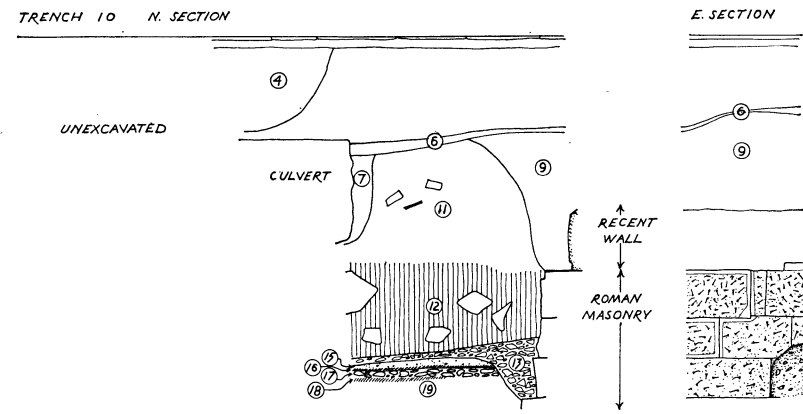


FIG. 18. Plans and sections of the excavations of the Temple precinct, 1967-8

limestone slabs which showed signs of considerable wear. A close examination of the surface of the step indicated that structures had originally stood on it, protecting certain areas from weathering, whereas the exposed surfaces had been eroded by the constant dripping of rainwater (fig. 19 and pl. iv). The southern unweathered patch may well have been covered by the north-east corner of the cheek wall of the temple; the strip to the north of it seems to represent a wall with an attached pilaster. Between the two features is a very worn area indicating, perhaps, a way through for pedestrians.

The northern part of the excavations, from which the slabs had been removed, was covered with a 4-6-in. (0.1-0.15-m.) thick layer of limestone and clay make-up, rammed into the surface of the natural blue-grey silty clay. The level of the make-up adjacent to the step and paving shows that the paving could not have continued at its original level beyond the north edge of the step. It seems likely therefore that the step turned at right-angles in an easterly direction to align with the step found in trench 9 below the Information Office. The possibility, however, remains that the step also continued to the north, since the make-up which would have been below it was rather more substantial than over the rest of the trench. If this were so, it would have divided the precinct into an eastern and a western half.

The soil above the Roman features seems all to have been disturbed in recent times, possibly as the result of builders raking through the mud to remove large stone blocks. The disturbed material had been cut by the foundation trench for the west cellar wall, the foundations for which rested on the Roman remains and incorporated several re-used Roman blocks.

Trench 13 (fig. 18). Trench 13 was dug to examine the layers adjacent to the north end of the masonry mass which projected north from the north-west corner of the reservoir enclosure wall.

In the south-east extremity of the trench one block, representing the north-west corner of the masonry, was seen, now incorporated in the footings of the cellar wall. On the north side of it were two stone blocks which seem to have formed a surround to the mass, for exactly similar blocks were seen by Mann on its west side; the two in trench 13 were worn on the surface, showing that they had been exposed. These blocks would have stood on the lias limestone slabs of the precinct floor, which a few feet in front of them lay at a depth of 7 ft. 6 in. (2.29 m.) below the present surface.

Sealing the Roman features was a 2-ft. (0.61-m.) thick layer of black clayey soil incorporating, in its upper levels, a few small blocks of limestone and some fragments of box-tiles. Above this the stratified levels had been disturbed in recent times.

1967. The East Colonnade of the Temple. Trench 14 (figs. 20 and 21)

The colonnade which fronted the east side of the temple precinct had been almost entirely cleared of surrounding stratified material in the late nineteenth century. Fortunately, however, a small island of undisturbed soil had been left in the south-east angle of the stylobate and this was examined in April 1967.

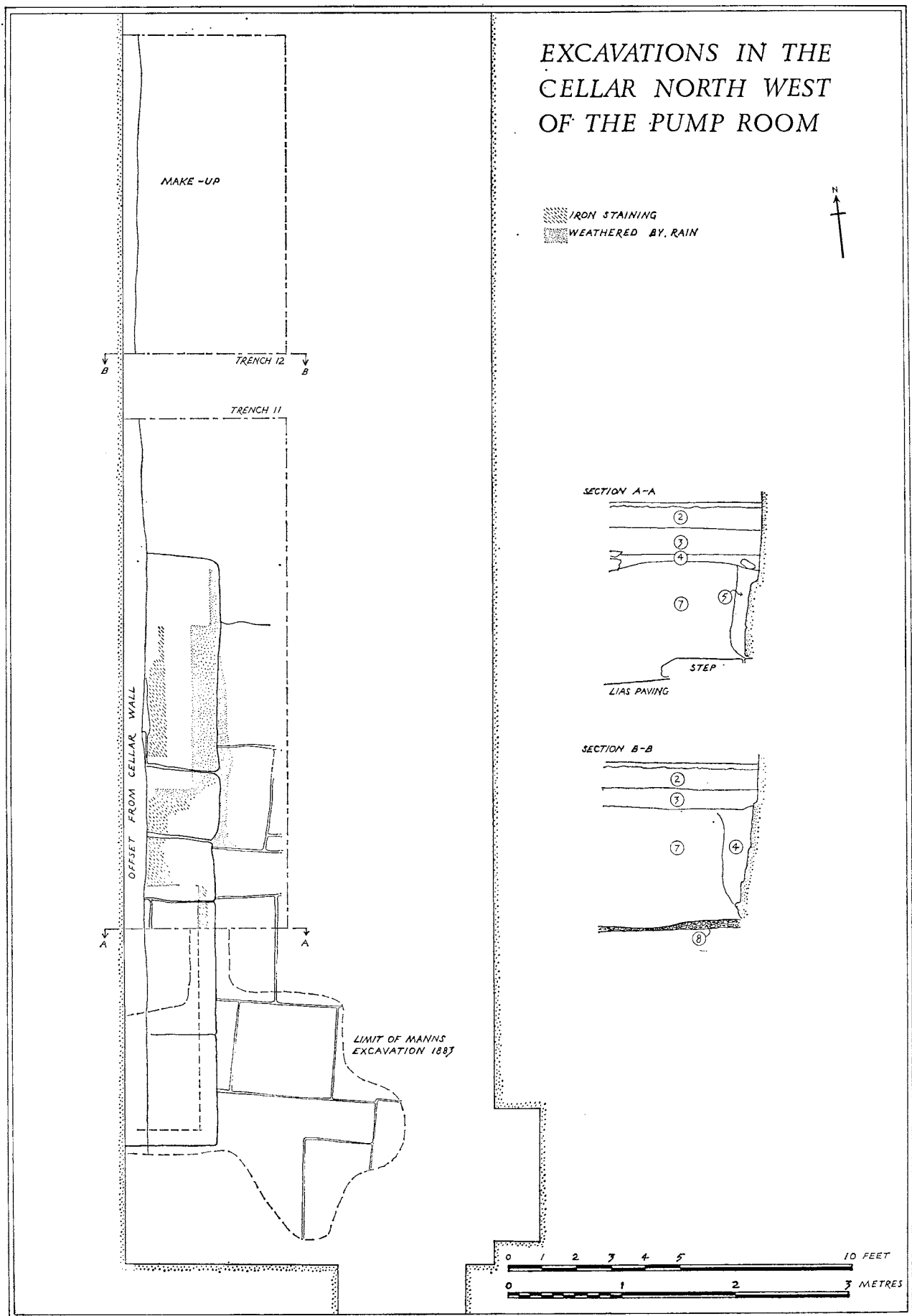


FIG. 19

The stylobate itself was set upon a well-constructed foundation of faced limestone masonry built freestanding from the original ground-surface. Against the foundation, up to the level of the bottom of the stylobate blocks, layers of make-up had been deposited, consisting of a mixed brown gravelly soil (layer 9) capped with a compacted grey-brown clay (layer 8). No trace of the original flooring survived, but it may have been of limestone flags. In order to prevent surface-water from building up against the stylobate foundations, a simple soak-away drain of box-tiles had been provided in the lower make-up, linked to a vent in the southern stylobate foundation.

On the clay make-up a series of occupation layers, incorporating ash and charcoal, had been allowed to accumulate (layers 5, 6, and 7). Later, walls had been built on the stylobate, dividing off a small room at the southern end of the colonnade. At this time a new layer of gravelly make-up had been deposited (layer 4) which had then been sealed by a thick mortar floor, contemporary with the newly constructed walls (layer 3). On top of the floor was a thin layer of occupation rubbish (layer 2).

For the pottery found, see below, p. 59.

1968. Further Excavations beneath the Pump Room. Trench 23 (fig. 18)

It was decided in April 1968 to cut a single trench through the cellar floor of the Pump Room at the east end of the available space immediately to the south of the altar platform, partly to examine the nature of the precinct floor at this spot but also to see if any sculptured blocks survived here. The trench was sited so as to expose the northern face of the western pier.

The excavation showed that much of the original lias paving of the precinct floor had been removed from this area, leaving only the rammed rubble make-up below, but a few 8-in. (0.2-m.) thick slabs still remained in position on the eastern side. Across the southern end of the trench lay a step of lias slabs of which the surface was 3 in. (0.076 m.) above the paving. On the step had been placed a single large slab, 10 in. (0.25 m.) thick, which served as the base for the pier. The slab had weathered and crumbled around its edges in such a way as to cause the pier itself to tip forwards. Even so, the pier was well preserved, showing that its front angles had been recessed to give the impression of a plain pier with attached side pilasters.

In an area around the pier lay a densely packed mass of rubble in a matrix of black silty mud (layer 11), which towards the top became relatively more stone-free. Amid the rubble were found four pieces of major sculptured monuments, the corner member of a pediment (no. 1.54), an engaged plain pilaster and part of a niche (no. 1.55), a block belonging to the Façade of the Four Seasons (no. 1.42), and a section of a large cornice. All had presumably toppled or been thrown down from monuments in the neighbourhood.

Above the mud and rubble was a thinner layer (layer 10) of dark grey silty clay, containing smaller stones and eroded fragments of gritty mortar. No dating evidence for this was found, but it may well have been post-Roman in origin. The layer had been cut by the foundation trench for a wide wall, presumably the north wall of the 1705 Pump Room

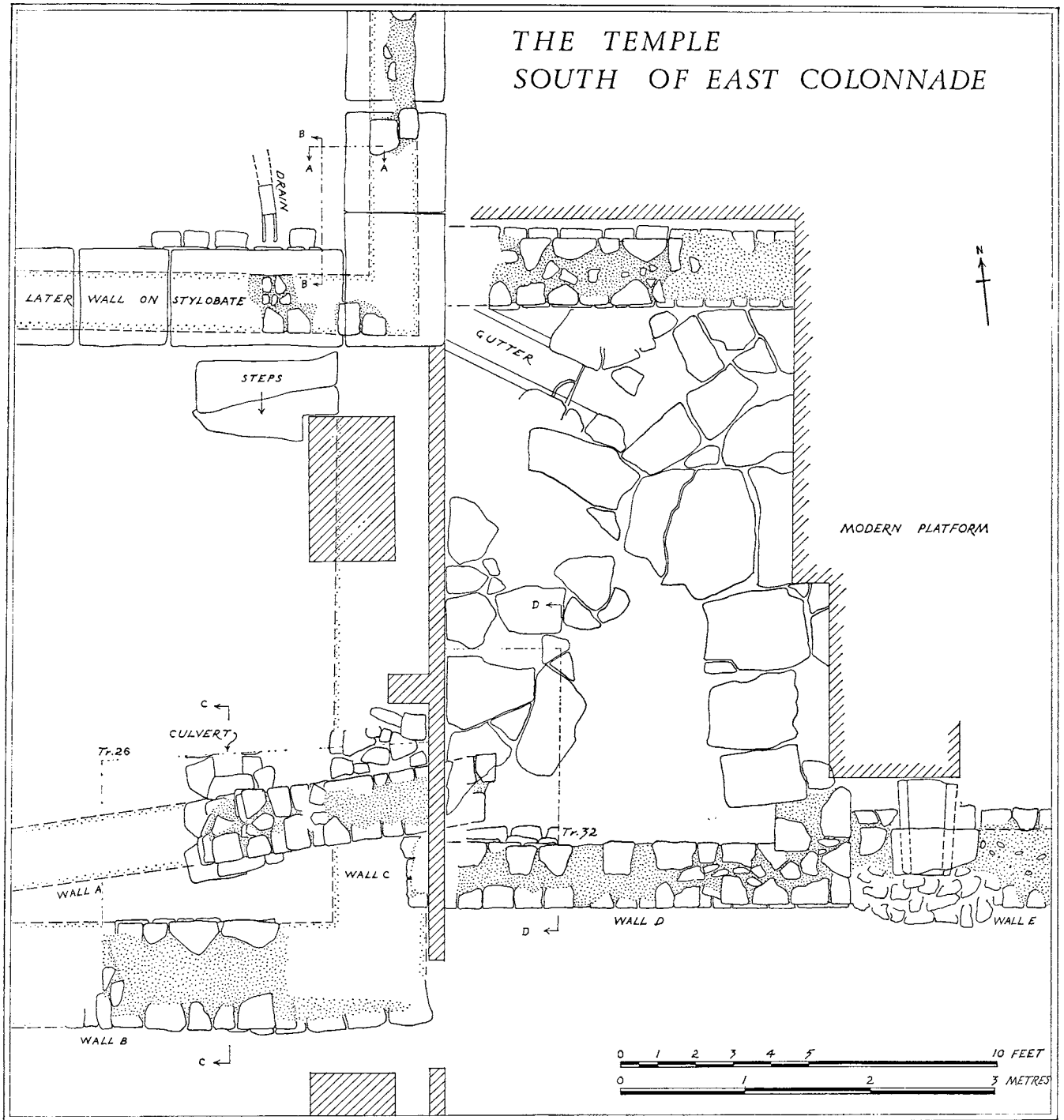


FIG. 20

which had been replaced by the present structure in 1790. In the eastern section part of a stone culvert could be seen passing beneath the wall, but further excavation was impossible.

1968. *The South Colonnade beneath Stall Street. Trenches 27 and 31* (fig. 22)

The area beneath the junction of Stall Street and the north side of Bath Street is occupied by a number of interconnecting cellars, now disused, which can be reached from the Pump Room or from Arlington House. Many of the cellars are piled high with rubbish but one (cellar no. 47) was largely empty, and since it lay across the line of the southern colonnade surrounding the temple an opportunity was taken to cut a section through the floor to examine the stratigraphy at this point, some 30 ft. (9.14 m.) west of the section dug in 1964 (p. 44).

Two east-west Roman foundations were exposed. The southern consisted of a wall of unknown width standing to a height of three courses above its contemporary floor-surface, while the northern foundation, composed of limestone slabs mortared rather more roughly together, had been brought to a level finish on the upper surface, presumably to support the blocks of a stylobate. In front of it was a shallow trench, floored with mortared rubble continuous with the foundation, in which a gutter would once have been bedded. These features clearly represent the foundations for a colonnaded veranda facing north towards the site of the temple building.

No trace of earlier occupation was found here: the foundations had been dug through the original turf-line (layer 13) and the natural iron-stained gravel and well into the blue-grey clay beneath, and between them a layer of gravelly clay had been deposited (trench 27, layer 12 and trench 31, layer 3) to form a basis for the mortar floor of the colonnaded walk (layer 8). Above the floor, soil had been allowed to accumulate, interspersed with

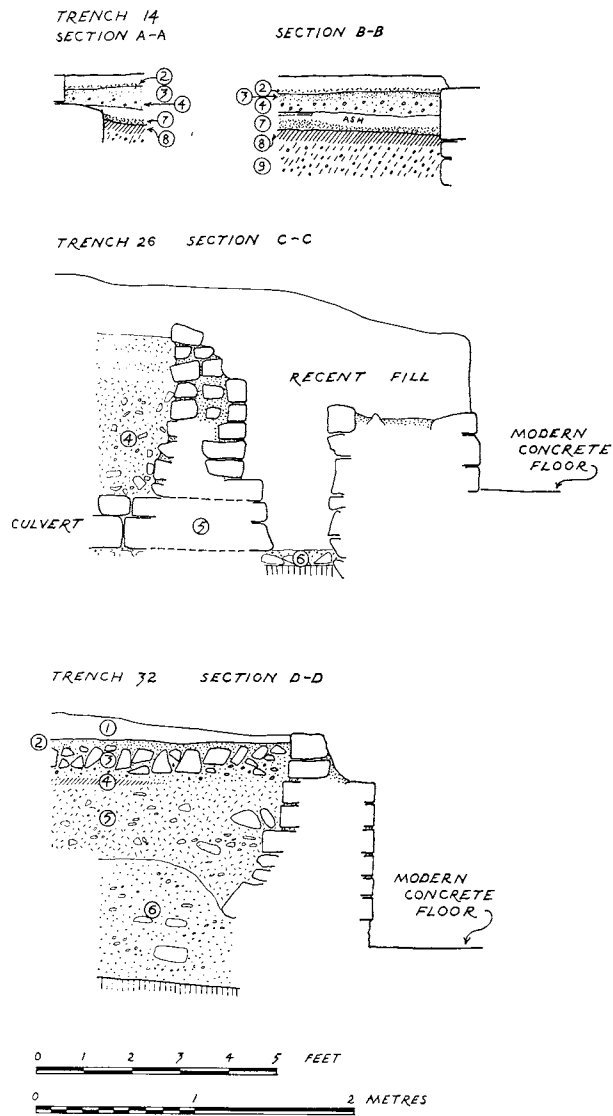


FIG. 21. Sections of the east colonnade, 1967-8

THE TEMPLE SOUTH COLONNADE BELOW STALL STREET

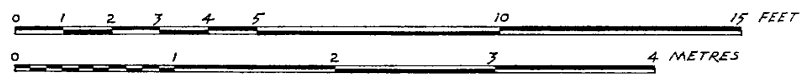
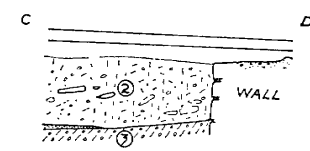
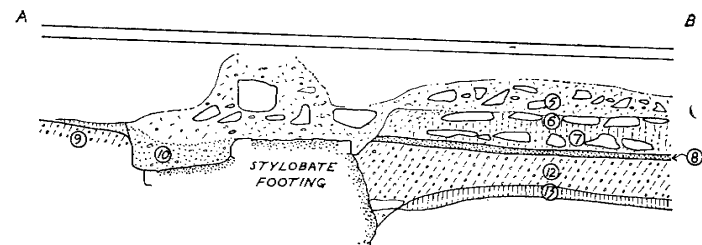
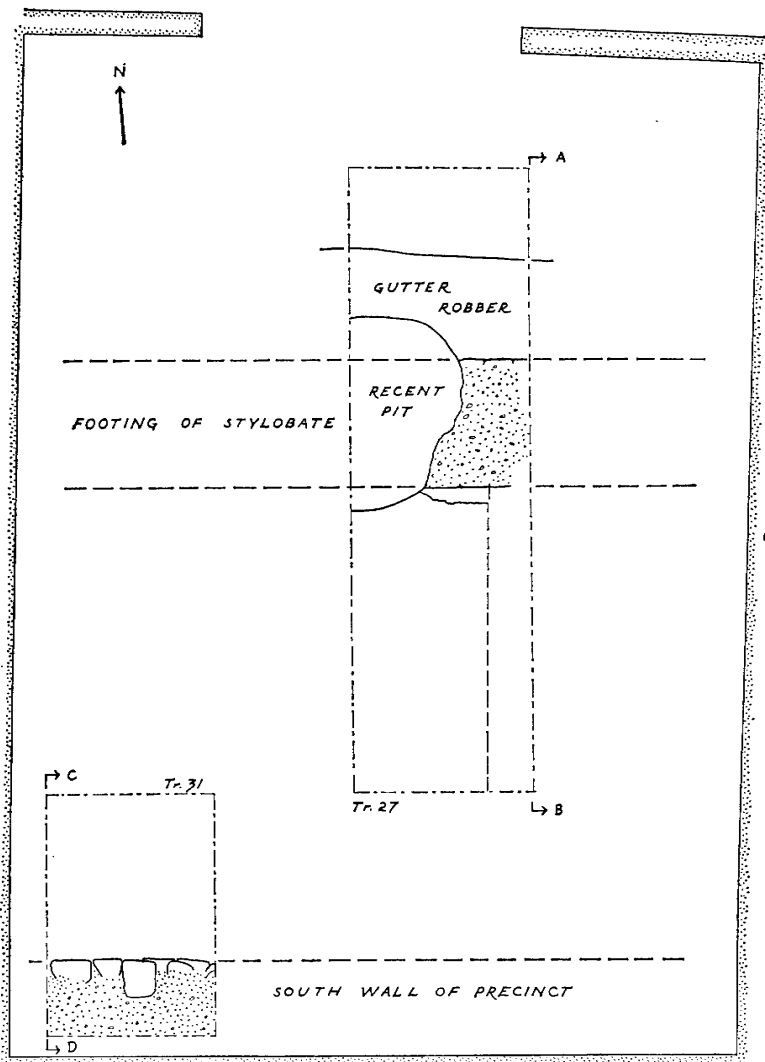


FIG. 22

various attempts at consolidating the surface with irregular slabs of limestone (layer 7). The paving, however, was discontinuous and sporadic and seems to have been designed simply to stabilize isolated wet or soft patches with no attempt at uniform reflooring.

Eventually, at some undefined date, the stylobate blocks and the gutter were removed and the foundations and floors became sealed beneath a mass of tumbled masonry mixed up with black soil (layer 5). All trace of later layers were removed when the cellar was constructed, with the exception of a pit, cut to a depth of 5 ft. (1.52 m.) below the cellar floor, the filling of which was barren but for a single sherd of a medieval cooking-pot.

1968. South of the Podium below Stall Street. Trench 22 (fig. 27)

When, in 1869, a tunnel was constructed below Stall Street to join the Pump Room with the Pump Room Hotel, the foundation trenches for its side-walls exposed a Roman wall running on a north-south line. It was planned by J. T. Irvine on 11 March. Immediately over the line of the wall is an old cellar opening through the north wall of the passage. In order to examine the structure of the wall itself and its adjacent stratigraphy, the floor of the cellar was removed and a limited excavation undertaken.

Immediately below the cellar floor the wall survived to a height of 4 ft. (1.22 m.) above its foundation offset, but only its west face could be examined, the east having been destroyed by a recent pipe-trench. It appears that it had been built, freestanding, from the level of the precinct floor (which here consisted of rammed mortar rubble) and against it a mass of blue and brown clay with chips of limestone had been deposited to a depth of 3 ft. 6 in. (1.07 m.) to make up the level of the floor. On this make-up a 6-in. (0.15-m.) thick layer of mortar rubble had been laid presumably as the basis for a new floor.

1968. The Platform against the East Face of the Reservoir. Trenches 26 and 32 (figs. 20 and 21)

In the angle between the south end of the east colonnade flanking the temple and the east face of the reservoir enclosure wall was a platform constructed during the Roman period to overlook the spot at which the mineral waters gush out of the reservoir. The area now lies in waste space behind the walls of the museum. Limited excavations were undertaken to elucidate the structures evident in this area and in the hope of obtaining dating evidence.

Trench 26 showed that there had been considerable disturbance here in the nineteenth century and that much of the stratigraphy had been completely removed, but fortunately small blocks of undisturbed soil still remained untouched. The earliest feature was a 4-in. (0.1-m.) thick layer of building debris (layer 6), which had been spread out on the surface of the natural black clay at the time when a 2-ft. (0.61-m.) thick wall (wall A) had been constructed. The wall, built on wide coursed footings set into a foundation trench of unknown depth, survived to a maximum height of eight courses. Its outer (i.e. southern) face was well-built in neat coursed ashlar, but the inner face was crudely constructed, presumably because it was intended to be hidden by the soil piled up behind it. There

can be little doubt therefore that the wall functioned as a retaining wall, revetting the south face of the platform. Through its foundations passed a small culvert built of two courses of ashlar masonry, 10 in. (0.25 m.) apart, capped by stone slabs. Originally this culvert was probably joined by the drain which passed beneath the stylobate further to the north (p. 51-3), and by the gutter leading from the temple precinct (fig. 20), but it had eventually become clogged with silt which on excavation was found to contain two sherds of second-century pottery (p. 63). Behind the wall had been piled a thick layer of soil mixed with rubble, charcoal, and discontinuous lenses of mortar, containing pottery of late second- to early third-century date (layer 4).

A short distance in front of the wall was a second wider wall (wall B) built in a similar fashion to the first, with a regularly coursed outer face and a roughly built inner face. The relationship between the two cannot be demonstrated stratigraphically because nineteenth-century clearing has removed the intervening layers, but in all probability the wide wall replaced the narrow wall, serving also as a revetment for the platform behind. No provision was made for the drain to pass through it. Running at right-angles to the wall, along the western side of the trench, was an unmortared rubble footing laid in a trench cut into the make-up (wall C). It cannot be dated absolutely, but must post-date wall A, over which it passes. In all probability it is contemporary with wall B and may well have been laid out with it to tidy up the platform area.

Trench 32 was dug to trace the relationship of wall A to a third revetting wall (wall D) which here runs in front of it (see fig. 20). Surprisingly, wall A was found to come to a somewhat irregular finish, its end being packed around with mortary rubbish (layer 6) similar to lower levels of a layer which backed it in trench 26. Wall D had been built in front of it, overlapping its end and therefore clearly structurally later. It had a well-built southern face but the northern face, though regular in its upper courses, was built on rubble footings, indicating that it, too, served as a retaining wall. Behind it occupation rubbish containing third-century pottery had been piled, which had later been sealed by a layer of rubble make-up (layer 3) surfaced with a thin spread of pink mortar (layer 2). At a still later date large irregular paving slabs had been laid over much of the area to the north, sealing a gutter which crossed the site here. When the modern wall close to the western side of the trench was built the slabs close to it seem to have been lifted and replaced later.

In summary, it may be said that the building sequence here is complicated, but in general terms a series of revetting walls had been built, sometimes replacing earlier structures. Wall A with its culvert came first, and later wall D somewhat irregularly extended its line to the east. Next, wall B and probably wall C were constructed to replace wall A, and it was at this time that the make-up and floor seem to have been laid to the north of wall D. It may be that wall E, which extended the line of wall D still further to the east, was also built at this time, together with the gutter which ran towards the south-east corner. Finally, the rough paving was laid, oversailing both the gutter and the northward return of wall D.

11. STRATIFIED POTTERY FROM THE TEMPLE AREA

The excavations carried out between 1964-8 produced a small quantity of stratified pottery from the temple and its surrounding area. The groups are illustrated and described below (figs. 23 and 24).

Pottery from the Mud lying on the Floor of the Temple Precinct (fig. 23)

1. Hard grey ware with a highly burnished shoulder.
2. Hard dark-grey sandy ware, highly burnished on the surface.
3. Grey sandy ware with a streaky white wash, fired red on the surfaces.
4. Hard dark-grey sandy ware.
5. Hard grey ware with a black wash outside and on the rim top.
6. Hard grey ware.
7. Hard grey ware.
8. Hard grey ware.
9. Hard grey ware, burnished inside.
10. Black sandy ware, burnished inside.
11. Grey sandy ware.
12. Grey sandy ware, burnished inside.
13. Hard grey ware, burnished inside.
14. Hard light-grey ware fired to a whitish-grey internally and on the flange; these areas are highly burnished.
15. Hard black sandy ware, burnished inside.
16. Hard grey ware, burnished inside and on the rim top.
17. Hard light-grey sandy ware with darker surfaces, burnished externally.
18. Hard black sandy ware with burnished surfaces.
19. Hard grey ware.
20. Hard pinkish-buff ware, fired to buff externally. Quartz grits.
21. Hard pinkish-buff ware with an external white slip. Quartz grits.
22. Hard grey ware fired to light red-buff on the surfaces. Quartz grits.
23. Hard red ware with a micaceous red colour-coat. Quartz grits.
24. Hard red ware with a grey core. The surface is coated with a white colour-coat. Quartz grits.
25. Hard red ware with a grey core. The surface is coated with a white colour-coat. Quartz grits.
26. Hard cream-buff ware.
27. Grey ware with crushed shell tempering, fired to light-brown on the surfaces.
28. Fine hard red ware with a grey core; red colour-coated surface.
29. Hard red ware with a red-brown metallic colour-coat.

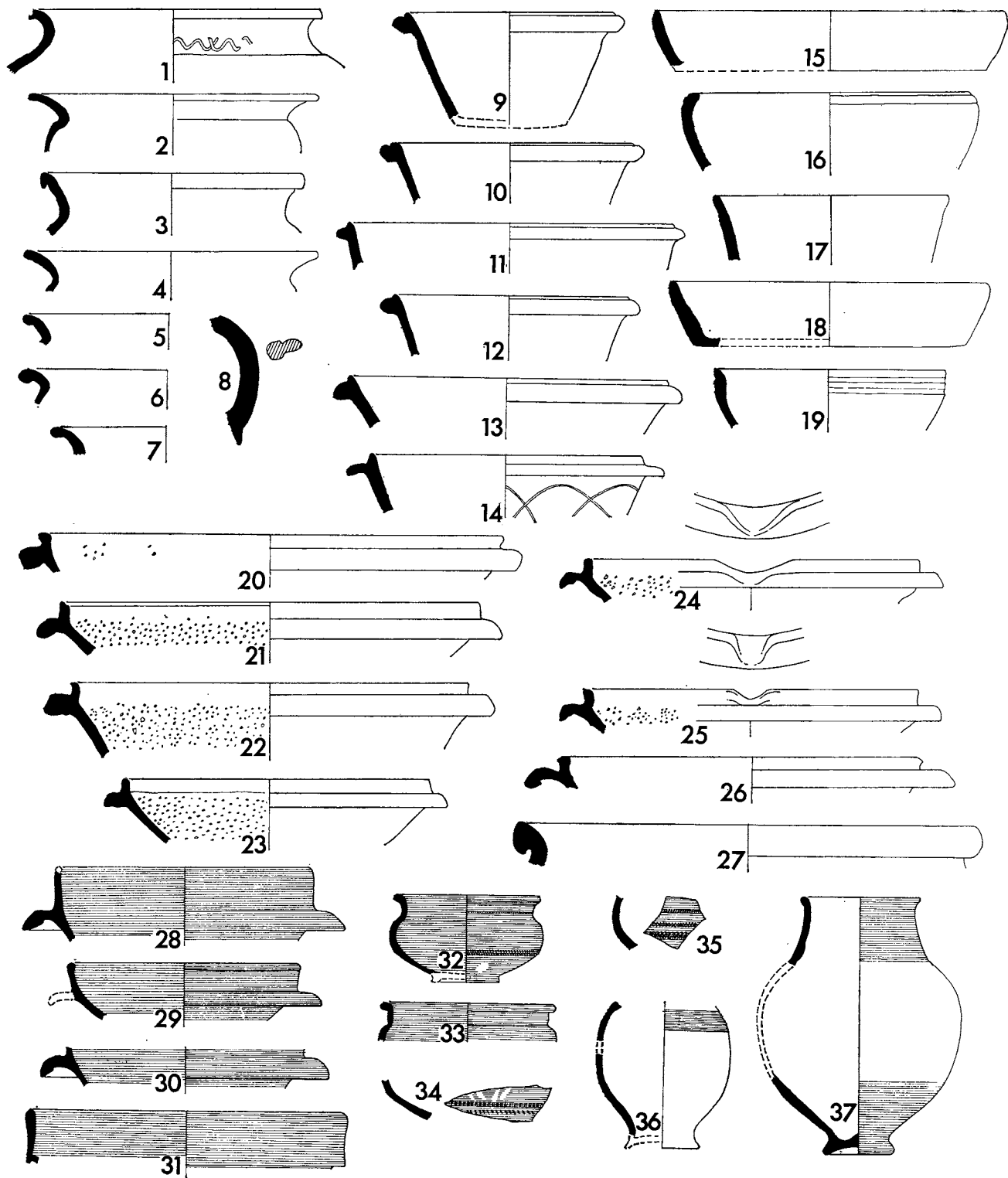


FIG. 23. Pottery from the Temple excavations ($\frac{1}{4}$)

30. Fine hard red ware with a micaceous red colour-coat. Design in white slip on the flange.
31. Fine hard red ware with a red colour-coat.
32. Fine hard red ware with a micaceous red colour-coat. White slip decoration.
33. Fine hard red ware with a red colour-coat.
34. Fine hard red ware with a red colour-coat.
35. Fine hard red ware with a red colour-coat.
36. Very hard dark-grey ware.
37. Buff ware with chocolate-brown external colour-coat.
38. Hard black sandy ware. The dish is oval, the wide diameter is shown. The handles were probably opposed.
39. Light-grey sandy ware.
40. Red ware with a grey core. Coated with a cream slip inside and out. The grits are rounded fragments of quartz.
41. Red ware with a red colour-coat.
42. Coarse grey sandy ware.
43. Grey sandy ware fired black externally.
44. Hard pinkish-buff ware with applied decoration. Originally coated with a brown colour-coat.

Not illustrated: several other sherds from vessels similar to nos. 32-5 and also a few sherds of an indented beaker in typical New Forest purple gloss ware.

The pottery from the marsh is reasonably representative of the types in use throughout the fourth century, but in the present state of our knowledge it is not possible to discover firm grounds for subdividing the period chronologically. The general impression gained is that the fourth century saw little or no ceramic development. The large kilns in the Oxford region, and those of lesser importance in the New Forest, had by the end of the third century developed a range of forms which continued to be made with little change until sometime in the early fifth century, when the factories closed down. No doubt some typological changes did take place, but they are not yet easy to detect. On analogy with the stratified groups published from Dorchester-on-Thames (Oxfordshire)¹ and Gatcombe (Somerset)² the types illustrated here are best placed in the second half of the fourth century, but while doubt still attaches to the close dating of fourth-century pottery the matter is best left open, indeed it is quite likely that these types continued to be used well into the fifth century.

One fact bearing upon economy may be mentioned: the group is remarkable for the large percentage of 'fine wares', such as the mortaria and the red colour-coated vessels, most of which seem to have come from the Oxford region. It may be that by this time few manufacturing centres were in operation in the Bath area and local markets had to be supplied from the more distant factories.

¹ S. S. Frere, 'Excavations at Dorchester-on-Thames, 1962', *Arch. Journ.* cxix (1962), 143-5.

² B. Cunliffe, 'Excavations at Gatcombe, Somerset, in 1965 and 1966', *PUBSS* xi, no. 2 (1967), 145 ff.

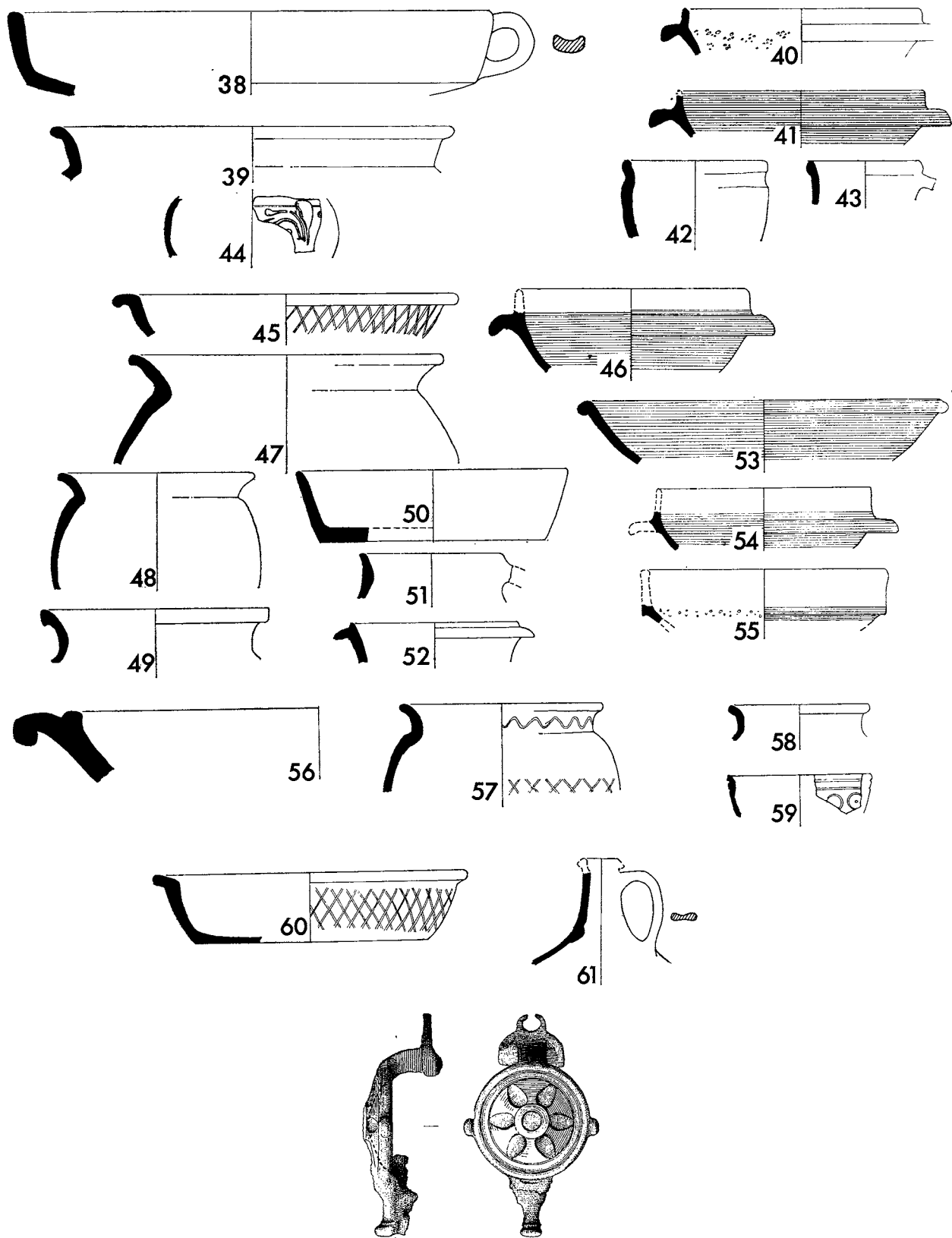


FIG. 24. Pottery from the Temple excavations, above ($\frac{1}{4}$); brooch from the Pump Room Hotel, below ($\frac{1}{2}$)

Pottery from the East Colonnade of the Temple

- (a) From the make-up layers against the stylobate footing (trench 14, layer 9).
Not illustrated: several sherds belonging to a first- or second-century flagon.
- (b) From the occupation layer (trench 14, layer 7).
45. Hard grey ware fired unevenly to red on the surface.
Second-century type.
Not illustrated: sherds of a second-century (?) flagon.

Pottery from the South Colonnade of the Temple

- (a) From the make-up layers against the stylobate footing (trench 3, layer 7).
Not illustrated: two small chips of a samian form 35. Probably first century.
- (b) From the later occupation layer.
46. Hard grey ware with red colour-coat. Fourth century.

Pottery from the Occupation Layer in the Outer Precinct. Trench 15, layer 3.

47. Coarse light grey-buff sandy ware, burnished surface.
48. Black sandy ware, burnished above girth zone.
49. Grey ware with copious crushed shell tempering.
50. Hard dark-grey sandy ware, burnished exterior.
51. Hard light-grey sandy ware.
52. Light-grey sandy ware.
53. Fine red ware with grey core, red colour-coated surface.
54. Fine buff ware with red colour-coated surface.
55. Mortarium. Fine red ware with red colour-coated surface. Quartz grits.
Not illustrated: small sherd of New Forest 'purple gloss' beaker.

From its stratigraphical position this group must represent an occupation layer post-dating the initial stages of flooding of the temple precinct: it is therefore the latest stratified Roman material from the temple area. Unfortunately there is little to be said about precise dating: all the forms are typical of those in use in the second half of the fourth century and even into the fifth, but it is impossible at present to offer a closer date-range.

Pottery from the Layers behind the Revetting Walls East of the Reservoir

- (a) From Trench 26, layer 4.
56. Pinkish-buff ware with fine grits.
57. Black sandy ware burnished on the surface.
58. Grey sandy ware.
59. Red ware with a brown glaze inside and out.

Not illustrated: one small sherd of a samian platter of Flavian date.

The types are difficult to date with precision but all would fit best in a late second-century context, although no. 57 might indicate a slightly later date at the beginning of the third

century. The nature of the layer shows that it was derived from redeposited occupation material. The pottery may therefore be largely rubbish survival of an earlier date than its deposition in this context.

(b) From the culvert, trench 26, layer 5.

60. Dark-grey sandy ware with a black burnished surface.

61. Pinkish-brown ware with an external cream slip.

Both vessels are of second-century date. The fragments are large and unweathered and from their position are likely to have been washed here from the temple precinct.

12. A BROOCH FROM THE PUMP ROOM HOTEL

by MISS K. M. RICHARDSON

The subject of this note (fig. 24) was recovered from below the Pump Room Hotel, Bath.¹ At first glance it appears to fall within Collingwood's Group Sii, with trumpet head, chain loop, spring pin, and disc on bow, but on closer examination important differences are apparent.

In the first place the head is not of trumpet type; the bow, above the disc, is rectangular in shape, abutting at an angle on a semicircular plate surmounted by a loop (broken), and the pin is hinged. Again, the disc is of unusual size, disproportionate to head and leg, and in place of the normal single or double concentric rings of enamel is decorated with a six-petalled flower, probably originally filled with red enamel which has perished, on a background of blue enamel. The 'eye' of the flower is also blue, surrounded by a thin band of red, and the whole disc itself has had a concentric edging of red enamel, traces of which survive.

On other brooches the disc is slightly convex in front but flat at the back; in this case the disc is concave at the back, thus very thin and a mere shell for the enamel filling. Two knobs on the perimeter take the place of the usual four. The leg, which is masked by corrosion, ends in a small knobbed foot. Both leg and bow above the disc appear to have a ribbed edge and were possibly also once decorated with enamel.

The general appearance of the brooch as compared with the prototypes of the series² suggests that the craftsman who fashioned it had seen a poor example of the type and it is of interest to recall that two others of the group, also somewhat degenerate versions, are from Camerton,³ only some 6½ miles south-west of Bath, while yet a third, from Wickwood, Nettleton (seen through kind permission of Mr. W. Wedlake), about 9 miles north-east of Bath, is closely comparable to the Camerton brooches, with flat leg, little knob foot, and head loop reduced to a crescentic projection. The elaborate enamel decoration of

¹ It was found by Mr. M. B. Owen during rebuilding work in 1959.

² *Ant. Journ.* xl (1960), 200, nos. 1-3.

³ W. J. Wedlake, *Excavations at Camerton, Somerset* (1958), p. 224, fig. 51, 18, 19.

the present example, on the other hand, recalls Collingwood's Siii brooch, with hinged pin, which has a disc on bow, usually ornamented with enamelled segments of alternating colours, but in one from Wroxeter¹ the ornament is a six-petalled flower. In this too the head is not of trumpet type but ends in a cross-piece surmounted by a large loop, and the pin is hinged. The foot, however, is quite different, triangular in shape, with decoration of enamelled triangles in alternate colours.

It is clear that the Bath brooch does not conform strictly to either group and must be regarded as a sport.

As to its date, the pottery from the same reddish-brown earth in which the brooch was found ranges from Flavian/Antonine to third century, but the Samian appears to be second century. On its own merits a late second-century dating is suggested for the brooch.

As a postscript to this note mention may be made of yet another outlier of the Traprain/Hebridean group, one of the 260 brooches recovered from the Nor'Nour workshop, Isles of Scilly,² which Mr. Hull has compared to two examples from Verulamium. It seems likely that this single example was imported to the island as a model.³

13. SMALL OBJECTS THROWN INTO THE RESERVOIR

a. Miscellaneous Objects

No satisfactory list of votive objects from the reservoir has ever been published, and lack of records and the disappearance of finds now prevent a complete inventory from being compiled. However, from the accounts published by Davis and from old guide-books and newspaper reports, a list of the major items can be offered although they cannot all now be traced. Most of the objects were found either in the reservoir itself or in the western part of the culvert, but since, with the exception of its extreme western section opposite the 'dipping-place', the culvert was completely enclosed, it is likely that the objects recovered from it were either washed out of the reservoir or were carried along by the water from the dipping place. The principal objects include:

1. Lead curse (pl. XIIIa): sheet of lead nearly 3 in. (0.076 m.) square, broken at the lower left-hand side. Eight lines of text are inscribed on its surface with the words written backwards so that only the god could easily decipher their meaning. Certain parts are obscure and there is some doubt as to its original meaning, but Collingwood's reading is the safest.

Qu(i) mihi Vilbiam in[v]olavit sic luquat com[o](do) aqua. Ell(a) muta qui eam v(or)-avit si Veluinna Exsupereus Verianus Severinus A[u]gustalis Comitianus Catus-minianus Germanill[a] Iovina.

¹ J. P. Bushe-Fox, *Wroxeter II*, Report Research Committee Society of Antiquaries, no. ii (1914), 12, figs. 4, 3.

² *Arch. Journ.* cxxiv (1967), 1, figs. 17, 111.

³ *Ant. Journ.* xl (1960), 200, nos. 27, 28.

'May he who carried off Vilbia from me become as liquid as water. (May) she who obscenely devoured her (become) dumb, whether Velvinna, Exsupereus, Verianus, Severinus, A(u)gustalis, Comitianus, Catusminianus, Germanilla (or) Jovina.'

It was found in March 1880, at the bottom of the reservoir. *Bath Herald*, 24 April 1880; Zangemeister, *Hermes*, xv (1880), 588; Davis, *Inscribed Plate found beneath the Baths of Bath* (1881); Haverfield 1906, 281-3.

RIB 154.

2. Tablet of lead. The surface bears some scratches which were interpreted as writing, but Haverfield was dubious and felt uncertain whether they were letters at all. Wright agrees. *RIB* 154

Found in March 1880, at the bottom of the reservoir.

Haverfield 1906, 283, superseding E. W. B. Nicholson, *Vinisius to Nigra* (London, 1904).

3. Tin mask (pl. xi). The mask, now flattened out, measures 13 × 10 in. (0.33 × 0.24 m.). It bears a stylized representation of a face and head-dress, produced by beating out the metal from behind. The eyes, however, are circles cut into the sheet with additional roundels of metal fused on behind. The alloy is almost pure tin. Similar masks have been found in Gaul often in religious contexts (see Lantier 1940). The face mask from Vieil-Évreux (Eure) is closely similar to the Bath example (*ibid.*, fig. 2). They were presumably attached to a wooden base by means of rivets.

Found in the culvert in March 1878.

Davis 1878, 403-6; Haverfield 1906, 251-2.

4. A gold ear-ring with inset carbuncle (pl. xiii*b*).

Found in the culvert at the 'dipping-place'.

- 5-6. Two pewter amulets, details unrecorded.

Found in the culvert at the 'dipping-place'.

7. Fibulae. Several were found in the culvert at the 'dipping-place'; the pins of two others were found further east.

8. Bracelets. Several were found in the culvert at the 'dipping-place'.

9. A bronze pin with a pearl.

Found in the culvert.

10. A barbed bronze fish-hook.

Found in the culvert.

11. Coins.

The records are far from adequate, but from the reservoir it is known that a series was found extending from Vespasian to the fourth century. Only a few coins seem to have come from the culvert, but these include one of Titus and two

'illegible small brass coins'. A catalogue of 350 coins 'found in Bath between 1879 and 1898' was published for the Corporation (Davey 1900) but no reference was made to the find-spots of the individual groups.

b. Pewter Vessels (fig. 25) by N. J. SUNTER

From the reservoir itself, Davis records the discovery of a pewter vase, 'a flat dish . . . , a smaller one and a small vessel and cover' (Davis 1881, 359). Another 'vase' was found in the culvert 100 ft. from the spring, and from the 'dipping-place' were recovered two jugs and two bowls. Ten individual pewter vessels therefore appear to be noted. In the museum however there are now thirteen items on show thus making exact identification impossible. Where and when the additional three were found is unrecorded and indeed we do not even know which the three are.

Description (fig. 25)

- 1 (RB 106).¹ Plate with a near-vertical rim, curved wall, and flat base. It has a squat support-ring of triangular section half-way between the rim and the centre of the plate. There is a prominent angle between the rim and the wall, but the rim is not thickened. For a distance of about one-third of the perimeter of the rim there remains a rough fringe of metal which is presumably untrimmed waste. Faint concentric rings and the central chuck-mark show that the plate was lathe-turned. The only decoration is the two pairs of concentric rings on the inside of the base.
- 2 (RB 101). A broader plate than no. 1, but of similar form. The present condition is very poor since the plate has been flattened but it appears to have had an upright rim, curved wall, flat base, and a shallow support-ring of radius slightly greater than the half-way distance between the rim and the centre of the plate. The rim is less upright than no. 1, and the pewter is thickened at the base of the rim but narrows towards the top. The two concentric incised lines under the base are rather faint and discontinuous and were probably accidentally caused by the lathe, the central chuck-mark of which appears on the inside as a small lump.
- 3 (RB 99). Dish with beaded rim. The side curves down to the base to form an internally convex wall and there is a prominent angle between the wall and the near-flat base which slopes slightly in to the centre. The triangular-sectioned support-ring has a radius of about one-third of the rim-to-centre distance. A slight thickening at the centre of the base shows the position of the chuck of the lathe and concentric lathe-lines are recognizable on both inside and outside surfaces.
- 4 (RB 98). Small dish with horizontal rim, curved sides, flat base, and shallow support-ring. The rim is decorated with small cast dots about 8 mm. apart and 2 mm. in from the edge. Possible lathe-marks are evident on the underside of the rim.
- 5 (RB 94). Hemispherical bowl with beaded rim and shallow support-ring soldered to the base. There are shallow grooves under the bead inside and outside the vessel. On

¹ The RB number is the Roman Baths Museum accession number.

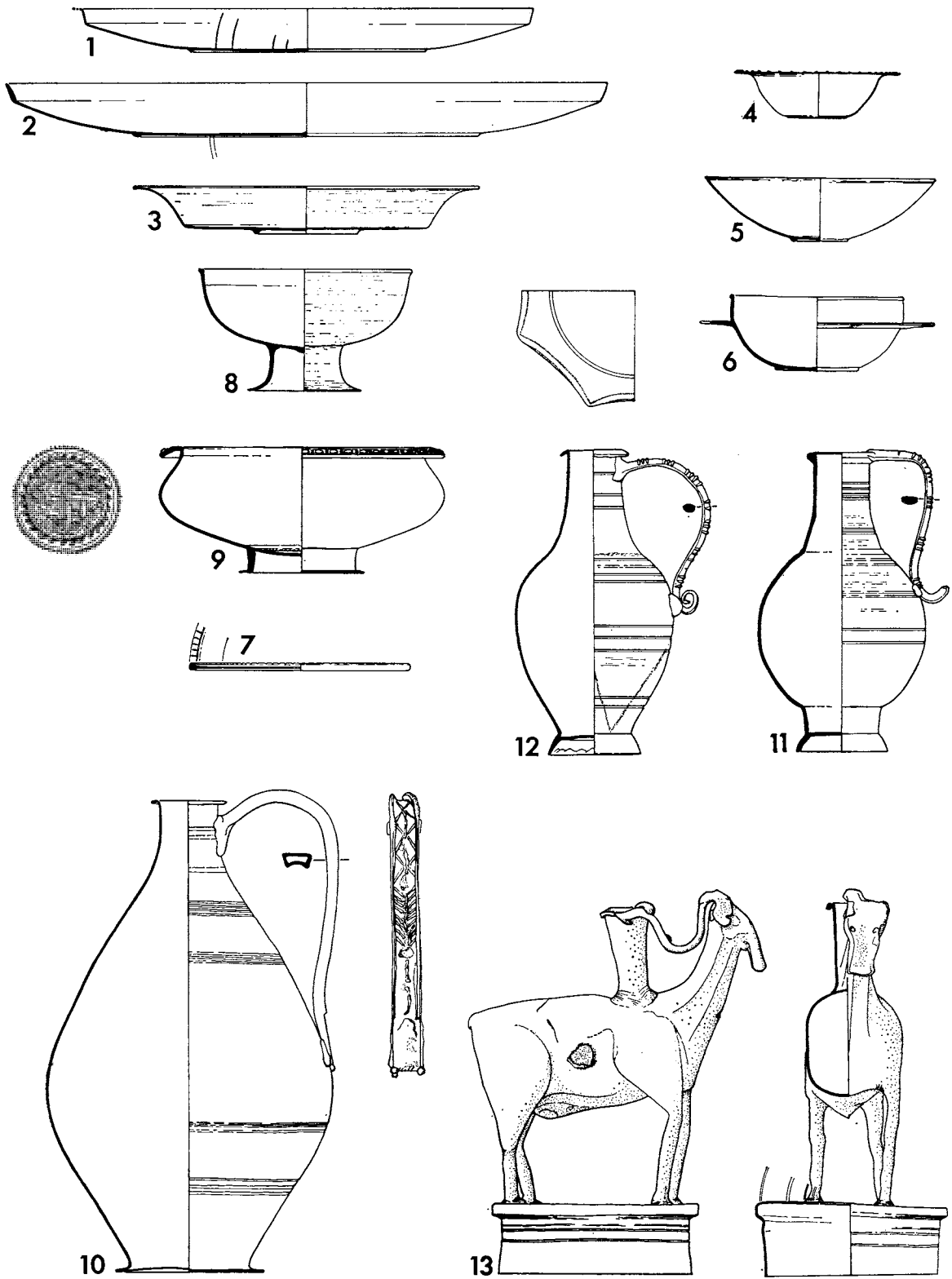


FIG. 25. Pewter from the Reservoir and drain (¼)

the inside of the base there is a 16-mm.-diameter circle of rough unturned pewter and around this is attached a thin ring of metal (solder) 4 mm. wide, to which was possibly attached some form of relief decoration.

- 6 (RB 105). Flanged bowl with a beaded vertical rim and a shallow support-ring. Set below the rim is an octagonal flange with slightly concave edges. Two rough lines of incised dots follow the curved edge of the flange, but do not correspond exactly to its curvature; thus the outer line disappears in places, indicating that the decoration was probably applied before the flange was cut.
- 7 (RB 93). A horizontally moulded ring of pewter, probably the detached flange from a bowl, with a bead around the outside, which is incised with grooves, probably filed, perpendicular to the bead and roughly 4 mm. apart.
- 8 (RB 192). Hemispherical bowl with a beaded rim and tall pedestal base. The bead has a shallow groove around the top on the inside and there is a slight offset on the inside of the wall 10 mm. below the bead. There are two 3-mm.-diameter holes pierced through the wall of the bowl about 30 mm. apart, but not quite vertically in line. They have been inadequately filled with solder and were possibly fixings for a handle. The inside of the bowl slopes down to the centre where the slight depression corresponds to a thickening of pewter beneath—probably a result of the fixing of the lathe chuck. The pedestal base which splays out to form a foot is soldered to the body. Lathe-turning lines are prominent on the outside of the base and body and possibly also on the inside wall of the vessel.
- 9 (RB 97). A shallow cauldron-shaped bowl with a low pedestal base. The everted rim turns down at an angle almost parallel to the top of the wall of the vessel. Around the outer edge of the rim is a line of cast decoration formed of alternating long- and-short dots. One of the Lansdown moulds shows similar decoration. The wall curves out sharply from the rim to a wide belly and then slopes in to the centre. In the centre of the bowl is a decorated roundel formed of lines incised with a square- or triangular-ended instrument. Four concentric freehand (not lathed) circles enclose a rather crudely executed pattern of interlaced lines in the form of a braided cross. The outer circle sprouts small wedge-shaped incisions while the second one from the centre supports a wave motif, the space between the waves and the line from which they radiate being roughly incised to make this the predominant roundel. The plain areas around the central cross are filled with a variety of squiggles and lines presumably intended to be tendrils. The pedestal base is soldered on to the body and is turned out at the bottom to form a flat foot.
- 10 (RB 104). Large ewer of common Romano-British form. It has a narrow neck, wide, low belly, flat out-turned foot, and strap handle. The narrow horizontal rim is crudely strengthened by turning the edge of the rim over on itself. The neck is short and slopes gradually out to the belly and then a little more sharply down to the base where the pewter bends out to form a splayed foot. The base is formed of a circular,

concave sheet of pewter soldered around the edge. The metal, about 1.5 mm. thick, is rather thin for the size of the vessel. Groups of incised lines have been turned on the body of the vessel—which has possibly been crudely lathed. The strap handle is rectangular in section, hollow, with the outer face concave. It is soldered on to the neck and the top of the belly. The cast decoration on the outer face of the handle seems to be formed basically of a central 'stem' from which a band of lines sprout upwards at 45°. Towards the top this alters to a criss-cross pattern which could be imitating cord tied around a handle for the purpose of assuring grip. At the base of the handle are two blobs of solder and between them five faint incised diagonal lines. There is modern solder on both the handle and the base.

11 (RB 100). Jug of globular form with a high neck with beaded rim and a footing. There is a distinct angle between the globular body and the neck and base of the vessel, further emphasized at the neck by two small offsets. The neck was probably cast separately from the body. The flat base is soldered into the foot-ring. The vessel is lathe-turned and decorated with groups of bold incised lines. The handle is soldered on to the rim and the body and has four groups of three raised lines cast across its outer face. At the upper angle of the handle some small grooves have been filed—presumably for extra grip. The lower end of the handle turns up in a 'tail'.

This is a well-proportioned vessel of good workmanship.

12 (RB 95). Jug of basically the same form as 11—but less globular in shape and of poorer workmanship. The pewter of the neck is simply splayed out and bent back to form the rim, and the neck and the body form a continuous curve down to the foot-ring. The concave base is soldered into the foot-ring. The neck seems to have been cast separately from the body, and diagonal lines across the body may indicate that the body was built up from sections beaten into shape. The body and neck of the vessel are decorated with groups of incised lines presumably crudely turned on a lathe. The handle is similar to 11 with the same lozenge-shaped section and the cast raised lines on the outer face, though these are somewhat irregularly spaced and grouped. There is one filed groove near the bottom of the handle. In a similar fashion to 11 the handle terminates at a 'tail', but here the metal tapers and curls to form a spiral. The handle is crudely soldered on to the neck and body.

13 (RB 103). Candle-holder in the form of a stag standing on an oval plinth and carrying a downward tapering tube on its back. The figure is hollow, and seems to have been cast in one. The head is rather small in proportion to the body, the nose is flat, and the eyes are merely scratched on to the front of the head. The 'antler' is formed of circular-sectioned pewter about 5 mm. diameter which loops and is soldered on to the top of the tube. Sprouting from this main stem are small soldered branches. The antler flattens out to form a 'plate' which is joined on to the side of the head. The left antler is missing. The body is somewhat out of proportion, and the legs are formed of circular tubes which splay out at the feet where they are soldered on to the plinth.

The tail is missing. Awkward angles have been shaped with a file as for instance the inside junction of the forelegs with the body, and the soldered feet. The tube for holding the base of the candle is about 20 mm. inside diameter at the top and 12 mm. at the base, where it is soldered on to the back of the animal and filed smooth. At the top the tube turns out and thickens to form a rim.

The plinth is formed from a wide cylinder of pewter which seems to have been sawn across suggesting that this is all that remains of a tall column. At the top it widens out where it supports the flat oval base of the plinth. In the centre is a roughly cut hole 45×55 mm., around which the feet of the animal are soldered. The back legs and possibly one of the front have been riveted through the base. There is also a fourth rivet 6 mm. in from the edge of the base. Rough and rather discontinuous lines have been incised around the top of the column and the top of the base. Soldering around the inside and outside of the junction between the cylinder and base is modern.

Comments

The Bath pewter is difficult to date by association as there are few parallels which are themselves dated. It is interesting to note the similarity of the Bath plates with Gallo-Belgic platters which show the same thickened rim, curved wall, and shallow supporting-ring. This similarity, however, is probably coincidental, these features being merely an economical way of producing strength in a flexible metal. There are several parallels with the Bath plates; for instance dishes and bowls in the hoard from Icklingham, Suffolk, now in the British Museum, which includes a plate similar to 2, a dish similar to 3, a small dish with cast dots on the rim close in appearance to 4, and a hemispherical bowl with a pedestal foot which has an octagonal flange like that on bowl 6. This flange has the same two rows of stippling and the same curvature of its edges. Another parallel for plate 1 comes from Coldham Common, Cambs., also in the British Museum. A striking parallel with the decorated roundel in the centre of bowl 9 can be found in the hemispherical bowl from Shapwick Heath, Somerset; this is the only known example of two identical motifs on Romano-British pewter and implies that the vessels were produced in the same workshops.

*c. The Gemstones from the Main Drain*¹ (pl. XII) by M. HENIG, M.A.

In 1885 a group of 34 unmounted gemstones was found in the main drain leading from the reservoir (below, pp. 121-6). They have never been adequately described. Haverfield, for example, lists only 28 items (Haverfield 1906, 252) concluding that: 'The gems have no special artistic merits. Some of them, indeed, are rudely executed . . . it has been ingeniously conjectured that they were lost by some lapidary selling gems and the like to visitors in the Baths.' He adds that he did not himself have time to examine them

¹ I would like to thank the many people who have helped me to compile this report, and especially Professor S. S. Frere, F.S.A., and Dr. John Onians who read my original

text and made a number of helpful suggestions; and Professor J. M. C. Toynbee, F.S.A., and Mr. John Boardman, F.S.A., for their encouragement.

minutely. The later accounts in the guide-book (Taylor 1906 and later edns.) are even briefer. But by the eleventh edition (1937) 33 gems were listed and an attempt was made to distinguish (not always accurately) the types of stone used. It also contained a plate. Since the hoard is of some significance and merit it has been thought to be worthwhile to discuss its constituent gems in some detail. On the basis of Haverfield's remarks C. N. Bromehead¹ attempted to establish a connection between the intaglios, some of them set in finger-rings, found at Charterhouse-on-Mendip and the Bath hoard. He asks whether the gems 'could have been engraved at Charterhouse for sale at Bath, the nearest likely market'. In fact, if either writer had examined the intaglios from the two sites he would have been in no doubt that they are different in almost every way, in size, style, material, and subject matter.

General Style

The general standard of workmanship is higher than that of most engraved gemstones found in this country although it does not compare with the products of the best Mediterranean workshops.² There are few Celticizing traits to demonstrate the affinity of these gems to Romano-British work in other media. Indeed for the most part the tradition established by the cutters of pre-Roman coin dies would appear to have died out at the Conquest. These intaglios may be regarded as provincial examples of a specialized craft of the classical world.

Human Figures. Chins, mouths, and even noses have a tendency to appear as short lines projected at right angles to the face. The scale to which the ancient gem-cutter worked was too minute to permit any but the most skilled practitioners from rendering human features naturalistically. The head is sometimes bare but in most cases a rounded hat (petasos)³ with a pronounced rim is worn. Minerva's (Cat. 2) is adapted to form a crested helmet; the satyr's (Cat. 12) narrows at half its height and finally terminates in a pair of horns; while both Methe (Cat. 13) and the two Fortunas (Cat. 4-5) wear hats with peak-like projections to front and back.

A similar uniformity is apparent in the relationship of head to body, which presented the engraver with problems not easy to resolve. Jupiter (Cat. 1), Minerva (Cat. 2), Mercury (Cat. 3), and both Fortunas (Cat. 4-5) as well as the Cupid (Cat. 10) and satyr (Cat. 12) have simple notches for necks, without any attempt at modelling. Some care has, however, been taken to integrate the two elements in the cases of Methe (Cat. 13), the discobolus (Cat. 14), and Cupid (Cat. 8).

Where the body is clothed the artist has made some attempt to represent the folds of the drapery (perhaps the rather simplified form which the patterning takes is a sign of

¹ C. N. Bromehead, 'Mines and Gems', *Antiq.* viii (1934), 462-3.

² Compare our portrait of Galene (Cat. 16) with Vollenweider 1966, pl. 15, 2 and 6 and pl. 16, 1 (in Geneva) and the poem in the *Palatine Anthology* (Book ix, 544—the gem was by an eastern artist, Tryphon). Cf. Sena Chiesa 1966, for examples of engraved gems (from various workshops

in Aquileia) which are often much inferior to those in the Bath cache.

³ This is very common on gems—cf. the following Society of Antiquaries Research Reports: *Wroxeter I*, fig. 10, no. 18; *Maiden Castle*, fig. 86, no. 29; *Richborough I*, pl. xiv, 24; *Richborough IV*, pl. xxxv, 88 and pl. lv, 261.

Celtic workmanship). The close affinity between the drapery of the chiton worn by each of the two Fortunas (Cat. 4-5) is very striking. Each is represented with a V-neck, with transverse creases or folds around the gently curving waist, and vertical hemming at the feet. The V-neck can also be seen on Minerva (Cat. 2) who also has a patterned chiton. The strokes represented by two short transverse lines below the waist were also used for the hanging fold of Jupiter's himation (Cat. 1)¹ which is very much stylized. Methe's cloak or mantle (Cat. 13) hanging on the left (far) side of her body and the chlamys draped over Mercury's (Cat. 3) left arm are effectively yet simply executed by means of a combination of simple gouging strokes. The goatherd (Cat. 20) wears a rough skin as is suitable for a rustic subject but its texture is naturally nearer to the hair of the animals represented in gems Cat. 21 ff.

The treatment of the nude body is, for the most part, unsatisfactory² owing to the artist's lack of skill. Neither muscles nor genitalia are represented and in most cases the body is too fat. The discobolus (Cat. 14) is an exception in the care taken to represent an athlete in action; while two of the Cupids (Cat. 7-8) show the depression of the sternum although in each case the line is projected below the thoracic cage. It is of some interest that the crutch in these nude figures makes a similar curve in each case. This is the result of the gem-cutter using the same stroke of the drill in order to produce the leg.

Legs and arms are very rough and without the easy articulation with which the artist was able to endow the limbs of animals. Indeed if the limb is straight no attempt is made at all; where it is bent the gem worker has merely changed the direction of his stroke. Jupiter (Cat. 1), Mercury (Cat. 3), and the discobolus (Cat. 14) show some thickening of the calves.

Feet are again very simple. Jupiter (Cat. 1) and the discobolus (Cat. 14) alone have arches to them.

If anything arms are worse represented than legs. The rounded left arm of the satyr (Cat. 12) is ridiculous. Only the discobolus (Cat. 14) and the Cupids (Cat. 8, Cat. 10) have any digits—two or three on each hand—unless Cupid (Cat. 7) is holding up his arms rather than two torches.

Attributes are rough and improperly understood. Jupiter's eagle (Cat. 1) and Minerva's Victory (Cat. 2) are reduced to very similar almost meaningless symbols while Mercury's moneybag (Cat. 3), although its purpose is still obvious, is enclosed in similar cross-strokes. His caduceus has been simplified from a double S-curve into two superimposed rectangles. The satyr's pedum (Cat. 12) now appears as a sort of bow or scythe and his dish of fruit (like that held by Cupid, Cat. 10) is also much simplified. The steering oars held by the two Fortunas (Cat. 4-5) are virtually identical although the gem-cutter obviously had no idea of their nautical function. The staff-like object with a double cross-bar carried by Fortuna (Cat. 4) is paralleled by the conventionalized arrows in Diana's quiver (Cat. 15) although the object in the former case clearly had some other

¹ This simplifies the curving flow of the himation on coins of Vitellius (*RIC* Vitellius 4, pl. xiv, 248).

² The discobolus (Cat. 14) is a solitary exception which may be explained by the excellence of the prototype used.

function. The single-handled vases with palm-sprays which stand before the discobolus (Cat. 14), Methe (Cat. 13), and the intaglio in Cambridge from Sea Mills are carefully executed although the vase is angled towards the right in each case. The same vessel is represented lying on its side on a column before the two horses (Cat. 26).

Portraits. The swimming bust of Galene (Cat. 16) is of considerable interest for the way in which the shoulder diverges from the standard iconography. Instead of depicting rippling water around it which actually conveys the impression of swimming in this type the gem-cutter has produced an interesting pattern of vertical strokes which are designed to balance the leafy tresses of her hair. The diadem is composed of regular simple strokes which cut across the lightly textured hair. Both these features are present in the very fragmentary head of Diana (Cat. 15).

Mammals. These are the masterpieces of the collection,¹ whether they are shown in vigorous movement or at rest. Heads are more assured and individual than those of humans—the hungry snake-like features of panther (Cat. 21) and lion (Cat. 23) with their vacant, gaping lower jaws; the pug-like self-satisfied expression of the (?) lioness (Cat. 24) which has just mastered a gazelle, the long-snouted goat (Cat. 25), the moon-shaped faces of the cattle (Cat. 29), and the ass's mouth (Cat. 28) opened wide to bray make up a gallery of exquisite vignettes, and confirm the artist's accurate appreciation of animal mannerisms.

In every case bodies are well proportioned and although the anatomy has been simplified it is accurate, with correct differentiation of the separate parts—flank, belly, and haunches. Carnivores have thick legs and heavy paws and the panther (Cat. 21), lion (Cat. 23), and gryphon (Cat. 22) have long sinuous tails. Herbivores have thin jointed legs (Cat. 18–19, 25–9) and except for the goats (Cat. 6, 25) with little upturned tails, their tails are generally held out horizontally for a short distance and then drop at right angles.

There are a number of obvious parallels to draw between the composition of the different subjects. The lion (Cat. 23), gryphon (Cat. 22), and horse (Cat. 27) each have a short base-line for the back legs although it should be noted that whereas the thrust of lion (Cat. 23) and horse (Cat. 27) is behind, the gryphon (Cat. 22) has finished its spring and the feet are now in a forward position.

The horses standing in front of the column (Cat. 26), the ass (Cat. 28), the lion (Cat. 23), and the horses on the biga (Cat. 18) have manes produced by means of a number of short vertical strokes with the graver—the underside hair of gryphon (Cat. 22), lion (Cat. 23), panther (Cat. 21), and goat (Cat. 25) was effected in the same way as were the dugs of the lioness or bitch (Cat. 24).

The finely modelled hair of goat (Cat. 25) and lion (Cat. 23); the feathers of the gryphon's wing (Cat. 22) and those of the eagle (Cat. 31); the horns of the goat (Cat. 25)

¹ The very fine carvings of animals on stone from Bath and its region are relevant here. On the prevalence of fine representations of animals in Britain cf. J. M. C. Toynbee, *The Art of the Romans*, p. 48.

and of the gryphon (Cat. 22); and the tail and back leg of the rear cow (in Cat. 29) and of the last horse in the quadriga (Cat. 19) should all be compared and noted. It would seem highly probable that one artist is involved and whether he was representing a pastoral scene of cattle standing and sitting in harmony beneath a tree, a horse in a biga tossing its head in high spirits (and perhaps trying to tear away from its fellow), a panther crouched by a column, or a savage lion in pursuit of its prey, his natural facility did not leave him.

Birds. Three of the gems show birds—the two eagles (Cat. 30-1) appear to be of different species; the one represented as standing on a cippus (Cat. 31) has rough plumage similar in texture to the gryphon's wing (Cat. 22) and a curving neck like that of the panther (Cat. 21). The other (Cat. 30) is neater and has more delicate plumage although the feather clumps in each case are characteristic of eagles in general.

The paste representing a crane (perhaps standing on the prow of a ship) (Cat. 34) is a curiosity in the cache. The jaded, conventional classicism of this piece was very likely the genesis of much of the other work but unfortunately no other pastes were preserved and no cornelian version of a crane or other water bird was found.

There are very few attributes connected with animals and birds that need be mentioned; the bow and arrow (Cat. 24) and the vase (Cat. 26) have already been cited. There is a column associated with the panther (Cat. 21) as well as with the two horses: although more roughly executed both of these columns are somewhat bulbous in form. The cornucopia (Cat. 21) which serves instead of the vase is schematic and does not rest upon the column. The same lack of care is evident in the cantharus (Cat. 6) which stands before the goat.

Although the branch or fulmen (Cat. 30) upon which one eagle stands is patterned with delicate transverse lines, the squat cippus (Cat. 31) which has been provided for the other bird is conventional. The poppy-head and corn ear do not show any originality either although the same attributes occur associated with one of the Fortunas (Cat. 5) and they were presumably well within the artist's repertory.

Symbols. Apart from the attributes which have been discussed, only two purely symbolic representations have been found. The trophy (Cat. 32) is garbled and was clearly misunderstood—as was the trophy on a cornelian from Lullingstone.¹ It belongs to the artist's more cursory work (e.g. the cippus behind the panther, Cat. 21). The modius (Cat. 23) is finely drawn and was evidently an object familiar to the artist—the striations on the corn ears which stand within it, reminiscent of the eagle's branch (Cat. 30) and of the patterning on the garments worn by Minerva (Cat. 2) and Fortuna (Cat. 4-5), perhaps betray a Celtic hand at work.

Subject Matter

Although at first glance the range of subject is very wide and only Fortuna and Methe

¹ J. M. C. Toynbee, *Art in Britain under the Romans*, p. 374 and pl. lxxxv, c. Also the suggestion that the engraver was copying a coin type.

would appear to have been repeated, there is a remarkable uniformity of theme—almost a programme for the enjoyment of the good things of life. Jupiter, the chief god of the Roman state; Minerva, goddess of Wisdom and also, of course, the patron of the temple and bathing establishment at Bath; and Mercury, the trader's god, might be expected, as also the ubiquitous goddess Fortuna. Cupid appears no less than six times although the 'eroticism' he was intended to convey includes far more than a merely physical passion; the Bacchic qualities of revelation and enlightenment through the sacred juice of the grape are present in the vase standing on a column (Cat. 26), the cornucopia on a column (Cat. 21), and in the representation of a satyr (Cat. 12), as well as more generally in the sensitive portrayals of animals. Although animals are a theme which could be expected to appeal to the Romano-British gentleman (who delighted in the same pursuits as those of the eighteenth-century patrons of the painter Stubbs) ancient religious attitudes and superstitions were also involved. As well as the references to Dionysus and to Diana (Cat. 15, 24) there is the general point made by Campbell Bonner (*Studies in Magical Amulets*, p. 6) that 'Strong and swift animals might become popular symbols' for their apotropaic power. Yet the men who commissioned these stones were farmers, primarily interested in rural prosperity, hence the horses, the ass, cattle, and goat, the modius and the corn ears.

It is no coincidence that the subjects of three of the stones (Cat. 13, 16, and 29) are found in poems about gems in ancient literature, for the Romanized Celtic aristocracy was but a provincial version of the minor gentry of Italy—these gems would have been too expensive for the ordinary provincial to buy.

Comparison with gems from other sites shows a remarkable absence of military types in the Bath cache—there is no representation of Mars and no Victory as such and the eagles, lacking standards, are not unequivocally legionary. The trophy, misunderstood and unsatisfactory, is the sole reference to the Romans as a military people. At Xanten, Vindonissa, London, and Caerleon, which all had military garrisons, martial types do occur; there cannot have been many soldiers as such amongst the customers of the Bath workshop, although, of course, a high proportion of those who came to Bath for a cure were soldiers.

Material and Technique

The stones are of a uniformly small size ranging from c. 14 × 10 mm. to 10 × 6 mm. (average 12 × 9 mm.). This compares with Silchester (range 21 × 16 mm. to 8.5 × 7 mm.) and London (range 20 × 16 mm. to 6 × 4 mm.). In both of these collections stones of very high quality coexist with very barbarous pieces.¹

Twenty out of thirty-four pieces (59 per cent) are of cornelian or sard, which is in striking contrast to site collections from this country and abroad.

¹ Compare a cornelian with a portrait of Julius Caesar from the Thames (British Museum 56, 7-1. 803 = Walters 1926) or the running boar jasper (London Museum A 14751 = *London in Roman Times*, 102 and Fig. 30, No. 23) with a crude cornelian showing a stag (London Museum

A 27084 = *London in Roman Times*, Fig. 30, No. 8). Or at Silchester contrast the numerous poor pastes from the town with the magnificent portrayal of the Genius Populi Romani (cf. Boon, *Roman Silchester*, Fig. 16, No. 5 on p. 111).

	Cornelian/sard	Jasper	Paste or glass	Other	Percentage cornelian
BATH ¹	20	4 (none red)	1	9	59
London ¹	3	6 (4 red)	5	6	15
Colchester ¹	9	2 (red)	12	7	30
Silchester ¹	5	3 (2 red)	17	7	16
Wall area ²	21	22 (21 red)	23	13	26
Vindonissa ³	17	6 (2 red)	21	3	36
Augst ⁴	4	1 (red)	13	13	17
Xanten ⁵	88	18 (16 red)	56	58	40
Charterhouse ⁶	3	4 (red)	5	3	30

The conspicuous absence of any pieces of red jasper and of nicolo-paste (or indeed of any pastes save one) is striking and cannot be coincidental. It is of some interest that Pliny praises clear gemstones⁷ and states that 'sarda' was the commonest type, at least in earlier centuries: 'nec fuit alia gemma apud antiquos usu frequentior' (Pliny, *N.H.* xxxvii. 31). Jasper occurs on first-century sites but its use is commoner in the second and third centuries. The uniformity of the raw material at Bath is also suggestive of a single source for the bulk of the stones and reinforces the likelihood that all the intaglios were products of one workshop.

The only adequate study of provincial gem production made to date is that of G. Sena Chiesa at Aquileia. She believes that cornelian was imported from the Alpine region of Noricum in large nodules. Cornelian is found in Britain but whether sufficient would be obtainable to form a regular supply of high-quality cut stones is dubious. Although there is very little evidence that any comparable industry to that which flourished around Aquileia was established in the Bath region, it is possible that here too cornelian was brought from the eastern Alps, perhaps via the ports of Liguria or Southern France.

The technique seems to have been the standard one employed in ancient times (Richter 1956, pp. xxii-xxiv). The stone was held in a vice while the engraver produced his subject with a range of fine drills made of a relatively soft metal but employing the frictional qualities of a powder composed of crushed corundum or some other hard stone.

The drill itself may have been worked by means of a bow. The engraving finished, the stone was polished and almost all of the Bath pieces retain their shine.

Pastes were made by a different process which required terracotta moulds. The paste (Cat. 34) in the Bath cache would seem to be present as a model for use by the engraver. He may also have used coins as models (cf. Catalogue and the section *Date* below).

¹ Based on a selective personal count, rejecting probable aliena in each case.

² After Dorothy Charlesworth, 'Roman Jewellery found in Northumberland and Durham', *Arch. Aeliana*⁴, xxxix (1961), 1 ff. including Cumberland. Most of the intaglios from these counties have been examined personally.

³ Gonzenbach 1952, 65.

⁴ Steiger 1966, 29 ff.

⁵ Steiner 1911, 188 ff. Many of the Xanten gems can

be ascribed to the double legionary fortress of VETERA I (before A.D. 70). This early date accounts for the large percentage of translucent stones.

⁶ Haverfield 1906, fig. 93; *Camb. Ant. Soc.* iv (1876-80), 278 ff.; *Camb. Ant. Soc.* abstract 1877-8, pp. ix ff.

⁷ Pliny, *N.H.* xxxvii. 9 ff. (He continually implies the pre-eminence of transparent and translucent stones over opaque ones. e.g. *N.H.* xxxvii. 39 (Lapis)—'Nusquam tamen perlucidae'.)

Date

The question of date is closely linked to those of style, theme, and material. The evident classicism and closeness to strictly Mediterranean forms argue for an early date. It may be significant that Roman art emphasized the countryside in the Flavian period in particular, when Vespasian attempted to emulate Augustus' policy of loyalty to the soil of the Fatherland—a policy made necessary in each case by the emotional shock of Civil War. Five of the types represented on the Bath gems may be found on Roman *denarii* minted between A.D. 69 and A.D. 82. In each case the representation on the gem faces in the same direction as on the coin (i.e. casts or impressions show the types reversed). In each case the actual type has a short life (e.g. the goatherd (Cat. 20) only occurs on the Roman coinage in the years A.D. 77–8 (*RIC* Vespasian 111)). Also (without citing direct numismatic parallels), Fortuna, the corn modius, the trophy, cattle, corn ears and poppy-heads, eagles, and a vase on a cippus all occur on Flavian coinage. It must be stressed, however, that in themselves the majority of gem types are by no means unique and all that such numismatic examination can suggest is a 'terminus post quem'. Also, while some of the types (Fortuna, modius, eagles, etc.) frequently occur later, a figure of Mercury does not appear on coinage until the time of Trajan at the earliest. It is always possible that the use of a copy-book, old gems,¹ or coins perpetuated a late first- or very early second-century character in the products of the Bath workshop.

The evidence for a Flavian or Trajanic date is greatly strengthened by the intaglio representing Methe, now in Cambridge, for not only is it almost identical to the Bath gem (Cat. 13) but it is also set in an iron ring of first- (or very early second-) century type. Less valuable is the Chester parallel to Cat. 18 for it is a paste and not of the Bath school.

Deposition

The guide-book to the Baths says that the gems 'were found in 1895 in the wooden duct along the main outfall drain on the north side of the Baths' and goes on to suggest that 'Perhaps a gem cutter sold his curiosities in the Baths and one day lost a bundle of them' (or alternatively 'Perhaps a worshipper dropped them in as an offering intentional or unintentional').

An important factor is that unlike most site collections in Britain, there is no evidence that any of the Bath gems has ever been set. It is of course true that in the late Republican and early Imperial periods gems were collected for their own sake (Richter 1956, pp. xxix–xxx) but it is unlikely that a private collection would only have pieces of one style by one or two hands.

The solution to the problem is, of course, that the person who made the gems also deposited them. The drain, in fact, led away from the sacred spring into which offerings would be thrown, not from the Baths as was thought but from the sacred temenos of the temple. Collections of gems (*dactylothecae*) had been deposited in temples by

¹ For example our gem (Cat. 34).

Pompey (Pliny, xxxvii. 5), Julius Caesar, and Marcellus the son of Octavia. It is possible that the collection of intaglios from Charterhouse-on-Mendip (in Bristol Museum) also came from a temple—we will never know as the full circumstances of their discovery are lost.

The other tradition is the workman's dedication of the tools of his trade in a sacred spring or watercourse—this is an adaptation of the Celtic practice of depositing food or weapons in such places. Mr. R. Merrifield, F.S.A., has suggested to me the possibility that the tools found in the Walbrook, London, comprised innumerable deposits of this character.

One day the Bath Master—for it is very likely on the grounds both of style and subject matter that one person was responsible for the manufacture of all the stones—piously approached the spring and threw in a little bag which floated around the pool for a little while before being washed down the drain where it was caught. The bag rotted and the contents were spilled out into the sludge of the drain.

*Catalogue of the Gems*¹ (pl. XII)

1 (17). Jupiter seated right wearing fillet and himation. He holds an eagle in his left hand and a sceptre in his right. A slight chip on the stone disguises the form of his stool or throne.

Pale cornelian. 12 × 10.5 mm. 1.5 mm. thick. Fresh apart from chip on side.

A very common type based on the statue of Zeus by Pheidias at Olympia. Zeus occurs on coins of Alexander the Great (Kraay, *Greek Coins*, No. 569) in the form shown here. More immediate prototypes, however, are the 'Jupiter Custos' (*RIC* 45-7) and 'Jupiter Liberator' (*RIC* 48-9) issues of Nero where he holds a fulmen instead of an eagle, and the 'Jupiter Victor' issue of Vitellius (*RIC* 4-5) in which he is represented holding a Victory. Cf. Middleton 1892, no. 3; Furtwängler 1896, 7137. For the general type with Jupiter holding either a Victory or a fulmen or a patera, cf. Furtwängler 1896, 2593, 7132 ff.; Walters 1926, 1243-52; Fossing 1929, 530-9; Sena Chiesa 1966, 1-16; Richter 1956, 249.

2 (24). Minerva standing to front and looking right. She wears a helmet and chiton, and holds a Victory (very stylized). There is a shield at her feet in front of her.

Cornelian (broken). Greatest diameter 10.5 mm.; 1 mm. thick. Surface fresh and polished.

Also a common type, probably taken from the Athena Parthenos of Pheidias. It occurs on a *denarius* of the moneyer C. Vibius Varus (c. 42 B.C.) with the goddess standing right. Grueber 1910, p. 590, no. 4301 (= vol. iii, pl. lviii, ii) and Vollenweider 1966, Taf. 28, 7. *Denarii* of Domitian (A.D. 81-2—*RIC* 10, 23, 30, 31) show Minerva to left, holding a spear, and Victory with a shield at her feet behind. On

¹ For the sake of simplicity the gems have been renumbered here, the original catalogue no. (Taylor 1906, 2nd edn., 1937) being given in brackets after. Descriptions are of the impression.

A bibliography of the references quoted here will be found on pp. xix-xx.

gems cf. Walters 1926, 1348 ff.; Henkel 1913, 421 (in a ring of the second century); Sena Chiesa 1966, 106 ff. (especially no. 122 with shield in front).

- 3 (23). Mercury standing to front and looking left. He is nude except for a ?petasos, and a drape (chlamys) over his left arm. He holds a moneybag and caduceus.

Red cornelian. 11×8.5 mm. 2 mm. thick. Fresh apart from slight abrasion around edges.

Coins do not appear with this type before the bronze issue of A.D. 172-3 (Marcus Aurelius, *RIC* 1070 ff.) with the exception of a medallion of Trajan minted in A.D. 101-2 (*RIC* 438) but the prototype is a statue by Polykleitos; cf. Furtwängler 1895, 232, fig. 93. Also statue from Troezen in *Bulletin de Correspondence Hellénique* (1892), pls. 2 and 17 and some of the representations of Hermes on gems are early. Walters 1926, 1381 ff.; Henkel 1913, 1386 (pl. lxxv, 97); Sena Chiesa 1966, 165-92 (caduceus simplified to a double rectangle as on Bath gem, no. 175).

- 4 (21). Fortuna standing to front facing left. She is draped in a chiton and holds a steering oar which is attached to a highly schematized rudder; in her left hand she carries a cornucopia.

Pale cornelian, lower part clear except for orange streak. 11.5×8.5 mm. 2.5 mm thick. Very fine condition.

A common type on coins of the Flavian period, e.g. *RIC* Vespasian 4; *RIC* Vespasian 261; *RIC* Titus 33 (Fortuna to front facing left); *RIC* Domitian 299 (facing right). For gems cf. Furtwängler 1896, 2884-91; Walters 1926, 1728 ff.; Fossing 1927, 658 ff.; Sena Chiesa 1966, 579 ff.; Steiner 1911, 119, 14 (pl. xiii).

5. Fortuna standing to front facing left. Almost identical to no. 4 but she holds a corn ear and poppy-head in her right hand as well as the steering oar; and a cornucopia in her left.

Pale cornelian. 12.5×11 mm. (mounted).

Unpublished but found with the other gems. Some abrasion.

The goddess has been syncretized with Ceres or Annona. This is characteristic of the second and third centuries but doubtless takes place at an earlier date as well. Cf. Henkel 1913, 1562 (pl. lxxv, 129); Ridder 1911, 2962 (pl. xxii); Sena Chiesa 1966, 602-4; Ashmolean Museum: Accession no. 1941, 612.

- 6 (16). Cupid mounted sideways on a ?goat (which, however, appears to have the head of a gryphon) standing to right before a cantharus above which is a star.

Cornelian. 14×10.5 mm. 3 mm. thick. Fresh surface.

Cupids or Erotes are frequently represented in ancient art riding on animals of all kinds. A *denarius* of the moneyer Marius Fonteius (c. 85 B.C.); cf. Grueber 1910, 322-3 (nos. 2476-83 and pl. xxxviii, 11-14) and Vollenweider 1966, pl. 12, 2 showing Cupid upon a goat. On gems the animals which occur on Steiner 1911, 71, pl. xiii and on Sena Chiesa 1966, 329 are both feline. (For other animals cf. Walters 1926, 1486 ff.)

7 (11). Cupid standing to front and facing right. He is nude; each of his arms ends in two stylized digits which point upwards. Perhaps they are intended to represent torches.

Onyx. 12 × 10 mm. 1.5 mm. thick. Fresh surface.

Walters 1926, 1519. Cupid right holding two torches but there seems to be no really close parallel.

8 (27). Cupid standing on tiptoe right, holding out a bunch of grapes in his left hand to a pet hare which jumps up to reach them.

Green jasper. 10 × 9 mm. 1.5 mm. thick. Slight wear at very edge only.

Sena Chiesa 1966, 325 shows a dog leaping to obtain some morsel which Cupid is holding in his left hand. The same scene occurs in an unpublished gem in the Fitzwilliam Museum, Cambridge, though the figure here is a satyr rather than a Cupid. For Cupid chasing a hare cf. Furtwängler 1900, pl. xliii, 57; Sena Chiesa 1966, 334; Richter 1956, 310; and Lippold 1922, pl. xxvi, 13.

9 (20). Cupid standing right with a conventionally stylized butterfly in his right hand and burning it with a torch held in his left.

Banded agate. 11 × 8.75 mm. 1.5 mm. thick. Very fresh, mirror-like surface.

This gem refers to a common version of the myth of Cupid and Psyche, and is an allegory of the pains of the Soul (Psyche) represented by the butterfly. It is frequently represented in the glyptic arts. Cf. Henkel 1913, 1608 (pl. lxxiv, 149); Steiner 1911, pl. xiii, 79; Middleton 1891, pl. 2, 56; and in Britain, Walters 1926, 1475 (from Chesterford, Essex).

10 (7). Cupid to right, making an offering at a rural altar (which stood in front of an image or shrine of Priapus, now missing). A tree overhangs the scene.

Cornelian (broken). Length 12 mm. 3 mm. thick. Fresh but with slight surface abrasion.

Furtwängler 1896, 7445-50; Henkel 1913, 1889 (pl. lxxvi, 153) in a ring dated to the first century; Sena Chiesa 1966, 317-19; Degani 1959, pl. xxix, 1; Siviero 1954, 369 (pls. 222 *f*; 223 *d*) is a gem of similar character (set in a ring of the first century B.C.-first century A.D.). It shows a young satyr in front of a cippus behind which is a tree.

11 (10). (?)Cupid dancing on the top of a cippus. He may have held a stave, the end of which can be seen between his legs.

Cornelian (broken). The upper part of the stone is missing. Greatest diameter 10 mm. 2 mm. thick. Very fresh, polished surface. Cf. Sena Chiesa 1966, 341-2 for Cupids kneeling or standing on altars.

Although this gem appears to be unparalleled, dancing or running Cupids are not uncommon on gems.

Henkel 1913, 155 (pl. lxxv, 150) in ring of the first century; Fossing 1929, 758-9. The suggestion made in the Bath guide that Harpocrates is intended cannot be

maintained as he is usually represented sitting on a lotus flower and on stones of undoubtedly magical character (cf. Bonner 1950, pl. ix, 189-99) but cf. Walters 1926, 1021 for a Cupid within a lotus flower.

- 12 (30). Satyr walking left holding a pedum in his left hand and a dish of fruit in his right.

Cornelian. 10.5×7.5 mm. 2.25 mm. thick. Slightly abraded surface.

A common subject on gems. Sena Chiesa 1966, 384 ff. (especially nos. 385, 387); Fossing 1920, 806; Furtwängler 1896, 7379.

- 13 (6). Methe, the personification of drunkenness, standing right. She is nude except for a cloak which hangs on the far (left) side of her body. In her hands she holds a small cup from which she is about to drink. In front of her a palm-spray in a vase symbolizes victory (over inebriation).

Plasma. Convex almond-shaped stone. 10×6.5 mm. *c.* 2.5 mm. thick. Very little wear on either side.

The subject was a very popular one during the late Republican and early Imperial period. It adorned the seal of Cleopatra as a prophylactic against drunkenness.¹ One of the gems from Aquileia upon which Methe is represented bears the inscription 'Vino' (Sena Chiesa 1966, 454). Also cf. Walters 1926, 1637; Furtwängler 1896, 2974-6; 4103-8; Sena Chiesa 1966, 450-8; Righetti 1955, 47 (pl. 3, no. 6) from the Praetorian Camp; Henkel 1913, 152 (pl. lxxvi, 173) from Trier and 1457 (pl. lxxvi, 174) from Frankfurt-am-Main both in rings of the first century A.D. Another gem (of mottled chalcedony) set in an iron ring of the first century A.D. was found at Sea Mills near Bristol in the last century and is now in the University Museum of Archaeology and Ethnology, Cambridge (Perceval Collection). Apart from the fact that Methe is beginning to drink, the representation is virtually identical to the piece from Bath and was almost certainly produced in the same workshop. A plasma from Caerwent (Newport Mus., Mon.) shows Methe without the vase and palm-spray, but on stylistic grounds it is difficult to ascribe it to the same school.

For the palm-spray in the vase, cf. no. 14 below. A panathenaic amphora may have been intended although the vessel engraved on the gems usually has only one handle.

- 14 (26). Discobolus right; poised on toes and about to throw. His left arm is thrust forward and he holds the discus in his right. In front stands a vase with a palm (as in no. 13) which represent the prize for Victory.

Deep red cornelian. 12.5×10 mm. 2.5 mm. thick. Virtually completely fresh.

Furtwängler 1896, 8268 is very similar though the cutting is not quite so fine.

- 15 (8). Female head right (probably Diana).

Only a fragment, but the stylized arrows held in a quiver behind her neck make the identification almost certain.

Cornelian. 2.5 mm. thick. Some slight wear on surface.

¹ *Palatine Anthology*, ix. 756.

The bust of Diana is shown on *denarii* of the moneyer Aulus Postumius Albinus (c. 91 B.C.); cf. Grueber 1910, 351-2, nos. 2836-8 and Vollenweider 1966, pl. 13, 4, 6, 8. For gems, cf. Middleton 1892, p. 64, no. 67; Middleton 1891, pl. 2, 50; Vollenweider 1966, pl. 44, 1, Richter 1956, 282; Walters 1926, 3437-9; Furtwängler 1896, 1855-6, 4903-4. The bust of Diana also occurs on an unpublished red jasper from London (London Museum).

16 (18). Female bust—representing the head and shoulder of the Nereid Galene swimming right.

Nicolo. 11.5 × 10 mm. 2 mm thick. Bevelled edge. Very fresh, almost no wear; deep, bold cutting.

The bust of Galene is represented on *denarii* of the moneyer Q. Crepereius struck in 73 B.C. (cf. Grueber 1910, 408-9, nos. 3335-47 and pl. xliii, 1 and 2). She is frequently represented on gems and there is a poem in the *Palatine Anthology* (ix. 544) describing a ringstone with this subject. Also cf. Walters 1926, 1221-2; Fossing 1929, 1100; Richter 1956, 150, 151; Vollenweider 1966, pl. 15, 2 and 6 and pl. 16, 1. From Britain note the fine Jacinth intaglio of Hellenistic date found at Caerleon (*Arch. Camb.* lxxxvii (1932), fig. 41, 1-2 and p. 94). According to the poem cited above she brought calm seas and so the stone would have been regarded in some sense as prophylactic against shipwreck. On a possible identification of the type with the moon goddess, cf. J. Boardman, *Engraved Gems: the Ionides Collection* (London, 1968), p. 32, pl. 43.

17 (22). Circus scene. Three (out of a probable four) teams can be seen racing to the right in front of the spina. Probably cornelian but unfortunately the gem has been lost.

Horse-racing was an extremely popular sport which is represented in many media—mosaics, beakers, and gems amongst others. They are all conventionalized and the circus shown is always the Circus Maximus in Rome with its obelisk and lion of Cybele. For other gems cf. Walters 1926, 2125-9; Sena Chiesa 1966, 872, and especially John Clayton in *Arch. Aeliana*², x (1885), 133-7 on a similar intaglio from the fort of Chesters. (This has since been lost—Charlesworth in *Arch. Aeliana*⁴, xxxix (1961), 33, no. 27.)

18 (3). Charioteer driving biga right. The front horse has turned his head to look at his yoke-mate.

Amethystine quartz. Almond-shaped oval, convex. 12 × 8 mm. c. 4 mm. thick. Surface slightly abraded.

Fossing 1929, 1762; Sena Chiesa 1966, 861. A very close parallel in blue glass (imitating amethystine quartz) was found in Hunter Street, Chester, associated with Flavian pottery. Cf. *Journ. Chester and North Wales Architectural, Archaeological and Hist. Soc.* xxxiii (1939), 59, fig. 12, 6. Unfortunately the deposit in which the ring occurred was not sealed.

- 19 (29). Charioteer holding Victory wreath driving quadriga right (at slow speed).
Cornelian. 13×10 mm. 3.5 mm. thick. Very fine and well polished; chipping at edge.

Cf. Walters 1926, 2124.

- 20 (2). Goatherd milking goat under tree. He is dressed in a rough skin and wears a petasos.

Dark sard. 14×12 mm. 2.5 mm. thick. Bevelled edge. Slight wear around beveling.

This type occurs on *denarii* of Vespasian and Titus minted in the years A.D. 77–8 (*RIC* Vespasian 111, vol. 2). It is also common on gems. Cf. Richter 1956, 450–2; Sena Chiesa 1966, 786 ff.

- 21 (32). Panther seated right with right paw raised. It looks back towards a column on which is a cornucopia.

Cornelian. 10.5×9 mm. 2 mm. thick. Fine condition.

The panther was the animal most closely associated with the Greek god Dionysus (whom the Romans identified with Bacchus). Sena Chiesa 1966, 1179: panther walking right with its tail in the air (late first century A.D.); 1181 with a thyrsos behind. Also cf. Walters 1926, 2335 and *P. Som. Arch. Soc.* lvi (1910), pl. opp. p. 55 and p. 60, no. 21 (Ham Hill).

- 22 (4). Gryphon springing to right.

Green jasper. 11.5×9.5 mm. 2 mm. thick. Fine condition—slight pitting of surface.

The springing gryphon is shown on coins of the moneyer Lucius Papius (*c.* 78/77 B.C.); cf. Grueber 1910, 370–80, nos. 2977–3095, pl. xli, 5–14 and Vollenweider 1966, pl. 12, 6. On gems, cf. Walters 1926, 1854–5; Steiner 1911, 67–8, pl. xv and Henkel 1913, 1195 (pl. lxxvii, 284). From Britain note the intaglio recorded by W. Borlase¹ found near Launceston; it also shows a gryphon and was possibly a green jasper.

- 23 (15). Lion springing to right.

Pale cornelian. 13×11 mm. 2.5 mm. thick. Some very slight surface pitting; otherwise fine.

A running lion occurs on a *denarius* of Augustus minted perhaps in Gaul at some date prior to 27 B.C. in the name of the Sixteenth Legion (*RIC* Augustus 373). For representations on gems cf. Walters 1926, 2315; Richter 1956, 501; Steiner 1911, 163, pl. xiv; Fossing 1929, 1286; Sena Chiesa 1966, 1172; Babelon 1899, 142, pl. ix; Furtwängler 1900, 22, pl. xlv. The facsimile (B.M. copy) of a first-century gold ring with amethyst intaglio representing a lion leaping right is preserved in the site museum at Richborough, but I have been unable to ascertain the whereabouts of the original.²

¹ *Antiquities of the County of Cornwall* (2nd edn., 1769), p. 342 and pl. xxviii.

² This has now been located in the British Museum.

24 (9). ?Lioness (or bitch) standing right with her left paw on the back of a gazelle. She wears a collar, and the short tail and dugs would be more appropriate to a bitch; but the animal does not correspond with the usual lithe hunting dog of antiquity. The animal's heavy build (especially the head and large paws) make it likely that a lioness is intended. Behind her is a ?bow and arrow (the frond-like bow could be taken for a bush). Cf. de Ridder 1911, 3246 where a palm-spray is shown behind a lion and Furtwängler 1896, 6567 where there is a bush behind a hound. Also Middleton 1891, pl. 2, 74.

Nicolo. 12 × 8.5 mm. 2 mm. thick. Bevelled edge. Worn around bevelling but otherwise in excellent condition.

Furtwängler 1896, 3263 shows a crouching lion with an antelope; 3120—a hound with bow and arrows behind.

Professor R. B. Onians comments that if a lion(ess) and bow and arrows are represented they bring the goddess Artemis to mind. Homer (*Iliad*, xxi. 480–3) describes her as 'pouring forth arrows', as the 'carrier of a bow', and as 'a lion'. Theocritus (*Idyll*, ii. 68) mentions a public ceremony at the grove of Artemis with 'many beasts around, among them a lioness'. Aeschylus (*Agamemnon*, 140 ff.) speaks of Artemis as 'gracious to the tender whelps of lions'. Artemis was, of course, 'mistress of wild beasts' and is shown in art from the archaic Greek period with lions (cf. A. B. Cook in *Journ. of Hellenic Studies*, xiv (1894), 110 ff.). She was the hunting deity for the Greeks and identified by the Romans with Diana to whom they transferred her attributes. A dog would not suit Artemis so well, though it would be appropriate to a huntress, and dogs were closely associated with the cults of the closely related goddess Hekate. A hound is, of course, a regular attribute of Artemis-Diana, although never actually identified with her, e.g. the relief from Nettleton in Bristol Museum. For a fragmentary portrait head of the goddess cf. no. 15 above.

25 (12). Goat standing right.

Agate. 12 × 10.5 mm. 1.5 mm. thick. Bevelled edge. Very little wear although a little abraded at bevelling.

Denarii of Domitian struck under Vespasian (A.D. 79) and Titus (A.D. 80) (*RIC* Vespasian 245 and *RIC* Titus 49) show a goat standing left within a laurel wreath. This may be identified with the Cretan goat which fed the young Jupiter and was thus a reference to Domitian as Princeps Iuventutis. For gems cf. Walters 1926, 2378–9; Sena Chiesa 1966, 1120. There is a nicolo intaglio from Colchester (set in a second-century bronze ring. Cat. 53, 1890 Castle Museum) which shows Jupiter seated on a rock (holding a fulmen and) feeding the Cretan goat.

26 (28). Two horses standing right before a column, the nearer animal has his head raised but the far one is cropping grass or drinking. On the column a vase with one handle is lying on its side and perhaps some of the liquid it contained has escaped on to the ground.

Green jasper with a few red streaks on the back. 13.5×10.5 mm. 2 mm. thick. Excellent condition. Front a little more worn than back.

A *denarius* of Divus Vespasianus (A.D. 80-1) shows an urn standing upright on a cippus; *RIC* Titus 62. A gem from the Casa del Menandro dated to the first century B.C. represents two horses which have just been unyoked from a biga. One is beginning to graze (Siviero 1954, no. 343, pl. 211). Furtwängler 1896, 2499 shows two horses in identical stance standing before a herm (also 5491—one horse in front of a herm). Presumably the scene has a Dionysiac interpretation in each case.

- 27 (1). Horse prancing right, ridden by a man holding Victory wreath (to left) in right hand, and facing left.

Cornelian (impure with black specks). 12.5×10 mm. 2.5 mm. thick. Slight chip at top edge, a few scratches, otherwise in excellent condition.

Although horses are extremely common in coinage, very few have their legs thrust back as forcefully as on the gem. The closest parallel would seem to be a *denarius* of Vespasian minted in A.D. 69-70, perhaps at Lyons (Mattingly in *BMC* attributes it to Illyricum). It shows (*RIC* 271) Vespasian galloping left, and raising his right hand. For gems of running horses cf. Walters 1926, 2856 (Eros riding on horseback right holding a wreath in his right hand; Furtwängler 1896, 3149 (young rider with whip), 6813 (Eros on horse).

- 28 (19). Ass standing to right and braying.

Pale cornelian. 12.5×10 mm. 2.5 mm. thick. Very fine condition.

This fine naturalistic rendering of an ass appears to be unparalleled.

- 29 (14). Three cattle: two standing and one sitting, looking right towards tree.

Chalcedony. Slightly convex. 11×10 mm. 2.5 mm. thick. Very fresh and highly polished.

Cattle were very popular subjects on engraved gemstones in antiquity and there are a number of poems in the *Palatine Anthology* about groups of cows shown on ringstones (*Palatine Anthology*, ix. 746, 747, 750). Oxen are found on *denarii* of Vespasian minted in A.D. 76-8 (*RIC* 99A; 107; 197—and Mattingly—*BMC* pl. 6, 10) where they have the same crescent-shaped horns as on this intaglio. For gems cf. Furtwängler 1900, pl. xlv, 1, 2, 6-9; Sena Chiesa 1966, 1037, 1045, 1059; Steiner 1911, 176 on pl. xiv. A cow is shown on a paste gem from Brockley Hill, Middlesex (*Trans. London and Middx. Arch. Soc.* xix (1958), p. 73 and pl. opp. 67) which can be ascribed to the first century A.D.

- 30 (5). Eagle to right upon branch or stylized fulmen.

Sard. 13.5×11 mm. 2 mm. thick. Bevelled edge. Good condition.

Eagles shown on gems usually have their heads turned to face behind them (as in 31 below).

31 (31). Eagle standing left upon a short cippus on which is a corn ear and a poppy-head. Its head is turned to the right and it holds a wreath in its beak.

Yellow-black, mottled jasper. 11×8.5 mm. 2 mm thick. In good condition but some surface scratching.

Coins of Vespasian (*RIC* 99), of Titus (*RIC* Vespasian 191) issued in A.D. 76, and of Domitian (*RIC* Titus 38) minted in A.D. 80 show an eagle with wings partly spread right, and looking left, standing on a short cippus. For parallels on gems, de Ridder 1911, 3309 (pl. xxvii) in ring of first-century B.C.–second-century A.D., Fossing 1929, 1817. For eagles in general see Walters 1926, 2433 ff.; Furtwängler 1896, 7877 ff.; Sena Chiesa 1966, 1259 ff.

Both this gem and the previous one show eagles without standards or other military attributes, which distinguishes them from the intagli found at Great Casterton (Dudley and Webster, *The Roman Conquest of Britain*, 123 and pl. 32), at Hod Hill (J. W. Brailsford, *Hod Hill*, vol. 1, pl. xivA, M2), and at Caerleon (G. C. Boon, *Bull. Board Celtic Studies*, xix (1963), 344–5 with fig.). A ringstone of Cornelian from an early second century context at Holditch, Staffs. (*N. Staffs. Journ. of Field Studies*, viii (1967), 30, fig. 3) depicts an eagle with head turned and holding a wreath in its beak, standing next to a cornucopia. Another cornelian found at Ham Hill, Somerset, shows an eagle with outspread wings (*P. Som. Arch. Soc.* lvi (1910), pl. opp. p. 55 and p. 60, no. 22).

32 (28). Trophy of arms: helmet, below which is a shield with two crossed spears. Sard. Convex. 10×7.5 mm. 3 mm. thick. A little wear on surface. Otherwise in good condition.

Trophies are often shown on coins, for example those of Julius Caesar (Grueber 1910, 505 ff.; nos. 3953 ff., pl. xlix, 13–14) and of Vespasian (*RIC* 301, minted in A.D. 72–3; cf. *BMC*, pl. 14, 2). They also occur on gems, for example Sena Chiesa 1966, 1481 ff. and Fossing 1929, 1849 ff.

It is doubtful whether the engraver of this intaglio understood his subject.

33 (13). Modius and scales. In the modius are two corn ears with a poppy-head between them.

Dark sard. 12×10 mm. 2 mm. thick. Bevelled edge. Slight abrasion at bevelling; otherwise in excellent condition.

The modius with corn ears occurs on *denarii* of Vespasian (*RIC* Vespasian 110) minted in the years A.D. 77–8 as well as on coins of later emperors. On gems cf. Henkel 1913, 1876 (pl. lxxvii, 297); Steiner 1911, pl. xiv, 207 for early imperial representations of the modius and scales. Also cf. Sena Chiesa 1966, 1469; Fossing 1929, 1619–1620.

34 (33). ?Crane standing on prow right.

Yellow translucent paste. Broken. 11.5 mm. long; 2 mm. thick. Pitted with corrosion and wear. The material is typical of the late Republican and Julio-Claudian periods.

The type appears to be unparalleled but cf. Walters 1926, 2459 ff. for representations of cranes. The material and style of this intaglio set it apart from the other thirty-three. The bird has a somewhat rounded body and a curving neck which show no trace of the individual idiosyncracies of the artist(s) involved.

It may be suggested that this piece was owned by the Bath Master as a model for his work (cf. above).

THE TEMPLE OF SULIS MINERVA

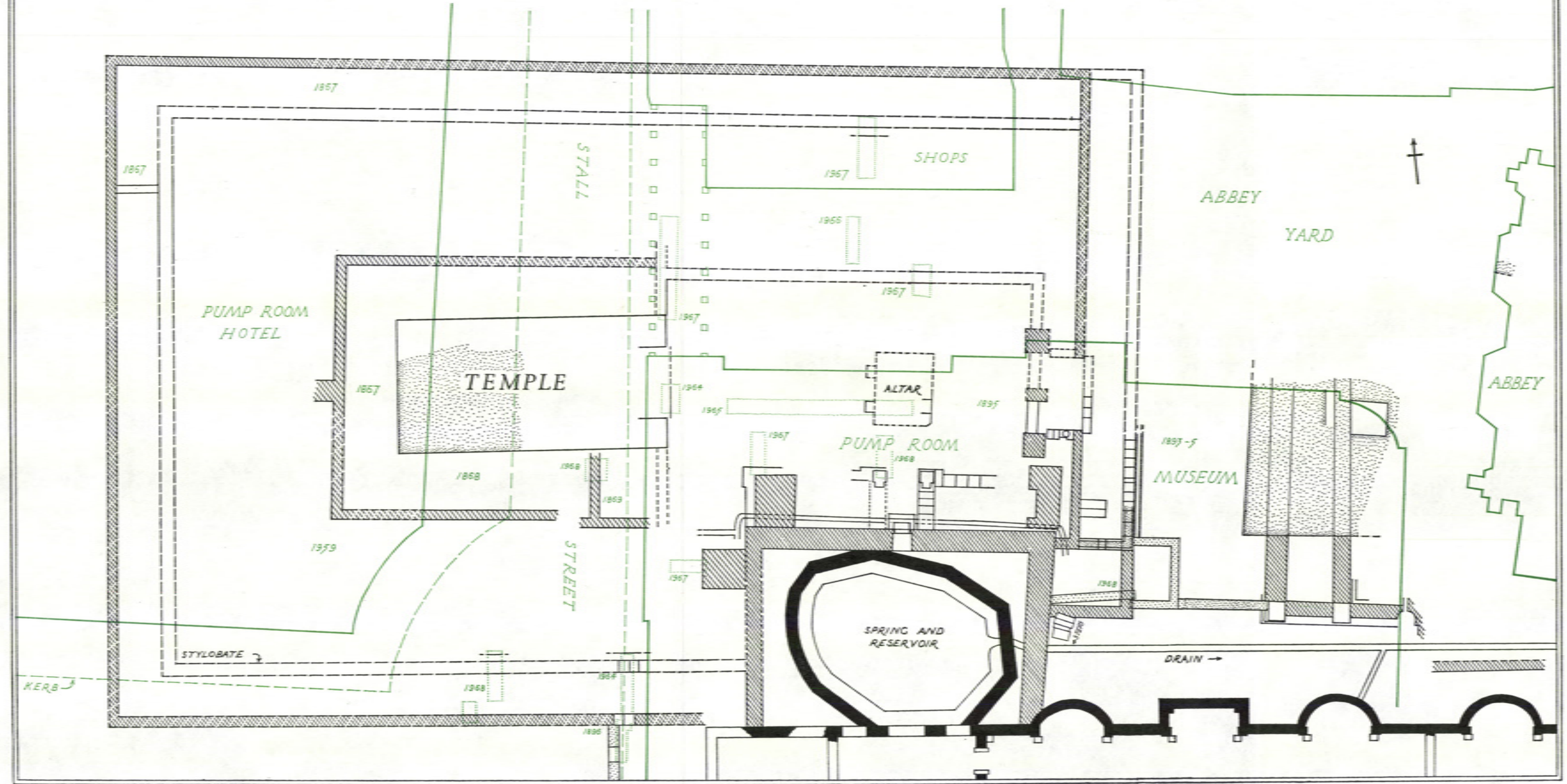
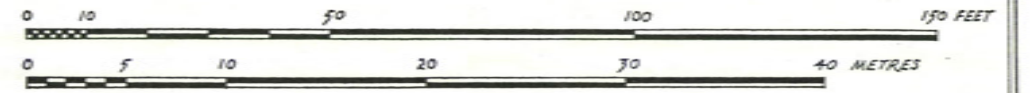


FIG. 26

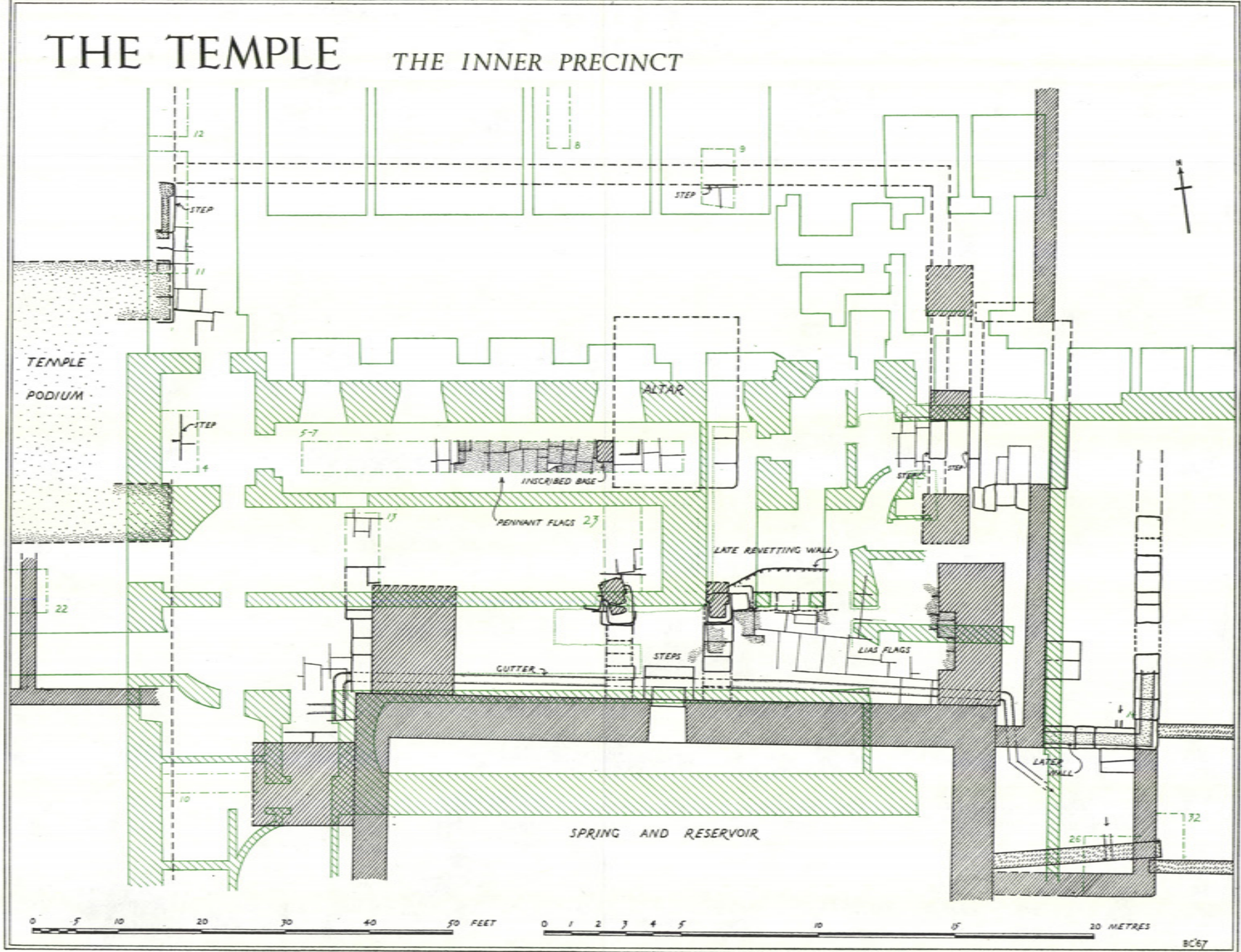


FIG. 27

III. THE BATHS

1. INTRODUCTION

THE great bathing establishment in the centre of Bath has been exposed to public view for about eighty years, but no adequate account of the remains exists, and indeed the only published plans hitherto available are inaccurate and incomplete. The original excavator, Major Davis, published little of lasting value and it was left to Haverfield to summarize the main features of the site in the *Victoria History of the County of Somerset*. An account of this kind was necessarily of limited length, but even so it has remained the standard work to the present day. Knowles's description of the 1923 excavation augmented the available information to some degree, but for the last forty-five years nothing has been published except for occasional reprinting of Taylor's guide-book, which first appeared in 1906 and has changed little since.

That one of our greatest Roman monuments could be so neglected led Sir Ian Richmond to initiate a new study in 1954. By the time of his death, eleven years later, other more pressing commitments had prevented him from completing the work, but fortunately a section of descriptive text and several plans had been prepared. In the following pages I have included Sir Ian's account of the Circular Bath, Great Bath, and the East Baths in full, adding only references, but it has been necessary to alter slightly the periods assigned to the features of the Great Bath so that they may be the more easily correlated with the building phases at the east and west ends. This in no way alters the sense or sequence of Sir Ian's work. The description of the baths at the west end of the establishment and of the features to the south has had to be completely rewritten in the light of recent work, and several sections both of introductory material and of detail have been added to complete the picture. For reasons of consistency I have redrawn Sir Ian's detailed plans, which now form figs. 31-3, keeping as close to the spirit and style of the originals as possible. The other drawings are based on new surveys prepared by myself and by the numerous students who have taken part in the work from 1965 to 1968.

2. THE DISCOVERY OF THE BATHS (figs. 28-30)

The Roman bathing establishment at Bath owes its early discovery to the great outburst of building activity which began in the early years of the eighteenth century. Since the time of the first find almost a quarter of a millennium ago, much, if not most, of the Baths has become known, but before describing the remains as we see them today

it is necessary to consider briefly the way in which the different parts of the building were first exposed.

Of the first discovery of 1727 there is little to be said except that the excavations took place somewhere in the south-west corner of the establishment as it is now known.¹ The first major discoveries were made some years later, in the summer of 1755, when the Abbey House, a modernized version of the eastern range of the abbey building, was demolished prior to the erection of the Duke of Kingston's Baths. This work, watched and recorded by Dr. Charles Lucas helped by the architect John Wood, brought to light first the remnants of the Saxon cemetery and then, beneath it, the foundations of Roman buildings. These remains, comprising the swimming bath now known as the Lucas Bath, and the eastern suite of hot baths adjacent to it, were described and planned in detail at the time (Lucas 1756, 222-30). A few additional discoveries were made to the south in the following years (Sutherland 1763, 16-22), but by 1763 work had begun on the construction of the new Kingston Baths and the Roman remains disappeared from view.²

In the first half of the nineteenth century a few isolated discoveries were made. Between 1799 and 1803 parts of the apsidal *exedrae* on the north and south sides of the Great Bath, at its western end, were exposed during building work (Spry 1822). Later, in 1825, traces of hypocausts were discovered in the cellars of a house near the corner of Stall Street and York Street (Long Collection). Serious exploration began in September 1867, when J. T. Irvine carried out a limited trial excavation in the cellars over the *exedra* of the south side of the Lucas Bath. This work was continued during the next year and the results were recorded in a manuscript plan (Irvine Papers). In December 1869 an engine-room chimney was built to the south-west of the Queen's Bath, close to the 1825 discoveries. Excavations for this, under the direction of Major C. E. Davis, exposed substantial parts of a hypocaust and other structures, now known to be part of the *tepidarium* lying immediately to the west of the Circular Bath. Again Irvine produced meticulous plans and sections (Irvine Papers).

In 1871 Major Davis, as City Engineer, was called in to prevent a leak in the King's Bath. During this work he found it necessary to sink a trench in Abbey Passage to a depth of 20 ft. (6.1 m.) and in doing so exposed, for the first time, the steps of the Great Bath and part of its lead-lined bottom at a point near the north-west corner. The work, however, had to stop, for the powerful pumps used by Davis caused the water-table to drop so drastically that the owners of the nearby Kingston Baths complained. But when, in 1878, the City Corporation acquired the property, Davis was able to continue his work by opening up the spring and reservoir beneath the King's Bath and emptying out the great Roman outfall drain for a distance of several hundred feet (see p. 121 ff.). The discoveries of this period sparked off considerable interest locally and subscriptions were

¹ Sketch in Bodleian Library (Gough, Map 28, p. 64).

² Besides the main sources quoted here there are others of lesser importance; these include a plan by William Hoare (Add. MS. 21577B), a plan by Hewitt dated 10 May 1759 in

Min. Soc. Ant. viii. 159, and various notices in *Min. Soc. Ant.* for 26 June and 30 October 1755, 10 May 1759, and 22 January 1761.

raised to enable neighbouring property to be bought and the excavations to continue. Between 1880 and 1881 much of the Great Bath was uncovered. Next, in 1883, the hypocaust west of the Circular Bath was re-excavated and this was followed, in 1884-5, by the uncovering of the Circular Bath and the passage to the north. From 1885 to 1887 excavation was concerned with the area south of the Circular Bath and from there work proceeded west. The state of knowledge by January 1887 was summed up by the plan

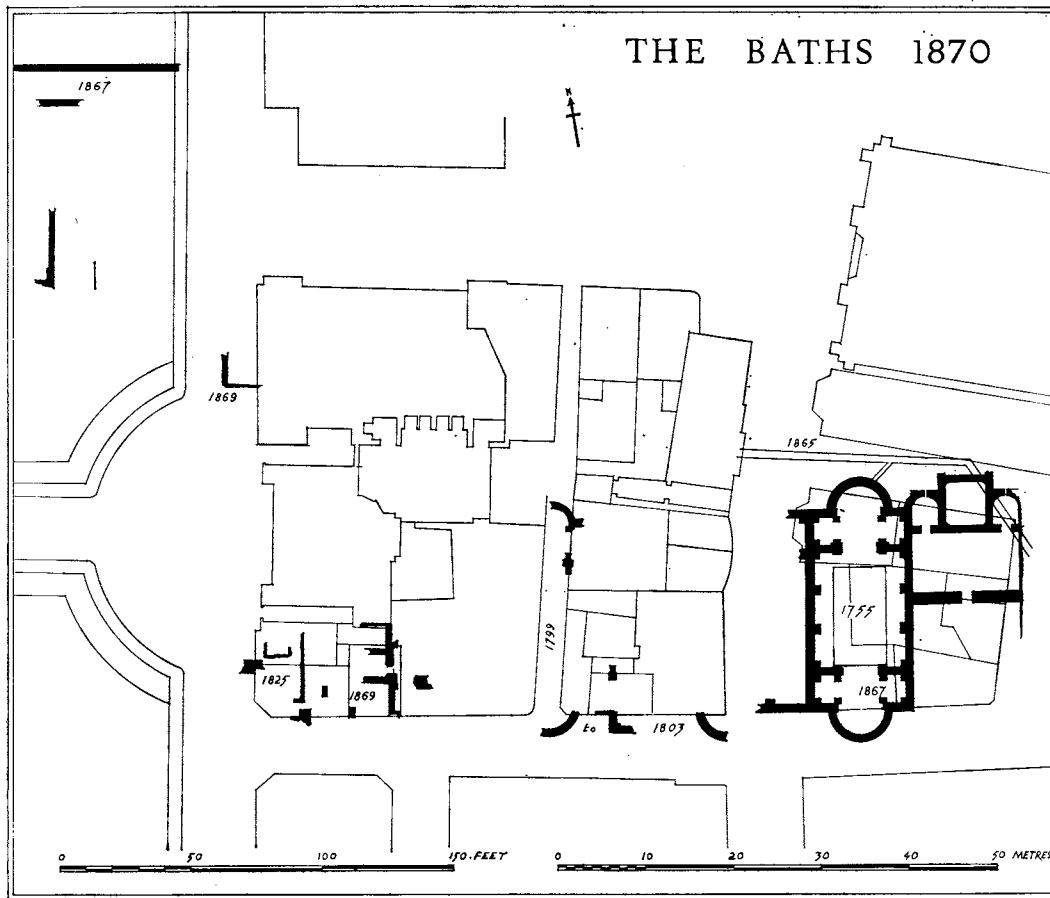


FIG. 28. Plan of the Roman Baths by about 1870

in Davis's guide (fig. 29). A few years later, in 1893-5, whilst the old Pump Room was being extended to the east, the opportunity was taken to examine the remains beneath the new floors, which included the so-called 'dipping-place' and the structures now thought possibly to be part of a theatre (p. 148). It was during this period that excavations were also made beneath the old Pump Room north of the reservoir. Finally, in the last year of the work, 1896, the westernmost rectangular bath under Stall Street was laid bare. Davis's activities, spread over a period of nearly twenty years, had exposed most of

the bathing establishment as we now know it, but his work was far from satisfactory and indeed it was severely criticized at the time. He appears to have produced no detailed plans after 1887 and records of stratification are entirely lacking. Looking at the remains today, however, it is surprising how little damage was done. Admittedly, apart from Irvine's drawings, we have lost all the evidence concerning the collapse of the superstructure and details of marsh formation, but the structures found, together with their latest floor-levels, are by and large intact and ready to yield new information. The worst to happen was that Davis covered most of the remains of the west end with the rooms and passages of his new douche and massage baths, now largely defunct, thus sealing the Roman features for future generations.

Although Davis produced no adequate plans, Richard Mann, a builder at one time employed by him, kept highly detailed records which the Society of Antiquaries commissioned him to draw up in final form for them, and which are now preserved in their library (Mann: drawings). Mann's plans are the most valuable of the surviving records of the excavations. Of written accounts we have Davis's *The Excavation of Roman Baths at Bath* (Davis 1895), but this was entirely superseded by Haverfield's balanced and accurate description of the whole complex, published in the *Victoria County History* (Haverfield 1906).

The next stage in the history of the excavations came in 1923, when the old Kingston Baths were removed, thus freeing the entire eastern end of the establishment for excavation. The work, undertaken by W. H. Knowles, was published a few years later (Knowles 1926). Besides offering an account of his excavations, Knowles attempted for the first time to show, with the aid of period plans, the way in which the establishment grew. The basis was therefore laid for further and more detailed research.

In 1954 the Spa Committee invited Sir Ian Richmond to supervise the exposure and presentation of the area excavated by Knowles. This he willingly undertook, making it an opportunity for further excavation here and for a detailed survey of the entire monument—a task which was to occupy him on and off for several years. By 1964 he had completed the plans and descriptions of the eastern complex, the Great Bath and the Circular Bath, but had not, to his own satisfaction, been able to fully work out the sequence of the western end where modern building obscures so much of the Roman structure. Therefore in 1964, the Bath Excavation Committee, under the direction of the present writer and in close consultation with Sir Ian, carried out a series of trial excavations south of the Circular Bath, in order to work out the structural sequence.

After Sir Ian's death in 1965, the Society of Antiquaries invited the present writer to complete and prepare for publication Sir Ian's work on the Baths. Whilst this was being carried out, in 1966–8, limited excavations were undertaken in the south-west corner of the establishment in order to elucidate several unsolved problems and at the same time the entire west end was resurveyed.

ROMAN BATHS AT BATH
ISOMETRICAL PERSPECTIVE VIEW

0 10 20 30 40 50
Scale 10 feet in one inch

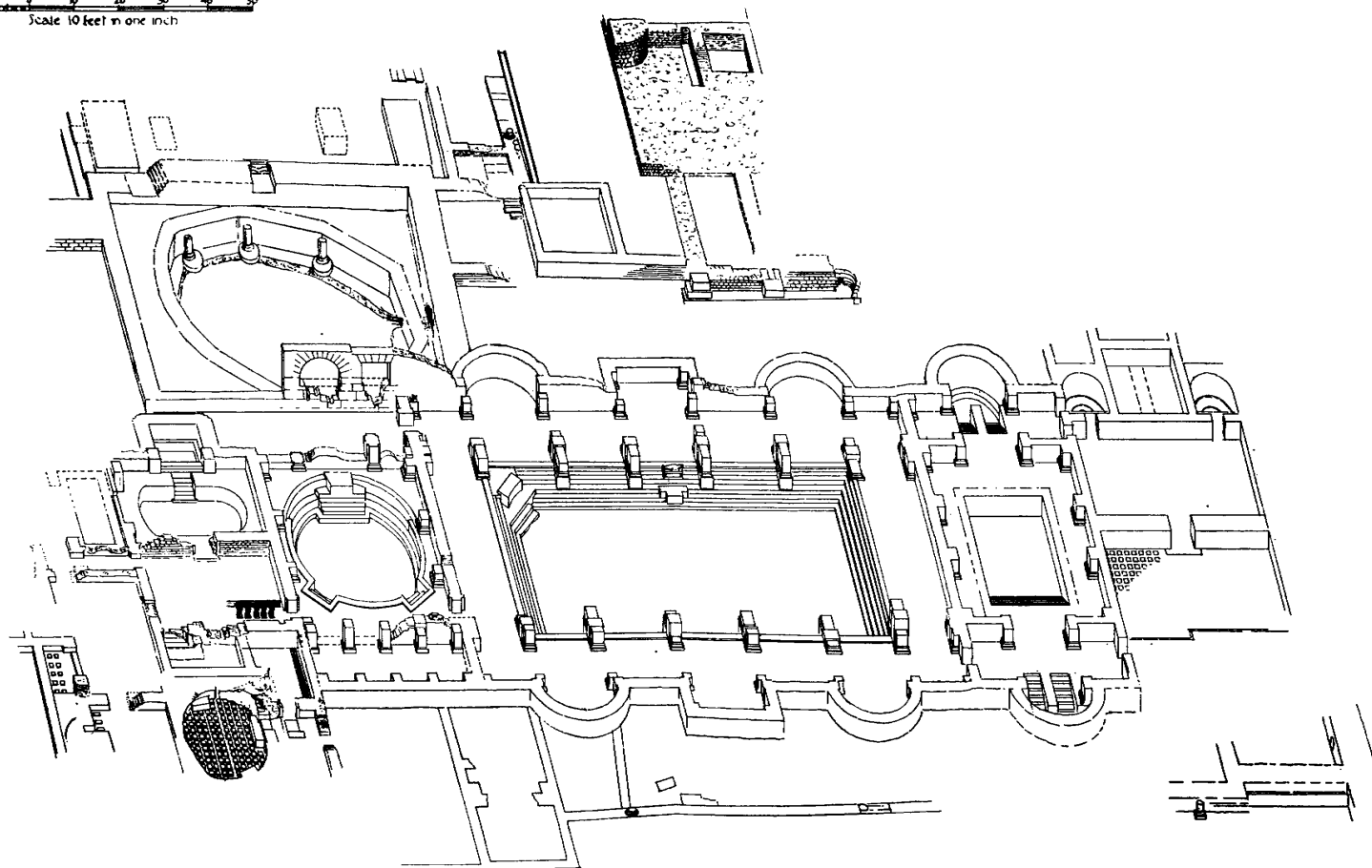


FIG. 30. Isometric view of the Baths by Richard Mann (Society of Antiquaries Library)

3. DESCRIPTION OF THE BATHS

by I. A. RICHMOND AND B. W. CUNLIFFE¹*a. The Great Bath* (fig. 31 and pls. xiv-xvii, xix-xxi)

The most impressive feature of the Roman spa at Bath has always been, in ancient times as now, the Great Bath. It was fed directly from the hot springs, not made accessible to bathers owing to their high temperature, by a wide box pipe of lead sunk in the surrounding pavement. The thermal waters emerged from this pipe, averaging 20 in. (0.5 m.) wide by 5 in. (0.13 m.) high, over a lead apron, in the middle of a quadrant-shaped vertical abutment, which fills the north-west corner of the Great Bath, and is so planned as just to clear the five steps which run all round the basin (pl. xvii*b*). The basin is $72\frac{1}{4}$ ft. (19.0 m.) long by $29\frac{1}{4}$ ft. (8.92 m.) wide and 5 ft. (1.52 m.) deep, and has two outlets: the first, in the middle of the east side, fed the Lucas Bath and a further bath to the east; the second was a true overflow (pl. xxi), discharging into the main overflow drain from the springs which run outside the Great Bath and parallel with its north side. The floor of the basin is covered by sheet lead in three regular rows of fourteen rectangular plates, each averaging 5 ft. (1.52 m.) by 9 ft. 10 in. (3.0 m.) in size, with three narrow strips at the west end, finishing off the series (pl. xvi*b*). There is good reason for thinking that the steps of the basin were also once lead-covered, since portions of such covering are still preserved behind the north side of the steps added to the front of the quadrant at the north-east corner and are also seen below the late fountain occupying the second step in the middle of the north side. This covering, unlike that of the basin of the hot spring, which was torn off by Major C. E. Davis, seems to have been removed in Roman or sub-Roman times. The sheets were brazed together, with a slightly raised joint, and are intact, except for slight damage close to the quadrant. Their function was no doubt to waterproof the bottom of the bath, and it may be observed that they also kept it free from uncontrolled minor ebullitions of thermal water which now bubble up with small but steady flow through flaws in the lead near the quadrant, and can be seen when the bath is empty. How the lead was bedded is not accurately recorded, but Major Davis, who first discovered the Bath, observed it to rest on a layer of cement made of crushed tile and lime, below which came a mass of rubble whose depth was not ascertained. Such bedding occurs below the secondary floor in the Lucas Bath, where the pink cement resting upon rubble still retains the impression of the lead plates (now removed), evidently bedded while the cement was still wet. The rapid method of work will explain why the workers laying the floor left themselves a narrow strip at the west end, which they would have had to fill working from the steps, in order to avoid manhandling the very heavy full-sized plates from so awkward a position. Traces of their working platform

¹ In the following section pp. 95-105, 113-116 were written by Sir Ian, and at the time of his death were in the form of a typescript. Pp. 106-12, 116-28 have been written by the present writer (B. W. C.).

at the top of the west steps was noted by the writer (I. A. R.) when one of the paving-slabs of the west walk round the baths was lifted, in October 1954, at the request of the Ministry of Works. The oolite rubble upon which the slabs were bedded showed signs of scorching and was besprinkled with large dollops of lead which had fallen molten upon it. Evidently the lining of the bath in lead and the melting of lead for brazing had been carried out before the laying of the pavement on the rammed rubble surface, so that the paving might not be marred by the plumbers at work.

The walks, or ambulatories, round the Great Bath were paved in large oolite rectangular slabs, 9 in. (0.23 m.) thick, carefully fitted and sometimes joggled. Their edges are slightly bevelled, at an angle of about 12° from the top downwards and inwards, to ensure a tight joint. Their lines usually ran parallel or at right-angles to the bath, though a slight deviation from the norm occurs in the south-west corner. The paving is not everywhere perfect, and has been broken by post-Roman buildings or drains: patches are accordingly absent in the east and south walks, and at the south-east corner there has been some relaying of the pavement in order to insert modern pipes, now functionless, while a modern outfall duct has disturbed the paving in the east alcove of the north walk. These interferences apart, the pavement is in good order. Its surface, however, shows signs of considerable wear, both ancient and modern. The wear creates puddles, but, apart from them, the careful laying of the primary pavement ensures that water drains off towards the bath and does not lodge against the walls of the building. Yet when it is imagined how much water would be brought out of the bath in casual splashing by emerging bathers, it will be realized that there might well be a fairly continuous flow-back of water over the exposed top step, tending to make its edge slippery and dangerous. An attempt to obviate this potential source of accident was made by providing run-off channels between the piers which surround the bath (pl. xx*a*). These channels have sometimes been mistaken for gutters intended to take the drip from an ambulatory roof: but the fact that their relationship to the piers is not constant and that they occur along the end of the bath, where there are no roof piers, rules out this explanation as decisively as it supports the run-off channels as the correct interpretation. Nowadays, the practice is to place such channels upon a corbelled ledge just below the step.

The walks are bordered by a wall, 27 in. (0.69 m.) thick, faced in small squared blocks of Bath stone, hammer and pick dressed, and filled with a core of rubble grouted with lime mortar. The wall has been coated on both faces with red cement of lime and crushed tile, in order to proof it from the damp steam of the thermal waters. The walling at the east and west ends of the bath is straight and unbroken except by doors at the north and south ends: on both the north and south sides it is varied by three alcoves, or *exedrae*, the middle alcove rectangular, or intended to be so, the flanking alcoves planned in segmental curves slightly less than the semicircle. The corners at the mouth of each are furnished with attached pilasters of plain finish, resting upon simplified Attic bases with double torus-moulds. These have been later reinforced by engaged pilasters, necessitating the cutting back of the original bases where the old and new members made contact

(pl. xix*a*). The purpose of the alcoves is not revealed by any features now preserved, but it may be supposed that they contained benches or seats set back to avoid the traffic of bathers and their servants in the ambulatories. The plan is closely matched by that of the main suite at St. Honoré-les-Bains, Nièvre.

The edges of the north and south walks adjacent to the water were lined with six free-standing piers with corresponding engaged piers at lesser intervals in the east and west walls (pl. xvi*a*). These piers, each 3 ft. (0.92 m.) wide by 2 ft. (0.61 m.) deep, had plain engaged pilasters at front and back, with Attic bases of simplified type. Their sides, where projecting members would have impeded traffic, are unornamented. The style closely resembles that employed in some of Rome's most dignified public buildings, especially those, like the Tabularium or the Colosseum, in which the effect depended upon an imposing architectural framework rather than detailed enrichment. There need thus be no doubt that the piers carried an arcade framed in pilasters and cornice, in a version of the Tuscan order, as the lack of ornamentation on the pilasters indicates; and the height of this may be calculated at approximately 20 ft. (6 m.), a scale appropriate both to the span of the arches in the arcade and to the width of the main pilasters. The pilasters at the mouths of the alcoves are, however, considerably smaller and may be taken to match in scale the piers of the arcade as opposed to the pilasters of its framework. It thus allows the mouths of the alcoves to be spanned by an archway corresponding closely in size to those of the arcades, behind which a roof could be devised to fit the curved or rectangular shapes of the alcoves.

The treatment of the main roofing, however, demands further discussion. If the Great Bath was originally open, the appropriate treatment for the surrounding porticoes would have been the open colonnade, as accorded by those who in modern times attempted to treat the surroundings anew in classical manner. But the heavier treatment indicates an altogether more massive scheme, and one which embraced the east and west walks in a covering involving no support between the opposite freestanding piers at their corners. This can only have been a roof spanning the Great Bath and giving it the comfort of cover so necessary to preserve the pool from pollution from birds and to render its use pleasant in all weathers. This granted, a clerestory becomes obligatory for lighting and for ventilation on the substantial scale demanded by the need to get rid of the steam; while a timber roof would be required to cover the 40-ft. (12.2-m.) span between the arcades. The architectural conception would not be unlike that of an arcaded *basilica* or market-hall, in which the Great Bath had taken the place of the normal nave: indeed, the appeal of the building lies rather in its novel variation than in its proportions, which, though large for a curative establishment, are small in comparison with such buildings as the *basilica* of Cirencester and Silchester, not to mention that of Roman London. (For a further consideration of the superstructure, see pp. 116-20, B. W. C.)

The complete absence of subsidences in the floors and piers of the building is sufficient indication of the great care taken by its constructors in laying their foundations. The manner in which the piers were taken down upon solid masonry, to at least the level of

the floor of the baths, is seen in the Lucas Bath, where the masonry in question is exposed. Equally, the welling-up of hot springs below the Great Bath reveals the water-logged subsoil upon which the whole building was founded: and there must in fact have existed a great raft of rubble and timber below the masonry, visible and unexposed alike, with heavy piling at points of stress: and, while nothing whatever is known of these details, the unshaken stability of the structure in such a subsoil implies their existence.

Now that the first structural phase of the Great Bath is defined, the next (period 3 in the over-all development) can be seen to follow logically from it. Its most notable feature is the very substantial enlargement of the main piers by massive projections on the site of the steps (pl. xvii*a*). These have coarser base-moulds than before, and still stand high enough to testify that they were not pedestals for attached columns, as the modern work might suggest, but were carried up as piers to full height. The fact that these piers are additional is proved by two points. First, they cut away the base-moulds of the pilasters against which they abut; secondly, the main thermal water duct had to be relaid in order to pass round the westernmost freestanding pier in the north walk. Their function is therefore also new and must be connected with the masses of fallen vaulting which eventually choked the Great Bath, on a much more extensive scale than might be suggested by the fragments now preserved in the *exedrae*. These fragments have a very large span and their curvature, while now represented by segments rather too small and too irregular to admit of more than approximate calculation, is plainly suited, as many observers have noted, to a vast tunnel vault covering the Great Bath and taking the place of the timber roof which no doubt proved uneconomical in the steam-laden atmosphere. The vaulting is ingeniously constructed of box-tile voussoirs, with plastered intrados and extrados built up of concrete and ridge-tiles (*imbrices*) into a thick, water-proof outer coating. It seems evident that, as in many Roman vaults, the outer surface of the roof was also arched, in a curve related to that of the vault below. The height of the vault is conditioned by two considerations. It is unreasonable to suppose that the additional piers can have gone higher than the pilasters to which they were added. On the other hand, windows are demanded just as before. The function of the new piers would thus be to support a massive arcade, capable of holding the haunches of the tunnel-vault covering the Great Bath: while the windows, whatever their exact form, would fill the lunettes outlined by the top of the new arcade and would be contained in the wall carried by the original arcade.¹ The comparative lightness of the tunnel-vault constructed with box-tiles does not, however, eliminate the danger of lateral thrust, and an attempt to counter this was made by the introduction of new piers of smaller scale in the north and south ambulatories. The purpose of these new features is not quite immediately obvious. At first sight they look as if their function was to carry bracing-arches between the main piers and the side-walks. But the fact that the dimensions, and even the positions, of piers which on that assumption would have to be exactly opposite one another do not everywhere correspond, forbids this assumption. They

¹ But see below, p. 118.

must then have served to carry arcades which would support a tunnel-vault covering the north and south ambulatories, while the rectangular alcoves were similarly equipped and would possess, like their semicircular neighbours, roofs of their own. The resultant roof-line would find its exact counterpart in the so-called Temple de Diane at Nîmes,¹ whose parallel tunnel-vaults teach us, like the Hunting Baths at Lepcis² or the wall-paintings of the Farnesina, how far removed from the modern style in roof-lines were the conventions of the Graeco-Roman world.

The new vaulted roofs of the third period were manifestly permanent, lasting, as already observed, until their ruined fragments choked the Great Bath in the Dark Ages. The fourth period changes manifest in this part of the building concern the floor, and took the form of a new pavement and the laying of a cold-water supply for douches and perhaps for drinking. The pavement was almost everywhere composed of oolite slabs, not so large in size as those of the original paving, but their regular outlines are much camouflaged by the multitude of cracks which each stone exhibits. Since the slabs were carefully set in cement, the cracks can hardly have been caused by the weight of traffic upon uneven bedding, and the damage is more likely to have been caused after the disuse of the building, by debris falling in ruins from above. Before setting the new paving, the mouths of the run-off channels in the north walk were cut out and filled with blocks of stone. Those of the south walk were left, and appear to have been more worn. A new kerb, or top step, was then set on top of them, and this was in turn provided with run-off channels, everywhere almost obliterated by continual treading, and now best seen at the north end of the western walk. The fact that the new paving was not contemporary with the additional piers of the third period is demonstrated by its relationship to their bases, of which it buries the plinths. It is also indicated by the new water-pipes which, as is shown below (p. 102), serve a fourth-period feature in the Lucas Bath, and are covered by undisturbed pavement. These pipes stem from a main supply-pipe introduced at the north-west corner of the Great Bath through the doorway blocked in the second period (see p. 104). Once inside the Great Bath they divide into three branches, marked by pipe-ducts cut in the original pavement. A short northward branch runs into the west alcove of the north walk, where the duct vanishes below much damaged later paving. It might be guessed that its function was the same as that of the very similar southward branch, which crossed over the thermal water duct and ran tight against the wall of the west walk until it reached the south-west corner bay. It then ran obliquely across the bay and ended against its south wall, just between two dowel-holes cut in the floor to take the raised fitting which it fed, either a basin or a douche. A duct for an outfall pipe led from an adjacent position to the Great Bath; and this was later relaid, as is shown by the fact that the cutting for a secondary duct impinges upon its lines. Two other small dowel-holes and a countersinking, difficult to relate to the two primary dowel-holes, also suggest

¹ A. Grenier, *Manuel d'Archéologie Gallo-Romaine*, iii (1958), fig. 34.

Hunting Baths at Lepcis Magna', *Arch.* xciii (1949), particularly pl. xxxvi.

² J. B. Ward Perkins and J. M. C. Toynbee, 'The

that the basin or douche was itself renewed, though not enough evidence remains to indicate the true character of the renewal. The third branch is a double one. Its first portion, in which some 25 ft. (7.6 m.) of original piping still lie in position (pl. xviii*a*), swings into the central bay of the north walk and feeds a fountain on the edge of the Great Bath. The second branches behind the fountain and runs to the Lucas Bath (see p. 102). The existing fountain is obviously a late replacement of a larger feature, whose seating it does not fit; and it has been carved out of a re-used stone, on which the worn sculpture looks like the reclining figure on a funeral-banquet tombstone metamorphosed into a water-nymph (pl. xviii*a*). It stands well above the level of the paving and the lead pipe was evidently introduced behind it by means of a short vertical run. But it could originally have fed, without any such rise, a lower structure of which only the base now survives, as a well-built stone pedestal with checked outer edge, occupying below water-level the two lowest steps of the bath: and, while the nature of the feature which stood upon the pedestal is irrecoverable, the pedestal itself affords proof that other decorative features existed before the surviving fountain, so unworthy of its stately surroundings, was introduced. The fountain was not the only feature on the edge of the Great Bath to undergo mutation. The quadrant at the north-west corner of the bath was later furnished with transverse steps: and the topmost treader of these, whose back was shaped to a curve fitting the outer face of the quadrant, and whose front was heavily coated with deposit resulting from the long flow of thermal waters, was later lifted, turned upside down, and used as a capstone for the mouth of the thermal water duct (pl. xviii*b*). It still occupies that position, in which it was found when the Baths were first uncovered. The original treatment of the top of the quadrant must thus remain no less obscure than that of the fountain. But curved stones, decorated and plain, which fit its perimeter lie about; and it is not impossible that a little quadrant-shaped shrine, a richly decorated minor feature, here housed the goddess of the waters (see below, p. 120). The tutelary deity of Badenweiler, *Dea Abnoba*, had her special place in the main saloon.

b. The Lucas Bath and the East End of the original Establishment (fig. 31)

East of the Great Bath lies the Lucas Bath, first discovered in 1755. The axis here runs from north to south, at right-angles to that of the Great Bath, and the over-all internal dimensions are 85 ft. (25.88 m.) from north to south and 34½ ft. (10.51 m.) from east to west. Allowing for the difference in orientation, the arrangement and planning has many points in common with the Great Bath. The central feature is an oblong 43 ft. (13.1 m.) long by 19½ ft. (5.95 m.) wide, set between two pairs of free-standing piers, exactly similar in size and design to those of the first period in the Great Bath. There were five steps at both short ends, the two topmost embraced by the piers, doubtless in order to waste no room where space was precious. Like the Great Bath, the Lucas Bath was no doubt once lead-lined, but the original lining and much of the original paving was removed later in Roman times when the bath was furnished with a floor at a higher level (see below, p. 102). In its original form the Lucas Bath was fed from the east

end of the Great Bath by a lead-lined box conduit, and emptied in the same fashion. The feeder conduit was, however, considerably damaged by later interference when the eighteenth-century Kingston Baths occupied the site, while the outfall is occupied by a small modern drainpipe and otherwise walled up, though its stone-built box-like end is still visible. The north and south walks were furnished with approximately semi-circular alcoves but the initial treatment of these is obscure, owing to their modification by the insertion of baths. It seems likely, however, that they were at first treated as sitting-out places as in the Great Bath. The original roof-treatment may also be presumed to have been very similar to that of the Great Bath, with north and south clerestories, the resemblance extending to the arcades spanning the east and west walks, which in both suites were narrower than the normal arcades in relation to their height.

The east walk, of which the outer wall and pavement have been severely damaged and are now largely missing, gave access to a second bath, discovered in 1923 by the late Mr. W. H. Knowles. This basin has never been fully excavated, but its over-all dimensions, 39 ft. (11.88 m.) by 14½ ft. (4.42 m.), are known and its southern two-thirds is largely visible. Its flagged bottom is mostly intact (pl. xxii δ), except at the north end, where it stepped up, as Knowles recorded and as the writer (I. A. R.) checked before filling in this highly unsafe portion of Knowles's excavation. Here the upper flagging had been robbed. Steps are now lacking, but may well have been supplied at the north-west corner. A small torn portion of lead lining on the bottom of the bath still exists below the later conduit which linked the feed and outlet, still serving to drain the Lucas Bath, when the bath was dismantled and obliterated, but elsewhere the lead lining has been totally removed. The outfall lay at the south-east corner and its exit was obliterated by the outfall drain of the Kingston Baths, which also removed the north side of the Roman outfall drain itself, leaving in position only its stone bottom and south side of massive stone slabs. The further course of this outfall drain is described below (pp. 121 ff.). There is no doubt that the Bath of 1923 marked the east end of the Baths as originally planned. The two doors at the north and south ends of the east wall of the Lucas Bath, the northern still extant and the southern recorded by Irvine, may thus be recognized, for the first time, as original exits or entrances communicating with the outside world. The notable features of this bath, as compared with the Great Bath or the Lucas Bath, is its lack of steps and the position of the floor of the bath at different levels as between the north and south ends. Both points of design are typical of the Roman swimming bath (*natatio*) and were in fact repeated again in *Aquae Sulis*, at the west end of the building, in the bath below Stall Street (see p. 109). The roofing of this vast alcove presents no problem, since its north and south walls permit the continuation of the main roof of the Lucas Bath and its east wall a gable end.

In the second period the Bath of 1923 was obliterated and its site was cut off from the Lucas Bath, to become part of a new suite of everyday Roman type, as distinct from those concerned solely with the curative waters. This development is described

separately below (pp. 133 ff.). Later in the third period the Lucas Bath received the same kind of treatment as the Great Bath, to adapt it to a vaulted roof, and a symmetrical row of entirely new additional pilasters, of which only the northern member on the east wall survives, was supplied and is recorded in several drawings of about 1755. Perhaps the most convincing, because so completely unsophisticated, is the little drawing now in the possession of the Society of Antiquaries of London. The pilasters have the same function as those of the Great Bath and indicate a thickening of the east and west walls by means of blind arcades, with the object of supporting a tunnel-vault running north and south between the main east to west rows of piers. This vault must have been high enough to allow of clerestory windows, and perhaps a lunette at the east end. The north and south walks would then be covered by east-west barrel-vaults, while the alcoves would be roofed separately, either by half-domes or ceiled wooden roofs.

The fourth period in the Lucas Bath saw some important transformations. The level of the floor of the main bath was heightened, so that the feed-duct from the Great Bath must have bubbled up from its inlet, while its outlet would be correspondingly depressed. The floor of the bath was relaid, as described above (p. 100), and its long sides appear to have been reinforced by new walling, probably to support additional steps, since the north flight was now blocked. The disuse of the north steps was connected with remarkable changes introduced in the north alcove, which was now cut off from the rest of the suite by walling up the access to the west walk, the east bay of the north walk, and the north steps of the Lucas Bath. The floor-level of the walk was also raised, as is indicated by the appearance of a pipe-duct in the original paving. In the alcove itself a deep semicircular bath, fed by the pipe-duct just mentioned and entered from the walk by twin flights of six steps, was constructed in the alcove. These steps were once panelled in stone and further stone panelling is largely preserved on the semicircular stone-faced seat with which the bath is equipped. The cold-water pipe which once occupied the duct was linked with the system already described in the Great Bath, and entered the new bath, as was observed in 1755, along the partition dividing the flight of steps. The outfall runs obliquely north-eastwards, to join the overflow drain from the Hot Springs. The purpose of this remarkable bath, so carefully provided with means of easy access and with seating below water-level is plainly connected with cold immersion treatment; and it will be recalled that a vogue for this specific treatment was established in Roman times by its success in the hands of the physician Antonius Musa, who cured the Emperor Augustus by its use. The bath was entered from the Great Bath only, and evidently served for the use of invalids as an alternative or adjunct to immersion in the hot mineral waters. It may have been now also that the south alcove of the Lucas Bath was supplied with an apsidal bath; but this was so severely damaged, by eighteenth-century walling and cellars, that only fragments of it remain and neither its feed nor its outfall have survived. It is therefore impossible to place it in a structural sequence, and, although the apse is considerably smaller than the northern alcove, the difference is probably not of consequence. Its shallower depth, however, suggests that its purpose was different

AQUAE SULIS THE THERMAL BATHS

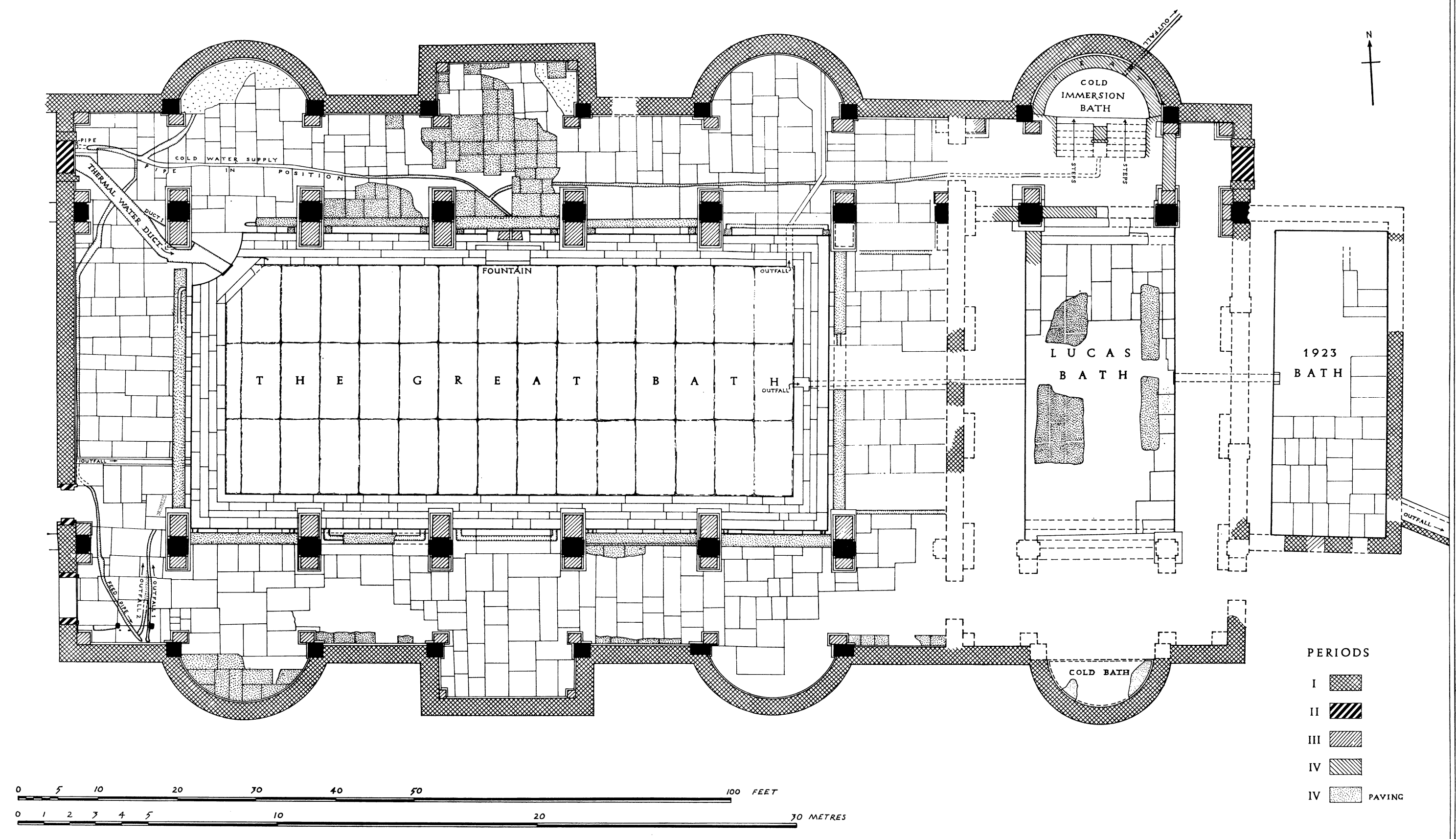


FIG. 31

and the source of its water-supply is unknown. The general effect of all these changes remains clear. Access to the Lucas Bath from the west was now obtainable only on the south, harmonizing with changes at the west end of the Baths, described below. The effect was to lessen the intimacy of connection between the Lucas Bath and the Great Bath, by putting new emphasis upon the connection with the eastern suite of baths yet to be described (pp. 113 ff.); and the description may be to this extent anticipated, by observing that the main Lucas Bath and its southern alcove-basin supply the necessary tepid- or cold-water baths not otherwise furnished in that suite. In terms of planning, the fourth period modification of the Lucas Bath therefore marks the encroachment upon the curative baths by the ordinary hot baths, even if the basins were used for both purposes.

c. The Chamber containing the Circular Bath and adjacent Areas (fig. 32)

To the west of the Great Bath lies the Circular Bath, a round basin manifestly fitted so tightly and awkwardly into the room which it occupies, that the very plan makes it difficult to accept as original. The suspicion engendered by the planning is converted into certainty by the fact that the steps at its north end are partly built of re-used material. When the circular bath is removed from the original plan, the room takes on another aspect. The south end of the suite is paved in fine stone slabs, exactly comparable with those in the walks of the Great Bath. The slabs are planned to fit four stone piers, two complete and two engaged, again matching in design the corresponding features in the Great Bath. But, while they fit the piers, they actually underlie the walling which links the piers; and this relationship demonstrates that the walling is secondary. In the first period, the room was therefore entered from the south, through open arcades carried by the piers. At the north end proof of the same relationship takes a different form. The original paving has been lifted, and replaced by a cement filling contemporary with the walling that runs between the comparable set of four piers; but, since the plinths and base-moulds of the piers were completely buried or obliterated by the walling and filling just described, and were only brought to light by cutting them away, it may be concluded that these piers also originally carried open arcades. The room thus begins to emerge as an open hall, and this is confirmed by the important and dramatic features in its north wall. This, unlike the walls in any other part of the Baths, was finished in massive ashlar pierced by great windows (fig. 35 and pl. xxv1a). That on the north-south axis of the room has a semicircular head and in its width of $9\frac{1}{2}$ ft. (2.9 m.) considerably surpasses that of the window opposite the eastern bay of the room, which measures $6\frac{3}{4}$ ft. (2.06 m.) wide and has a flat head. Plan and elevation together leave no doubt that there was originally a symmetrical arrangement of three windows; but the western member was removed when the King's Bath received its charming if small-scale Renaissance form in the seventeenth century. The stately proportions and fine quality of the masonry demonstrate the special care lavished upon this part of the building, which is echoed by the fluting of the north face of the adjacent piers (pl. xviii6) (but see below, p. 105). The jointing and fitting of the stones is everywhere of extremely good quality, nowhere better

demonstrated than in the joggled voussoirs of the flat-arched window. The work belongs to the classic Roman building tradition, and its very excellence defies close dating, since this first-class work continues little changed in standard from the Augustan period well on into the second, third, or even fourth century.

The structural details now described comprise all the evidence today available for the original arrangement of this important room. The dominant feature in its plan, especially when the question of elevation is considered, is the large central arcade, matching those of the Great Bath in scale, and the separation of both the south and north passages. This seems to imply, exactly as in the Lucas Bath, a continuation of the original timber roof of the Great Bath, with clerestory windows on north and south. The special feature of the room is the provision of the large window in its north wall, lighting the passage which gave access to the Great Bath. The door between the two was an impressive structure, with the large monolithic stone jambs typical of bathing-establishments, in which the steam would have warped and destroyed wooden frames. But the emphasis and concentration is upon the windows, and it is important to observe that what lay beyond them was the sacred pool, and the Temple of Sulis Minerva, its presiding deity. They were no doubt intended to give a vista, but they neither gave access to the pool nor afforded any convenient close view of it. Their principal function was to light an important traffic point, where bathers turned eastwards to the Great Bath. The room therefore served as a vestibule to the Great Bath. It might, indeed, have served as an original *apodyterium* or dressing-room, resembling the hall, by some miscalled a temple, which divides the two suites of baths at Bourbonne-les-Bains, Haute-Marne.¹

The second period in the Circular Bath is marked by important changes, brought about by the introduction of the round basin itself. The still later third-period kerb, now left high and dry by the removal of the floor once flush with it, and the third-period engaged piers on the east and west walls, now give an effect of really awkward overcrowding, as if the bath had been planned actually too large for the available space. But when these are eliminated, and when the bath is seen in its original form, the relationship is more harmonious, if the fit is tight. The bath is built in masonry, and is just over 4 ft. (1.22 m.) deep. But its floor is highly irregular, as if only its rubble underpinning were now left; and it may be supposed that there was once a flagged floor or at least an even floor of cement, probably lead-lined. A covering of lead would both conceal and justify the employment of re-used masonry for the south-west corner of the lowest projecting step at the north end of the bath. No feed channel for the bath is now visible and there was certainly no connection with the Great Bath matching the feeder-duct to the Lucas Bath. Nor is there the slightest indication of a connection with the hot spring, though a modern pipe supplies the bath with hot water today. Indeed, the entire arrangement of the ancient feed channel from the Hot Springs indicates that no connection with this room was contemplated. The water-supply must, then, have been a cold one, supplied from a fountain-like structure carried on the projecting platform at the north

¹ A. Grenier, *Manuel d'Archéologie Gallo-Romaine*, iv (1960), fig. 140.

end of the Bath. The overflow channel, on the other hand, ran as an open duct into the Great Bath, where it still appears in the south walk, at a point just west of the door leading into the Circular Bath from the walk in question; its western end has been damaged by the insertion of new paving. A main outlet for emptying the bath no doubt connected with the large drain which runs southward from its south-east side, but the destruction of the floor has ruined all trace of the arrangement (fig. 40).

The cutting off of the north and south passages outside the respective arcades meant a reorganization of doorways. To give access to the circular bath a doorway was inserted in the west wall of the Great Bath, while a new doorway, whose jambs are of poor re-used stones, was cut in the same wall to give access to the south passage. This passage now became the principal thoroughfare between the west end of the Great Bath and other parts of the establishment to the south-west.

The north passage, which had been the principal entry to the Baths in the first period, was now cut off from the Circular Bath, while its east door, giving access to the Great Bath, was blocked, rendering the passage completely obsolete.¹ The purpose of the new alterations was, in fact, to provide a large cold plunge bath, which is unquestionably to be brought into connection with the building of a great *laconicum* to the south-west, as described below (p. 110): for the cold plunge was a necessary item in this kind of bathing, as in the Swedish bath to which it is akin.

The third period involved the laying of a new pavement in the Circular Bath, connected with the kerb-like stone margin which now surrounds it and has been left above the general floor-level by the removal of the pavement. Fragments of the pavement nevertheless remain and are visible below the engaged piers, of which four were now added to both the east and the west walls; they are also seen at the south-west corner of the room. These new piers do not follow the style of the older examples, of which the base-moulds were now buried and the faces obliterated by wall-plaster: their base-moulds are of a pattern not seen in the rest of the Baths, in which the tori are hardly separated and are capped by a small *cyma reversa*. The function of these piers was no doubt the same as in the Lucas Bath, namely, to carry blind arcades intended to support a new barrel-vaulted roof. The direction of the roof, as in the Lucas Bath, must therefore have been changed, and light would have here to be derived from the north and south ends, since the east side at least would be overshadowed by the west end of the tunnel vault covering the Great Bath. The south passage, on the other hand, was now

¹ The present writer (B. W. C.) has left I. A. R.'s statement as it was written, but has reservations about the practicality of such an arrangement. It would surely have been unnecessary completely to cut off the north passage and hide from view the magnificent windows. A more likely explanation is that in the second period the floor of the passage was raised, much as it is now, necessitating the construction of a retaining wall between the piers and the blocking of the lower part of the east door. Access could have been provided by steps up from the north ambulatory of the Great Bath. A

raised platform would have afforded bathers a better view of the springs. Such an arrangement would explain why the north faces of the piers are not fluted down to their bases (pl. xviii^b), as they would have been had the fluting been primary: in fact the fluting is more likely to be of second-period date relating to the proposed raised floor. A final point, possibly of some relevance, is that on the old model constructed early in this century a small area of raised floor is actually shown, though on what briefing the modelmaker worked cannot now be discovered.

covered with an east-west vault, carried upon plain baseless piers, of which one still stands to full height, with two voussoirs of juxtaposed blind arcades remaining in position upon its finely moulded capping. The height of the arcade can thus be calculated accurately at 11 ft. 2 in. (3.4 m.), while the intrados or soffit of the vault covering the passage will come at 14½ ft. (4.42 m.) above floor-level, allowing for the insertion of a moulding in stone or tile at its springing (fig. 36 and pl. xxvi*b*). It will be observed that the height to the springing of the vault coincides closely with that of 14 ft. (4.27 m.) to the extrados of the arched window in the north wall. This might well be considered to provide a general norm for the height at which roofing, whether vaulted or timbered, began in this part of the building and in the north and south walks of the Great Bath which correspond to it. It is thus a particularly interesting and valuable portion of the building for its bearing upon elevation.

The chambers to the south of the hall containing the Circular Bath are now largely obscured by the pipes and pumping machinery which purify the mineral waters and conduct a supply to the various treatment centres. Nevertheless re-planning, clearing operations, and the excavation of several trial trenches (pp. 134 ff.) have combined to make the general development, if not the detail, of this region intelligible. In the first period the south wall of the hall was pierced by three openings, a wide central opening flanked by one of narrower width on each side, reflecting in its general proportions the north wall of the hall, previously described. The central opening led between massive piers into a rectangular chamber, measuring internally 15 ft. (4.57 m.) by 17½ ft. (5.33 m.), the original floor of which, consisting of a 3-in. (0.076-m.) layer of red mortar upon pitched limestone blocks, lay at a depth of 4 ft. 10 in. (1.45 m.) below the contemporary floor of the hall. In the centre of the north wall, which revetted the higher hall floor, was embedded a large stone slab pierced by a roughly cut circular hole, 12 in. (0.3 m.) in diameter, leading through the wall into the drainage system which now lies below the floor of the southern part of the hall (fig. 50). Thus we are dealing with a room with a sunken floor which originally it was necessary to drain. Two possible explanations present themselves: either the room served as a swimming bath or as a large latrine. Although conclusive proof is not forthcoming, the possibility of a latrine would seem less likely on the grounds that the drainage system, as it is at present known, would not have been adequate for flushing so large a structure, the room would have been rather too exposed to view from the hall, and no internal seat supports exist. If, as seems more likely, the room functioned as a bath, it would have been similar to the swimming bath at the east end of the original establishment though rather shallower. Until the clutter of modern machinery has been removed and further excavation is possible, here the matter must rest. On either side of the arched opening to the bath were doorways flanked by monolithic jambs leading to short corridors, the southern extremities of which have since been largely destroyed. It seems probable, however, that doors also existed on the southern ends to allow access to the exterior. If this were so, the corridors might represent the main entrance to the Baths at this period. From the south-east corner of this suite a wall

continued towards the south. Unfortunately later alterations and modern obstructions make a further examination of the area impossible.

In the second period massive alterations took place. All but two lengths of the earlier walls were demolished and a new room was constructed incorporating the earlier bath and its western corridor, together with a somewhat larger area to the south. The newly enclosed area, measuring 26 ft. (7.93 m.) by 39½ ft. (12.03 m.), was levelled up with rubble from the demolition and a new floor of pennant flags was laid, at about the level of the paving of the hall, sealing the rubble and the stumps of the demolished walls.

The wide entrance in the north wall, leading to the hall (by now presumably containing the Circular Bath), was also modified. The piers, but not their basal slabs, were removed and a new, narrower doorway was built against the western respond, the rest of the gap being filled by a blocking wall (fig. 50). The new doorway was flanked by massive stone jambs, two features of the western of which deserve attention: first, the north-east corner of the jamb is heavily worn by traffic moving through it to or from the east; second, the top of the jamb is cut back at an angle to receive a flat monolithic lintel, now removed but evident from the bed cut to receive it. It was no doubt at the time of these alterations that the door immediately to the east was also blocked.

As a result of this work and of the alterations, previously described, which took place in the southern part of the hall when the Circular Bath was inserted, the paved room was divided from the Circular Bath by an east-west corridor, eventually to be roofed with a barrel-vault supported on blind arcading. Provision was, however, made for adequate access between the paved area and the Circular Bath. The function of these units will become more apparent later, when the west baths are described, but it may be mentioned here that the paved area probably served now as an exercise court for use in conjunction with the hot dry *laconicum* constructed to the west.

At the time of these second-period alterations two entirely new rooms were constructed to the east, immediately adjacent to the paved court, and of one build with it, the northern of which, measuring 18½ ft. (5.64 m.) by 21½ ft. (6.63 m.), was floored with a hard pink mortar. It was entered through the original first-period door from the north and was divided from the southern room only by two projecting responds, which would have supported the haunches of a wide arched opening. The southern chamber was a bath floored at a level 2½ ft. (0.76 m.) below the adjacent floor, first with lias slabs which were later covered with a thick red mortar laid at the same time as the walls were rendered. The floor of the bath was reached by a flight of steps, constructed of tiles and mortar, leading down from the northern room. Waste water was expelled through a drain in the north-east corner which is said to have been provided with a bronze sluice when it was first uncovered in 1890.

The function of this new unit is not altogether apparent, but it was clearly unconnected with the exercise yard and its adjacent bath suite. However, the close resemblance both in size and structure between the second-period bath and the first-period bath, at this time destroyed to make the court, strongly suggests that the new bath was meant to

replace the old functionally. It may even have been of ritual or symbolic significance as its original axial position might be thought to imply.

In the third period several minor alterations were undertaken. The responds between the two rooms were strengthened by the addition of two blocks of ashlar masonry, and the northern room was refloored with pennant slabs. It may have been at this time that a new door was constructed in the east wall to give access to the area south of the Baths, but it is more likely on structural grounds that the doorway belonged to the preceding period. Similar doubt attaches to the period of the blocking of the north door. This is unlikely to have taken place before the third period, but might have happened at any time after.

The final additions post-date the third period. The first consists of the construction of a stylobate south of, but not parallel to, the south side of the Great Bath. The stylobate and its colonnade evidently belong to a building further to the south, of which one wall footing and an area of mortar floor are all that survive. The nature and extent of the building must therefore, at present, remain unknown. At a later date a roughly constructed wall was built from the stylobate to the south-west *exedra* of the Great Bath and at about this time the bases of the columns belonging to the colonnade were cut back to receive a blocking wall built between them. At one point a door, or window, was inserted, the monolithic base and jambs of which still survive *in situ*. It is a matter of considerable regret that more cannot be learnt of this interesting late structure.

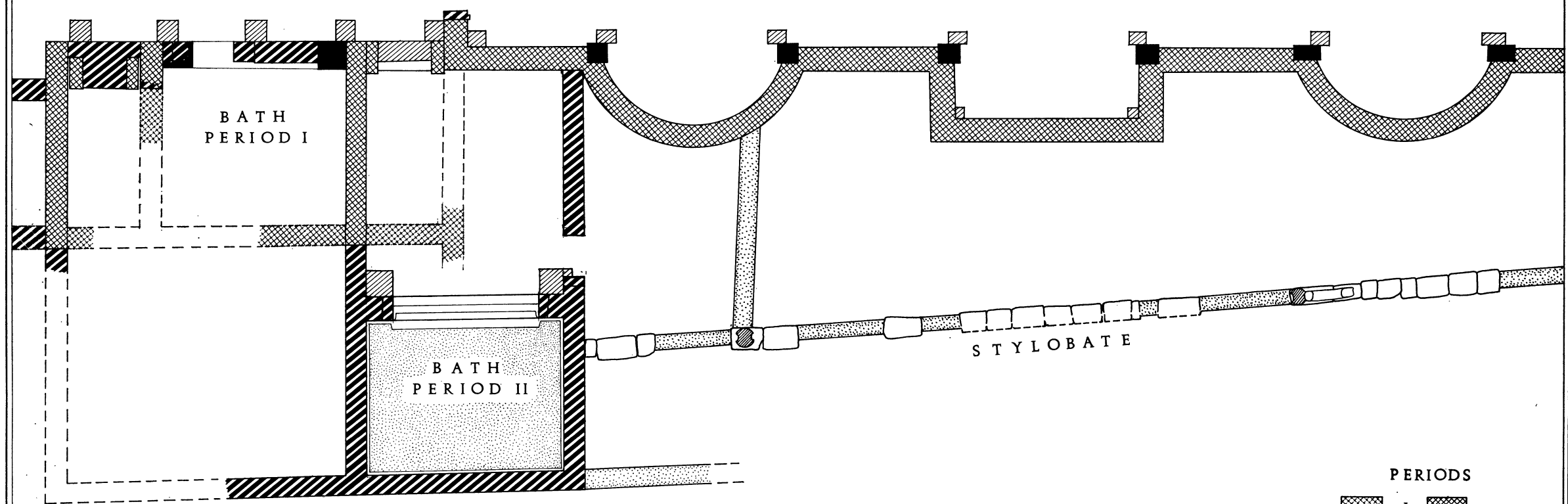
d. The Western Range of Heated Baths (fig. 33)

The detailed study of the baths west of the Circular Bath is rendered difficult by the superincumbent douche and massage baths which, from 1886, were erected over the Roman remains as they were uncovered, destroying and obscuring much of the Roman work. So great was the concern of the contemporary archaeological world for the well-being of the Roman structures that two deputations were sent to Bath by the Society of Antiquaries, but in general their advice was unheeded and the City Engineer, Major Davis, was allowed to continue with his building work. Although most of the Roman western baths cannot now be viewed by the public, some of the structures can still be seen in cellars to the south and west of the nineteenth-century building, and even below the building itself small trapdoors allow access to the better-preserved Roman features. Thus, while it is true that much has been destroyed and even more obscured, the main elements of the Roman arrangement can be disentangled and the general trends of its development can begin to be defined.

In the first period (figs. 33 and 44) there appears to have been a range of four large rooms lying to the west of the hall: these constituted a suite of baths comprising a *caldarium*, a *tepidarium*, a *natatio* serving in place of a *frigidarium*, and a smaller room which might have served as an *apodyterium*. The *caldarium* and *tepidarium* are both immediately adjacent to the hall, with which they can be shown to be contemporary by the fact that the wall dividing them bonds with the west wall of the hall. The original

AQUAE SULIS

AREA SOUTH OF THE GREAT BATH



PERIODS

	I	
DEMOLISHED	II	
	III	
	LATER	

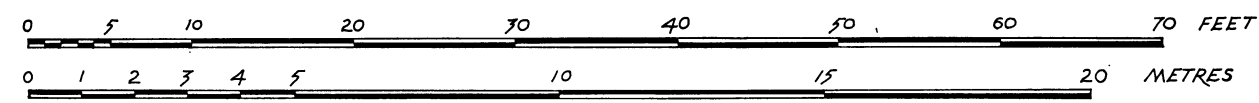


FIG. 32

internal details of the *caldarium*, measuring 19 ft. (5.79 m.) by 29½ ft. (8.99 m.), would have been completely destroyed by the subsequent alterations to the room, but sufficient remains of the basic structure to show that two smaller baths, each in a rectangular recess, opened from the north and west walls respectively. Here again, details of the original arrangement are lacking, but since the stoke-hole which served the main chamber of the *caldarium* also heated the north bath but not the west it would seem likely that the two baths were of unequal heat; the larger, the west bath, being the cooler since it would have derived its heat second-hand from the main room. Further, the arrangement of the stoke-hole is such that its cheek walls would probably have supported a boiler which would have provided the hot water necessary for the baths. The door leading from the *caldarium* is still sufficiently well preserved to show that the surviving stone jamb and sill are not in their original period 1 position, which would have been 17 in. (0.43 m.) below the present (period 2) sill. The reason for the change will be discussed below.

The first-period details of the *tepidarium* are completely unknown, but it seems likely that the room was entered only through a narrow door from the *apodyterium*. Since the period 1 plan, as we know it, strongly suggests that a corridor ran from the *apodyterium* along the south side of the *tepidarium* to the hall, it is most unlikely that the *tepidarium* would have been heated from the south: it must therefore have obtained its heat from the *caldarium* through vents in the dividing wall. The crucial evidence is, however, buried beneath subsequent floor levels, and cannot now be reached without substantial damage to the later features.

The *apodyterium*, which divides the *caldarium* and *tepidarium* on the one hand from the *natatio* on the other, seems, in its original phase, to have been entered from the north by means of a wide corridor. Four doors opened from it: one to the north, possibly to an entrance; one to the *tepidarium*; one to the *natatio*; and possibly one through the southern wall. It must be admitted that no positive evidence has yet been found for a southern door, but one in this position would have been essential to allow access between the artificially heated suite and the hall, and thence to the thermal baths beyond. No trace of the supposed southern corridor survived the later rebuildings.

To the west of the *apodyterium* lies the cold-water swimming bath, set tightly within a room measuring 20 ft. (6.09 m.) by 33 ft. (10.05 m.). The bath itself measures 21 ft. (6.40 m.) long by 15 ft. (4.57 m.) wide and is 5 ft. (1.52 m.) deep. Its walls are built of tiles heavily plastered with red mortar which also, in greater thickness, constitutes the floor: there is no trace of a lead lining, and indeed such a lining would have been unnecessary. The bath is entered by two flights of steps leading from the north and west sides respectively; its narrow surrounding platform, which overhangs the bath, is composed of large stone slabs, those along the west side being chamfered and grooved. The bath is highly reminiscent of the first-period arrangement at the east end and may, in a similar manner, constitute the extreme western limit of the bathing establishment.

The first-period features just described together comprise a heated suite in which fine detail is clearly subservient to an austere but spacious grandeur, perfectly in keeping

with the quality of the first-period work elsewhere in the establishment. The various elements have been so arranged as carefully to separate the artificially heated suite from the thermal baths by means of a wide hall in which the bathers could meet, talk, and choose their style of bathing.

The elegance and spaciousness of the simple first-period plan was swept away by the second-period alterations, in which the bathing facilities were further extended by adding a Swedish-style unit, consisting of a hot dry and cold plunge facilities, to the Turkish system of baths already in existence. The principal element of this new arrangement was a large circular room 18 ft. (5.49 m.) in diameter, of which the main floor has vanished but the hypocaust basement and *pilae* largely remain. The hypocaust seems to have been stoked from the south side of the room, no longer visible, for no stoke-hole is now to be seen in the other three. The nature and dressing of the stones used in this new building so closely resembles those of the second-period *caldarium* in the east wing (pp. 113 ff.) that they may be considered to be largely contemporary. The form of the room clearly shows that it served as *laconicum* or sweating-chamber, the function of which was, by means of very hot dry heat, to promote heavy perspiration. The bather, having sweated, could then choose between a plunge in the cold water of the Circular Bath or the warm water of the Great Bath beyond. As fig. 45 shows, the remodelling of this area linked the single door of the *laconicum*, through an ante-room, to the corridor running along the south side of the circular bath in a simple and efficient way, whilst preventing the steam of the Turkish suite from penetrating the dry atmosphere of the Swedish system. An added refinement was the provision of an exercise yard—the paved area described above (p. 107)—in which the bather could tire himself before relaxing in the dry soothing atmosphere of the *laconicum*. The worn western door-jamb shows with what frequency the bathers availed themselves of this facility.

The rest of the west range underwent some minor modifications at this time. It seems that the level of the hypocausts was raised by about 23 in. (0.6 m.) in both the *caldarium* and the *tepidarium* to the level of that in the *laconicum*. This necessitated several structural alterations: a new flue was inserted into the *caldarium* at the higher level, the door sill and jambs between the *caldarium* and *tepidarium* were raised, but it is in the *tepidarium* that the nature of the alterations can most conveniently be studied. Since, in the new arrangement, the *tepidarium* now had to serve as means of access to the thermal part of the establishment, a new doorway was cut in the south end of its east wall thus linking the west range to the circular bath chamber and the Great Bath beyond. The rise in floor-level created further problems, for it will be remembered that in the first period the *tepidarium* probably received its heat from the *caldarium* through vents in the wall, which would have been buried below the new hypocaust basement floor. To overcome the difficulty it seems that a new stoke-hole was built in the space between the north wall of the *laconicum* and the south wall of the *tepidarium*. The eastern part of the hypocaust is still moderately well preserved, but, when found, large areas of the suspended floor were still in position and Irvine's section drawn in 1867 (fig. 48) shows clearly that

it was constructed largely of box-tiles laid in closely spaced horizontal rows, so that the hot air could circulate more efficiently. This detail has unfortunately since been destroyed, but the jacketing of vertical box-tiles clamped to the south wall is still largely intact.

One further structure, probably belonging to this second period, is the oblong alcove containing a small bath $6\frac{1}{2}$ ft. (1.98 m.) long by $4\frac{1}{2}$ ft. (1.37 m.) wide, which was built behind an opening cut into the west end of the south wall of the *tepidarium*. The bath, entered by means of a step, is still exceptionally well preserved, being plastered with pink mortar and surfaced with a fine lime wash; all the angles were furnished with a quarter-round moulding in the same pink mortar. The bath does not seem to have been separately heated, although it must be admitted that the point cannot at present be examined in detail. An outfall drain leads from the south-east corner.

In summary, it may be said that the second-period alterations involved the addition of a further attraction—the Swedish-style suite—and necessitated several minor adjustments to the existing baths, notably the addition of a small bath to the *tepidarium*, a convenience which was further expanded in the third and fourth periods.

In the third period a new pair of heated rooms was built in the corner between the *laconicum* and the *apodyterium*; together they measured 16 ft. 6 in. (5.03 m.) wide by about 28 ft. 6 in. (8.69 m.) long, and were divided by a wall pierced by three vents to allow the hot air to circulate freely below their suspended floors. The stoke-hole serving the new unit must lie to the south, shared perhaps with that belonging to the *laconicum*. Unfortunately the southern area cannot be excavated. The addition of rooms in the south-west corner affected the heating system of the original *tepidarium*, for they made it impossible to use the stoke-hole which, in the second period, had been inserted between its south wall and the *laconicum*. A new stoke-hole had therefore to be constructed in the *apodyterium*, opening through the west wall of the *tepidarium*. Such an arrangement, though functionally adequate, was not particularly satisfactory, for stoking activities now occupied much of the *apodyterium* and, even though they were screened off by a wall from the main passageway which led to a newly constructed door in the north-west corner of the *tepidarium*, bathers wishing to use the new south-west baths would have been forced to pass through the stoker.

By the end of the third period the users of the western range of baths were thus provided with three different types of bathing facilities. They could have taken a normal Turkish bath using the modified first-period rooms, or they might have wished to take a sweat-bath making use of the *laconicum* and its associated features added in the second period. The south-west rooms, by the time of the final expansion in the fifth period, provided yet another choice, for this arrangement does not form part of an ordinary bathing suite and it is consequently possible to recognize here a series of rooms for curative treatment fitted with small baths in which different types of individual treatment might be given. It may be noted that the douche and massage baths of 1886 now lying directly above the Roman remains were of a closely similar form, and no doubt functioned in much the same way.

The fourth period saw a major reorganization. The passage between the *laconicum* and the Circular Bath was blocked and a small latrine inserted against the blocking wall. At the same time a door was cut through the southern room of the *tepidarium* so that the *laconicum* and *tepidarium* could be used together. Now since this reorganization implies that the *tepidarium* was intended, in this phase, to be a room of warm dry heat, it is reasonable to suppose that it was at this time that the small bath opening from its south-west corner was walled up. Even more far-reaching alterations occurred in the old *caldarium*, which was now converted into an oval-shaped cold plunge c.5 ft. (1.5 m.) deep, reached by a flight of steps from its north side. The bath, built of fine ashlar masonry, is fitted tightly into the room but a sufficiently wide surround was left to allow the bathers, having plunged into the cold bath after sweating in the *laconicum*, to climb out and walk back to the *tepidarium*, which would presumably have functioned now as a warm *apodyterium*. The small hot bath, recessed in the north wall of the old *caldarium*, was converted into a cold bath, while that in the west wall seems to have been blocked up. It is very much to be regretted that this fine series of fourth-period structures have been almost completely sealed below the nineteenth-century floors, and those few elements which may still be seen are reached only with considerable physical discomfort.

The south-western heated rooms were further modified during this period. The *pilae* were removed and the basements were filled with rubble to approximately the level of the original suspended floor. At this height the rubble was surfaced with pink mortar, thus creating a basement floor upon which a new hypocaust was constructed. At the time of the reflooring an additional heated bath was constructed in a recess attached to the west wall of the southern room. Its walls were jacketed with box-tiles and it was heated by means of a flue cut through the wall to the east. The possibility, however, remains that a separate stoke-hole was provided to the south, but here again recent cellar walls make impossible a further examination of this region.

In the fifth period the south-western heated rooms reached their final form. The basement of the small heated bath of the fourth period was, at this stage, filled with rubble so that a new unheated semicircular bath, of which the flooring of pennant slabs and the mortar wall-rendering are still very well preserved, could be inserted into the recess. To compensate for the loss of this heated bath, a new recessed bath of similar dimensions was built immediately to the north, opening out of the west wall of the northern room. At a still later stage the west wall of the addition was rebuilt from just above foundation level.

How the western part of the west range functioned in its final stage is not immediately apparent, but it may well be that the south-west rooms served as the *caldarium* and *tepidarium* of a Turkish system, for which the first-period swimming bath still served as a *frigidarium*. Another possibility is that the eastern range now provided the only Turkish facilities and the south-west rooms continued to be used as curative baths. The question will unfortunately remain until far more is known of the date and form of the heated rooms which lie to the north (see pp. 44-6).

AQUAE SULIS

THE WEST BATHS

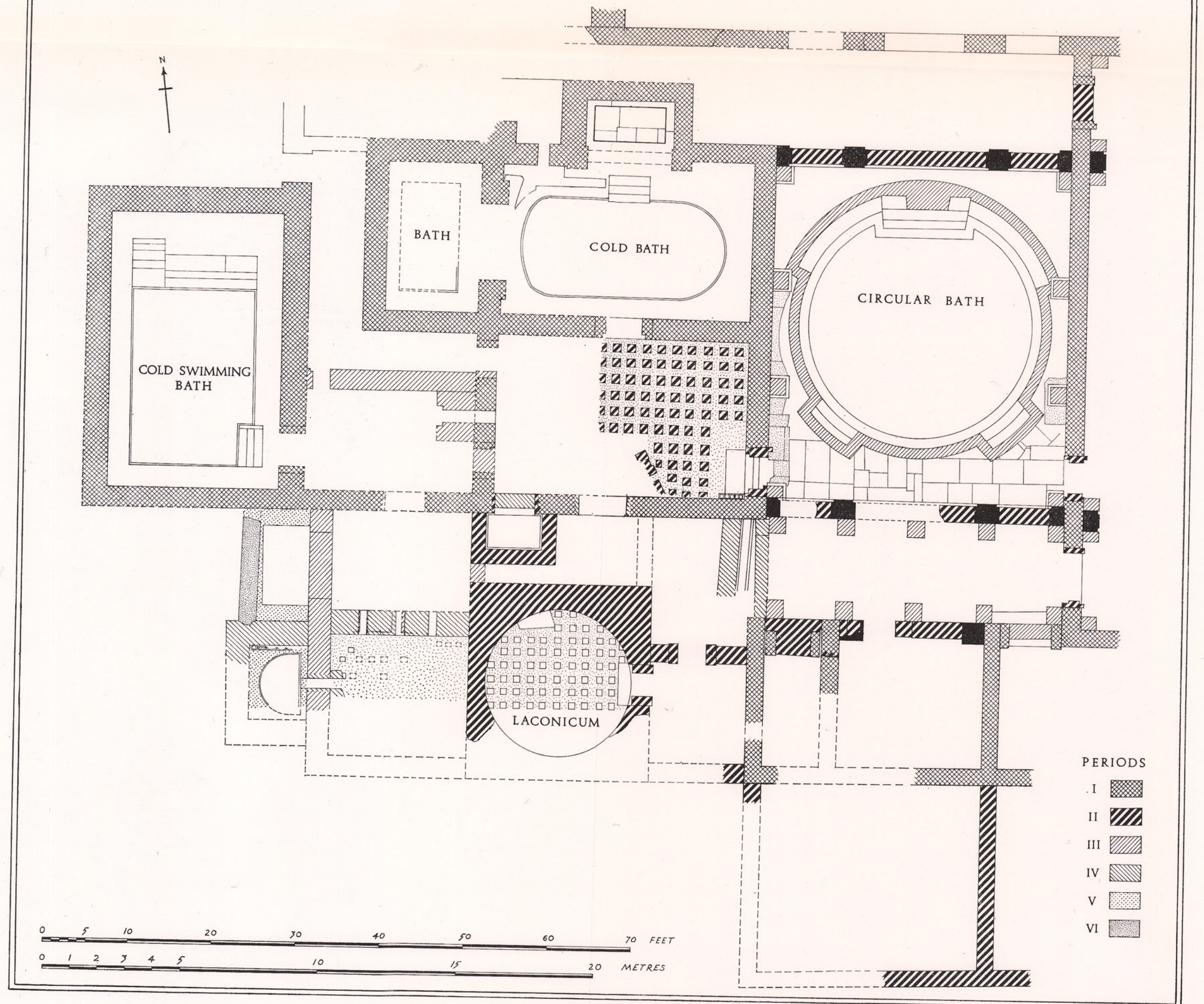


FIG. 33

e. The Eastern Range of Heated Baths (fig. 34)

As has already been observed the new east wing was excavated by W. H. Knowles in 1923, but his analysis of the remains was insufficiently detailed to give an accurate picture, as a new description will incidentally show. The first step taken was to fill up the large oblong bath occupying the eastern alcove of the Lucas Bath. The bath was packed with rubble, below which a new drain was inserted to link up the old inlet and outfall of the bath, so that the waste from the Lucas Bath itself might continue to run off unimpeded. The east and west walls of the alcove were thickened and supplemented by a new wall, embracing piers which divided it into three bays. These piers, but not the walling between them, were carried down to the bottom of the disused bath, of which the sides were cut back to receive them (pl. xxiii^b). They were evidently intended to carry the main weight of a vaulted roof. They are not, however, related to the main divisions in the room which they embraced. The space above the old bath is divided into two unequal rooms, the southern 20 ft. (6.09 m.) long by 13 ft. (3.96 m.) wide, the northern-most 16 ft. (4.88 m.) long and 13 ft. (3.96 m.) wide. The wall between them contains three basement flues and it is clear that both rooms formed part of a continuous heated suite. From the smaller room opened eastwards a stilted apse 12 ft. (3.66 m.) in diameter, with a stoke-hole flue in its north side, while to north lay a small rectangular room which had very thick basement-walls and a large north stoke-hole. There was also a south flue linked with the smaller room and no doubt supplying it with heat. The very thick wall enclosing the stoke-hole on the west, its east wall being buried below later remains, indicates that the stoke-hole was a big one, associated with a boiler-stand. The whole suite is therefore recognizable as a hot bath of the normal Roman kind, with a *tepidarium*, *caldarium* with apsidal bath heated by a special stoke-hole, and a large stoke-hole heating a boiler. The *tepidarium* gave on to a pair of rooms running east and west, both heated by flues which connected them with the *tepidarium*. The western room served as a vestibule for bathers entering from the Lucas Bath, and the eastern room, of very gentle heat, led into a large room, almost 20 ft. (6.09 m.) square, which would have served as a dressing-room. In an atmosphere as warm as that of the curative waters, rooms normally treated as cold (*frigidaria*) would have to be warmed to some extent, in order to meet the danger of chills, while a dressing-room would be needed for those bathers who chose to take a Turkish bath before using the curative waters.

The third period saw a substantial extension of the suite. The room identified as an *apodyterium* in the second period received new and thicker walls, a heated floor, of which the basement remains, and an eastern stoke-hole, which incidentally defines the eastward limit of the building. It also received an oblique north entrance, wedged in between its north-east corner and the east wall of the apse of the *caldarium*. The room to south of it was equipped with a new hypocaust, with its own stoke-hole, and was extended southwards over the remains of the second-period south wall. Richard Mann records its new south wall and also the fact that there was a further room to the south. To west of the

southern half of the new room yet another room was added, extending as far as the south alcove of the Lucas Bath, and the south-east corner of this was also noted and carefully drawn by Mann. The effect was thus to add very substantially to the number of *caldaria*, but not yet to the hot-water baths normally associated with them, it being no doubt expected that the curative waters were to be used in the Lucas Bath or the Great Bath, with the advantage that the waters would also be more effective when absorbed by the open pores. For those who desired the normal type of non-curative bath, the *caldarium* of usual type was still available. The dressing-room must no doubt be sought in the southward room, of which only Mann records the existence.

If the third period had thus marked the extension and remodelling of the south end of the suite, it was the fourth structural period in which was evolved the striking plan which ever afterwards determined the form of its north end. The *tepidarium* and *caldarium* of the second period, which had continued in use unchanged in plan during the third period, were completely obliterated. The space occupied by the *tepidarium* was united with the north-west room of the third period to form a large new *tepidarium*, while a new extension was built northwards to form a splendid new *caldarium*, equipped with a pair of apsidal baths, set on either side of a huge stoker, from which the two baths and the *caldarium* were served by three individual stoker-holes. The west bath is choked with a mass of modern concrete filling. The east bath retains its leaden outlet-pipe and a small part of its half-circle of mosaic pavement, exhibiting a crow-step border (pl. LXXXIIIb). The heated basement of both baths were at this stage cut off from that of the *caldarium*, though they were united with it in the fifth period, as described below (p. 115): since, however, the bath hypocaust had no chimney-flues and through-draught was somehow required to make them effective, this was achieved by a return vent into the stoker-hole. The hot air from this was perhaps absorbed by the still hotter air passing into the main flue of the *caldarium*, but it cannot have been an ideal arrangement; and it is possible that details which now elude us have vanished. The walls of this period were jacketed in flue-tiles, of which none now remains, for they were stripped off during the fifth-period alterations: but the broken stems of the iron hold-fasts which spiked the flue-tiles to the wall still occur on the east wall of the room and their line is obliterated by the surviving fragment of the fifth-period floor. Only in this part of the suite do the remains stand high enough for such evidence to exist (pl. XXIIa). The floor-level of the hypocaust basement is substantially higher than those of previous periods, probably very close to the upper floor of the second-period hypocaust which it removed. The reason for this change of level is in the fact that the second-period hypocausts had been set below the general floor-level of the Baths, so that their tops should coincide approximately with it. But this meant that if the hypocaust basement and stoker-hole approach of the fourth-period northward extension had been supplied with a basement at the second-period level, it would have cut right through the crown of the main overflow drain of the Hot Springs, which at this point had turned south-eastwards and was running below the north-east corner of the new extension. It was therefore necessary to raise the floor of

AQUAE SULIS EAST BATHS

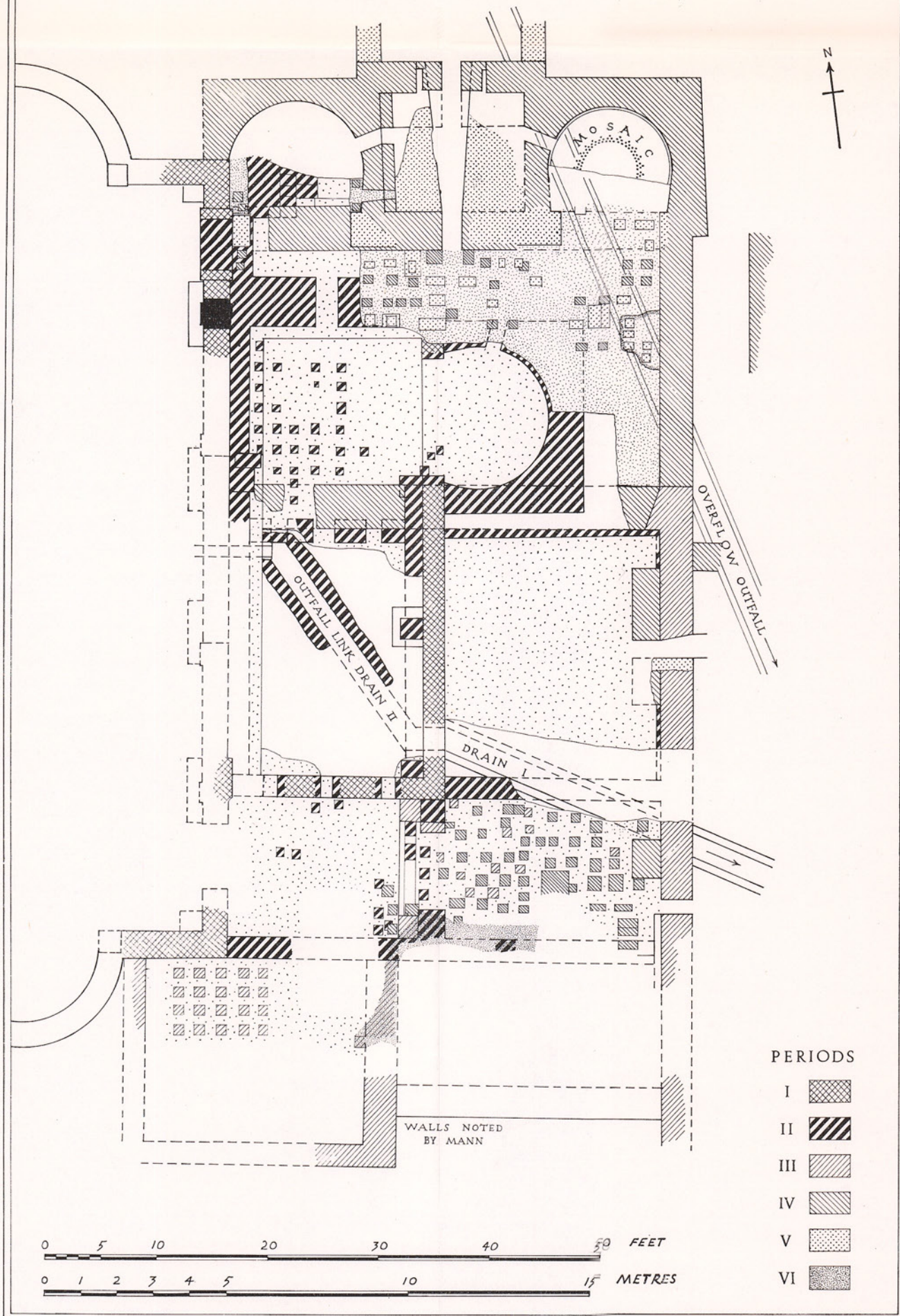


FIG. 34

the new basement so as to clear the top of the overflow drain, thus accounting for the new change in level.

In the fifth period came some final and remarkable changes, of the greatest interest for the history of the Baths. Wherever the conditions permit such evidence to survive, the hypocaust basements all over the Baths (see above, p. 112) were filled to a height of 9 in. (0.23 m.) with puddled blue clay, beaten hard. In the east wing the filling is seen in the *caldarium* and in the rooms to south of the *tepidarium*. In the west wing it occurs in the room immediately to west of the Circular Bath. This filling lies on top of the soot-covered floor of the hypocaust basement. In the *caldarium*, however, where a small block of stratification remains undisturbed and sealed by the fifth-period floor, the top of the clay is covered by a layer, up to 3 in. (0.08 m.) thick, composed of numerous flood-deposits of Avon river-water, mixed with elements from a local manganese-laden spring (see pp. 143 ff.). This evidence makes it clear that the raising of the level of the basement floor by the clay filling was undertaken in order to avoid river-floods, which must have been interfering seriously with the use of the Baths for the first time. To appreciate the point it must be realized that at the outlet from the Roman baths the present river-bank stands at Ordnance Datum level 57.01 ft. (17.37 m.), while the basement floor of the *caldarium* is at O.D. 61.96 ft. (18.89 m.). Only a 4-ft. rise in water-level is therefore required to flood the basement, and severe floods nowadays rise to just that level, though the worst have risen high above it. On heightening the floor by the extra 9 in. (0.23 m.) the situation is therefore secured against floods of normal severity. The general significance of this change in conditions is discussed later. Structurally, it demanded a heightening of the hypocaust pillars and the complete reconstruction of the floors which they carried; and the character of this rebuilding is clearest in the fragment of well-made floor and its rather roughly built supporting pillars in the *caldarium*, although it is also to be observed in the rooms south of the *tepidarium*. In the *tepidarium* itself neither pillars nor floor survive, but the south cheek of the stoke-hole was lined anew, and the clay of the lining embodied a substantial fragment of a stout straight-sided dish in fumed ware, devoid of ornament but of fourth-century style and fabric. At the same time drastic changes took place at the north end of the *caldarium*. The great stokerly was completely reconstructed. A new stoking yard was provided beyond it and a huge stoke-hole, gradually narrowing in width towards the inside, was built to support the boiler above it. This new structure completely blocked the fourth-period stoke-holes and vents leading to or from both semicircular hot baths. The baths in question were therefore remodelled by opening up their fronts and so linking their hypocausts with that of the main room. The new work required has left its traces on the east and west sides of both baths, in the form of a patch in the east wall of the *caldarium* and of wholly new jambs elsewhere.

At the south end of the suite a sixth phase of alteration is seen. The clay filling of the fifth period covers, as elsewhere, the burnt deposit on the fourth-period floor and is tucked round a rebuilt hypocaust pillar. But it is covered by a layer of broken rubble, largely composed of the remains of concrete floors, capped by a thick floor of new concrete,

undoubtedly Roman. This represents the latest Roman reflooring of the room in question; and the floor is cut and damaged by the eighteenth-century cellar walls, while a gutter, contemporary with them, rests upon it and, together with a cistern or vat, was mistaken by W. H. Knowles for an ancient feature. The flooring, which is indubitably ancient, has remained until now unobserved, and did not become appreciable until the section was cleaned. It is of special interest not only because it represents the last stage observable in the Roman structure, but because it stands for encroachment by non-heated rooms upon an area previously heated, as if it represented a new *apodyterium* now added to reduced buildings. The level of the new floor matches that of the fourth period in the east walk of the Great Bath, which was there the latest Roman level, and it is interesting to find the two positions in accord with one another.

f. The Roofing of the Main Chambers (figs. 37 and 38)

Sufficient has been said above to give a general idea of how Sir Ian Richmond thought that the Great Bath, the Lucas Bath, and the Circular Bath had been roofed. To summarize, he believed that in the first period the three chambers were probably roofed together beneath a continuous timber cover supported on lateral arcades, the side aisles or ambulatories being roofed separately at a lower level to allow clerestory light. In the third period the timber roof was replaced by three massive masonry vaults, one running east-west over the Great Bath flanked by lateral tunnel-vaults covering the ambulatories, the others, covering the Lucas Bath and the Circular Bath, lying on a north-south axis. All three would have been open-ended to allow steam to escape.

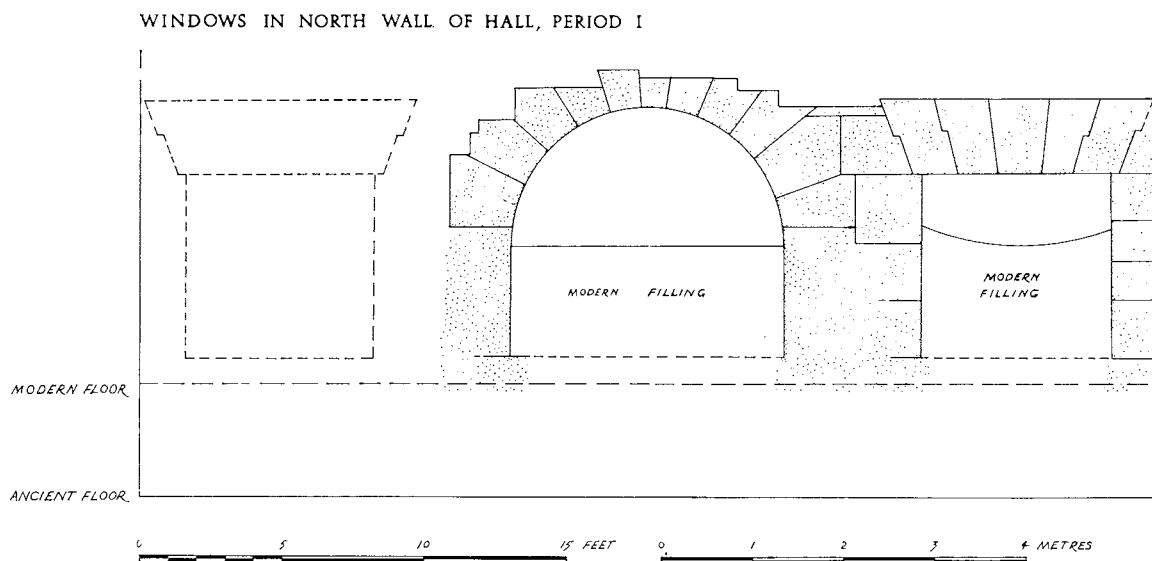


FIG. 35

If the broad outline is sufficiently clear, the details are somewhat obscure; nevertheless certain general points emerge from a closer examination. The superstructure of the

Great Bath in its initial stage can be reconstructed with tolerable accuracy. The spacing of the columns of the arcade and the nature of the surviving structure shows that the soffits of the individual arches would have been about 18 ft. (5.5 m.), and since the arcade was framed in an entablature supported on attached pilasters this would place the underside of the architrave at about 21 ft. (6.4 m.). The nature of the entablature cannot with certainty be known, but a number of blocks of a monumental cornice and architrave have been recovered from time to time during the excavations (nos. 1.77-83). They are of a size and simplicity well in keeping with the style of the baths and may well have come from the main entablature. No part of the frieze is known but in such a bold and simple arrangement it is most likely to have been plain and may therefore have been discarded by the earlier excavators. The surviving architectural fragments and the character of the building therefore suggest that the top of the entablature would have come at approximately 24 ft. (7.3 m.). This much is reasonably certain. The arrangement of the side aisles would demand similar proportions for the framing piers of the north and south walls, above which would have been an outward-sloping roof. Therefore, as fig. 37 will show, the bottom of the clerestory lunettes cannot have been much below 29 ft. (8.8 m.). How this second storey was arranged is not known, but the simplest interpretation in keeping with the quality of the building is that the lunettes were framed within an arrangement of engaged columns supporting an entablature (fig. 38), echoing the first storey. The proportions suggested on the reconstructions are, of course, conjectural but a ceiling at about 46 ft. (14.0 m.) would have created an internal volume

BLIND ARCADING SOUTH OF CIRCULAR BATH, PERIOD III

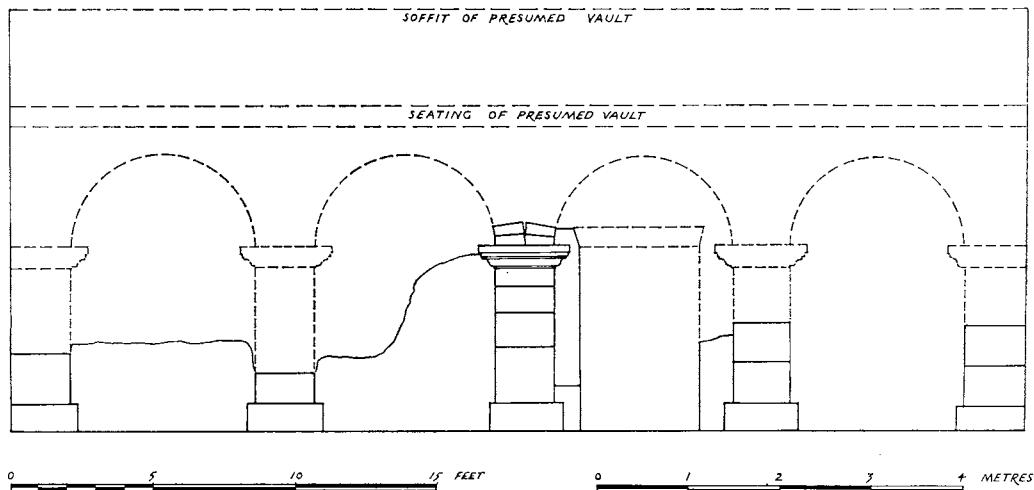


FIG. 36

of acceptable scale. Some hint of the style of the second storey may be given by the number of sections of engaged half-columns which were recovered from the excavations.

Half-columns must have been used somewhere within the baths and the most likely position for them would have been in the second storey between the lunettes. If they had once occupied this position, the arrangement of the arcades would have been similar to that employed on such monuments as the theatre of Marcellus and the Coliseum.

While there is no problem in supposing that the main roof continued over the Lucas Bath and the small bath beyond, certain difficulties arise with respect to the hall at the west end, which was later to contain the Circular Bath. Admittedly, there is no insuperable structural reason why the roof-lines could not have been continued across it, but the visual axis of the hall was north-south creating a view between the wide-spaced columns, through the windows in the north wall and across the sacred spring. It seems far more likely that this axis was accentuated by dispensing with the idea of north-south side aisles and roofing the entire hall in one below a north-south ridged roof. In such an arrangement the piers would have supported screen walls perforated by a large central arch flanked by smaller side arches, the effect being to divide the central part of the hall from the entrance-bay to the south and from the bay to the north, by means of which access to the Great Bath was obtained. The roof would then have been continued to the south to cover the small bath and its flanking corridors. A further advantage in this arrangement would have been to allow the entablature of the hall to be placed at the slightly higher level demanded by the height of the central arches. In summary, since the hall and the Great Bath were functionally entirely separate it is easier to suppose that they were roofed individually to suit their different visual demands.

The third-period re-roofing with vaulted masonry closely reflected the direction and form of the earlier roofs. In the chamber containing the Great Bath the piers of the arcade were strengthened by cutting away the bases of their engaged pilasters and by increasing them in depth to become massive projecting pilasters. The reason was clearly that added strength was necessary to support the weight of the vault. The rearrangement need have caused little reconstruction of the old lower storey: indeed, the only alteration required, besides the additional pilasters themselves, was the bringing forward of the entablature above the new capitals. What happened above this is however much less certain. One possibility is that the second storey was left substantially intact, while its engaged half-columns were brought forward to take a new entablature serving to support the haunches of the vault. An arrangement of this kind is shown on fig. 37. Alternatively, the vault may have begun to spring from some point above the lower entablature, dispensing with the second storey framing altogether, but reflecting the earlier arrangement by piercing the vault with lunettes corresponding with the spacing of the arcade below. On balance, the first arrangement would seem to be more likely in that it would have retained the volume and basic structure of the earlier chamber, whilst allowing the vault to be constructed in one piece. The alternative would have meant weakening the structure of the vault with the close-spaced openings necessary to admit light.

One of the basic structural problems raised by the new vault, namely the lateral thrust which it would have exerted on the walls of the arcade, was neatly solved by vaulting

the ambulatories with parallel tunnel-vaults so as to provide stabilizing masses of buttressing masonry. The projecting *exedrae* would have served as secondary buttresses as is shown on fig. 37.

By the third period the hall at the west end had been changed in function by the insertion of the circular bath, but nevertheless the north-south axis seems to have been retained, for at this time the east-west walls were strengthened by blind arcading pre-

GREAT BATH SECTIONS

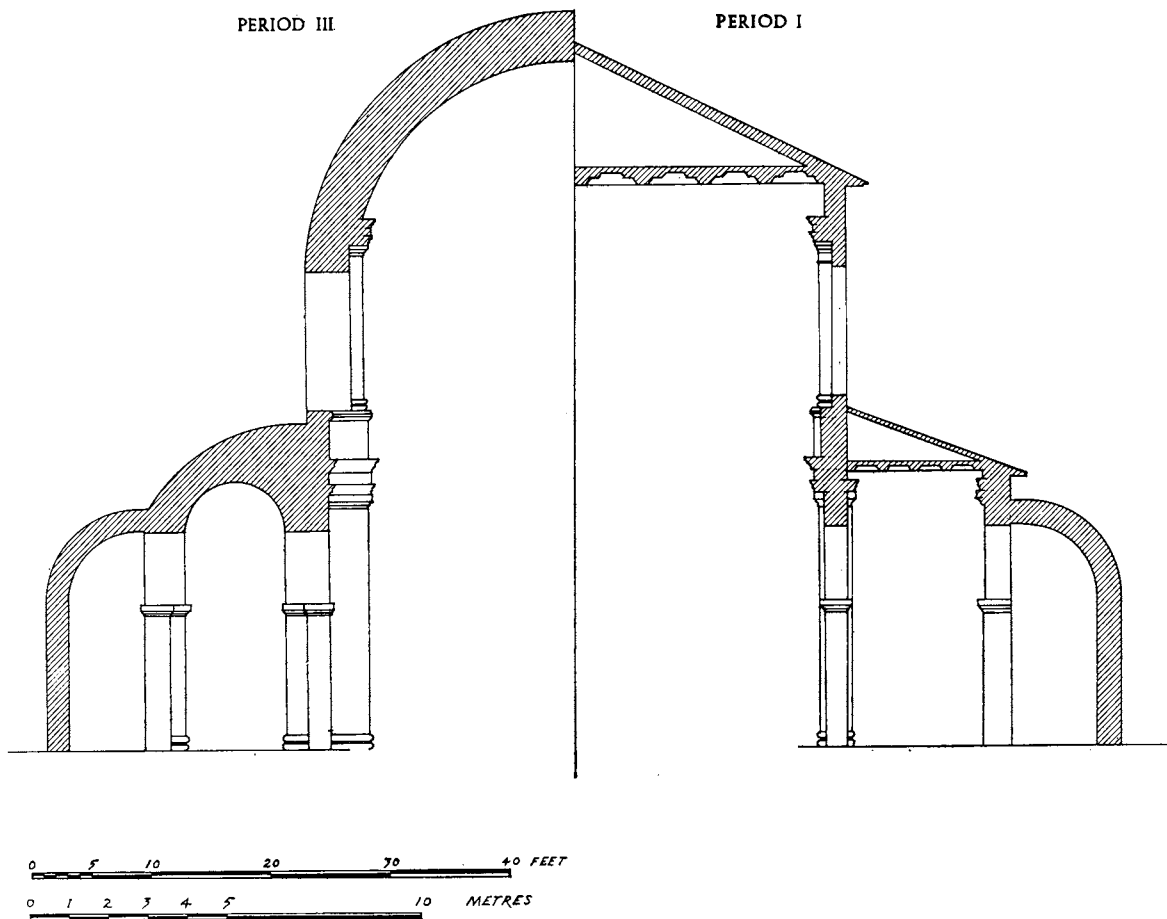


FIG. 37

sumably to support a vault extending over the Circular Bath and probably the corridor to the north. The southern corridor, however, which had by this time been cut off and was no longer a functional part of the hall, was roofed separately with an east-west tunnel-vault to link the south ambulatory with the baths to the west.

The nature of the east end had also changed by this period, for the tank to the east of

the Lucas Bath had been replaced by a new suite of baths, thus altering the visual appearance of the room in which the Lucas Bath was situated. The new vaulted roof took account of this by running north-south, being supported on the east and west walls of the room which were now strengthened with blind arcades. In this way the room, which in the first period had been arranged about the same east-west axis as the Great Bath, was now reorientated so that the apsidal recesses became the visual foci.

GREAT BATH ELEVATION PERIOD I

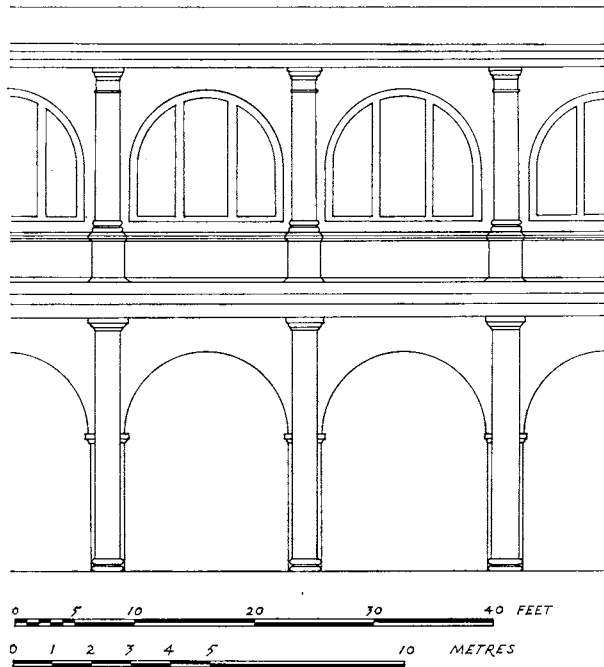


FIG. 38

same monument. It, too, is decorated on both faces, leaving little doubt that the entablature was intended to be seen both from within and from without. The exact form of the monument is unknown: in theory it may have been a completely circular tholos-like structure, but if the monument stood somewhere in the hall of the Great Bath, as would seem probable, it is more likely to have been semicircular or even a quartercircle.

Two of the blocks belonging to the frieze (nos. 2.1 and 2.2) were found on the floor of the ambulatory flanking the east side of the Great Bath. Mann, in a drawing now in the library of the Society of Antiquaries, shows them both lying on the paving slabs amid a great mass of fallen masonry, including a cap and a base of a column. The find-spots of the other pieces cannot now be traced. Since it is unlikely that, in the destruction, the blocks had been moved far from the spot where they were displayed, we may tent-

The roofing of the bath suites to the east and west of the three rooms discussed above poses various problems to which there can be no firm answers. In all probability the individual rooms were covered with vaults, but little remains to indicate their form and direction. However, the absence of architectural mouldings is a strong indication that embellishment, in the form of framing pilasters and entablature, was not employed.

g. The Decorated Entablature (fig. 39 and pls. LI-LIV)

The excavation of the Great Bath in 1880 produced four fragments of a finely decorated entablature belonging to a monument of circular form 6 ft. 6 in. (1.98 m.) in radius. Three of the blocks (nos. 2.1-3), belonging to a frieze, were carved on both the inner and the outer faces, the inner face depicting a continuous leafy scroll whilst the outer was divided into a series of rectangular panels containing figures and floral designs.

The fourth block is from the cornice of the

atively assume that, in the last phase in the life of the Baths, the monument was standing somewhere at the east end of the Great Bath. But this does not necessarily imply that it had stood here originally, indeed the recess cut into the bottom of no 2.1 suggests re-use. The most likely original position for the monument is clearly the quadrant platform which projects into the north-west corner of the Great Bath, for both are of precisely the same radius. Moreover, it is here that the water entered the Bath, and such a place would undoubtedly have been enlivened with a special ornamental treatment, perhaps a shrine: the quality of the carvings on the frieze would have been well in keeping with the importance of such a position. If we are correct in supposing that the monument served here as a shrine, the occasion for its removal to the east might well have been the raising of the ambulatory floor-level or the strengthening of the piers to take the new vaulted roof, for additions such as these would have demanded its dismantling. Its place may have been taken by some lesser structure placed on the large stone slab, which at this time was laid across the inlet pipe, but which originally formed one of the steps in front of the quadrant.

The identification of the figures depicted on the frieze remains in doubt, but they might be thought to mirror the figures on the corners of the sacrificial altar: the individual wearing a cape might be Hercules (cf. no. 1.28), the draped figure next to him might be the female deity on no. 1.27, and the knee supporting a lyre is very similar to that carved on the altar corner now at Compton Dando. A close relationship of this sort between the two monuments is an attractive idea, but is by no means proven. If, however, the suggestion is correct it would imply eight figured panels which, on the available evidence, would demand a lengthy frieze approximating more nearly to a semicircular monument than to a quadrant. How such a structure would have fitted into the hall containing the bath is beyond the scope of the present evidence to say.

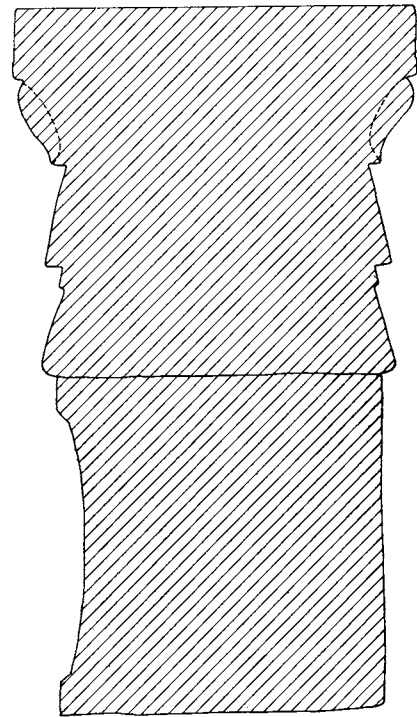


FIG. 39. Section of the decorated entablature of the Quadrant Monument

h. The Drainage System (figs. 40-42)

To cope with the quarter of a million gallons of water a day which bubbled up into the reservoir, the Romans found it necessary to equip the baths with an adequate drainage system, the function of which was ultimately to remove the water from the centre of the town and lead it to the river. This was accomplished by building a main drain connected directly to the source through which the overflow was removed, and into which at intervals subsidiary drains could pour the waste water from the various baths.

The drain was discovered on 6 October 1865, by J. T. Irvine who, digging in a cellar

adjacent to the Abbey, which he was at the time restoring, broke through the vaulted roof at the point marked E on fig. 40. In the following weeks the section from B to G was cleared and explored. Some years later, in 1871, the City Engineer, Major Davis, had the work extended to include the length to point K, at which he struck a later post-Roman drain cutting into the Roman work and crossing it at right-angles. Breaking into this he discovered that it was in fact part of an extensive network dating to medieval or later times. In 1878, Richard Mann was employed by Davis to extend the work, first by examining the area from K to L, which he did by working back from the main post-Roman drain, and later by tunnelling below ground along the line of the Roman drain from B to A. When the work had been completed Davis had the Roman drain connected to the medieval system so that water could be carried off from the Pump Room area—a function which it still performs today.

The entire system, except the short section from K to L, can still be inspected and the following description is based on a survey made in 1967. For the short stretch from K to L we have to rely on the description and plans contained in letters written by Mann to Irvine whilst the work was in progress.

From the reservoir wall at A to the east wall of what is now the Museum, at B, the drain has been almost totally destroyed by post-Roman disturbances, but from B to K it is still largely intact. Typically it measures $7\frac{1}{2}$ ft. (2.29 m.) in height by $2\frac{1}{2}$ –3 ft. (0.76–0.91 m.) broad, narrowing at the bottom to a rectangular timber-lined duct 12 in. (0.30 m.) wide by about 10 in. (0.25 m.) deep. The walls are built of coursed, but rough, masonry and the roof is vaulted in a similar style.

Three manholes occur at D, F, and J. The best-preserved, at F, consists of a rectangular shaft, 2 ft. 7 in. (0.79 m.) by 2 ft. 9 in. (0.83 m.), extending through the roof of the vault for a height of $7\frac{1}{2}$ ft. (2.29 m.), above which it has been blocked with paving slabs. The vault on each side is faced with well-cut voussoirs flush with the sides of the shaft. The manhole must have functioned in the Roman period as an inspection shaft to allow a periodic check to be made of the drain at this angle where obstruction and silting could easily have occurred. The other manholes, at J and D, would have allowed similar inspection at points where subsidiary drains joined the main course.

In the section between A and K three side-drains are known: the first, a small side-duct conveying the overflow from the Great Bath, enters a little to the west of B. Since the vault hereabouts has been destroyed, it is impossible to know if originally it had been served by an inspection chamber. Further on, at D, a duct $2\frac{1}{2}$ ft. (0.76 m.) wide and 4 ft. (1.22 m.) high entered the main drain, also from the south; it is now blocked, but Irvine's notes show that it once ran from the semicircular alcove on the north side of the Lucas Bath. The Roman inspection chamber at this point is now much obscured by modern work. Finally, at J, a small corbelled drain entered the east side of the main course at a high level. It is now completely blocked and the structure which it drains is unknown. There is some suggestion that another drain may have entered from the opposite side, but the point is now obscure.

THE BATHS , WATER SUPPLY AND DRAINAGE

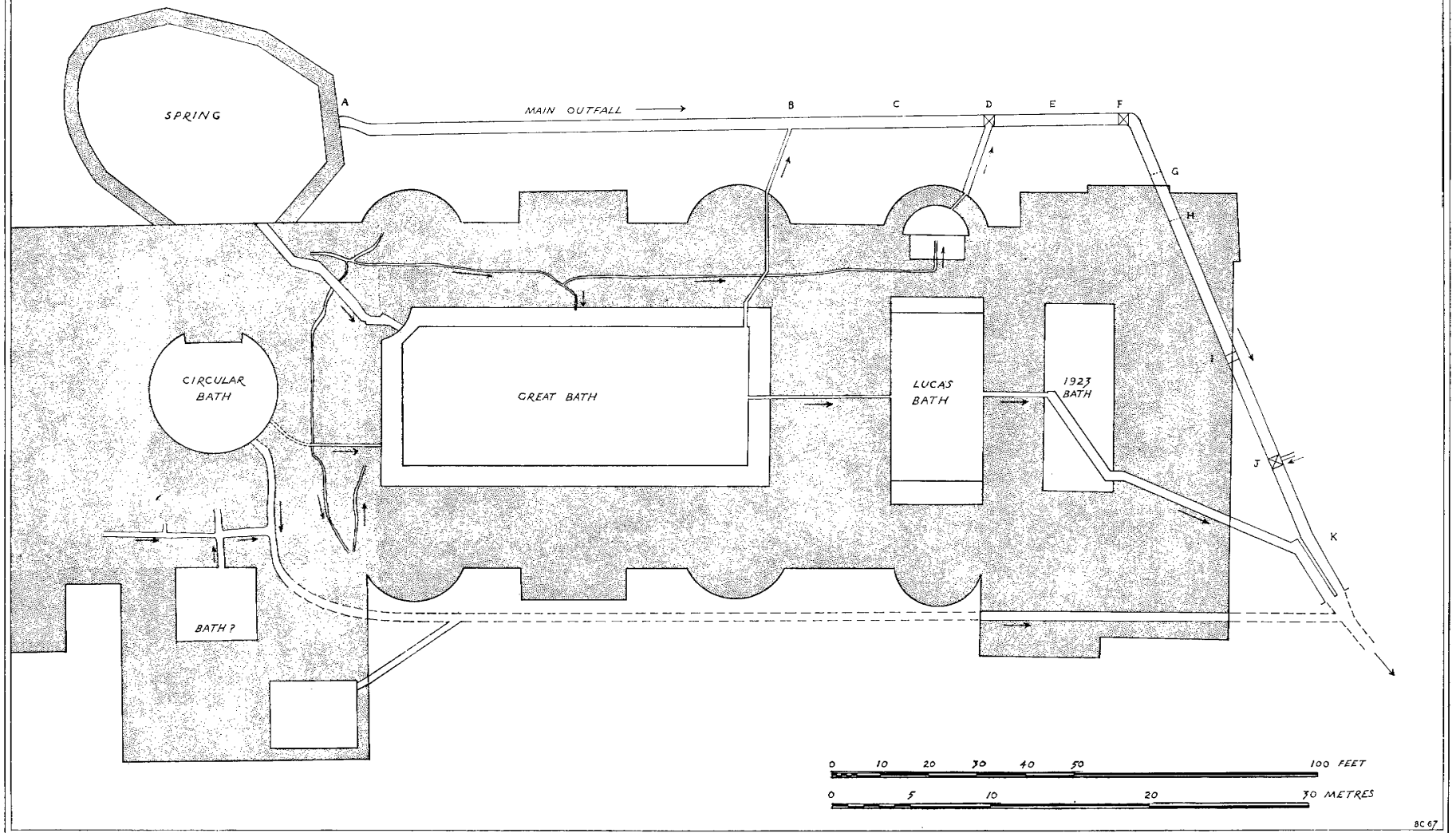


FIG. 40

ROMAN BATH

Several features were cut into the vaulted roof of the main drain. At C the gutter, which can be seen draining off surface water from the vicinity of the north-west alcove of the Great Bath, has broken through the vault, but the gutter is in no way connected

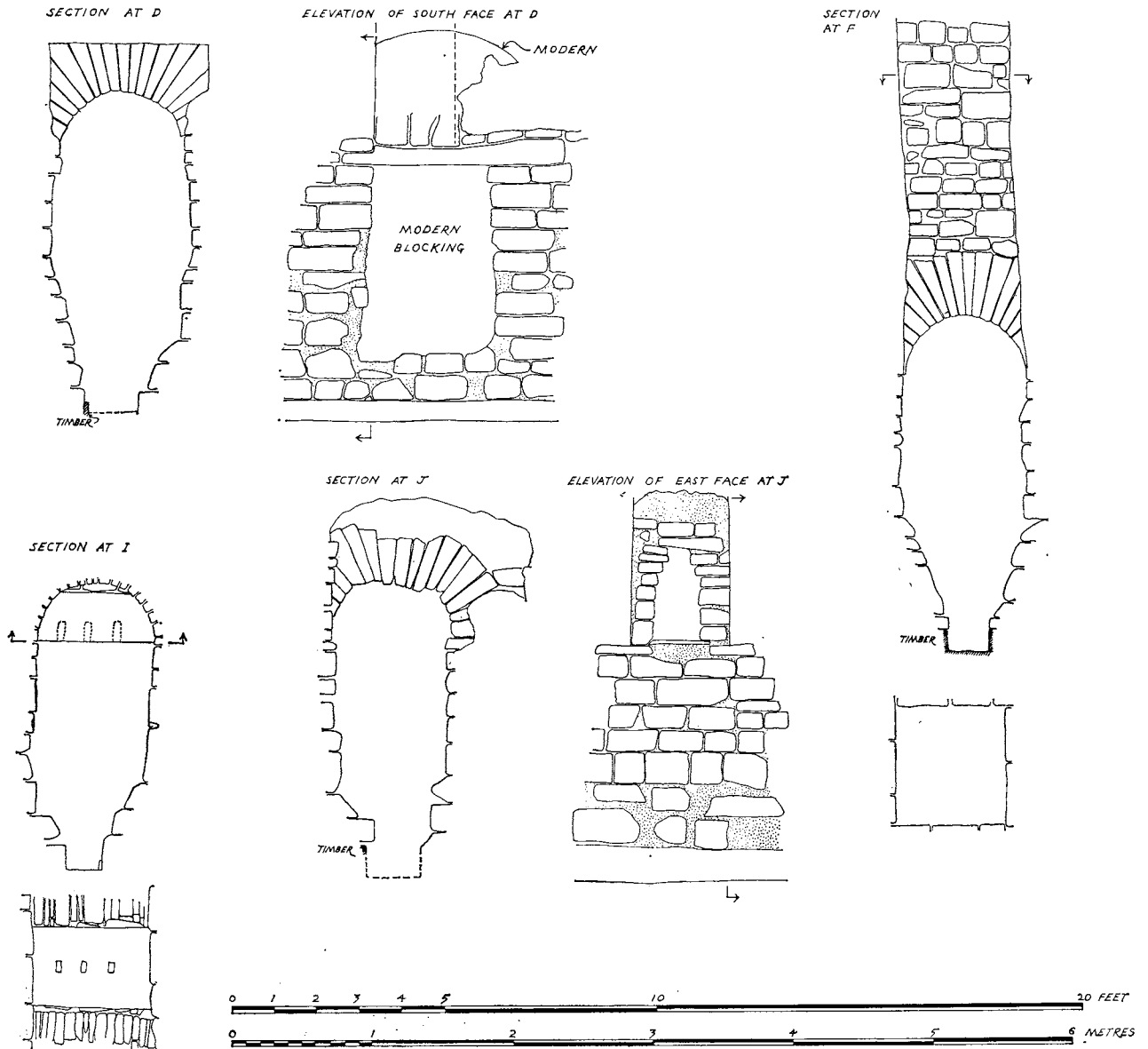


FIG. 41. Details of the main drain

to the drain beneath. Further round, between G and H, the vault has been completely removed and is replaced by large stone slabs which were, no doubt, inserted at the time of the fourth period extension to the East Baths which crossed the drain at this point. Further on still, at I, a single block of limestone has been let through the vault, but in

this case the neatness of the masonry on either side suggests that it was contemporary with the roofing of the drain. Into the underside of the block were cut three deep slots which very probably served as the seating for the vertical members of an iron grill. Opposing holes cut into the side walls beneath them would have taken a horizontal strengthener. It is difficult to see why such a grill would have been necessary, but presumably security would have demanded it.

The features at L, the point at which the outfall from the Lucas Bath meets the main drain, cannot now be seen but they were clearly depicted on a drawing which Mann sent to Irvine on 8 May 1878 (fig. 42). The side drain entered at an angle, but for a distance of 14 ft. (4.27 m.) the two drains run parallel separated only by three large stone slabs laid on end. The roof at this point, consisting of stone slabs, is considerably lower than the vault behind. At the mouth of the two drains Mann saw the remnants of an arch which seems originally to have

spanned both. From here onwards the water now flows in a single channel, lined with large stone slabs, which bends north-east to join the post-Roman sewer. To reconstruct the Roman arrangement from the arch southwards is impossible. It may be that from here the water originally flowed in an open ditch. Alternatively, the upright slabs may be of Roman date—the problem cannot yet be answered. At any event, it seems likely that the Roman course continued in a straight line to the river. Another problem remains unsolved: it was at precisely the spot at which the two drains opened into a common channel that a third drain, running parallel to the south wall of the Baths, must have entered. Mann unfortunately does not mention the way in which its junction was effected. The drain itself is, however, well enough known. It begins south of the Circular Bath, where several minor drains converge, and then runs in an easterly direction, in a straight line, to meet the main drain. South of the Lucas Bath it was sectioned once by Mann and was found to be constructed—box fashion—of large stone slabs measuring internally 2 ft. (0.61 m.) across by 3 ft. (0.91 m.) high.

It will be clear from the foregoing description that the drainage system of the Baths was carefully planned as well as being a work of some magnitude. The way in which the individual mains were constructed, for example, would have allowed men to walk

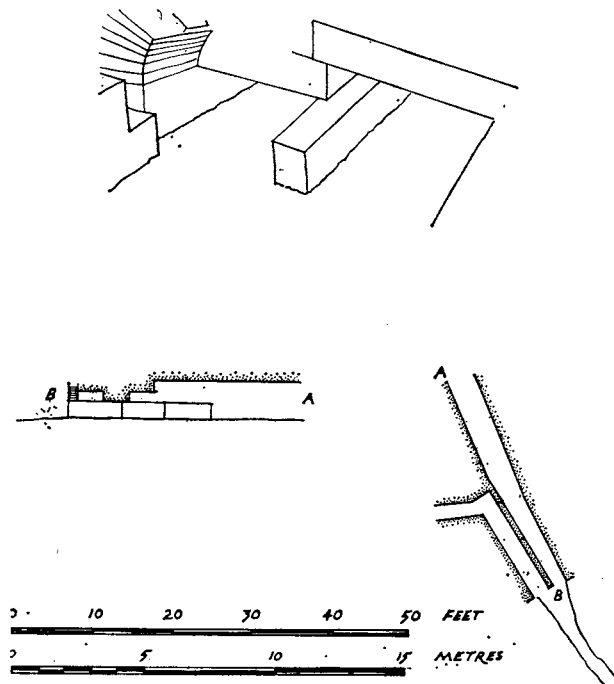


FIG. 42. The south end of the main drain (after Richard Mann)

along them in order periodically to clear out the sediment; furthermore, the provision of inspection shafts, strategically placed, shows a keen awareness of the problems which would have been posed when cross-currents of silt-laden water met.

i. The Plumbing (fig. 43 and pl. xxv)

The Baths provide a remarkable example of Roman plumbing at its most extensive, for not only was lead used to make water-pipes and ducts, it was also employed as lining for the reservoir, the Great Bath, and probably several of the other four swimming baths of the establishment. But it is only in the Great Bath that the lead still survives *in situ*, and even here the sheets covering the steps have long since vanished. Estimating the thickness to be about 1 in. (0.025 m.), the total weight of lead covering the bottom of the Bath would be in the order of $8\frac{1}{2}$ tons (86,000 kg.). In terms of normal-sized Roman lead pigs some 90 would have been required for this job alone. The number needed to fit out the entire building would have been colossal. The details and technique of the leading of the Great Bath have already been considered at some length above (p. 95) and need not be pursued further here.

Of the water-pipes, a variety of forms and sizes survive but the method of construction is generally the same. In the first stage, a strip of lead was cast, usually between $\frac{1}{4}$ and $\frac{1}{2}$ in. (0.007–0.013 m.) thick, 12–18 in. (0.3–0.45 m.) wide, and up to 10 ft. (3 m.) long. It was then beaten into tubular form with a circular, triangular, or rectangular cross-section, the two edges being brought closely together. Strips of clay were then stuck along either side of the join to form a mould, and molten lead at a high temperature poured between. This would fuse with the exposed edges and form a waterproof joint. Finally, when the clay strips were removed the rough edges of the cast joint were beaten smooth. The final treatment was not, however, invariable and many examples with unbeaten joints still survive. The largest single length of pipe known in the Baths is that which lies *in situ* in the north ambulatory of the Great Bath (pl. xviii*a*). The individual sections, each measuring 9 ft. 3 in. (2.82 m.) in length, were joined simply by socketing the end of one section into the other and pouring molten lead over the join.

A sample of a pipe was submitted to Mr. Kenneth Gray of Mellowes & Co. Ltd., Sheffield, by Mr. J. Hutton, the Spa Director, in September 1934. Mr. Gray prepared a section of the pipe to show its crystallographic structure (pl. xxv) and, based on this, offered a description of the manufacturing process involved. He pointed out that the section shows how the columnar crystals, which formed when the sheet was allowed to cool, were fragmented at the two lower corners, due to the hammering which would have been necessary to bend the sheet into its triangular form. At the apex the crystal structure demonstrates how the edges of the sheet melted when the molten lead was poured on to them: the columnar crystals caused by cooling can clearly be seen. The final hammer finishing of the joint is shown by the way in which the outer edges of these crystals were shattered.

One variant to this general description survives: the box-pipe which carries the hot

water from the spring to the Great Bath. This duct, measuring internally 20×5 in. (0.5×0.13 m.), was made first by beating a lead sheet into a shallow trough-shaped section, and then by placing a flat sheet across the top. The two were fused together by pouring molten lead along their junctions (fig. 43). Part of this pipe is still in position.

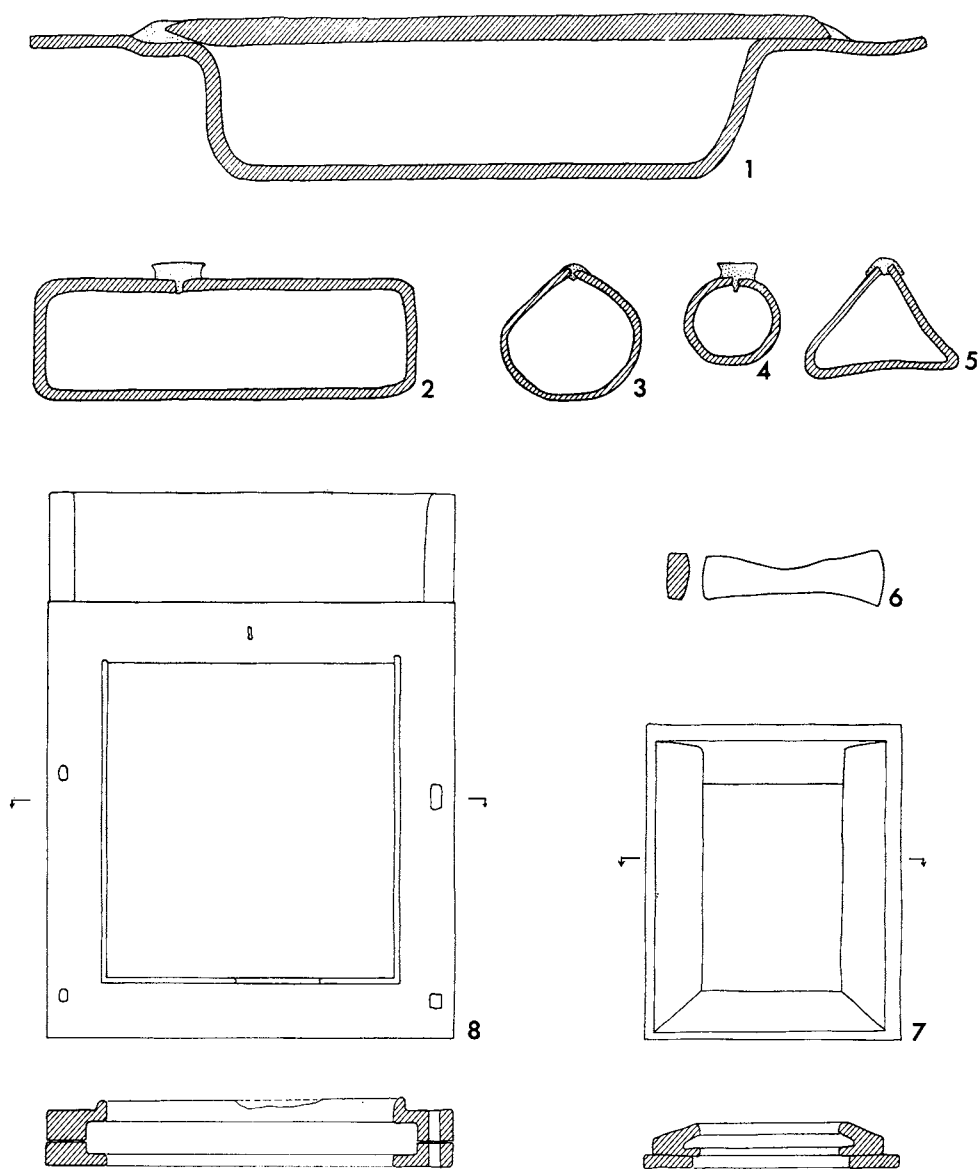


FIG. 43. Lead and bronze fittings from the Baths ($\frac{1}{8}$)

Bronze seems to have been little used, unless as fittings since removed, but Davis discovered that the main outfall opening from the north-east angle of the Great Bath still retained its original bronze sluice-frame, which he removed. It is now preserved in the museum and is illustrated here as no. 8.

A selection of lead pipes and other objects are illustrated below (fig. 43 and pl. xxv).

1. Section of the duct carrying water to the Great Bath.
2. Section of water-pipe. Provenance unknown.
3. Section of the water-pipe serving the fountain on the north side of the Great Bath.
4. Section of water-pipe. Provenance unknown.
5. Section of water-pipe. Provenance unknown.
6. Lead dowel $\frac{3}{4}$ in. (0.02 m.) thick. Provenance unknown.
7. Lead framework of a small sluice-gate. Provenance unknown.
8. Bronze sluice removed from the north-east corner of the Great Bath.

Pl. xxv Part of a lead pipe found in 1825 at the junction of York Street and Stall Street.

It bears the raised letters LDA on a plaque $6\frac{1}{2} \times 2\frac{1}{2}$ in (0.15 \times 0.075 m.).

Pl. xxv Pig of lead found in 1809 near Sydney Place. It weighs 195 lb. and is inscribed IMP. HADRIANI. AUG.

4. SUMMARY OF THE DEVELOPMENT OF THE BATHS (figs. 44-7)

Having described the details of the bathing establishment it remains now only to summarize the main features of its growth. The task is made difficult by the very size of the building, for although the development of the component parts can be worked out, it is often difficult to link the periods of building observed at one end with those evident at the other. Fortunately, two important horizons can be recognized: the first is the isolation of the primary features, the second the re-roofing of the central chambers with a massive barrel-vault which necessitated the addition of much supporting masonry. Between and around these fixed points the development of the monument can be reconstructed with tolerable accuracy.

The baths of the first period (fig. 44) present a picture of dignified simplicity in which the two types of bathing facilities, one making use of the thermal waters, the other of artificially heated rooms of varying temperatures, were separated from each other, as at Bourbonne-les-Bains, by an imposing hall, entered possibly from one or both of its southern corners. The hall would have served both as a place of assembly and as an undressing room for bathers wishing to swim in the thermal waters of the Great Bath or in the smaller tanks beyond. Those who required the more rigorous treatment offered by the 'Turkish baths' need only have walked a short distance from the hall to reach the small *apodyterium*, out of which opened the main rooms of the heated suite, a *tepidarium*, a large *caldarium* with two attached hot baths, and a combined *frigidarium* and cold swimming bath. The function of the room south of the hall is problematical, but it may well be a bath possibly of ritual significance.

The roofing of this primary arrangement was as simple and effective as the plan itself, the rooms from the hall eastwards being enclosed below a continuous roof supported on two arcaded walls based on parallel pairs of piers. The side aisles would have

been roofed at a lower level to allow the rooms below adequate clerestory light. The arrangement, as Sir Ian Richmond suggests (p. 97), was reminiscent of a great basilica. It is equally certain that the heated rooms to the west would have been covered by barrel-vaulting, either in a single or a double span, constructed of masonry to eliminate the risk of fire.

Although practically the entire first-period building has been excavated, no dating evidence has been found in direct relationship to the structure, and indeed, apart from the often-quoted Vespasianic inscription (no. 2.13) which is not even associated with the Baths, no indication of date survives except the few sherds of late first- to second-century pottery lying above the building spread (p. 141). Moreover, a monument of this kind, built in so simple a form, with a virtual absence of ornament, defies typological dating methods. The general impression given on a number of counts is of a first-century flavour, but further than this it is impossible to go. If a context is required, the Romanizing phase of Agricola's governorship might be suggested, but there is nothing to prevent an even earlier date.

The additions of the second period were concerned simply with an extension of the existing bathing facilities. At the west end a new suite of rooms was constructed incorporating a *laconicum* to supply intense dry heat, an exercise yard, and a circular cold plunge bath, which together constituted a unit closely similar to modern Swedish sauna baths. A small bath to replace the first-period bath now buried beneath the exercise yard was built next to it. The original western baths continued unchanged during this period, except that the floor level of the *tepidarium* was raised and a small bath added, but at the east end the first-period tepid *natatio* was obliterated and replaced by a suite in the 'Turkish' manner, comprising a *caldarium*, similar in construction to the *laconicum*, a *tepidarium* and several other heated rooms, whilst the Lucas Bath now served as a tepid plunge. If we are correct in supposing the changes at the east and west ends to be largely contemporary, the second-period baths could boast two 'Turkish' suites—one at each end. A possible explanation for such apparent extravagance is that one suite was reserved for females whilst the other was used by the males. Such an arrangement was no doubt more efficient than opening the establishment at different times or on alternate days for different sexes—a system which must have been enforced in the first period as the only means of preventing mixed bathing, thought at the time to be an undesirable practice.

Again it must be admitted that no firm dating evidence is available but a few fragments of late first- to early second-century pottery were found beneath the building spread to the south of the Baths (p. 141). A partly detached circular *laconicum* however is a feature suggestive of a pre-Hadrianic date, but this fact alone is not conclusive.

The third period saw the re-roofing of the entire central area with a massive masonry barrel-vault of such proportions that a considerable strengthening of the existing walls and piers was necessary. One explanation of the surviving foundations is that a continuous east-west vault now covered the Circular Bath and Great Bath and the Lucas Bath,

springing from a strengthened version of the arcaded base which supported the original roof. This would imply that the north and south ambulatories were roofed with parallel but narrower tunnel vaults. An alternative and more likely arrangement is for the Circular Bath and the Lucas Bath to have been roofed with north-south vaults (pp. 120-1). The advantage of such an arrangement would have been to allow the Great Bath to be lighted through the open east and west ends of its vault.

The other third-period alterations were of a minor nature. Additional heated rooms were added to the south ends of both the east and west 'Turkish' baths, causing some internal reorganization, and it was at this time or a little before that the Circular Bath received its curb and repaved surround.

The only fact which has some bearing on the dating of period 3 is the discovery of a coin of Hadrian, which Knowles says was mortared to the base of one of the additional piers belonging to this period (Knowles 1926, 18). The *terminus post quem* provided by the coin, though of some interest, implies little more than can already be deduced from the building sequence.

If the third-period activities added little to the bathing facilities, the modification undertaken in period 4 completely reorganized and to some extent simplified them, creating an arrangement which was to remain little changed for the rest of the Roman period. The old east baths were almost entirely rebuilt on a far grander scale with rooms larger than any previously known. Out of the *caldarium* to the north opened two semicircular hot baths with a large stokerly between. South of the *caldarium* was a *tepidarium* of equivalent size, beyond which smaller rooms dating from the second and third periods remained in use. The simple linear arrangement created at the east end was also attempted with the west baths by linking the *laconicum*, through the original *tepidarium*, to a new oblong cold plunge bath now inserted into the first-period *caldarium*. The original linking corridor between the *laconicum* and the Circular Bath, which was no longer required, was blocked off and a latrine inserted into one of the recesses thus created. It was probably at about this time that the south-west rooms were refloored at a higher level and a small heated bath was added to the southernmost room, which was by now serving either as a *caldarium* for a small suite using the first-period *natatio* as a cold plunge or, more likely, as part of a specialized curative range distinct from the main 'Swedish' unit. The curative properties of the waters were further exploited at the east end where, in the north recess of the Lucas Bath, a remarkable cold immersion bath was inserted, screened off from the rest of the establishment so that its users could sit in privacy immersed up to the neck. At about this time the ambulatory of the Great Bath was repaved, hiding the lead pipes which took water to a reconstructed fountain in the centre of the north side of the bath and also to the immersion bath beyond. It may have been in this period that the colonnade south of the Great Bath was constructed. Evidently it belongs to a yet unexcavated building to the south and is not therefore strictly part of the bathing establishment as it is at present known.

This then was the bathing establishment in its most advanced form, a great central

swimming bath flanked at either end with smaller pools of cold or tepid water, beyond which were the artificially heated suites, that at the east end providing a hot steamy atmosphere of 'Turkish'-bath type in rooms of graded temperatures, whilst that at the west end offered an intensely hot room linked with a cold plunge for those who wished to indulge in the rigours of sauna bathing. For the less vigorous or the infirm, special rooms were provided for hot or cold curative treatment, which could be followed up if desired by a gentle swim in the Great Bath.

The date by which the system had evolved to this extent is completely unknown. Then followed, in the fifth period, a series of minor rebuildings and additions. The south-west rooms were enlarged by the addition of a new bath, whilst at the east end the hot baths were turned into one with the *caldarium* probably at the same time as the hypocaust floors were being raised to counter the effect of flooding, which would have become more serious as the sea-level, and therefore the water-table, rose in the later Roman period. As part of these general alterations, a new stoke-hole was built. Finally, in the sixth period, the south-east hypocausts seem to have been abandoned and refloored with concrete.

It is a sad fact that the nineteenth-century excavations have robbed us of the evidence which would have shown, in a vivid manner, how the end came. What little survives of the excavation record suggests that in the final stages the drainage system failed and the mineral waters which were once drained away now filled the hollow in which the Baths lay, allowing vegetation and tips of occupation rubbish to clog the rooms and baths. As the rubbish and silt accumulated, so the water rose. Soon the great vault collapsed into the mire, raising the level even more. Eventually the monument would have been reduced, visually, to only the tops of walls and piers projecting above the marsh. This may even have been the state of things in the late Saxon period. At any event, it is reasonably certain that the pier caps, and perhaps even the cornices, were still to be seen when later generations of builders, requiring stone, removed them. Some such explanation is necessary to explain why these architectural details are missing. But much remained, for the marsh, by this time many feet thick, obscured what was below, making stone-robbing impracticable. Thus the waters which the Romans had briefly tamed were, by regaining control, to preserve the Roman structures in remarkable detail.

5. ARCHAEOLOGICAL DISCOVERIES RELATING TO THE BATHS

In the foregoing sections an attempt has been made to describe the form and development of the bathing establishment as it is now known. But since the discoveries of the past have been piecemeal and frequently ill-recorded, it is important that the nature and results of each act of exploration are briefly described.

1727. South-west Corner of the Baths

In July 1727, whilst the main sewer was being laid below Stall Street, Roman remains

were discovered at a depth of about 16 ft. (4.88 m.). An annotated sketch drawn on 20 August 1727 by Bernard Lens (Bodleian Library, Gough's maps, fol. 28, p. 64. Copy by Priscilla Combe in Kings Library, British Museum, xxxvii. 26, o) shows a floor of box-tiles, placed side by side, mortared together with red cement and covered by a course of horizontal tiles. Inside, we are told, was 'black-stuff very like soot'. It seems likely that the floor was the suspended floor of a hypocaust very similar in construction to that found in the *tepidarium* west of the Circular Bath. The discovery was made a few feet north of a hole dug 'over against Alderman Ford's house in Stalls Street'. Haverfield was informed that the house was at the junction of the south side of Bath Street and the west side of Stall Street. If so, the find must belong to part of the Baths west of the present west end shown on the plans above.

1755-63. *The East Baths* (pl. xxiii)

The construction of the Duke of Kingston's Baths in 1755 and the following years brought to light a series of Roman baths which have since been re-excavated and are now on show to the public. The initial discovery, recorded in detail by Lucas (Lucas 1756), included the large plunge bath now called after the finder and the small bath inserted into the apsidal recess on the north side of the main bath. To the east were two large rooms with hypocausts beneath them, and opening out of the north wall of the north room were two small baths in apsidal recesses separated by a large flue. In fact, what was then exposed was the fourth-period arrangement of the east end. It was not until 1923 that the earlier phases became apparent beneath. The original records provide little information that cannot now be checked on the ground, but the construction of the 1755 building evidently caused the destruction of the plain mortar suspended floors of the hypocausts, except for a small section which still survives in the north-west corner of the northern room. Of the two heated baths in the apses to the north, the eastern still survives to a tolerable extent with its simple mosaic in position, but the western, which was also mosaic-floored, is now overlaid and largely destroyed by masses of modern masonry.

By 1763 some further remains had been uncovered to the south of the Lucas Bath, including the southern apse which contained a mortar-floored bath. Sutherland's plan and description (Sutherland 1763, i. 16-22) gives a brief account of the work. It was at about this time that the eastern steps leading down to the Great Bath were seen.

A number of other useful, if not always accurate, accounts of these early discoveries exist: the principal ones are a plan by William Hoare (B.M. Add. MS. 21577B), reproduced here as pl. xxiii, and a plan in the *Min. Soc. Ant.* (10 May 1750), viii. 159. The many other references are largely derivative.

1799-1803. *The Great Bath*

Trenches dug below Abbey Passage and along York Street in the early years of the nineteenth century brought to light the two western apsidal *exedrae* of the Great Bath

THE BATHS, PERIOD I

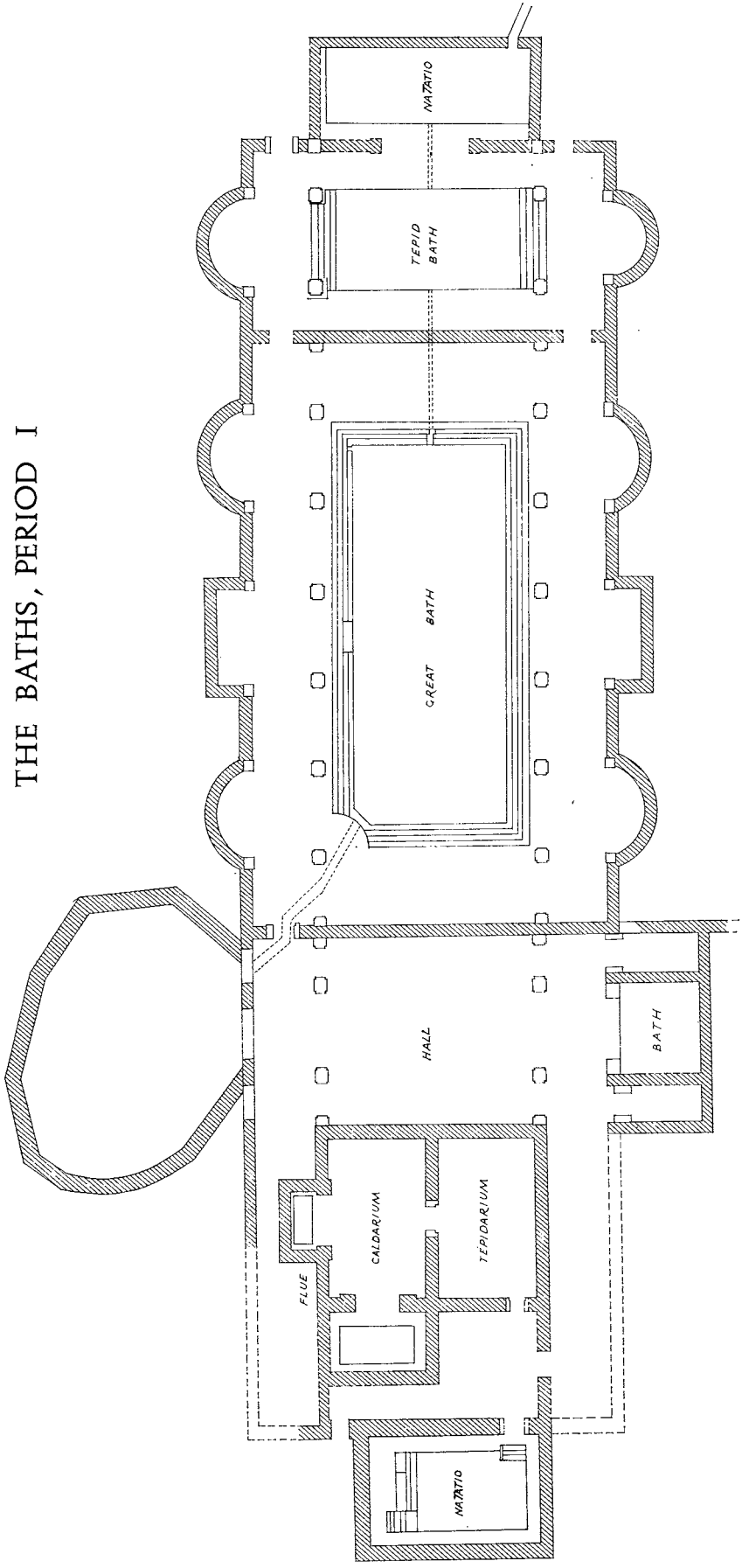


FIG. 44

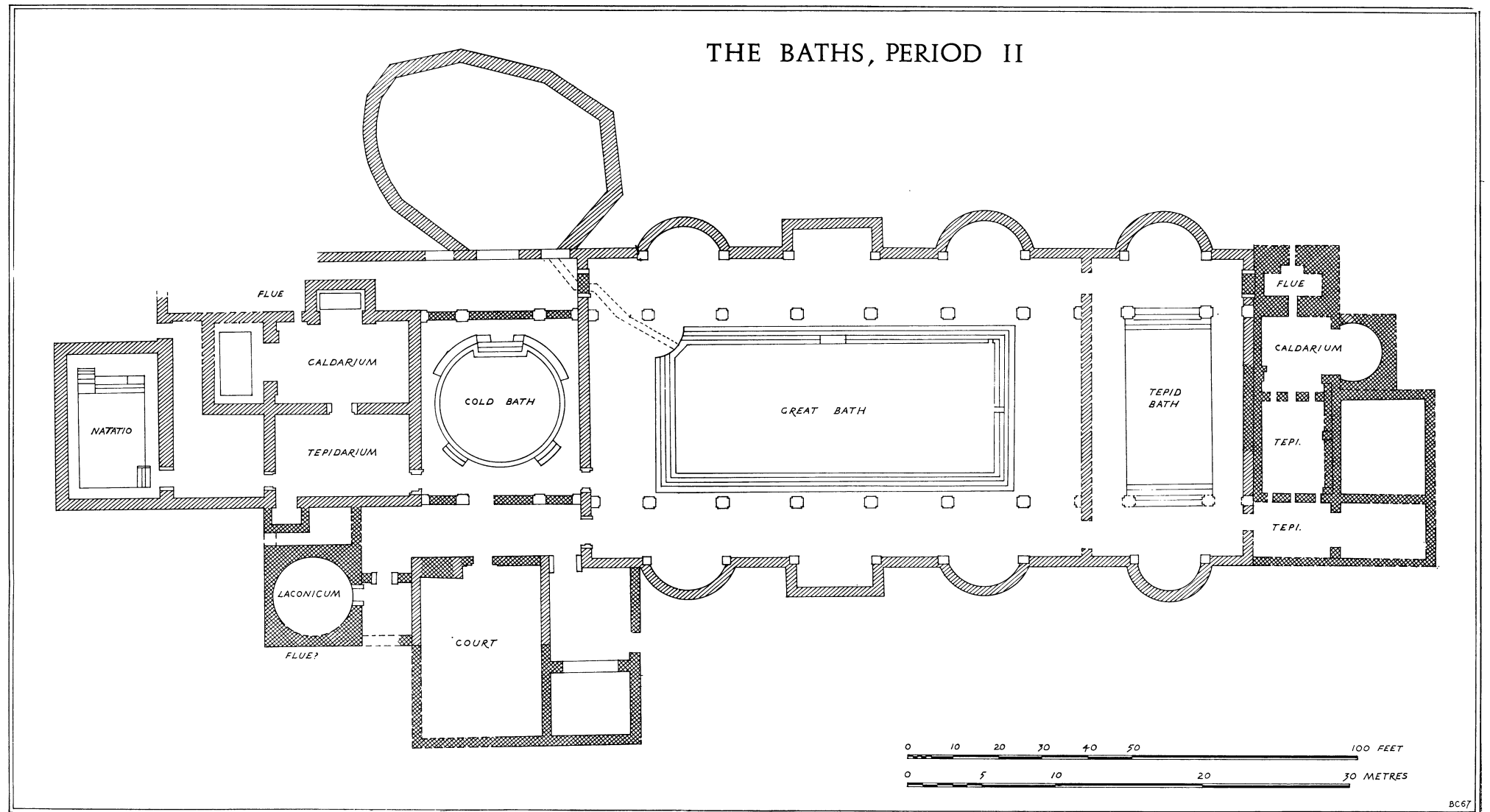


FIG. 45

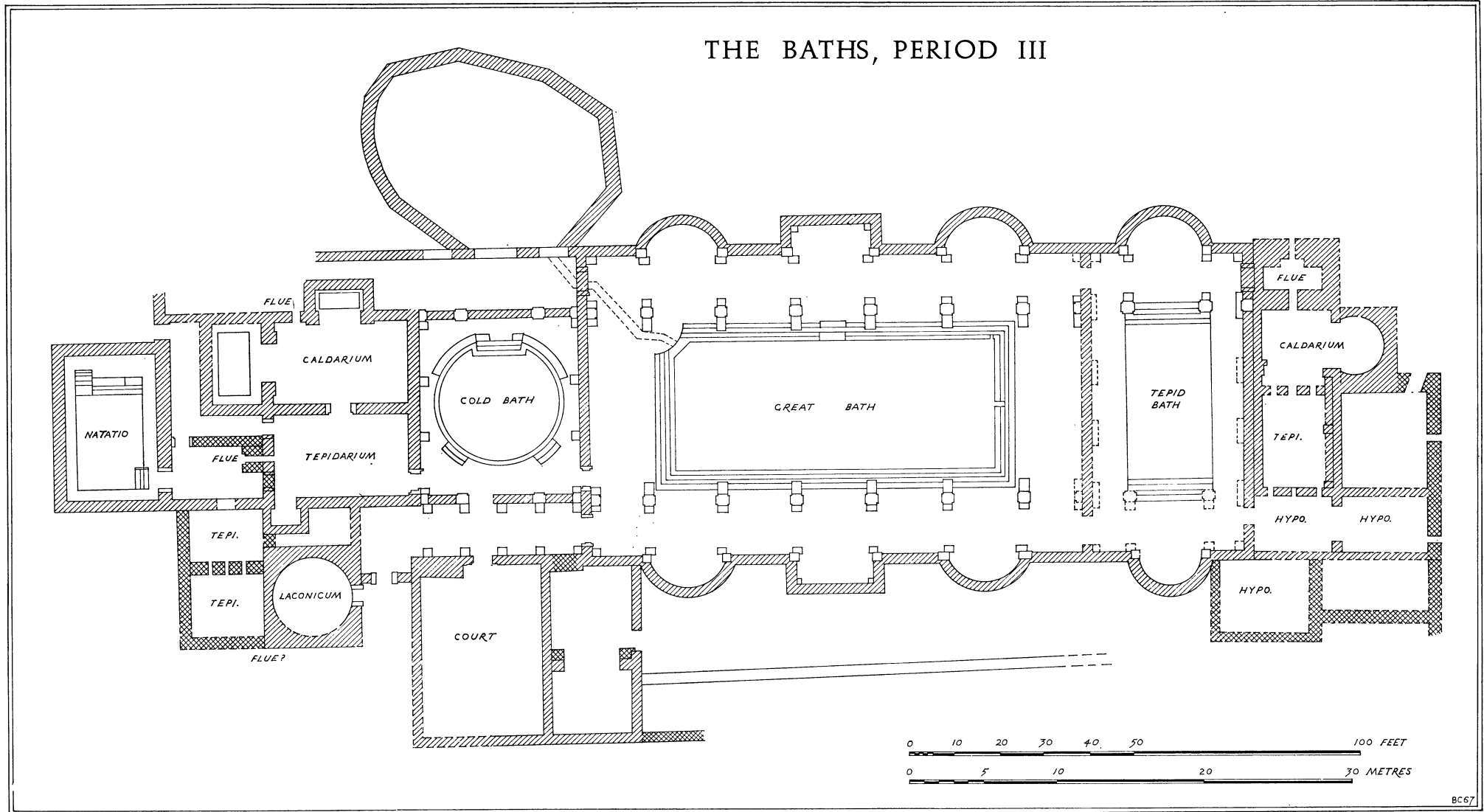


FIG. 46

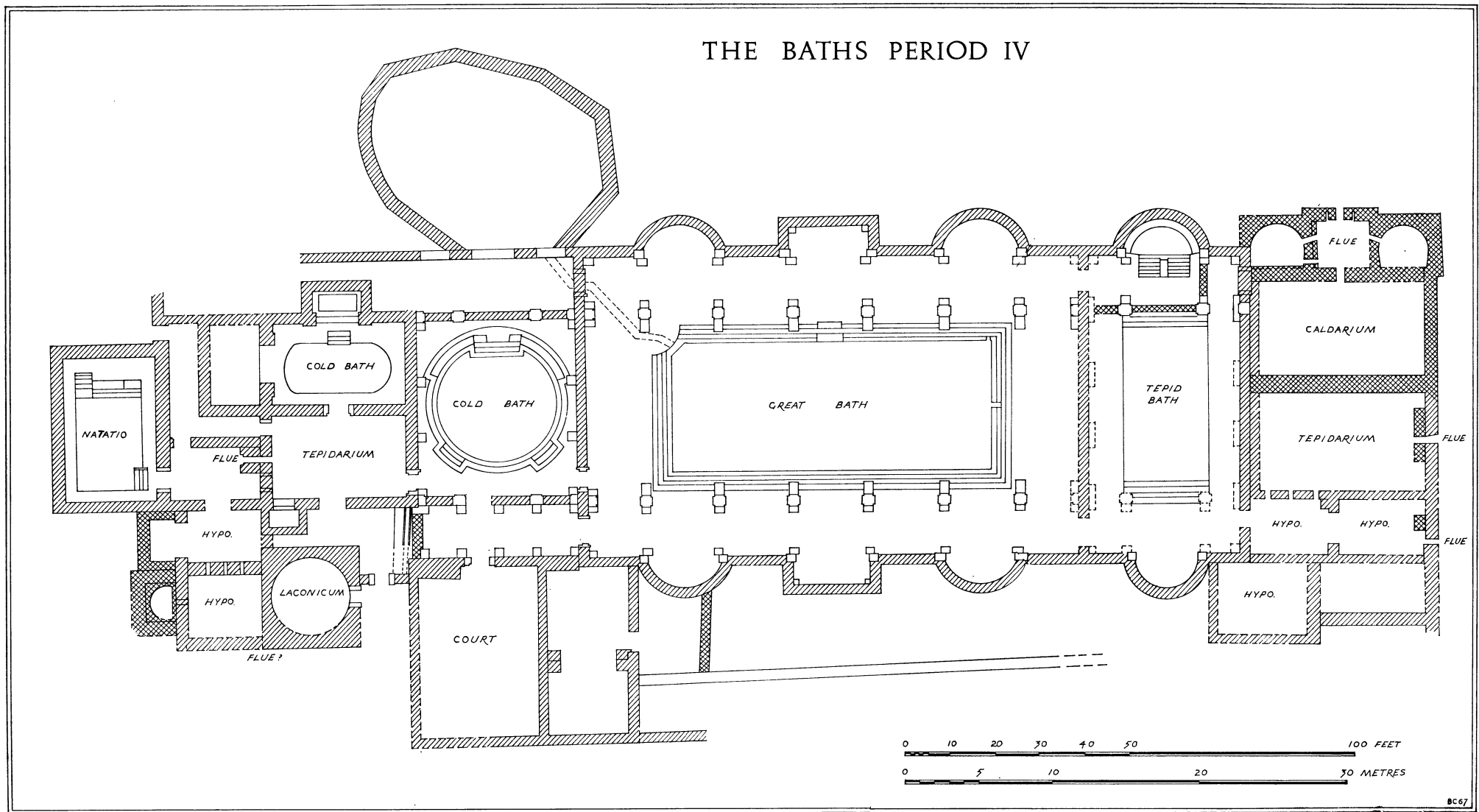


FIG. 47

and one of the piers of the north arcade. No detailed accounts survive but the remains appeared on the plan published by J. H. Spry (Spry 1822). It was thought at the time that the new discoveries were part of a room balancing that found at the east end by Lucas.

1825. *The South-west Corner of the Baths*

Discoveries made below the floor of the building which once occupied the north corner between Stall Street and York Street included a floor built of hollow box-tiles like that found in 1727. It evidently belonged to the heated rooms in the south-west corner of the known baths.

1867-8. *The East Baths*

In September 1867 J. T. Irvine carried out a limited excavation in the cellar above the southern part of the Lucas Bath, exposing the small bath in the semicircular *exedra* and parts of adjacent walls. The work continued into the next year. No publication of the results appeared but detailed plans were made by Irvine and are now preserved with the Irvine Papers in the Bath Reference Library.

1869. *The South-west Corner of the Baths*

In December 1869 Roman remains were recovered during the building of a new engine-room chimney, close to the discoveries of 1825, under the direction of Major C. E. Davis. Exploration was continued so far as the cellars hereabouts permitted, uncovering parts of the *tepidarium* west of the Circular Bath, including the door leading between the two, and walls belonging to the late latrine immediately to the south. Again, the remains do not seem to have been published but Irvine was present during the work and made detailed notes and drawings which include a section showing the collapse of the superstructure above the *tepidarium* floor, the only known section drawing from the nineteenth-century excavations (redrawn here as fig. 48).

1871. *The Great Bath*

Engineering work concerned with the King's Bath caused the City Engineer, Major Davis, to dig a trench 20 ft. (6.09 m.) deep in Abbey Passage. In doing so he hit upon the paving of the ambulatory of the Great Bath close to the north-west corner and, in extending the work, discovered the steps descending to the bath exposing at this time

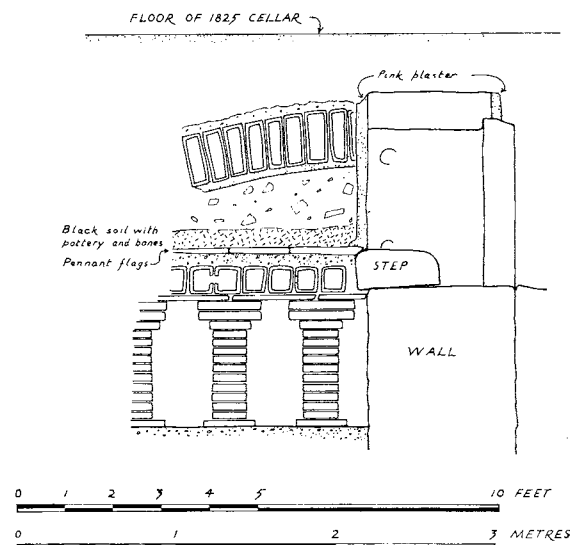


FIG. 48. Section across the western *tepidarium* (after J. T. Irvine)

part of its lead-lined bottom. He removed a small portion of the lead sheeting to examine the foundations below: the hole can still be seen.

The trench was apparently arched over and was utilized seven years later during the tunnelling operations which led to the discovery and excavation of the spring and reservoir (described above, pp. 42-3).

1880-96. The Excavation of the Great Bath and the Rooms to the West (fig. 29 and pls. XIV-XV)

The excavation of the area from the Great Bath to the western limit of the establishment, as it is now known, took place sporadically from 1880 until about 1896. In 1880-1 those parts of the Great Bath which were then available were uncovered, and from 1883 to 1885 the Circular Bath and the adjacent areas on the north and south were excavated. The rooms between the Circular Bath and Stall Street were partly uncovered between 1885-7 and immediately built over again with a douche and massage bath, which still obscures large areas of the Roman work. In 1890 work on the steam laundry which lies at the north-east corner of York Street and Swallow Street exposed the range of rooms south of the Circular Bath, and finally in 1896 the swimming bath below Stall Street was excavated.

Contemporary records were, to say the least, poor. Davis published various accounts (Davis 1884, 1895, etc.) and Mann drew a series of useful plans and an isometric view of the remains (fig. 30), which are now preserved in the library of the Society of Antiquaries. There were also a spate of newspaper reports and derivative accounts of varying degrees of accuracy and usefulness. We must be thankful that so much of the actual structure remains for study.

1923. The East Baths

The demolition of the old Kingston Baths in 1923 freed once again the area of the east baths for excavation. The work, carried out by Mr. W. H. Knowles, showed that most of the latest period floors had been destroyed in the eighteenth century, but this was fortunate because it enabled the excavator to examine the earlier features and to produce a series of plans in which three periods were proposed (Knowles 1926). In general terms the sequence still holds good, but later work has shown the picture to be rather more complicated.

1954. The East Baths, etc.

In 1954 Sir Ian Richmond began a series of limited excavations concerned principally with studying the development of the east baths. No detailed excavation notes survive, but the results of the work were incorporated in the description of this region written by Sir Ian and published above (pp. 113-16).

1964-8. Excavations South of the Great Bath and Circular Bath (figs. 49-51 and pl. xxiv)

Immediately to the south of the Circular Bath a door leads into a series of intercon-

necting cellars, running beneath York Street and the buildings on the south side, which house the pumping machinery and pipes required to circulate the mineral waters. The cellars are also used to store massive blocks of masonry recovered during the earlier excavations, and for heaps of other rubbish which have accumulated over the years. Space for excavation is therefore severely restricted. It has been possible, however, to cut a series of trenches by means of which the development of the area has become clear and some dating evidence has been recovered. The trenches will be described geographically rather than in the order in which they were dug.

Trenches 1, 33, and 34 (figs. 49–51) were dug to examine the history of the large room, marked as 'paved court' on the early plans. Two phases soon became evident. In the first a small plunge bath, 17½ ft. (5·33 m.) by 15 ft. (4·57 m.), opened directly from the south side of the hall through a wide opening flanked by plain piers placed symmetrically in relation to the main north–south axes. Its floor, lying at a depth of about 5 ft. (1·5 m.) below the later paving, was of hard red mortar laid on a foundation of pitched limestone blocks (trench 1, layer 9). In trench 1 a layer of pink mortar and tiles (layer 7), 4 in. (0·10 m.) thick, sealed the red mortar but did not appear further to the south in trench 33. The inner faces of the walls were not rendered, nor was the mortar floor surface finely finished; it may therefore have been intended to form a bedding for sheets of lead. Insufficient floor area could be examined to show if junctions between different sheets were apparent in the mortar, but at one point in trench 34 a small puddle of molten lead had been allowed to accumulate on the mortar, showing that plumbing of some kind was taking place at this time.

How water was led into the bath is no longer clear, but the outlet was discovered in the centre of the north wall. Here a stone slab, perforated with a roughly circular hole 12 in. (0·3 m.) in diameter, had been set into the footings so that water could flow north into the drain which ran from east–west beneath the floor of the southern part of the hall (fig. 50).

In the second period, while the east wall of the bath was retained (and still stands to a height of 8–9 ft. (c. 2·5 m) above its floor) and the north wall remained to its original height on a level with the paving of the hall, the south and west walls were demolished to below the level of a new pennant floor. The west wall had not been entirely removed, however, but had been chopped off, as the plan shows (fig. 49), its ragged end being made good with tiles. The bath itself had then been filled to a depth of 4 ft. (1·22 m.) with mortary rubble, derived presumably from the demolition of the superstructure after useful building material had been removed. The whole area was then refloored with pennant slabs set on a bedding of pebbly mortar oversailing the demolished walls and abutting the new period 2 walls, which more than doubled the size of the room by enclosing a new area to the south. The junction of the second-period walls with the first could be clearly seen in trenches 33 and 34, where the new masonry could be shown to abut the external rendering of pink mortar on the earlier wall. The second-period wall was also built in a foundation trench cut through the building spread of the first.

Before the paving of the second period was laid the area to the south of the period 1 wall was raised to the new level by the deposition of a 1-ft. (0.3-m.)-thick layer of mortary rubble containing numerous fragments of window glass (trench 33, layer 3).

Immediately to the west of the period 1 bath was a short corridor entered from the north, and possibly once with an external door in its south wall. Its south-west corner, where masonry of a later period abutted, was seriously obscured and in part destroyed by recent sewers, but it was possible to examine the main development of the structure in somewhat irregular and constricted holes, here collectively called trench 34. The extreme western wall of first-period date had been retained throughout the life of the building, but in period 2 its easterly return (probably a door) was removed and the whole of the corridor was included within the new period 2 paved court. At this time a new length of wall was also built to the west to join the court to the newly constructed *laconicum*. Later this wall was removed and the whole area covered with a pink mortar floor continuous with a fresh rendering of the western face of the wall. Among the rubble which had, still later, accumulated on the floor were found several slabs of Purbeck marble, no doubt from a decorative inlay hereabout.

Trenches 2 and 30. Immediately to the east of what, in the second period, was to become the paved court, the walls of two other rooms survive. Trenches 2 and 30 were dug through the floor of the northernmost of these. Areas of recent filling were also removed from the southern room, which had previously been excavated in the late nineteenth century, but since the soil removed was entirely modern the work of clearance has not been numbered as a trench.

Trench 2 showed that the north room (in its period 2 state) had been floored with a layer of hard pink mortar 6 in. (0.15 m.) thick, which here sealed the lias limestone slabs of the drain culvert (pl. xxiv*a*). The mortar floor had been laid up to the step of a door which served in both periods 1 and 2 to link the area with the hall to the north.

A hint of the period 1 arrangements was provided by trench 30, which showed that immediately below the pink mortar floor of period 2 lay the lower courses of a demolished period 1 wall, originally the south boundary of the first bathing establishment (see p. 106). The wall jointed with another running north-south, which would originally have linked up with the south-west corner of the Great Bath. Although the trench was of necessity restricted, it was possible to show that, to the south of the early wall, lay a make-up layer 18 in. (0.46 m.) thick composed of pitched stone blocks placed on the original ground-surface and capped with a rough mortar spread deposited at the time when the wall was being pointed. The mortar can in no way be regarded as a deliberate floor and it must be supposed that the area to the south of the wall was outside the building. In the second period the wall was demolished and the ground to the south made up with 9 in. (0.23 m.) of mortary rubble before the pitched stone make-up for the new pink mortar floor was laid.

The southern room was a bath of period 2 construction floored at a depth of 2 ft. 6 in.

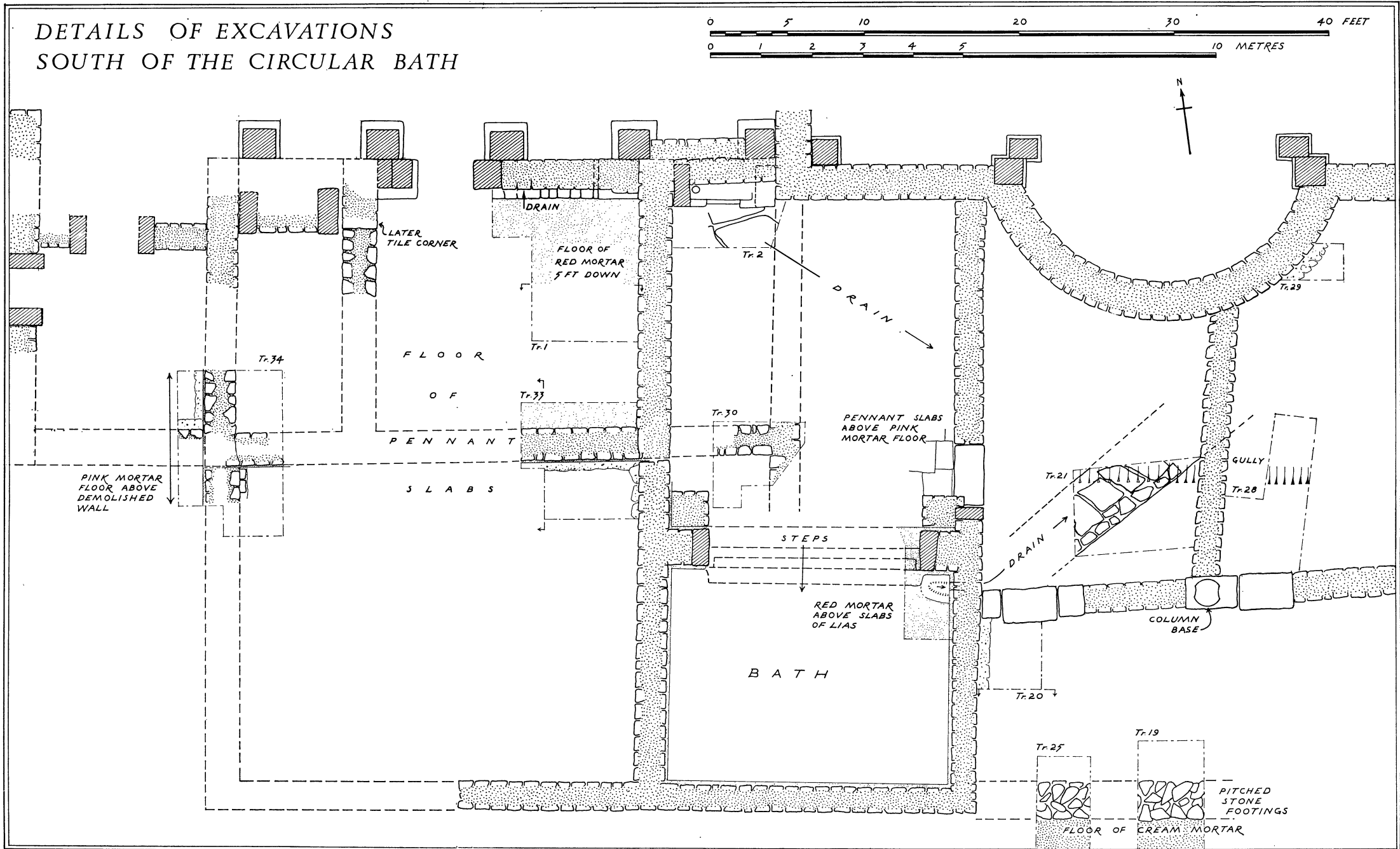


FIG. 49

(0.76 m.) below the level of the northern room with large slabs of lias limestone overlaid by a 4-in. (0.10-m.)-thick layer of red mortar contemporary with the rendering of the walls. It seems likely that the stone slabs represent an early phase which was later buried by the mortar rendering, though why this was necessary is not clear. A flight of steps constructed of tiles rendered with mortar led down into the bath from the north side. Excess water drained away from the north-east corner through a vent in the masonry, 6 in. (0.15 m.) across by 9 in. (0.23 m.) high, into the culvert sectioned in trench 21 (see below, p. 138).

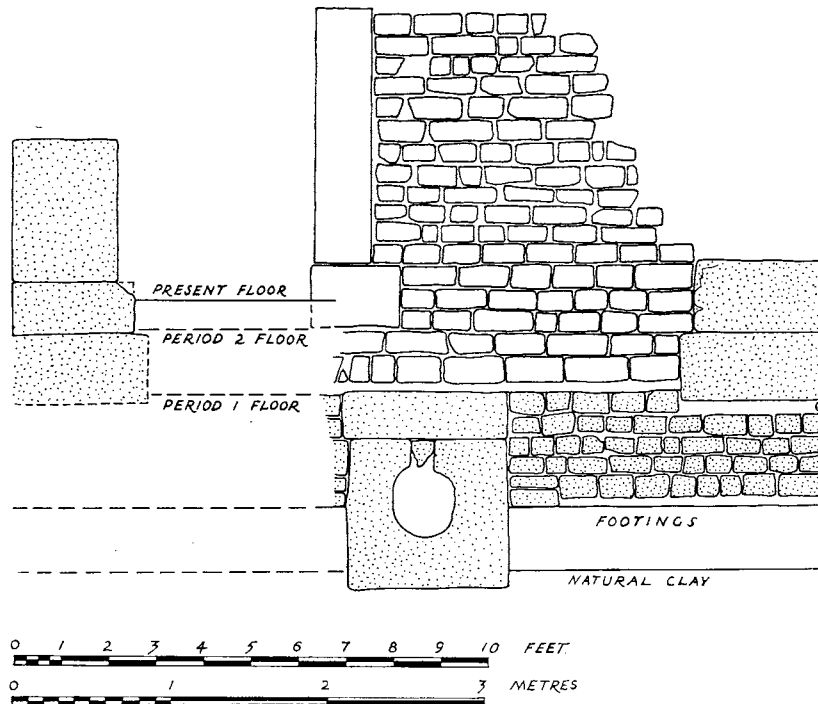


FIG. 50. The north wall of the first-period bath south of the hall

Surface examination and a superficial clearing of the upstanding masonry jambs flanking the steps to the bath showed that they were of two periods. The original period 2 jambs had been strengthened by the addition of further masses of ashlar masonry built on a footing cut through the pink mortar floor of the northern room. At this time a new floor of pennant slabs was laid above, sealing the earlier floor and the footing.

Trenches 19, 20, and 25. To the east of the room just described, two footings can be seen, one supporting a stylobate (see p. 108) and the other being part of a wall running north from it. South of the stylobate three trenches were dug. The natural subsoil here, consisting of a black clayey turf-line above a waterlaid deposit of broken limestone and flint pebbles in a grey-brown clay, appeared at a depth of about 1½ ft. (0.46 m.) below the present floor. Above it was a 4-in. (0.10-m.)-thick layer of compacted builders'

rubble, presumably of first-period date, containing pottery of the ? first century (p. 140). In trench 20 this was cut by the foundation trench for the second-period wall and was sealed by a mass of mortary rubble (layer 2), containing droppings of pink and white mortar, overlapping the foundation offset of the wall, deposited at the time of the wall's construction.

In trenches 19 and 25 the building spread had been cut by the foundation trench for a wall, since robbed, built on pitched stone footings which still remain. To the south of the wall was laid a thick floor of hard yellow mortar. What happened on the north side is far from clear because the relevant levels have been removed, but between the nineteenth-century masonry piers supporting the roof are blocks of undisturbed soil, which suggest that the area between the pitched footing and the stylobate was made up at this time with gravel to form a colonnaded veranda. The matter is somewhat obscure but trench 20 showed that the footings for the stylobate were similar to those of the wall and were cut from apparently the same level. At any event, both wall and stylobate post-date the second period.

Trenches 17, 18, 21, 28, and 29 were dug between the stylobate and the south wall of the Great Bath in an attempt to recover datable material relating to the structural sequence.

In all trenches the original ground-surface was found at between 12 and 24 in. (0.3–0.6 m.) below the existing surface. It was covered uniformly with a layer of mortary rubble contemporary with the first-period building (trench 17, layer 9; trench 21, layer 6; trench 28, layer 3). In some areas (trench 17, layer 8 and trench 21, layer 5) thin lenses of trampled silty soil containing sherds of late first-century pottery (pp. 140–1) were found above the rubble. In trench 21 a trench had been cut through these layers and well into the underlying natural, in which had been constructed a drain leading out of the second-period bath and emptying, presumably, into the main east–west drain. It was not sectioned but was cleared to the top of the capstones and the packing between them and the trench edge. The drain was sealed by a layer of mortar droppings and rubble contemporary with trench 20, layer 2, which could be seen there to be of second-period construction date. Thus the drain is clearly dated to the initial layout of the second period. Further east, in trench 18, this layer (layer 7) contained more broken limestone than mortar. Everywhere its surface was hard-packed and trampled.

It was only in trench 17, where a small block of soil against the stylobate had been left undisturbed by the nineteenth-century excavators, that the later layers survived. Here it was possible to show that over the second-period construction level a layer (layer 6) of brown sand, 3 in. (0.076 m.) thick, had been allowed to accumulate, and it was from the level of the top of this that the foundation trench for the footings of the stylobate had been dug and packed with pitched stone blocks. Above this the footings were built free-standing of faced ashlar for a height of 1½ ft. (0.46 m.). The mortar and rubble dropped at this time (layer 5) was allowed to remain and was sealed by make-up (layers 4, 3, 2, and 1) of sand, gravel, and rubble to nearly the level of the top of the stylobate.

Between 7 and 8 ft. (2.0-2.4 m.) north of the stylobate ran a gully of unknown width, filled now with grey silty soil containing a quantity of fourth-century pottery (trench 17, layer 12; trench 28, layer 5; and trench 21, layer 2). The upper levels had been completely removed, destroying all evidence of the level from which it was cut. All that can

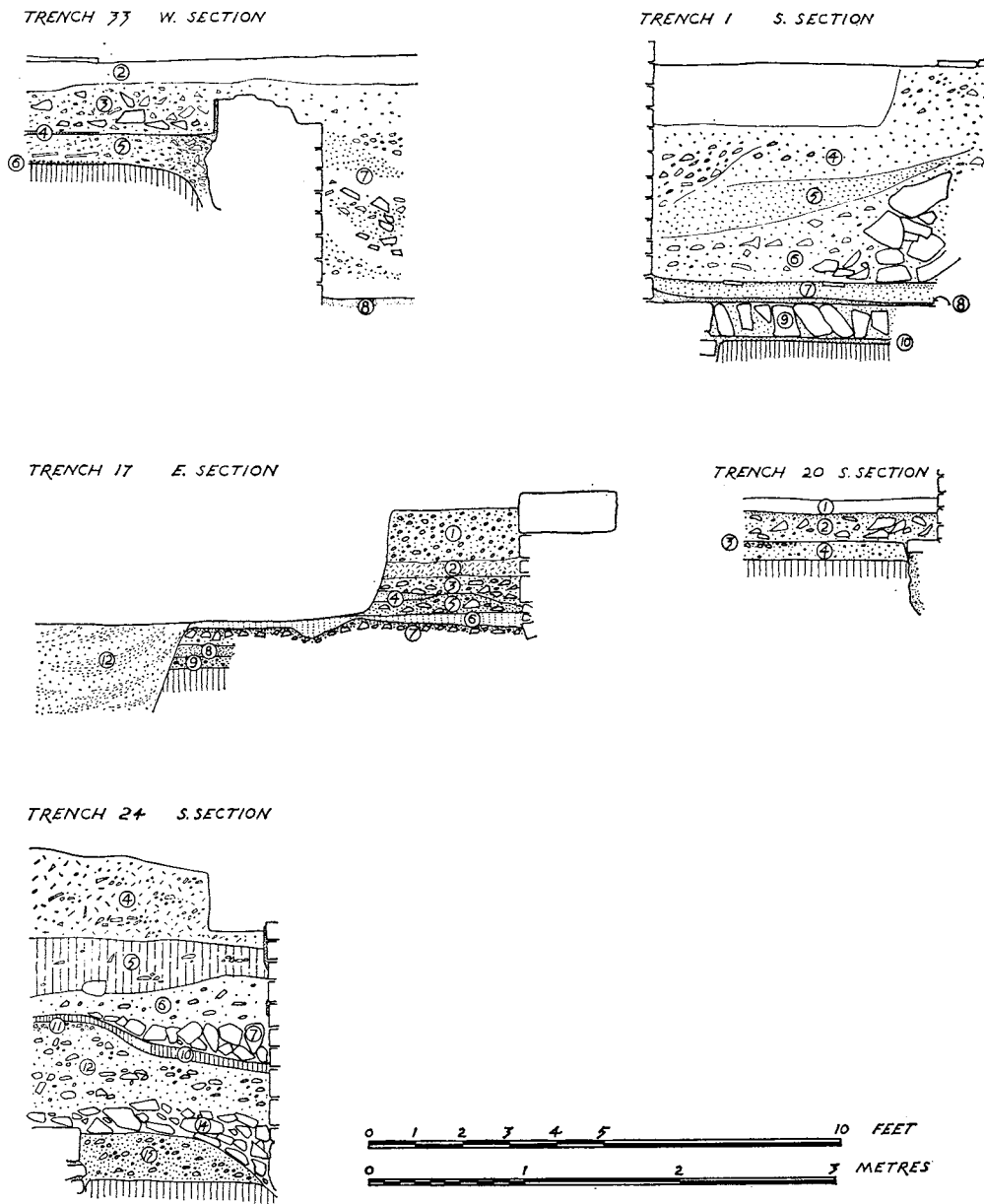


FIG. 51. Sections of trenches associated with the Baths

be said is that it post-dated the sand layer which had accumulated on the second-period mortar spread and is likely to have also been later than the construction of the stylobate.

It was, however, cut by the north-south wall which runs between the stylobate and the apse of the Great Bath, which is thus the latest recognizable feature on this part of the site.

1968. Trench 24, East of the East Baths (fig. 51)

Immediately to the east of the north-east apsidal bath in the east range is an eighteenth-century cellar which provided sufficient space for a limited excavation. Accordingly, a trench was dug to examine the stratigraphy at this point.

The natural blue-grey clay was found at a depth of 7 ft. (2.13 m.) below the present surface. Into this the foundation trench for a north-south wall had been cut, the ground adjacent to it being made up with mortar rubble to a depth of about 12 in. (0.30 m.). At a later date the wall had been demolished to its lowest course above the pitched foundations, and the wall of the apsidal bath constructed, the rubble of the builders' level being spread out over the earlier wall. Above this, for a depth of between 11 and 22 in. (0.3-0.56 m.), a layer of hard-packed mortar rubble had been deposited (layer 12) up to the newly constructed wall which, above this point, had been plastered and painted white. The top of the rubble is cambered down to the wall, its highest point (in the east end of the trench) being considerably compacted as if it had served as a road or path. On this surface a layer of trampled occupation material, 2-3 in. (0.07 m.) thick, had been allowed to accumulate (layer 10), which was in turn sealed by a layer of heavy collapsed rubble (layer 7).

Above the rubble, soil of various consistences had accumulated; first a rubblely soil (layer 6), then a silty soil with charcoal and occupation rubbish of fourth-century date (p. 141) (layer 5), and finally another thickness of rubblely soil (layer 4) containing small fragments of tile, limestone, and mortar.

The stratigraphy in the south side of the trench had been disturbed by a Saxon grave, which will be described elsewhere.

The section provides a reasonably straightforward sequence of unremarkable character, with the exception of the early wall which evidently pre-dates a late phase in the baths and may well be part of a separate building, demolished as the baths expanded. Its southerly extent is shown on fig. 32, but nothing is yet known of the building to which it belongs.

6. POTTERY FROM THE BATHS

The excavations to the south and east of the Baths produced a small quantity of stratified pottery, illustrated here as fig. 52.

Pottery contemporary with the Initial Construction of the Baths (trench 20, layer 4)

Not illustrated: fragments of a flagon in smooth orange ware. It is of a first-century type, but the sherds cannot be reconstructed into a more closely datable type.

Pottery contemporary with the Occupation following the Initial Construction of the Baths (trench 21, layer 5).

Not illustrated: two sherds of samian form 18, one Nero–Vespasian, the other late in the first century.¹

Pottery contemporary with the Occupation following the Second Period of the Baths (all trench 21, layer 4, except no. 4 which is layer 7)

1. Light-grey sandy ware.
2. Hard grey sandy ware.
3. Smooth grey sandy ware.
4. Orange sandy ware.

The coarse ware types defy close dating but they would fit into a late first- to early second-century date range.

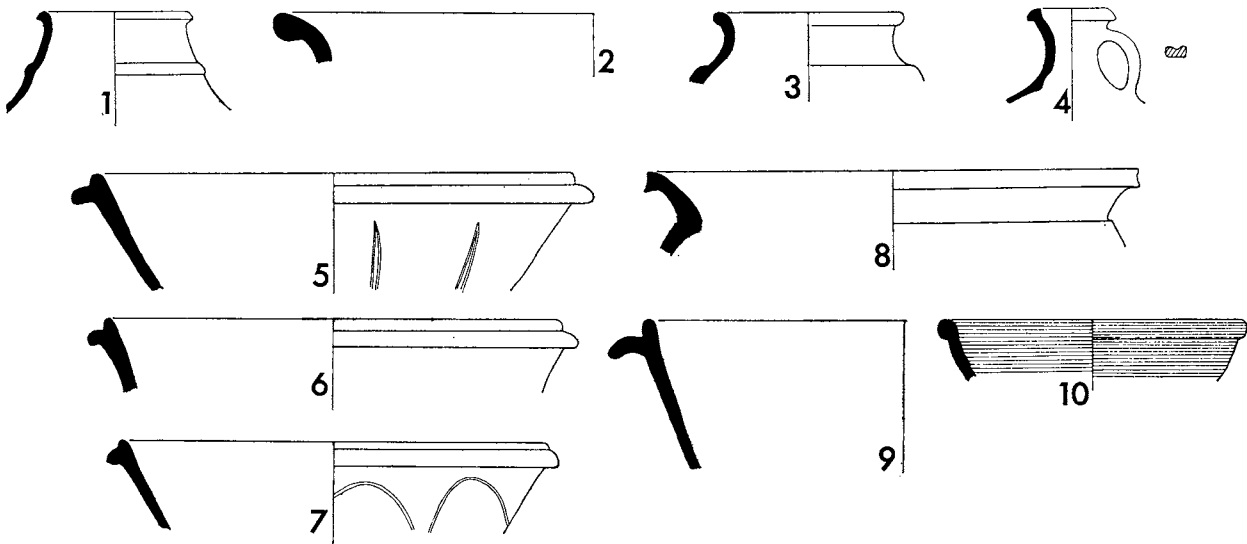


FIG. 52. Pottery from the Baths (1)

Pottery from the Late Gully South of the Baths (trench 21, layer 2)

Not illustrated: a number of indeterminate and undatable body sherds were recovered. The only distinctive piece was a small fragment of a third-century Rhenish beaker. The samian includes: form 18, Nero–Vespasian (2); form 17 var., late Neronian–early Flavian. In all probability these pieces are rubbish survival.

Pottery from the post Fourth-Period Occupation Layer East of the East Baths (trench 24, layer 5)

5. Hard grey sandy ware.
6. Grey sandy ware with light-grey slip.

¹ I am grateful to Mr. G. Dannel for the identification of the samian.

7. Black sandy ware with burnished surface.
8. Hard light-grey ware.
9. Light-grey sandy ware.
10. Red ware with red colour-coated surfaces.

All the pottery types were in use in the fourth century.

7. THE ENVIRONMENT IN THE CENTRE OF BATH AT THE END OF THE ROMAN PERIOD

The breakdown of the Roman drainage system led, as we have seen, to the gradual silting up of the hollow occupied by the baths and the temple but in spite of extensive excavation details of this important environmental change are sadly all too few. Admittedly the egg of a marsh bird, either a coot or a teal, was recovered during the original excavation of the baths and various mammalian remains found from time to time were listed (Moore 1869) but this early work was of very limited value. Fortunately the recent excavations have produced soil and silt samples which, in the hands of specialists, have yielded valuable new information. In the following pages two reports are given, one on a sample of black organic mud sealing the floor of the temple precinct, the other from the silt lying on the basement floor of the hypocaust at the east end of the Baths.

a. A Sample of Silt from the Floor of the Temple Precinct

by PROFESSOR G. W. DIMBLEBY

The sample of peat submitted for pollen analysis proved to be only moderately rich in pollen, and what there was was in a very poor state of preservation, making reliable identification difficult. Nevertheless, it was apparent that woody species were hardly represented in the pollen assemblage, and this in turn made dating impossible. The predominant pollen was *Gramineae* (grasses), including a small proportion of cereal grains. Also very abundant were the grains of *Liguliflorae* (dandelion-type), but under conditions such as these, this type is liable to be over-represented; not only are the grains very recognizable, but they are resistant to decay and so become differentially preserved.

It seems likely that arable agriculture was being practised in the vicinity. The cereal pollen, and possibly also the *Liguliflorae*, are indicative of this, but so are other weeds found in this analysis; for example, *Chenopodiaceae* and *Cruciferae*. Others, such as the ribwort plantain (*Plantago lanceolata*), are characteristic of farmed land, but particularly of pasture and grassy places such as roadsides.

In addition to the pollen types indicating farming of one sort or another, there is a small proportion of species more characteristic of wet places, such as *Typha* (reedmace),

Cyperaceae (sedges), and probably the *Gentianaceae*. The peat itself was interesting in that it contained a good deal of finely fragmented charred plant matter. Some of it was clearly derived from wood, but some was probably from rhizomes of bracken (*Pteridium*). Bracken spores, however, were only represented in small quantity in the pollen spectrum.

Analysis (percentage of total pollen and spores)

<i>Alnus</i>	0.9	<i>Rubiaceae</i>	0.9
<i>Betula</i>	0.4	<i>Typha</i>	0.4
<i>Ligustrum</i>	0.9	<i>Umbelliferae</i>	1.8
<i>Gramineae</i>	33.9	<i>Urtica</i>	0.4
Cereal	1.3	<i>Varia</i>	4.4
<i>Chenopodiaceae</i>	0.9	<i>Dryopteris</i> type	1.8
<i>Compositae</i>		<i>Polypodium</i>	0.4
<i>Liguliflorae</i>	28.2	<i>Pteridium</i>	2.6
<i>Tubuliflorae</i>	1.8	<i>Cruciferae</i>	3.1
<i>Cyperaceae</i>	3.1	<i>Cf. Fagopyrum</i>	0.9
<i>Gentianaceae</i>	1.8	<i>Plantago lanaceolata</i>	6.2
<i>P. major</i>	0.9	<i>Ranunculaceae</i>	1.3
<i>Rosaceae</i>	1.8	TOTAL COUNT	227

b. A Sample of Flood Deposit from the North-east Corner of the East Range of Hypocausts

by R. H. ROLSON and J. A. SMYTHE

Description. The thickness of the deposit is just over 4 cm. It consists of two separate parts—a lower layer, brown-black in colour and 3.2 cm. thick, and an upper layer, medium-grey and 1 cm. thick. The brownish layer consists of fine-grained, silty material, of alternating thin black bands with thicker brown bands. The brown colour (and occasional yellow) is due to iron-staining, and the black strings probably to manganese (see Dr. Smythe's report). The deposit is slightly calcareous. It shows no variation in grain-size. The upper grey layer includes a few strings of lighter-grey material in the medium-grey mass. It is highly calcareous throughout. The light-grey strings are probably less silty and richer in lime than the main part of the layer. This deposit is also very fine in grain, but in addition it contains (relatively) large grains of quartz, comparable in size to those in a very fine-grained sandstone (0.09–0.2 mm. in diameter).

The whole deposit has been examined for micro-fauna by Mr. E. S. Robinson. He records the presence of ostracod shells, a few unidentifiable foraminifera, and fragments of sea-urchins from the grey layer—but very little organic material (one or two ostracod shells) from the brownish layer.

Origin. The district which the River Avon drains is composed chiefly of rocks of Jurassic age. The Jurassic succession contains much lime. This is especially true of the Inferior and the Great Oolite Series. The formations below and above the Oolites, the Lias, and the Oxford Clay respectively, are extremely fine-grained clay deposits, rich in macro- and micro-fossils, the latter of the type recorded by Mr. Robinson. It seems fairly certain

that it was from this country rock that the river derived the grey deposits which form the upper division of the succession described above. One invasion of the hypocaust by the flood-waters would have been sufficient to produce this deposit.

The question of the origin of the lower brownish layer is a difficult one. If it is a river deposit, it is hard to explain the scarcity of lime in it, since all the Avon's tributaries pass over country rich in calcareous rocks (the Oolites). The presence of manganese might be related to the Dolomitic Conglomeratic of Triassic age. This conglomerate is manganese-bearing, and outcrops round the fringe of the Carboniferous of the hills. Some of the Avon's tributaries, including the River Frome, drain this area, and enter the Avon above Bath. This, then, is a possible, though not a very satisfactory, explanation, since it does not account for the scarcity of lime in the brownish layer. Without a greater familiarity with the district it would be unwise to speculate further about its origin.

In the autumn of 1954 exceptionally high water laid down a new deposit in the same locality. This deposit, collected as a lump, without bedding preserved, is very similar to the grey layer described above. Again it is highly calcareous and very fine-grained. However, it also contains grains of rock (pieces of limestone and shale) up to 5 mm. in diameter—that is, very considerably larger than the quartz grains recorded from the grey layer. This suggests that the flood water which deposited last autumn's material was more swiftly flowing, and hence able to transport larger grains than those which were laid down in the earlier grey layer.

This deposit has also been examined by Mr. Robinson. He finds essentially the same varieties of organic fragments as occur in the grey layer described above, though they are more numerous, and include small gastropods.

This additional evidence from the recent flood deposit seems to stress the likelihood of the supposition that the grey layer in the earlier deposit resulted from straightforward flooding, while the brownish layer with manganese resulted from some special conditions which we cannot yet explain.

Analysis (by Dr. J. A. Smythe)

The deposit rests on a bed of puddled clay and is 6–8 in. thick. It is entirely free from chloride and contains little more than a trace of sulphate. A representative sample, dried at 110°C, gave on analysis:

<i>A</i>	
Insoluble in HCl	11.0
Soluble in HCl	$\left\{ \begin{array}{l} \text{Fe}_2\text{O}_3 \quad 8.0 \\ \text{MnO}_2 \quad 4.8 \\ \text{CaCO}_3 \quad 74.1 \\ \text{MgCO}_3 \quad 0.5 \\ \hline 98.4 \end{array} \right.$

The portion *insoluble* in HCl afforded, by washing, a little fresh-looking charcoal. This is the only carbonaceous matter found in the deposit. The chief constituents are quartz grains, rock fragments, clay, bright red particles up to $\frac{2}{3}$ in. in size, but usually

much smaller, looking like brick. This is confirmed by analysis *B*, which indicates a rather low-grade, fairly high siliceous brick.

<i>B</i>	
SiO ₂	65.2
TiO ₂	1.0
Al ₂ O ₃	17.6
Fe ₂ O ₃	6.0
CaO	5.8
Alkalis and loss	4.4
	100.0

These materials have evidently been carried into position by a gentle current of water.

The portion *soluble* in acid consists in the main, as shown by analysis *A*, of calcium carbonate, carrying as usually a little magnesium carbonate, along with the oxides of iron (dark red) and manganese (black). In the main the calcium carbonate occurs in well-stratified bands, of dirty yellow colour, varying in thickness from $\frac{1}{8}$ in. down to paper thickness, and separated from one another by thin highly coloured bands, red and black.

One such carbonate band had the composition *C* and is evidently charged with clayey matter to which the alumina, titania alkalis, and part of the silica and water is due.

<i>C</i>	
SiO ₂	30.5
TiO ₂	1.0
Al ₂ O ₃	10.9
Fe ₂ O ₃	5.1
MnO ₂	0.8
CaCO ₃	43.9
Alkalis, water, and loss	7.8
	100.0

This corresponds roughly with the proximate composition

Clay	42
CaCO ₃	44
Fe ₂ O ₃ + MnO ₂	6
Others	8
	100

which indicates that the early precipitation of calcium carbonate was accompanied by heavy settlement of clay.

Several partial analyses of thin bands, parting the carbonate layers, gave:

Fe ₂ O ₃	8.5	18.5	32.1	33.4
MnO ₂	1.3	15.0	12.3	29.0
CaCO ₃	75.0	—	—	6.4

Finally, a complete analysis of a dark band, so lacking in cohesion as to fall to powder at a mere touch, gave the results shown in *D*.

ROMAN BATH

D

Insoluble in HCl	19.6
TiO ₂	tr.
Al ₂ O ₃	7.9
Fe ₂ O ₃	43.2
MnO ₂	8.8
CaCO ₃	4.9
H ₂ O(+)	15.8
	<hr/> 100.2

It is clear from these observations that the deposit, as a whole, consists of about 10 per cent of material insoluble in acid (sand, clay, brick) which has been brought into position by gentle movement of water, and the remainder of carbonate of calcium and magnesium and the oxides of iron and manganese, these being deposited under conditions of quiet settling, the proportional quantities of the precipitated matter varying within very wide limits. It is to be noted, too, that there is evidence of periodicity in the process, for there are several well-defined bands of carbonate-rich material separated by less well-defined layers, rich in the oxides of iron and manganese.

The level of the hypocaust and its proximity to the River Avon make it liable to be flooded nowadays from that source. A sample of such a flood deposit yielded on analysis the results given under *E*.

E

Insoluble in HCl	27.0
Fe ₂ O ₃	7.5
MnO ₂	0.5
CaSO ₄	11.9
CaCO ₃	45.2
MgCO ₃	0.9
H ₂ O(+)	6.6
	<hr/> 99.6

This has some slight resemblance to the hypocaust deposit, especially in the presence of particles of red brick in the insoluble matter and notably of some manganese dioxide, which can hardly have been derived from the river water. The large content of calcium sulphate, coupled with the complete absence of stratification, establishes an important difference, and it seems clear that we have had a modern river deposit which has become mixed with the ancient one in the hypocaust.

There is no evidence now of the manganiferous spring. One may speculate that its outfall was close to river level, and that the rise of this in flood cut off the spring, driving its water into the hypocaust.

The soluble constituents are compounds of calcium, magnesium, iron, and manganese, all elements whose normal carbonates (MCO₃, where M represents these four metals) are insoluble in pure water, but which dissolve in carbonic acid, passing into solution as

the bicarbonates ($M(\text{HCO}_3)_2$). When a water, charged with carbon dioxide and holding these bicarbonates in solution, is freely exposed to air, it loses carbon dioxide and the normal carbonates are precipitated. In the case of iron and manganese a further chemical change takes place, oxygen from the air being absorbed, and the oxides of these two metals are precipitated, instead of the normal carbonates. The extent to which these changes take place depends on many factors, e.g. the relative proportions of the bicarbonates in solution and of the carbon dioxide and oxygen in the gas in contact with the solution, and it is not surprising that the composition of the solid precipitated should vary within wide limits.

The amount of calcium carbonate in the deposit (analysis *A*) is so great that the solution from which it is derived must have been highly charged with carbon dioxide. This suggests that it came up cold and probably under pressure and could in no way be derived from the neighbouring hot springs, the temperature of which is about 120°F. This is supported by comparing the composition of the hypocaust deposit with that of the soluble matter in the hot springs. The latter has been investigated in detail by I. Masson and Sir W. Ramsay (*Journ. Chem. Soc.* ci, 1912, 1370). They found it to be extremely rich in halides (mainly chlorides) and sulphates of the alkali metals (mainly sodium) and of the alkali earths (mainly calcium). The total amount is 0.17 per cent of the water, and the relative amounts (percentage) are:

Alkalis	10.9
Alkali earths	19.0
Halides	8.8
Sulphates	19.0
	<hr/>
	96.9

The chief constituents are thus common salt and calcium sulphate and such a water would yield a deposit extremely rich in calcium sulphate. Of the thirteen constituents, quantitatively determined by these authors, there is no mention of manganese, though, if present, it could hardly have been overlooked. The abundance of manganese in the hypocaust deposit is a striking fact, as the presence of the element in quantity is comparatively rare in spring waters. (I have described one such case in *The Vasculum* (1926), 20.)

To summarize: one may state with confidence that the hypocaust was flooded with a muddy, highly carbonated spring water, saturated with the bicarbonate of calcium, magnesium, iron, and manganese. The velocity of flow of this water was only high enough to carry in small, specifically light, particles of sand, silt, brick, and charcoal encountered on the way. The flood-water remained static for some time, allowing the carbon dioxide to escape and air to take its place. This led first to the major precipitation of carbonate of lime, followed by the oxides of iron and manganese, it being understood that all the reactions involved took place to a varying extent simultaneously and that deposition of mud and fine silt occurred over the whole period. As the water drained or seeped away it was replaced by the inflow of fresh carbonated water and this apparently happened several times.

IV. MONUMENTAL BUILDINGS ADJACENT TO THE TEMPLE AND BATHS

IN addition to the Temple of Sulis Minerva and the Great Baths, there are indications of at least one, and possibly two other, masonry buildings of monumental proportions in the central area. The first, represented now by substantial foundations, lies to the east of the temple; the existence of the second is indicated only by architectural mouldings found in cellars on the north side of the temple.

1. THE BUILDING TO THE EAST OF THE TEMPLE (fig. 26)

Remains of a substantial masonry building were discovered beneath the eastern part of the Pump Room in 1893. The main structure, which lies 33 ft. (10 m.) east of the temple precinct colonnade, consists of a massive east-west revetting wall supporting a

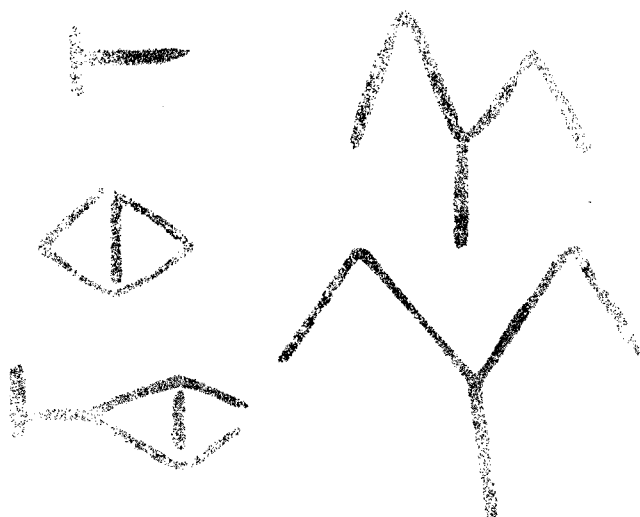


FIG. 53. Masons' marks ($\frac{1}{10}$)

stylobate and joined by two north-south walls which now lie beneath the concrete floor of the Museum. Mann's plan shows that a gutter was found at the inner angle made by two of the walls. It therefore seems likely that the easternmost of the north-south walls, as well as the east-west wall, supported a stylobate forming the basis for a colonnade. A

semicircular recess had been built into the east-west wall (fig. 30), but this can no longer be seen and its purpose is difficult to diagnose.

According to Mann, a considerable part of the area had been overlaid by a massive concrete foundation faced with rough masonry, which his plans and sections strongly suggest to be a later addition. He tells us that part of this platform had been removed in ancient times, more of it in the eighteenth century, and the remainder in 1893, and adds 'Beneath the Abbey it was also met with in 1868'.

Too little is known of the plan of the building to be sure of its function. On many continental sites, however (and indeed on a few sites in this country), it is not unusual to find either the forum or a theatre adjacent to the temple and arranged on the same axis. As Bath does not seem to have been a tribal capital, a forum of this type is unlikely but a theatre would be well in keeping with the religious and cultural nature of the rest of the complex. The plan of the known structure, in both its phases, could be interpreted as the stage of such a theatre, but until more of the eastern part of the building has been examined it is impossible to be certain. Unfortunately most of the crucial area is now overlaid by the Abbey Church.

On the outer face of two of the blocks used in the foundation of the main east-west wall were carved a series of marks made by the Roman masons. These are illustrated in fig. 53.

2. THE ARCHITECTURAL FRAGMENTS OF A MONUMENTAL BUILDING (fig. 54)

The excavation of 1869, beneath the floor of the cellar immediately north of the Westgate Street frontage of the Pump Room Hotel, revealed a quantity of fallen masonry among which were found four sculptured fragments, listed below (nos. 3.1-4). Three of the pieces were from a gigantic cornice enlivened at intervals by human faces which acted as gargoyles; the fourth piece included a modillion from a similar cornice. Fig. 54 shows clearly that the cornice from which these fragments came was about twice the size of the main cornice of the temple and is therefore likely to belong to a building of correspondingly larger proportions. No foundations suitable for supporting such a building are known from within the precinct and since the fragments were found nearly 120 ft. (36.6 m.) north of the temple, it seems reasonable to assume at present that the building to which they belonged still remains to be discovered, perhaps somewhere in the area of Westgate Street.

Two fragments from what is evidently a very large Corinthian capital are now preserved in the Baths Museum (nos. 3.5-6). Their find-spot is unrecorded, but in all probability they were found during the excavations of the Baths, in the late nineteenth century. It is difficult to judge the exact proportions of the capital from the surviving

ROMAN BATH

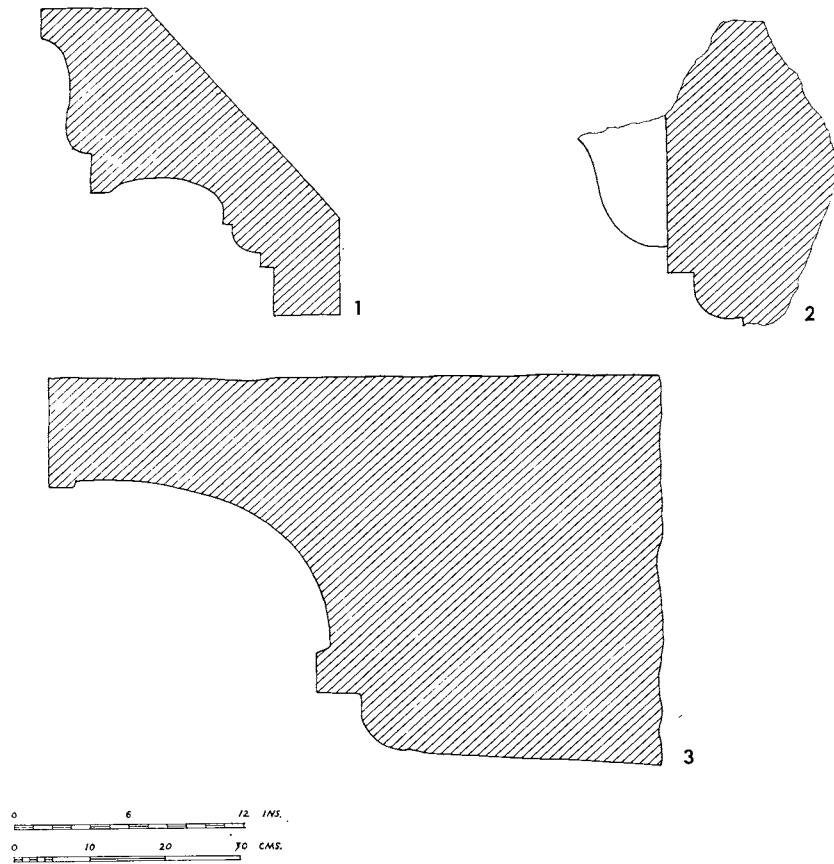


FIG. 54. Architectural fragments: 1, from the Temple;
2 and 3 from the unsited monumental building

pieces, but a column somewhat larger than those of the temple would seem to be indicated. No direct connection can be claimed between the capital and the monumental cornice, but in view of their comparable size it remains a possibility that both belonged to the same building.

V. OTHER RELIGIOUS SITES WITHIN THE SETTLEMENT

IT is clear from the general plan of the walled area that the principal source of hot mineral water in the Roman period, as now, was the King's Bath spring around which the main temple and bathing establishment were built. But there are, close by, two other springs, one at what is now the Cross Bath, the other at the Hot Baths; both were in use in the medieval period and there is every reason to suppose that both functioned in Roman times. An examination of the evidence found in and around each spring strongly suggests that they served a curative or religious function, similar to the Great Baths but on a lesser scale.

1. THE HOT BATHS (figs. 55-6 and pl. LXXX)

The Royal United Hospital, situated on the triangle of land between Beau Street, Hot Bath Street, and Lower Borough Walls, was completely rebuilt between 1864-6. Fortunately during the excavation for the foundations J. T. Irvine made frequent visits to the site and was able to record, by means of plans, sections, and photographs, the remains of a substantial Roman building lying at a depth of 10 ft. (3 m.) below the surface. His records, though quite remarkable for their time, are not exhaustive, no doubt due to the physical difficulties involved in working on a building site, but they show clearly that at least three different building periods were apparent. A copy of his plan (fig. 56) summarizes the main features of the site.

The last phase seems to be represented by a well-preserved bath suite consisting of an apsidal-ended room (room 1), a corridor floored with white mortar (room 2), and a room, or rooms, with a pillared hypocaust (room 3), within which there appears to have been a small plunge bath cut through the raised floor and floored itself with stone slabs. To the south are two further rooms which might have been added to the main building. No. 4, which leads from room 2, was floored with tesserae whilst room 5 was evidently a cold plunge bath floored with stone slabs and reached by two steps down from its north side. A lead pipe, possibly a feed-pipe, was found to enter the bath through a projecting mass of masonry in the west wall.

To the north lay an isolated structure (no. 6), only the corner of which was examined. It appears to have been a plunge bath, the lead-lined bottom of which was reached by a flight of six steps leading down from the south side. A carved base of a pier with attached pilaster was found upside-down lying on the foundations of the east wall. Although

clearly in a secondary position it is likely once to have formed part of the superstructure of the suite. The exact structural and chronological relationship of this bath to the main range is unknown, but there is no reason to suppose that they are not broadly contemporary. West of the bath, and joining the north wall of room 1, Irvine found a dry-stone footing which might represent the outer wall of an ambulatory—the point cannot now be proved.

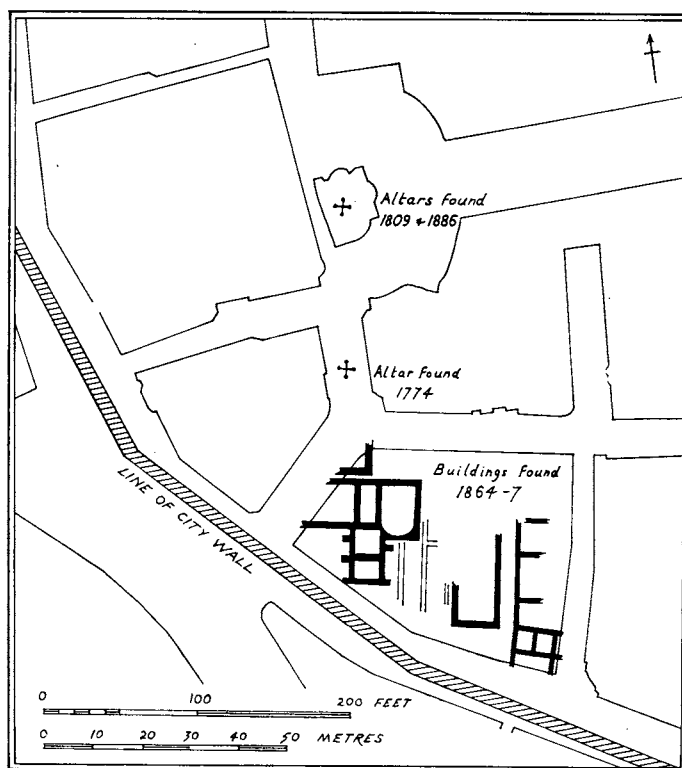


FIG. 55. The south-west quarter of Bath

Of the earlier structures, all that Irvine saw are recorded on fig. 56 and although there can be little doubt that considerable alterations took place during the Roman period, the nature of the early features must remain unknown.

The status of these baths is difficult to assess on the evidence available, but they would seem to be rather too elaborate for a normal domestic suite. Their full extent is undefined but they are known to have spread across Hot Bath Street, for in 1908 Taylor recorded walls, some plastered in pink mortar, and hypocausts which were found on the west side of the street when the Nurses' Home was built (Taylor 1908). Unfortunately, the plan made at the time was unpublished and cannot now be traced.

Three further discoveries from the area may be relevant to the interpretation of the remains. In 1774, when rubble was being removed from the Hot Bath spring, a small Roman altar 25 in. (0.63 m.) high was found, dedicated to Sulis Minerva by Sulinus

son of Maturus (no. 4.1). Two years later 'in the ruins of the Hot Bath' a second altar came to light bearing a dedication to Diana, the stone being given by Vettius Benignus (no. 4.2). Finally, when the United Hospital was built in 1825, part of an inscribed block was recovered recording an act of devotion to an unknown deity by the son of Novantius, on behalf of himself and his family (no. 4.3).

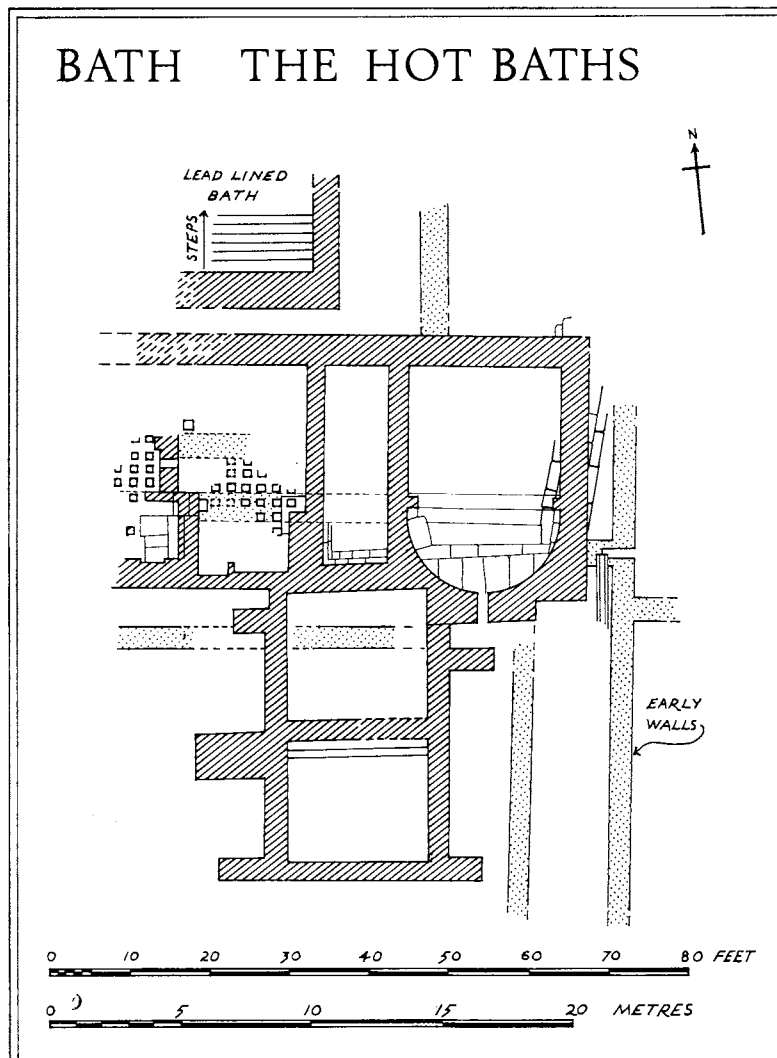


FIG. 56. The Hot Baths (after J. T. Irvine)

The remains of a substantial bath building together with three dedicatory inscriptions, all from the immediate vicinity of the Hot Bath spring, imply that in Roman times the spring was regarded as sacred and that its waters were used for bathing, possibly of a curative nature. The size and development of the establishment, whether private or

public, and its relationship to the main baths remain unknown, but further excavation will no doubt eventually clarify the problem.

2. THE CROSS BATH

Evidence for the Roman use of the Cross Bath spring, though definite, is not extensive. When the cistern was being cleared out in 1809, an altar was recovered from 13 ft. (3.96 m.) below the street-level, dedicated to Sulis Minerva and the deities of the Emperors by a centurion of the Second Augustan Legion, Gaius Curvatus Saturninus (no. 4.4). Later, in 1885, further clearing operations, this time 20 ft. (6.09 m.) down, brought to light a carved block depicting scenes thought to be related to the Aesculapius story (no. 4.5) Davis records that at the time of this discovery an uninscribed altar was also found, together with the 'walls of the Roman well' (Davis 1895). Finally, an excavation in the street south of the Bath uncovered a drain running north-south, the top of which was 6 ft. 5 in. (1.96 m.) below the surface. Mann considered it to be Roman (Irvine papers), but of this there is no proof.

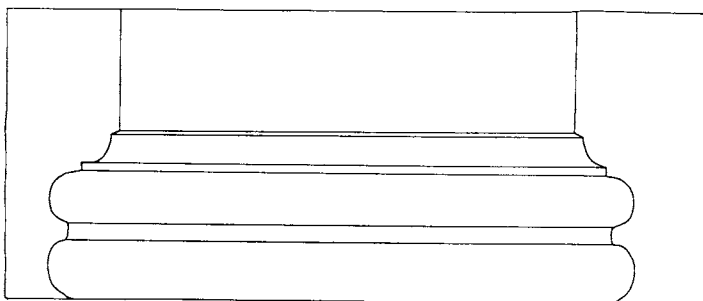


FIG. 57. Pilaster base from the Hot Baths ($\frac{1}{10}$)

That the Cross Bath spring was open in the Roman period is clear; however, nothing survives to show that the spring was used for bathing and it might well be that the waters were simply retained within a reservoir wall set about by various dedications. Further than this it is impossible to go on the available evidence.

3. THE *LOCUS RELIGIOSUS*

During building operations carried out in 1753 somewhere on the west side of Stall Street at its 'lower end', three inscriptions came to light. The first was dedicated to Loucetius Mars and Nemetona by Peregrinus (no. 4.6); the second to the Suleviae by

Sulinus (no. 4.8); and the third refers to 'this Holy Place wrecked by insolent hands and cleansed afresh' and restored to the divinity of the Emperor by a centurion, Gaius Severius Emeritus (no. 4.7). The discovery of three inscriptions of this kind, apparently close together, is suggestive of a religious centre so far undefined. The very number of the stones would argue against their having been brought to the site and re-used as building material. It is unfortunate that the contemporary accounts give little indication of the precise find-spot. The 'lower end of Stall Street' is mentioned, which is usually considered to mean the south end, but it is possible that for a person standing at the City Bridge, one of the main entrances to the City, the 'lower end' could be the north end. If so, the blocks could have come from the main temple. It is, however, more likely that the site lay somewhere between Stall Street and the Hot Bath spring.

VI. OTHER ROMAN SITES EXCAVATED

1963-7

1. INTRODUCTION

IN addition to the work outlined in the previous section, which was concerned largely with the problems posed by the major Roman public buildings in the centre, several sites in other parts of the town have been excavated. Indeed not only has the opportunity been taken to examine all sites due for redevelopment, but several patches of waste ground have been sectioned in an attempt to improve our knowledge of the town's growth. It is pleasant to remember here the interest and ready help given by the developers, architects, and owners of the various sites, whose names are recorded below.

The problems confronting the archaeologist in Bath are enormous. The ancient walled area of the city is densely packed with buildings, many of which are of exceptional architectural merit and unlikely to be demolished. Moreover, practically every building is founded on deep cellars which have often removed all traces of ancient levels. The process of redevelopment does not help much, for when a new building is to be erected it is now general practice for the existing structure to be demolished and its cellars filled with rubble. This, together with the surrounding soil, may either be dug out mechanically or, if the new building is to have no cellars, piles are driven through the rubble to support the new frame. Thus the archaeologist is, if he is lucky, presented with two opportunities for excavation: either he must work by digging trenches through the old cellar floors before demolition, or he must wait for the mechanical excavation in the hope of salvaging something. In practice during the last few years both opportunities have been taken, usually with some degree of success.

In the following reports each site is treated separately, the excavated features being described in detail first, followed by a description of the stratified pottery and finds. Medieval material, which is usually sparse in Bath due to the removal of the more recent layers by levelling, has been generally omitted. It will be published elsewhere.¹

2. THE SITE OF NO. 4 ABBEYGATE STREET, 1964-5 (figs. 58-61 and pls. xxvii and xxviii*a*)

An old house of no architectural merit, no. 4 Abbeygate Street, was recently acquired by Messrs. Marks and Spencer Ltd. and demolished, leaving only the walls of the basement standing. By kind permission of the owners and through the good offices of their

¹ A volume on Saxon and medieval Bath is in preparation.

architect, excavation began in October 1964 and continued throughout the winter until January 1965. Most of the work of excavation was undertaken by Mr. M. B. Owen, of the Roman Baths Museum, and by the present writer.

Description of the Excavations (figs. 58-9)

The flagged basement floor of the demolished building, at a depth of 6 ft. (1.83 m.) from the present-day road surface, lay immediately upon Roman and medieval layers. Excavation beneath it has yielded evidence of eight major periods of occupation, each of which will be described in turn.

Period 1. At the beginning of the Roman period the natural soil in this part of the city consisted of a layer of dark blackish-brown organic mud, more than a foot thick, lying above clayey subsoil. Throughout the first and second centuries the area appears to have been largely unoccupied, but a few sherds of pottery and fragments of animal bones were dropped from time to time on to the surface of the mud and have become incorporated in it (trench 2, layer 13 and trench 7, layer 10). Over the eastern part of the site some attempt was made to consolidate the ground-surface with a layer of broken-up pink mortar rubble (trench 2, layer 23), but more mud (trench 2, layer 22) was soon deposited over it.

Period 2. It was not until the beginning of the third century that a further attempt at consolidation was made. It appears that in the area sectioned by trench 1, blocks of limestone and spreads of clay and gravel had been laid on the surface of the mud (trench 1, layers 6, 8, and 9), whilst in trench 3 a tightly packed layer of limestone blocks was found. Whether or not these formed the floor of a building is uncertain since the excavation of the early levels was necessarily limited, but mortared limestone blocks in the western end of trench 2 may well represent a wall of this period.

Period 3. Later, probably during the third century, a well-constructed masonry building was erected of which the south-east corner, consisting of three rooms and possibly an outside corridor, has been examined. The walls were of coursed limestone masonry on a rubble footing. The lowest three courses below the foundation offset were built, free-standing, of a hard white lias limestone; above the offset oolitic limestone was used. The rooms and the area outside the main bounding wall were floored with a layer of hard gravelly mortar up to 4 in. (0.1 m.) in thickness (trench 2, layers 5, 11, and 13; trench 1, layers 5 and 19; trench 7, layer 9).

A thin layer of occupation material was allowed to accumulate within the rooms (trench 7, layer 8 and trench 1, layer 12) and evidence of a small fire was found outside the east wall of the building, in trench 4.

Period 4. In period 4 modifications were made to the existing building. In room 3 a channelled hypocaust with ducts 2 ft. (0.61 m.) deep was inserted (pl. xxviiA), the walls bounding the individual channels being cut through the period 3 floor, which now became the floor of the channels; no trace of the new suspended floor above survived.

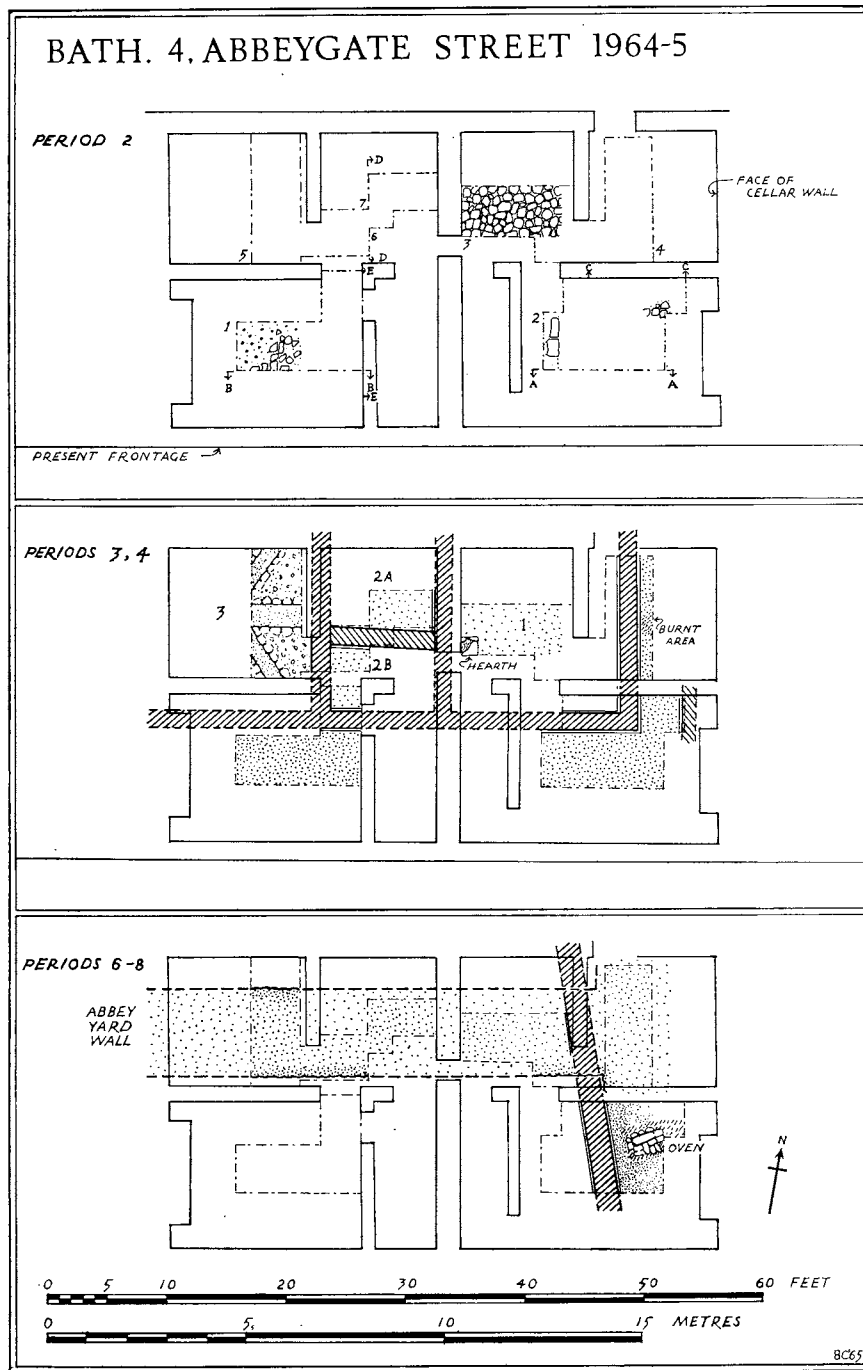


FIG. 58

Nothing is known of the flue by which the hypocaust was heated, but it is clear from the plan that it lies either to the north or the west of the room. From the rubble filling of the hypocaust channels came a number of fragments of wall plaster painted red and white, indicating that the room was once elaborately decorated.

At this time room 2 was divided into two unequal parts by a partition wall of oolitic limestone. Two ill-defined floor levels were identified (trench 7, layers 6 and 4) and from the level of the lower floor, in the south-east corner of room 2A, a pit had been cut to take an amphora (fig. 60, no. 9), buried up to its shoulders. Both rooms produced very small fragments of wall plaster painted in green, red, and white.

Room 1 was also refloored with mortar in period 4 and a hearth of limestone slabs was built against its western wall on the new floor level. Small fragments of painted wall plaster occurred in quantity, the most common colour being plain red, occasionally enlivened with thin white bands $\frac{1}{8}$ in. (0.3 cm.) thick. A few pieces painted in ochre and flecked with red have also been recovered.

Just outside the south-east corner of the building a wall belonging to another building of this date was discovered. Its structure differs from that of the previous building in that it was erected on a footing of pitched stones. Nothing is known of the form of the building to which the wall belonged.

Period 5. Period 5, probably dating to the last half of the fourth century, represents the destruction of the building. The first part of the superstructure to fall was the roof-covering of Pennant slabs, which slid off and piled up on the mortar surface bounding the southern side of the building (trench 1, layer 4). It is surprising that no attempt was made to salvage the unbroken slabs or limestone ridge blocks which lay scattered in the rubble. After the roof had fallen the painted plaster flaked off the inside surfaces of the walls and eventually the walls themselves collapsed (trench 1, layer 3). Over the western part of the site black soil began to accumulate (trench 1, layer 2) and continued so to do until the medieval period but the erection of the new period 6 building interrupted soil accumulation on the eastern part of the site.

Period 6. Some time after the collapse a completely new building was erected over this eastern area. Excavation has revealed one of its walls, consisting of coursed oolitic limestone blocks set in yellow sandy mortar on a pitched stone footing. To the east lay a mortar floor. The building is of considerable interest since, on the evidence of the sequence alone, it must lie towards the end of the Roman period and it may even have been erected in the early years of the fifth century.

Period 7. During a late stage in the occupation of this new building an oven was constructed within it, the surviving flue being built of limestone blocks set in clay laid in a shallow pit cut into the mortar floor. Evidently it had remained in use for some time, during which a layer of ash had accumulated (trench 2, layer 15) only to be overlaid later by a clay floor (trench 2, layer 14). After the oven had been finally abandoned a human skull was placed in the flue (see p. 164 and pl. xxviii b).

Period 8. To period 8 belongs the footing of a wall, 7 ft. (2.13 m.) wide, which was found to run across the site in an east-west direction, cutting into the latest Roman layers. It undoubtedly belongs to the medieval wall, bounding the south side of the Abbey precinct, and was probably erected in the late eleventh or early twelfth century when the Abbey flourished under John de Villula. Stukeley's map of 1723 shows that the wall was still standing in the early part of the eighteenth century. The footings consisted of a single course of stone blocks (trench 7, layer 2) packed together in a foundation trench. The surface was rendered with mortar but nothing remained of the superstructure of the wall. At the eastern end of the site the footings were considerably wider and were composed of two courses of blocks, suggesting that a greater weight was supported

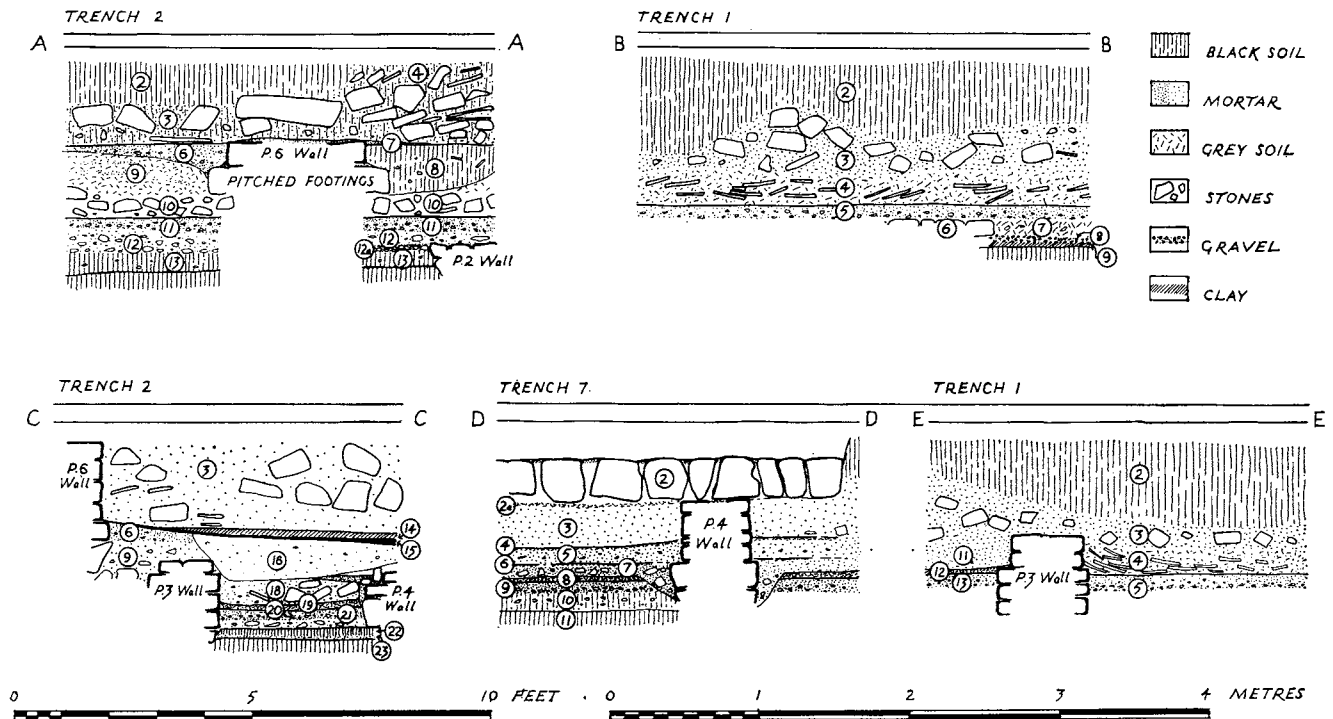


FIG. 59. Sections of the excavations at Abbeygate Street

at this point. Although definite proof is lacking, it is not unreasonable to suppose that we are dealing here with part of the foundation of the Abbey Gate. The only object found in association with the wall footing was a small fragment of a decorated Saxon cross which had been re-used in the rubble of the foundations.

The superstructure of the wall and the contemporary occupation layers had been removed at the time when the present cellar was constructed.

The Finds: the Roman Pottery (fig. 60)

It is becoming increasingly apparent that in the latter part of the Roman period Bath

relied heavily on the markets selling pottery which had been produced in the Oxford region. A high percentage of the material published below, including the two mortaria (nos. 12 and 27) and probably all of the red colour-coated ware, can be traced to this source. Smaller quantities of pottery were also reaching the town from the New Forest kilns (no. 19) and probably from the Farnham area (no. 26). The remainder of the wares, with the exception of the amphorae (nos. 9 and 35), were probably of a relatively local origin.

The significance of the groups of pottery from Abbeygate Street lies in the fact that they can be arranged, on stratigraphical grounds, in a sequence which extends throughout the fourth and into the fifth century, thus providing a useful framework which may, when more material becomes available, be extended into a detailed type-series of this elusive period.

Period 1

1. Jar. Hard grey ware fired to a streaky red on the surface (trench 3, layer 10).

Period 2

2. Rhenish beaker. Fine hard red ware with a grey metallic colour-coat (trench 2, layer 13).
3. Mortarium. Soft red sandy ware with traces of an external white colour-coat. Quartz grits (trench 1, layer 7).

The Rhenish beaker (no. 2) was found immediately beneath the construction layer of the period 2 structure. The type is thought to be of early third-century date, a date which would correspond with that of the wall-sided mortarium (no. 3). On the evidence of these two vessels alone it would be difficult to offer firm dates for period 2, but a range from the early to the mid third century would not be far wrong.

Period 3

4. Dish. Smooth grey sandy ware with well burnished dark-grey surfaces (trench 7, layer 8).
5. Dish. Black sandy ware with well burnished surfaces (trench 7, layer 8).
6. Jar. Black sandy ware burnished in zones (trench 7, layer 8).
7. Jar. Hard light grey sandy ware (trench 7, layer 8).

This group represents the period of occupation within the period 3 building. Precise dating is impossible with so small a group, but all of the types were in use in the area in the second half of the third century and may have lasted into the early part of the fourth century.

Period 4

8. Jar. Hard grey sandy ware burnished inside the rim and on the shoulder (trench 7, layer 7).
9. Amphora. Smooth red-brown micaceous ware fired to a darker brown on the surfaces (trench 7, layer 6).

10. Dish. Grey sandy ware fired red on the surfaces (trench 7, layer 4).

Period 4 must lie within the early part of the fourth century by virtue of its position in the stratigraphical sequence. The amphora (no. 7) is an unusual form and cannot easily be paralleled.

Period 5

11. Flanged bowl. Fine hard red ware with a red colour-coat (trench 4, layer 4).

12. Mortarium. Red-grey ware with a pinkish colour-coat. Quartz grits. Oxford kiln type (trench 4, layer 4).

13. Jar. Light grey sandy ware fired grey-brown (trench 4, layer 4).

14. Dish. Black sandy ware burnished internally (trench 4, layer 4).

15. Bowl. Red ware with a red colour-coat and white painted decoration (trench 4, layer 4).

16. Dish. Black sandy ware with burnished inner surface (trench 4, layer 4).

17. Beaker. Hard grey-brown ware with a metallic purple colour-coat. New Forest type (trench 2, layer 9).

18. Bowl. Red ware with a red colour-coat. Stamped decoration (trench 2, layer 9).

The pottery from period 5 represents the destruction of the masonry building erected in period 3. All of the forms were common during the fourth century and a date towards the middle or end of that century would seem likely.

Period 6. Construction Phase

19. Jar. Hard grey sandy ware (trench 2, layer 8).

20. Jar. Black sandy ware with lightly burnished surfaces (trench 2, layer 8).

21. Flanged bowl. Red ware with red colour-coat (trench 2, layer 8).

These vessels are probably of late fourth-century date.

Periods 6-7. Occupation and Destruction Phase

22. Bowl. Fine red ware with a red colour-coat. Decorated with rouletting and white paint (trench 2, layer 4).

23. Dish. Hard red ware with a red-brown colour-coat (trench 2, layer 4).

24. Jar. Hard light-grey ware with smoothed surfaces (trench 2, layer 4).

25. Jar. Grey-brown ware fired to dark-grey on the surfaces (trench 2, layer 4).

26. Jar. Hard grey sandy ware. Probably from the Farnham kilns, e.g. *Surrey Arch. Coll.* li (1949), fig. 8, no. 55 (trench 2, layer 4).

27. Mortarium. Grey ware fired red on the surfaces and coated with a cream colour-coat. Quartz grits. Oxford kiln type (trench 2, layer 4).

28. Flanged bowl. Fine red ware with an even red colour-coat. Decorated with white paint on the flange (trench 2, layer 4).

29. Bowl. Pale red ware with traces of a discontinuous colour-coat. Decorated with rough roulettings (trench 2, layer 4).

30. Bowl. Hard red ware with a red colour-coat (trench 2, layer 3).

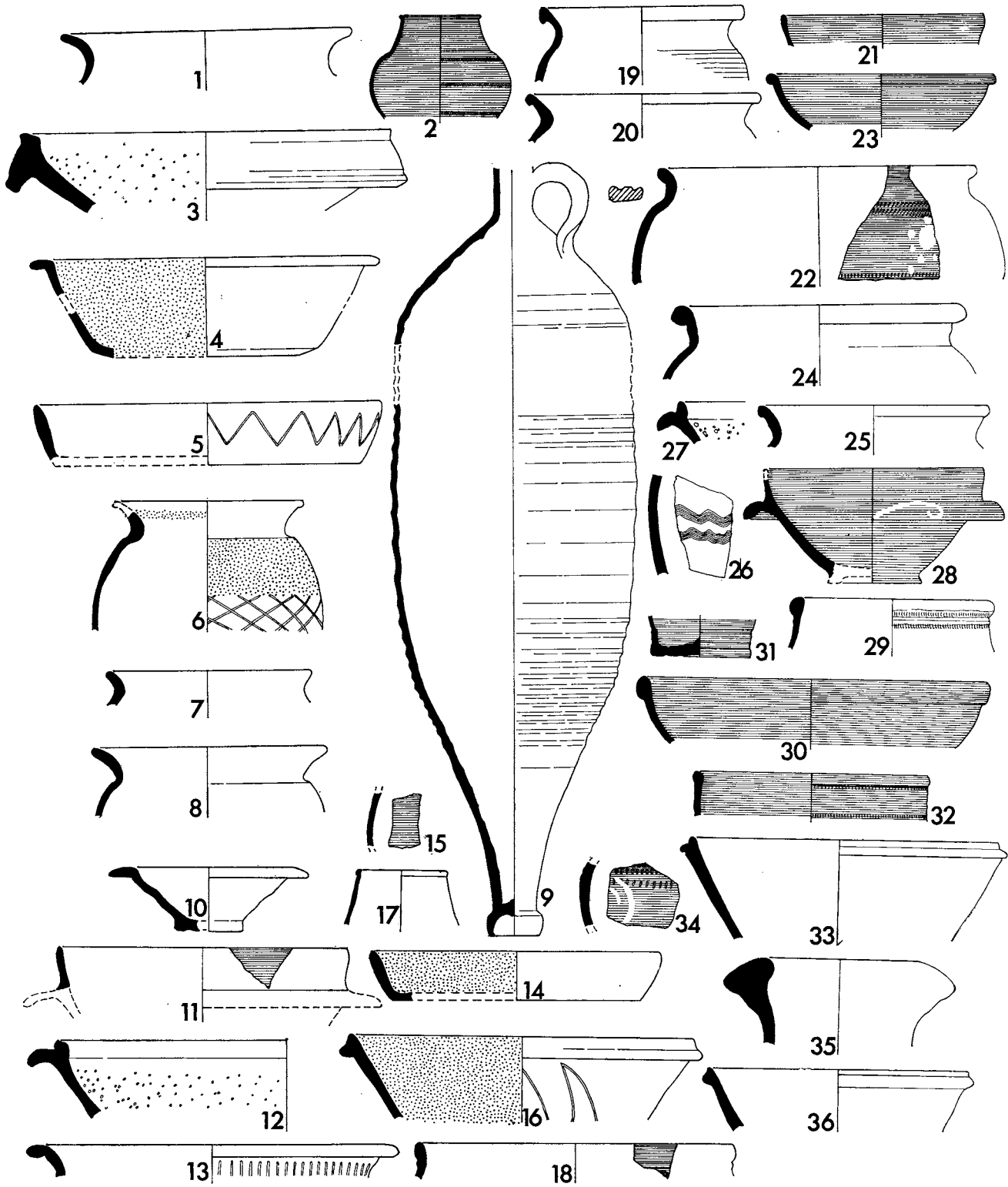


FIG. 60. Pottery from Abbeygate Street ($\frac{1}{4}$)

31. Beaker. Fine blue-grey ware fired to light-brown on the surfaces, with a brown colour-coat (trench 2, layer 3).
32. Bowl. Red micaceous ware with a thin red colour-coat. Decorated with rouletting (trench 2, layer 3).
33. Dish. Hard grey sandy ware (trench 2, layer 3).
34. Bowl. Red micaceous ware with a red colour-coat. Decorated with rouletting and white paint (trench 2, layer 3).
35. Amphora. Pink sandy ware. This is an early Roman type and is best regarded as a stray (trench 1, layer 2).
36. Dish. Hard grey sandy ware (trench 1, layer 2).

This group represents the material in use at the very end of the Roman period. It is very difficult to offer a firm date for pottery of this kind, but a closely similar group was found sealing the defences of the Roman town at Dorchester-on-Thames and associated with two coins of the House of Theodosius. Clearly a group such as this could be expected to continue in use well into the fifth century.

The Finds

1. (Not illustrated.) A lump of lead slag about 5 in. (0.12 m.) in diameter. Period 1/2; from trench 7, layer 10.
2. (Not illustrated.) A roughly polished bone ring made by cutting a slice $\frac{1}{4}$ in. (0.6 cm.) wide from a long bone of an ox or horse. Period 3 occupation; from trench 7, layer 8.
3. (Fig. 61.) A worked block of oolitic limestone $12\frac{1}{2}$ in. (0.31 m.) long, probably forming part of the roof crest of the period 3 building. From trench 1, layer 4.
4. (Fig. 61.) A worked block of oolitic limestone 5 in. (0.12 m.) long. From the superstructure of the period 3 building; trench 1, layer 4.
5. (Fig. 61.) A worked block of oolitic limestone $4\frac{1}{2}$ in. (0.11 m.) long. From the superstructure of the period 3 building; trench 1, layer 4.

The Human Skull discovered in the Period 7 Oven

by C. B. DENSTON, Duckworth Laboratory, Cambridge.

Sex. Female. The cranium is typical of the female sex; the mastoid processes are small, there is a relative lack of superciliary ridges, the frontal bone rises up from the nasion steeply and has prominent frontal eminences, and the occipital bone is what is commonly known as 'bun-shaped'. There are also other diagnostic features of the cranium suggesting female sex, and an over-all picture of the cranium is that it is typical of a female, and shows no robust features at all.

Age at Death. Approximately 20 years. This estimate of age at death is based upon the degree of sutural closure of the ect-cranium and the state of eruption and attrition of the teeth. No conflict occurred between the estimates based upon these two sets of criteria.

Dental Pathology. Post-mortem loss accounted for the incisors, canines, and the premolar teeth, leaving *in situ* only four molar teeth. The cause for there being just four molar

teeth was the occurrence of bilateral congenital absence of the two third molars. No indications of caries, abscesses, or periodontal wear were noted, but slight deposits of calculus, or tartar, were present on the molar teeth. The second molars show a normal degree of hypocone reduction, whilst the hypocone is well-developed on the first molars.

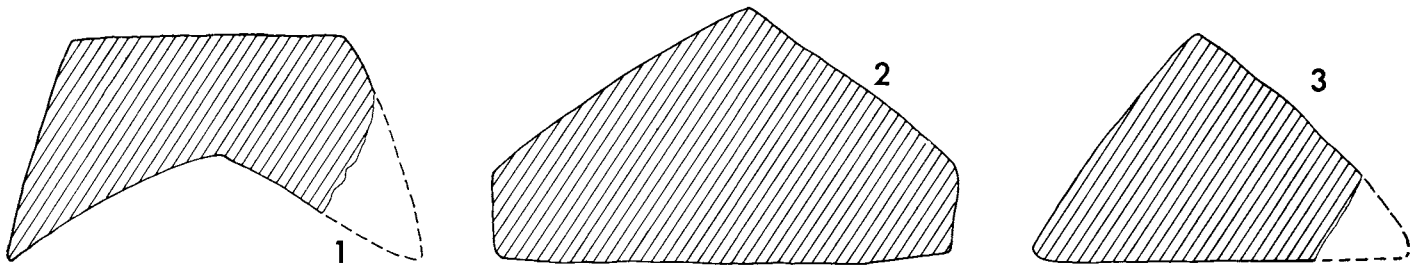


FIG. 61. Roof cappings from Abbeygate Street ($\frac{1}{8}$)

Summary and Conclusions

The excavation of no. 4 Abbeygate Street has provided a complete series of occupation layers extending throughout the latter part of the Roman period. During the first and second centuries this area of the town appears to have been devoid of buildings and indeed the paucity of early material must mean that the immediate neighbourhood was largely unoccupied. It is perhaps interesting to note in this context that two other recently excavated sites, no. 30 Stall Street and the area to the west of the Little Theatre, were similarly devoid of early material. The first substantial masonry building, presumably a house, was not erected until the third century. After at least one major alteration it was eventually allowed to collapse, at some date late in the fourth century, and then followed a remarkable new building which must have continued in use into the fifth century. The sequence therefore provides the first good evidence from Bath of the survival of town life after the official abandonment of the Province by the Roman central government.

3. THE SITE OF HARVEY'S BUILDING, UPPER BOROUGH WALLS, 1963-5 (figs 62-4)

The block of buildings bounded by High Street, Upper Borough Walls, Union Passage, and Northumberland Place was, with the exception of the shops lining Northumberland Place, completely demolished and rebuilt in 1964-5. The owners of the site, Messrs. Harvey Ltd., kindly gave permission for the Bath Excavation Committee to undertake a series of excavations before and during the building operations. The Committee would like to express their thanks to the owners and their representatives, particularly to Mr. B. Thomas, the Managing Director, and to the architects, North and

Partners of Maidenhead. During the course of the excavation it became apparent that the line of the city wall lay beyond the northernmost of the available cellars, and in order to complete the examination of this important area it was necessary to carry out a limited excavation in the cellars of no. 6 Upper Borough Walls, on the north side of the road. Permission for this undertaking was readily given by the Surveyor of Corporate Property, Mr. Bevan-Jones.

The present pavement-level surrounding the site lies at between 90 and 95 ft. (27.4–28.9 m.) O.D., the cellar floors being approximately 8 ft. (2.4 m.) below this level. The bedrock in this part of the town consists of the hard blue lias clay overlaid by more than 4 ft. (1.2 m) of river terrace deposit, composed of water-lain sand, grit, and shingle, presumably part of the 100-ft. (30-m.) terrace of the River Avon. It appears that the original ground surface was approximately level, although the present street surface falls off rapidly to the east and south. Since the cellars, which cover practically the whole city, were built in relation to street level, they have cut deeply into the underlying layers over the eastern and southern parts of the site, removing practically all trace of the archaeological levels and even the top of the original ground surface. The only surviving remains, apart from deep features, therefore lie in the north-west part of the area.

The cellars of the new building have removed everything to a depth well into the natural subsoil, over the eastern and much of the southern part of the site. Over the remainder of the area the old cellars have been filled with rubble to street level, thus preserving archaeological remains.

Description of the Excavations

Most of the work of excavation was carried out in the cellars of the old building before it was demolished and is therefore restricted in scope. Between demolition and reconstruction there was further limited opportunity for rescue work and recording. For the sake of clarity the trenches have been renumbered here.¹

The City Defences, Trenches 1–5. An almost complete section was obtained across the line of the city defences by means of a series of short staggered trenches extending from the Harvey building, beneath Upper Borough Walls, to the Accident Prevention Office.

Trenches 1 and 2 sectioned the rampart behind the city wall. Its lower levels were composed of tips of gravel, clay, and turf piled on top of the original ground surface and rising to a height of about 6 ft. (1.82 m): the surface was sealed by a thin turf-line. Finds from within the body of the rampart were few, but the surviving scraps of samian were sufficient to suggest a date sometime in the second half of the second century (p. 169). Over the tail of the rampart there had accumulated a considerable thickness of trampled occupation material, interleaved with lenses of mortar and rubble. On top of this was a

¹ Trench 1 was recorded in the notebook as CSF 1; CSF 4; 7 as CSF 5; 8 as CSF 6; 9 as OL 1; and 10 as 2 as CSF 3; 3 as CSF 2; 4 as APO 2; 5 as APO 1; 6 as SCL 1.

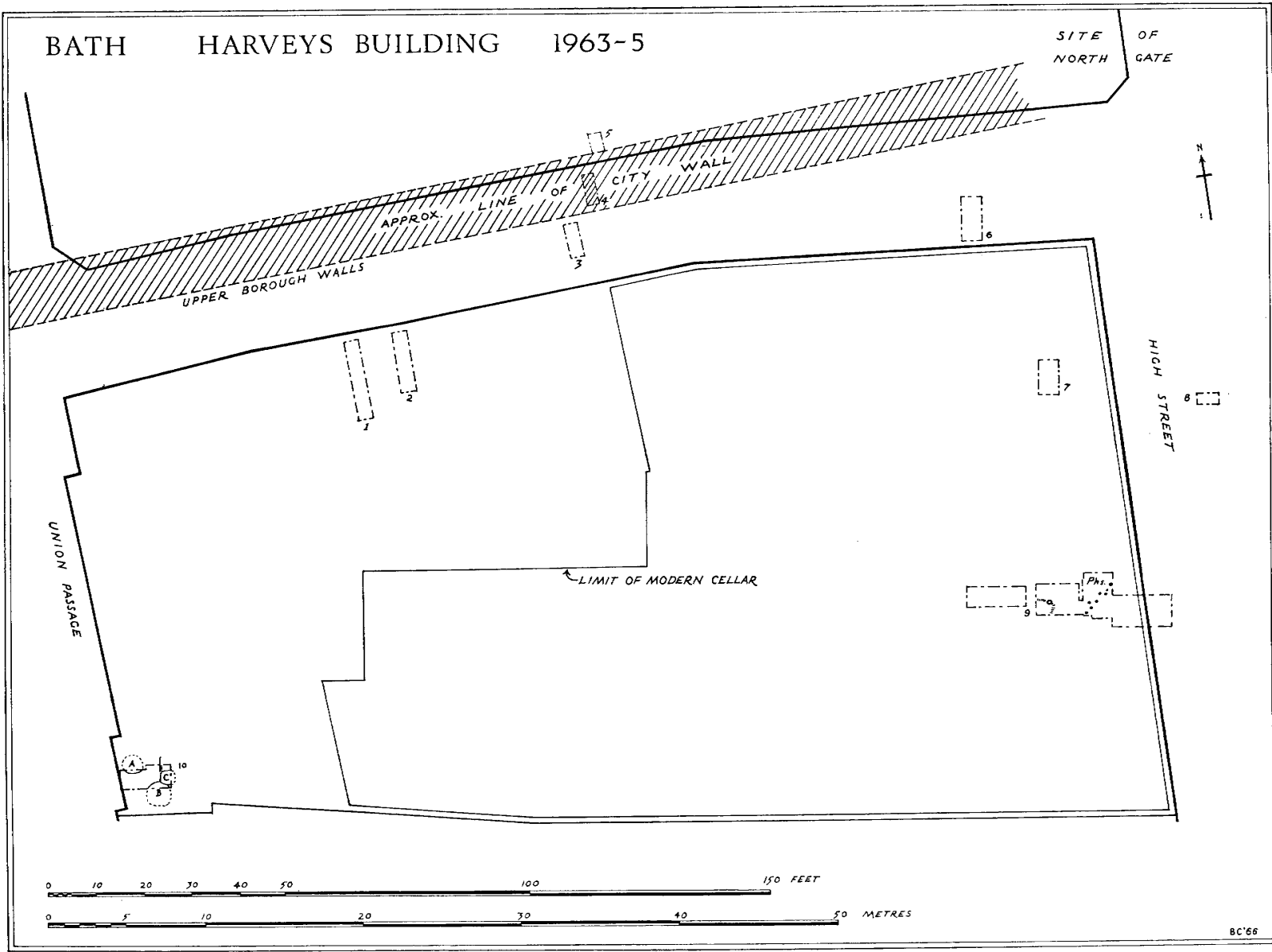


FIG. 62

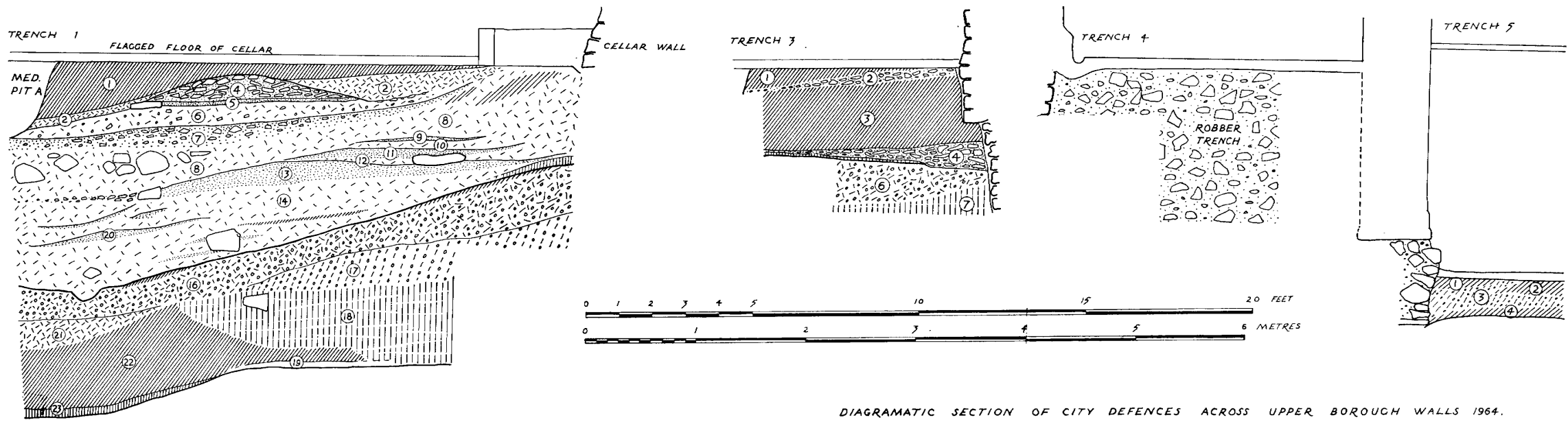
thick deposit of clay, through which had been cut the bottom of a medieval pit. Higher levels had been destroyed by the cellar floor.

Trench 3, which lay north and east of trenches 1 and 2, was cut in an even more restricted cellar in the hope of sectioning the relationship between the rampart layers and the back face of the city wall. Unfortunately the crucial area had been removed by a nineteenth-century cellar wall. Nevertheless, the top of the original rampart, together with its sealing turf-line, were again found, covered by a mass of limestone chippings which thinned out to the south. On top of this was a thick mass of blue clay. To extend the section still further north, two trenches were cut through the floors of the cellars beneath the Accident Prevention Office. Trench 4 lay wholly within the early nineteenth-century robber trench dug to remove the city wall, but trench 5, further to the north still, sectioned the area immediately in front of it, showing that the main front wall of the nineteenth-century building rests exactly on pitched stone set in a mass of rammed gravel, which must be the footings of the city wall. These footings are cut through layers of clay and gravel containing second-century pottery, but they are otherwise undated.

To summarize: the evidence so far obtained shows that in the Roman period a rampart of defensive type crossed the northern part of the site. What little dating evidence there is suggests that it was built in the second half of the second century. Later, at some unspecified date in the Roman or medieval period, the city wall, 10 ft. (3.05 m.) thick, was inserted into the north front of the rampart. If the layer of stone chippings lying on the rampart in trench 3 belongs to the construction period of the wall, then the wall can be dated to some time in the third or early fourth century, but since there is no proof of this relationship the question of date must remain open. If, however, the wall and the addition to the rampart are Roman the defences of Bath would seem to follow the pattern of those elsewhere in western Britain, with late second-century earthen defences improved in the early third century by the addition of a masonry wall.

Trenches 6-9. The evidence obtained from trenches 6-9 shows that the archaeological levels over the entire eastern part of the site had been almost entirely removed by eighteenth-century levelling. The only features to survive are the bottoms of two pits or depressions of Roman date, one in trench 6 and one in trench 7, and a series of undated post-holes in trench 9, one of which contained a sherd of fifteenth- to sixteenth-century pottery. No trace of the rampart was found in trench 6, but since the cellar floor has removed even the top of the natural shingle this is not surprising.

Trench 10. This trench, dug in the western part of the site, showed that here, too, levelling had removed the early levels, with the exception of a Roman gully filled with gravel containing late first- to early second-century pottery, a late Roman pit (pit B), and two medieval pits (pit A and pit C), both filled with grey occupation debris interleaved with lenses of charcoal. Pit A, 3 ft. 9 in. (1.14 m.) in diameter, survived to a depth of 3 ft. 6 in. (1.06 m.); pit C, 3 ft. (0.91 m.) across, was of unknown depth.



DIAGRAMATIC SECTION OF CITY DEFENCES ACROSS UPPER BOROUGH WALLS 1964.

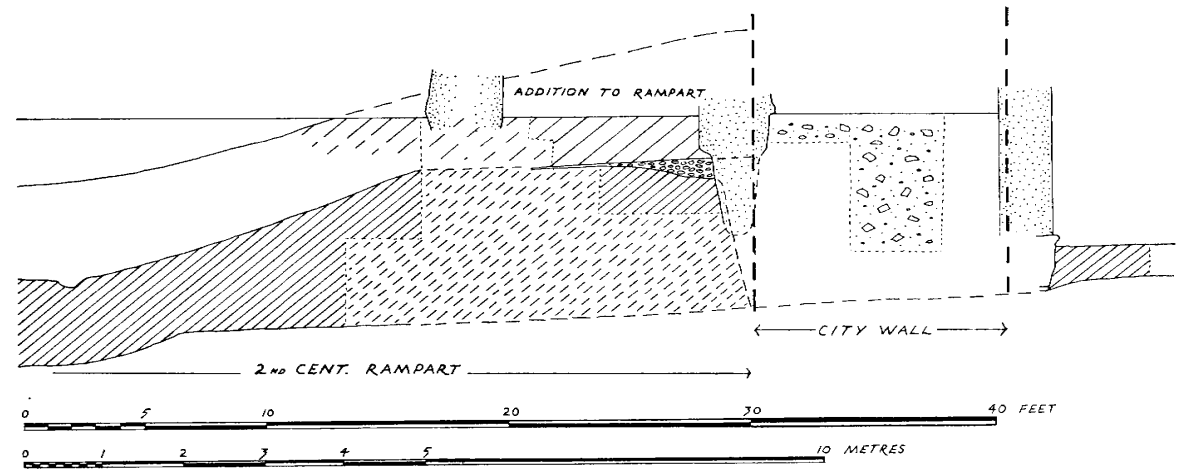
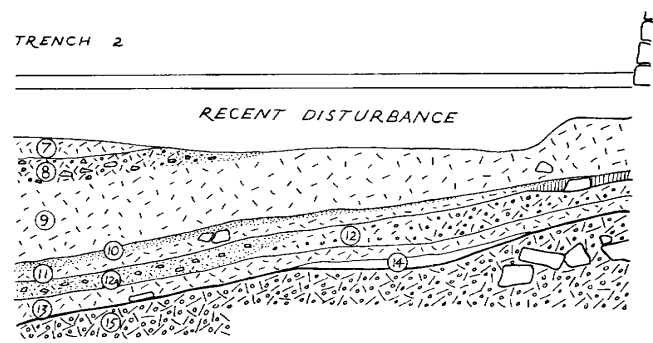


FIG. 63. Sections of the excavations at Harvey's building

Roman Pottery (fig. 64)

Trench 1. Pottery from within the Rampart (layers 16-19 and 21-2). Mid-late second century.

*Samian*¹

Form 30—Scrap, probably early second century.

Form 31—Two examples, Hadrianic-Antonine.

Form 33—Two Hadrianic and one Hadrianic-Antonine.

Form 37—One, c. A.D. 75-90. A second in the style of PATERNUS, Hadrianic-Antonine.

Form 38—One, Hadrianic-Antonine.

Curle 21—One, probably pre-dates A.D. 150.

Coarse ware. Fig. 64, nos. 1-5.

1. Bowl. Hard grey sandy ware with an internal burnish.
2. Dish. Hard grey ware with traces of external white slip. Two examples.
3. Jar. Hard grey ware fired to a reddish-brown on the surface. Two examples.
4. Jar. Smooth hard grey ware.
5. Jar. Hard grey ware with a streaky external burnish.

Not illustrated. Body sherd of a Nene Valley beaker. White paste, bluish colour-coat.

Trench 1. Pottery from the Lower Mortar and Occupation Layers (layers 13, 14, and 20). Late second century.

Samian

Form 18—One, early second century.

Form 27—One, Antonine.

Form 31—Two, Antonine.

Form 31R—One, Antonine.

Form 33—Three, Antonine.

Form 37—One, late Antonine.

Form 38—One, Antonine.

Form 45—One, Antonine, after A.D. 150.

Form 79—One, Antonine, after A.D. 150.

Coarse ware. Fig. 64, nos. 6-17.

6. Bowl. Grey sandy ware with smooth blue-grey outer surface. One other.
7. Mortarium. Hard grey ware fired to red on the surface, cream slip, quartz grits. One other.
8. Dish. Hard grey ware, burnished inside. One other.
9. Jar. Grey-black sandy ware, burnished outside and on the inside of the rim. Twelve others of this size, three slightly larger.

¹ Notes on the samian ware were kindly provided by Mr. G. Dannel.

10. Mortarium. Hard coarse white ware, no grits visible.
 11. Dish. Grey-black sandy ware, burnished inside. Eight others.
 12. Dish. Hard grey ware with smooth slate grey surface. Five others in grey-black sandy ware.
 13. Mortarium. Hard grey sandy ware fired to red on the surface, cream slip, large quartz grits.
 14. Bottle. Hard grey sandy ware fired red on the surface, red-brown colour-coat.
 15. Jar. Grey sandy ware fired red on the surfaces and burnished externally.
 16. Imported Rhenish beaker. Hard red ware with black metallic glaze. Three other sherds.
 17. Cup. Hard light-grey ware with blue-grey burnished outer surface.

Trench 1. Pottery from the Upper Occupation Layers (layer 8). Late second century and early third century.

Samian

Form 31—One, Antonine.

Form 37—One in the style of CINNAMUS, c. A.D. 135–65/75.

Coarse ware. Fig. 64, nos. 18–21.

18. Beaker. Hard grey ware fired red on the surfaces.
 19. Amphora handle. Hard red sandy ware.
 20. Mortarium. Pink ware with light-pink slip on the flange. Quartz gritted. Oxford kilns.
 21. Mortarium. Fine hard white ware, no trace of gritting.

Not illustrated. Two sherds of vessels similar to no. 3, and three jars similar to no. 8.

Trench 1. Pottery from the Upper Occupation Layers (layers 4 and 6). Early third century.

Samian

Form 27—One, second century.

Form 33—One, late second century.

Form 37—One with ovolo in style of CINNAMUS, c. A.D. 135–65/75.

Form 43 or 45. One, late second century.

Coarse ware. Fig. 64, nos. 22–6.

22. Jar. Hard grey ware with well-smoothed outer surfaces.
 23. Dish. Black burnished sandy ware, with traces of lighter slip on the flange. One other.
 24. Dish. Hard grey ware with well smoothed outer surfaces.
 25. Dish. Hard black sandy ware, burnished outside.
 26. Jar. Black burnished sandy ware.

Not illustrated. One sherd of a red colour-coated bowl.

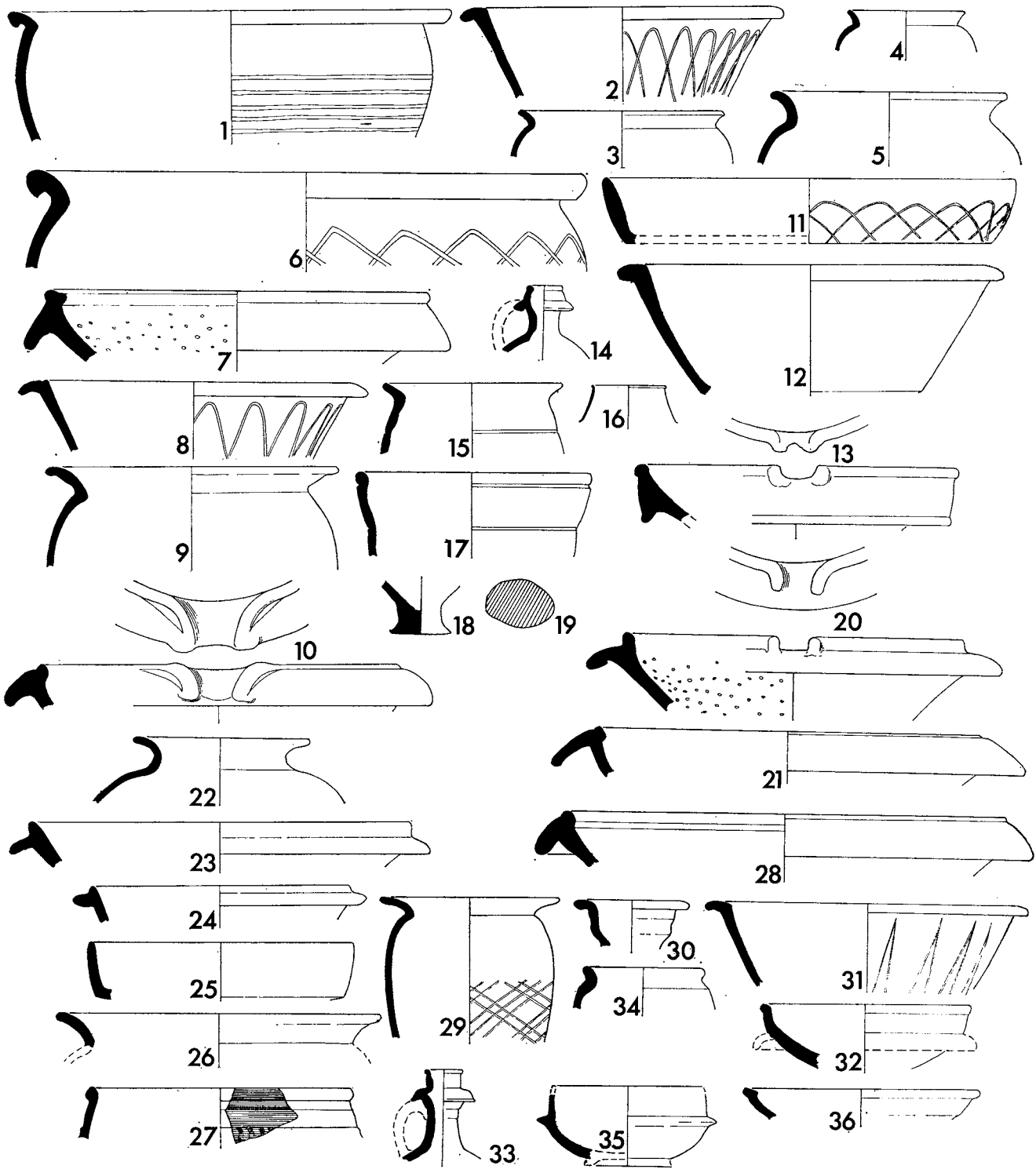


FIG. 64. Pottery from Harvey's building (†)

Trench 1. Roman Pottery from Medieval Pit A

27. Bowl. Red ware with red colour-coat, rouletted and stamped decoration. Probably New Forest.

*Trench 2. Pottery from the Rampart (layer 15). Mid-late second century.**Samian*

Form 31—One, Hadrianic–Antonine.

Coarse ware. Not illustrated.

Small sherd of a rusticated indented beaker in hard red ware, with a brown colour-coat; also jar similar to no. 9, and dish similar to no. 8, and dish similar to no. 7.

*Trench 2. Pottery from the Occupation Layer (layer 9). Late second to early third century.**Samian*

Form 31—Several, Hadrianic–Antonine.

Form 33—One large example stamped P TERCLINI, Antonine.

Form 37—One, Antonine.

Form 38—One, Hadrianic.

Form 45—One, early Antonine.

Coarse ware. Fig. 64, nos. 28–30.

28. Mortarium. Hard white ware. No grits visible.

29. Jar. Hard black sandy ware. Four others.

30. Flagon. Hard grey sandy ware.

Not illustrated. Eight dishes similar to no. 24, two similar to no. 23, one similar to no. 1, six jars similar to no. 16, one similar to no. 4, and one bowl similar to no. 3.

*Trench 2. Pottery from the Occupation Layer (layer 11). Late second century.**Samian*

Form 31—Several, Antonine.

Form 33—One, Hadrianic–Antonine.

Form 37—One in the style of SEVERUS, Antonine.

Form 38—One, Hadrianic–Antonine.

Coarse ware. Fig. 64, nos. 31–4.

31. Dish. Black sandy ware, burnished outside.

32. Flanged dish. Hard red sandy ware, burnished inside.

33. Bottle. Hard grey ware fired red on the surface, buff colour-coat.

34. Jar. Hard grey ware, burnished outside.

Not illustrated. One mortarium similar to no. 17, and one dish similar to no. 8.

*Trench 5. Layers of Gravel and Clay.**Samian*

Form 18—Two, first century.

*Trench 6. Occupation Layer.**Samian*

Form 31—Two, Hadrianic–Antonine.

*Trench 10. Pottery from Medieval Pit C.**Samian*

Form 18/31—One, Hadrianic.

Form 33—One, Hadrianic.

Form 37—One, Hadrianic–Antonine.

*Trench 10. Pottery from Roman Gully.**Samian*

Form 18—Two, first century.

Coarse ware. Fig. 64, nos. 35 and 36.

35. Flanged bowl. Hard grey ware with thin red colour-coat on the surface.

36. Dish. Hard grey ware fired red on the surface.

Not illustrated. One dish similar to no. 31.

Rescue Work. A quantity of unstratified Roman pottery was recovered from the rescue excavations. The general date-range is very similar to the stratified material published above, ranging from the late second century to the late third or early fourth, with a rather greater emphasis on the later period. Of the imported wares those coming from the Oxford kilns were abundant; the Nene Valley kilns and the New Forest kilns are represented only by single fragments. One notable point is the almost complete absence of first- or early second-century material; this is shown particularly clearly by the samian sample in which there are only a few fragments of a Flavian 27 and one sherd of a Trajanic–Hadrianic 27, while all the rest is Antonine.

4. THE SOUTH-EAST SECTION OF THE CITY WALL AT THE FERNLEY HOTEL (fig. 65, pl. LXXXIVb)

In May 1965, with the permission of the manager, a trial section was cut in the garden of the Fernley Hotel against the external face of the city wall to examine its structure

at this point. As expected, the east wall of no. 2 North Parade Buildings was found to have been built exactly upon the ancient wall.

At a depth of 7 ft. 6 in. (2.29 m.) the original ground-surface was exposed. Cut into this was a shallow foundation trench in which a dry-stone wall, 2 ft. (0.61 m.) wide and surviving to a height of three courses, had been laid. Behind, on pitched stone footings, was the city wall, built of neatly jointed and regularly coursed masonry surviving to

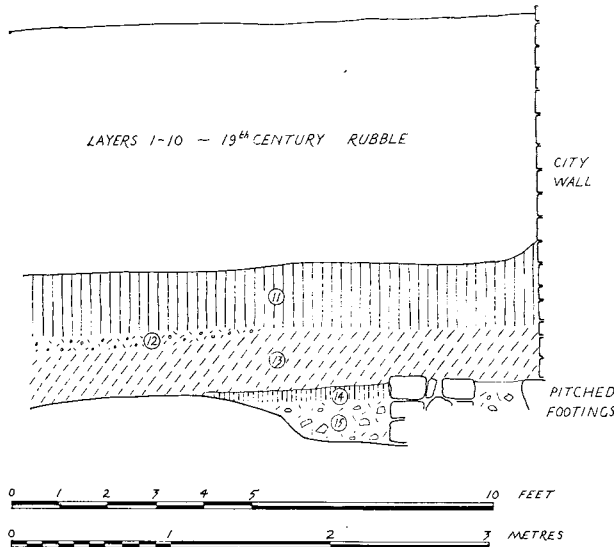


FIG. 65. Section in front of the city wall at the Fernley Hotel

a height of 7 ft. 9 in. (2.36 m.) (17 courses). The date and relationship of these two structures pose serious problems for which there can yet be no firm answer. Structurally it would appear that the 2-ft. (0.61-m.)-thick wall served as a revetment for the foundations of the city wall, but such a structure would be peculiar to say the least. That the wall is part of an earlier building destroyed by the erection of the city wall is an idea which can be rejected on the grounds that an exactly similar feature was found in front of the city wall some distance to the south (see below, p. 175). The coincidence would be too great. That the wall may have been the original boundary of the temenos cannot, however, be completely ruled out.

The fillings around and above the wall contained nothing but Roman sherds, but this is not proof of a Roman date. The quality of the building of the city wall, on the other hand, is comparable to Roman work elsewhere in the city, and on these grounds alone a Roman construction date might be tentatively put forward.

The upper courses of the wall had been coarsely patched, probably in the medieval period. In the eighteenth century, a buttress was added to the face of the wall, apparently to support an overhanging projection from the house above. Some time after this considerable deposits of builders' rubbish raised the level by almost 5 ft. (1.52 m), to nearly that of the present garden.

5. THE CITY WALL SOUTH OF MANVERS HALL

In 1959, before the erection of the Marks and Spencer's and Woolworth's building, a length of city wall survived to a considerable height just to the south of Manvers Hall. With the permission of the owner of the site, Mr. M. B. Owen of the Roman Baths Museum

was able to cut a trial trench in front of it. His results showed the city wall to be precisely similar to the wall seen later at the Fernley Hotel. Even the small 'revetting wall', in front of the main foundations, appeared and here again the lowest levels sealing the footings contained only scraps of Roman pottery. The face of the ?Roman wall was remarkably well preserved, surviving to a height of no less than 40 courses, 18 ft. (5.49 m.) It was later largely destroyed to make way for a car park.

6. EXCAVATIONS BEHIND THE LITTLE THEATRE, 1964 (figs. 66-8)

One of the few open sites available for excavation within the walled area of the city was an overgrown plot of land lying in the north-east corner of the junction of Westgate Buildings with the alleyway leading between the Little Theatre and Citizen House. Originally the site had been occupied by a nineteenth-century building, but this had been destroyed by fire in 1937. The remnants of the building were demolished, but during the war an air-raid shelter was erected on the western part of the site. The shelter was still standing in 1964; the rest of the site had reverted to a jungle of vegetation. The owners of the land, the Trustees of Bath Municipal Charities, when approached, kindly allowed the Bath Excavation Committee to undertake a trial excavation.

A cursory examination showed that the western part of the site not covered by the shelter was occupied by deep rubble-filled cellars belonging to the old building; the excavation was therefore restricted to the eastern area, across which two trial trenches were cut. These showed that much of the garden had been dug into by a complex series of interlocking rubbish pits of medieval date. The picture was further confused by the discovery of a substantial nineteenth-century ice-house. In reality these features meant that the only undisturbed Roman layers were restricted to a narrow strip between the back wall of the house and the pits in the lower end of the garden. Nevertheless, an interesting sequence of building-levels was recovered.

Description of the Excavations (figs. 66-7)

Period 1. Throughout the first and second centuries the site does not appear to have been occupied: the contemporary turf-line (trench 3, layer 18 and trench 4, layer 16) produced only a few weathered sherds of pottery.

Period 2. Some time in the second century, a masonry building was erected, the north-west corner of which was examined. At this time the ground surface was raised by 9-12 in. (0.22-0.3 m.) by the deposition of a layer of rubbly mortar containing builders' debris (trench 3, layer 17 and trench 4, layer 15). Within the building a floor of thin chalky mortar was laid (trench 3, layer 16), the surface to the north being consolidated with rough pebbly mortar (trench 4, layer 14). During the period when the building was in use, a layer of occupation debris was allowed to accumulate within (trench 3, layer 15), whilst outside the surface seems to have been kept clear of rubbish.

Period 3. Some time in the late third or early fourth century the building was demolished, the rubble from its superstructure being spread out and the site levelled up (trench 3, layer 14 and trench 4, layer 11). To the north loads of clay were also deposited to aid the levelling (trench 4, layer 12). It seems that at this time a new north-south wall was

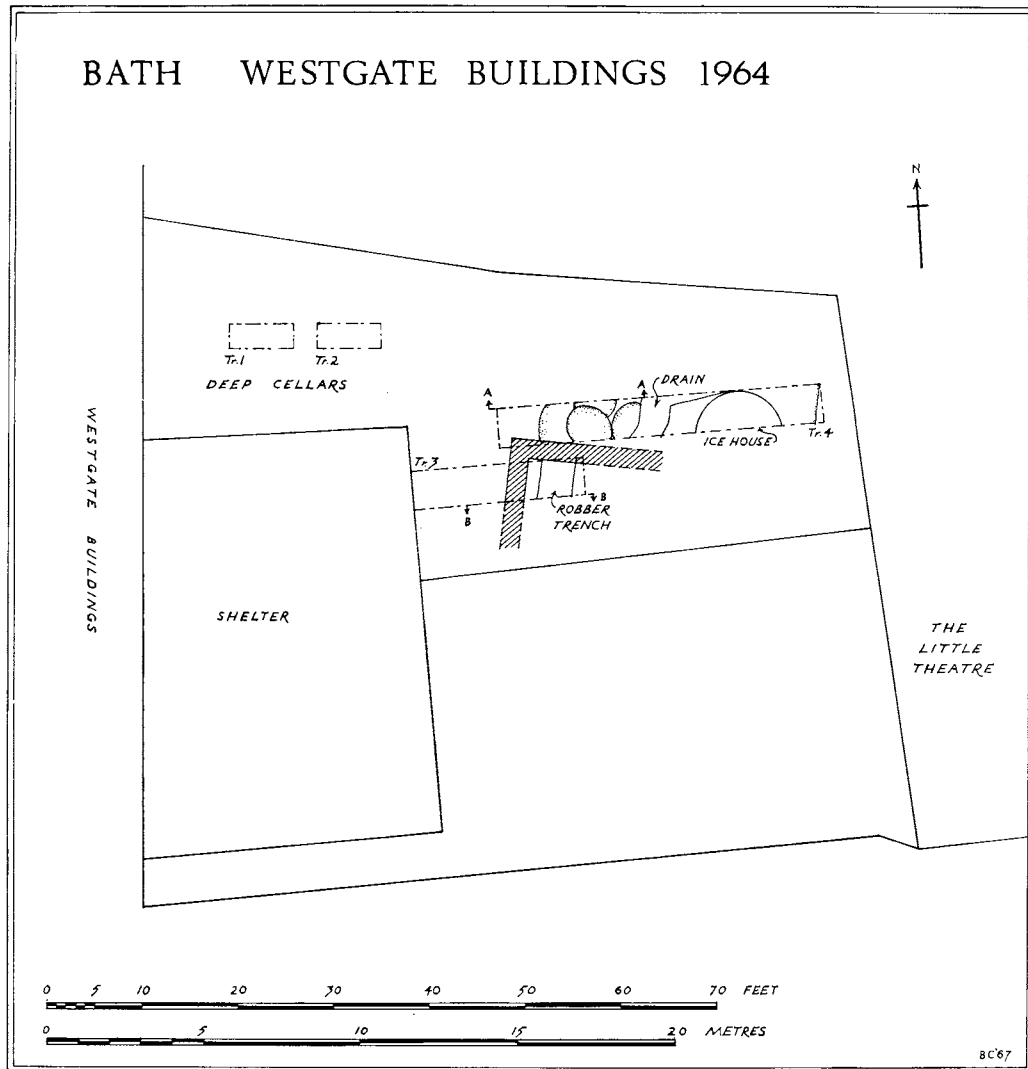


FIG. 66

built, but apart from a mortar spill in the bottom of its foundation trench (trench 3, layer 8), nothing survived the later robbing. West of the wall was a hard mortared surface (trench 3, layer 13 and trench 4, layer 10), upon which had been set several slabs of Pennant grit.

At a later, but undefined, date the roof of Pennant slabs collapsed (trench 3, layer 12

and trench 4, layer 9), and this was followed by a period during which fine grey soil accumulated (trench 4, layer 8).

Period 4. Whilst the wall was still standing, a new mortar spill was laid on the contemporary ground surface (trench 3, layer 10 and trench 4, layer 7). This probably

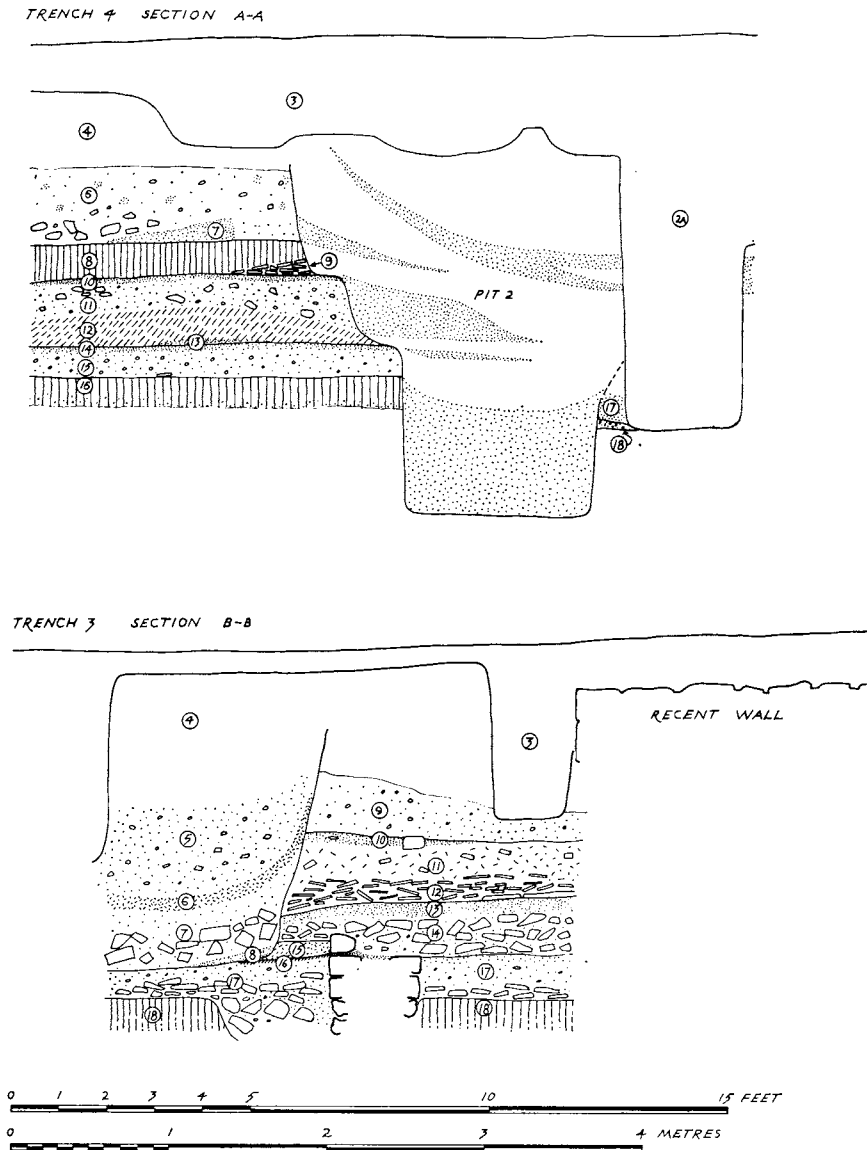


FIG. 67. Sections of the excavations at Westgate Buildings

represents a phase of renewed building activity, about which nothing else is known. Finally, it seems that the superstructure of the building disintegrated and fallen mortar and rubble accumulated around it (trench 3, layer 9 and trench 4, layer 6).

At a later date still, quite possibly within the medieval period, the wall itself was robbed and dark humus accumulated over the entire site.

Pottery (fig. 68)

Period 1

1. Bowl. Hard grey sandy ware (trench 4, layer 16).
2. Flagon. Hard red sandy ware with a buff colour-coat (trench 4, layer 16).

Both are second-century types.

Period 2

3. Jar. Hard grey sandy ware with a burnished lattice and burnished zone above (trench 3, layer 17).

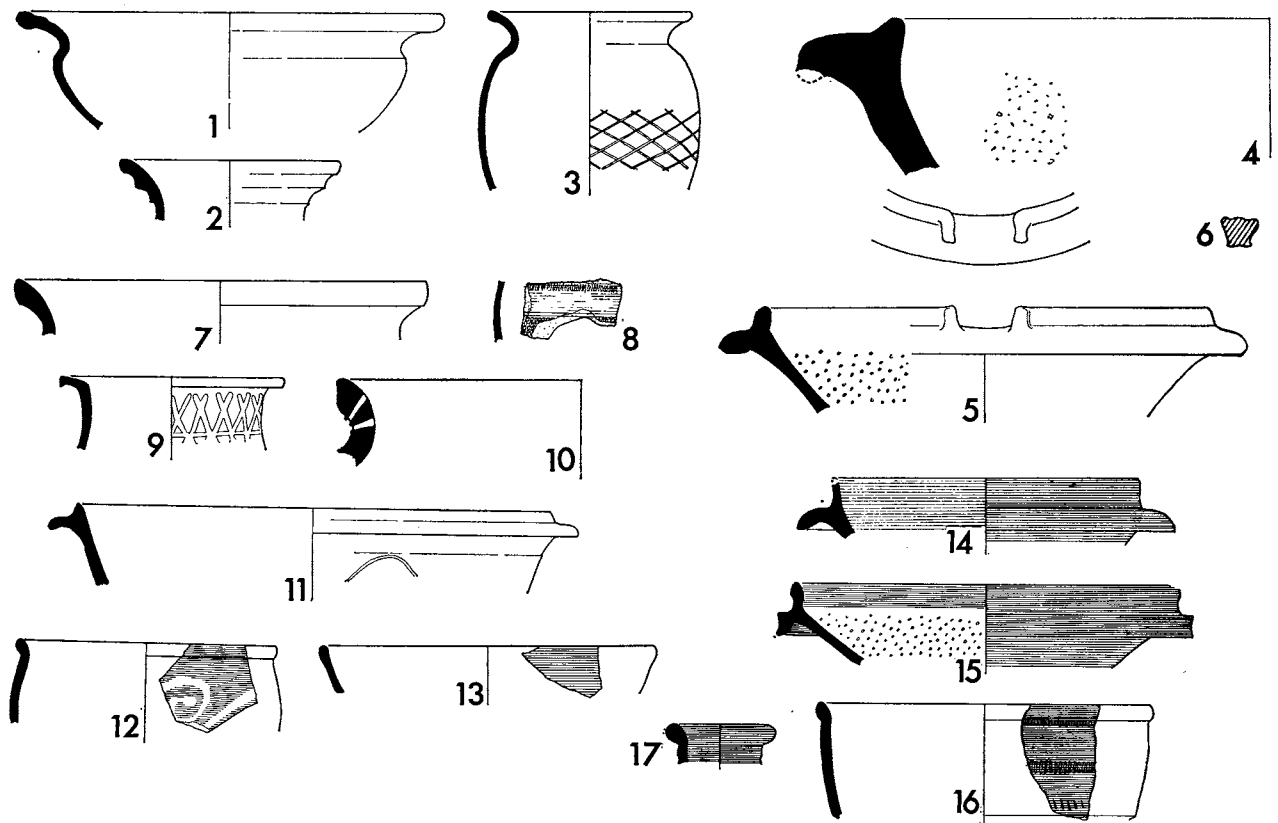


FIG. 68. Pottery from Westgate Buildings (1)

Second to early third century.

Period 3 Construction

4. Mortarium. Hard grey sandy ware fired to buff. Crushed quartz grits (trench 3, layer 13).

5. Mortarium. Hard pinkish-buff sandy ware with water-worn brown quartz grits. From the Oxford region (trench 3, layer 13).
 6. Jug handle. Grey sandy ware (trench 3, layer 13).
- No. 5 suggests a late third- or early fourth-century date.

Period 3 Occupation

7. Jar. Hard grey sandy ware; darker grey surface (trench 4, layer 8).
8. Bowl. Red micaceous ware with a red colour-coat (trench 4, layer 8).
9. Jug. Grey sandy ware with a burnished lattice on the neck (trench 4, layer 8).
10. Large jar. Grey sandy ware (trench 4, layer 8).

Early to mid fourth century.

Period 4 Destruction

11. Dish. Hard grey sandy ware with a darker grey surface (trench 3, layer 9).
 12. Bowl. Red ware with an external red colour-coat and white painted decoration (trench 3, layer 9).
 13. Bowl. Hard red ware with a red colour-coat (trench 3, layer 9).
- These vessels could date to anywhere within the latter part of the fourth century.

Pottery from Medieval Disturbances

14. Bowl. Red ware with red colour-coat (trench 4, layer 5).
15. Bowl. Red ware with red colour-coat, quartz grits (trench 4, layer 5).
16. Bowl. Red ware with red colour-coat (trench 4, layer 5).
17. Flagon. Red ware with red-brown colour-coat (trench 4, layer 9).

7. NOS. 30-31 STALL STREET, 1964-5 (figs. 69-70)

When, in 1964, it became known that the shop on the north-east corner of the junction of Beau Street and Stall Street was about to be redeveloped, an approach was made to the owners, Messrs. Foster Brothers Ltd., for permission to examine the site. This was kindly given, and the architects for the project, Peter Falconer and Partners, offered every facility. Unfortunately the cramped nature of the cellars, and the possibility of weakening the foundations, prevented extensive work being carried out before the superstructure was demolished, but several trial trenches were dug. However when, by May 1965, the old building had been removed, it was possible to follow closely the stratigraphical details exposed whilst the 5 ft. (1.52 m.) of soil below the old cellar floor was removed to make way for the concrete raft upon which the new building was erected.

Description of the Excavations

At a depth of 13 ft. 3 in. (4.04 m.) below street-level was the top of a layer of black

organic mud 9 in. (0.23 m.) thick resting on discontinuous layers of water-worn flint pebbles. This represented the ground-surface at the time of the initial Roman occupation.

Period 1. The first period is represented by a series of floor-levels associated with sill-beams and post-holes which lie over the eastern part of the site. No plans could be

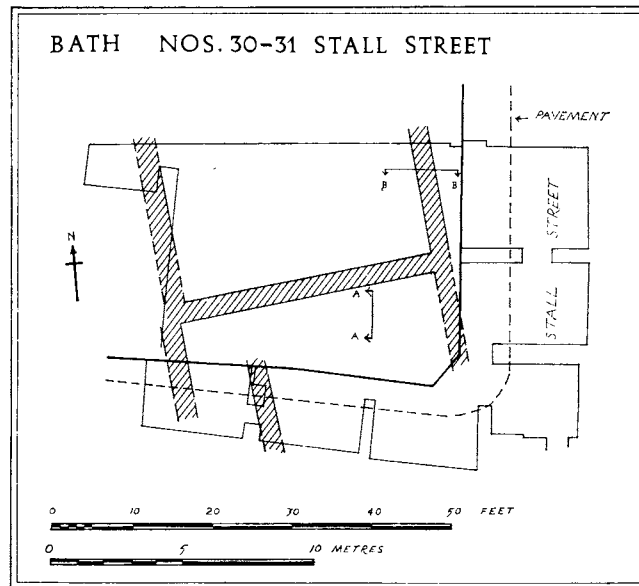


FIG. 69

recovered, but the limit of one of the mortar-floored rooms in the north-east corner of the area was traced. Further south a trampled floor-level of this period lay on rubble brought from a demolished wall. Above this was a 9-in. (0.23-m.)-thick layer of clean brown sandy clay interlaced with many small patches of paper-thin paint. It seems likely that this deposit represents the material from a collapsed and disintegrated daub wall, which had originally been painted. Elsewhere layers of trampled occupation rubbish were allowed to accumulate.

Period 2. In the second period there is evidence to show that a new mortar floor was laid over the area in the north-east corner of the site, but to the south the period seems to be represented by a thin deposit of grey silty soil which may well have been outside the building existing at this time.

Period 3. In period 3 the site seems to have been levelled with rubble of various types before a substantial masonry building was erected, several walls of which were seen (fig. 69). The walls, of faced oolite limestone blocks, were built freestanding on footings of pitched rubble dug through the earlier levels. Areas of mortar floors belonging to

the rooms were recovered in some places, but the floors of recent cellars have destroyed most of the Roman floor-levels as well as all the stratigraphy above.

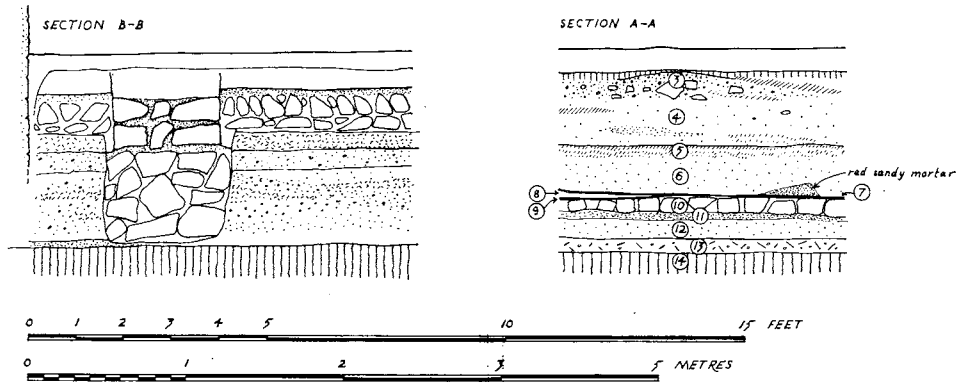


FIG. 70. Sections of the excavation at 30-31 Stall Street

The latest pottery found beneath the period 3 floors dates to the second century. The precise date of the period is unknown, as is the subsequent history of the site. The stratified pottery amounts to only a few sherds which are not illustrated here. A larger quantity was recovered, unstratified, from the rescue work. The main forms will be published later as part of a type series for the town.

VII. INSCRIBED AND CARVED STONE FROM BATH

(pls. xxix–lxxix)

IT has been thought advisable, for the sake of completeness and easy reference, to provide a list of all the stonework from Bath—much of which is surprisingly little known. The Gorgon's Head Pediment has admittedly been published on several occasions and recently the definitive list of inscriptions has appeared in *Roman Inscriptions in Britain* (Collingwood and Wright, 1965), but much of value remains unpublished. The arrangement of the list to follow has been adopted so as to bring together all types of stonework, under headings relating the pieces to the building or feature to which they belong, thus enabling us more easily to appreciate the decorative form of the individual monuments. Classes of material are therefore dispersed, but it is worth sacrificing rigidity of classification for a picture, albeit incomplete, of over-all architectural unity. To enable the lists to be expanded as new material comes to light, each monument has been given a prefix number, the individual blocks from it being numbered consecutively. The lists below are presented under the following headings:

The Temple (prefix 1)

- a. The Temple Building.
- b. The Sacrificial Altar.
- c. The Façade of the Four Seasons.
- d. The Luna Pediment.
- e. Pediment of an Unsited Monument.
- f. The Large Relief-decorated Monument.
- g. The Niched Quadrangular Monument.
- h. Dedicatory Inscriptions from the Temple Precinct and Surrounding Areas.
- i. Miscellaneous Sculptured Stones from the Temple Area.
- i. Architectural Fragments from the Temple Area.

The Baths (prefix 2)

- a. The Quadrant Monument.
- b. Miscellaneous Fragments of Sculptured Stone.
- c. Inscriptions.
- d. Architectural Fragments from the Baths and Reservoir.

The Monumental Building North of the Temple (prefix 3)

Other Religious Sites in Bath (prefix 4)

- a. The Hot Bath.
- b. The Cross Bath.
- c. Inscriptions from Other Sites within the Town.

Tombstones and other Funerary Monuments (prefix 5)*Miscellaneous Inscriptions at one time built into the City Wall and Gates* (prefix 6)*Columns and Colonnettes* (prefix 7)*Roof Finials* (prefix 8)*Miscellaneous* (prefix 9)

The references given below are to the major sources only: too often individual pieces have been published on several occasions, the later works adding nothing to what was already known. In the case of inscriptions, the first adequate description and the *RIB* reference only are given since *RIB* lists fully all previous accounts; to repeat such details here would be unnecessary.

1. THE TEMPLE

a. The Temple Building (pls. xxix–xxxv)*Columns* (pls. xxix–xxx)

- 1.1. Part of a fluted column shaft 27 in. (0.69 m.) in diameter. The surviving piece, only 12–13 in. (0.30–0.32 m.) thick, has been broken from the end of the drum.
Found in 1879 in the reservoir.
Davis 1880.
- 1.2–3. Two joining pieces of an Attic base, 3 ft. 9 in. (1.14 m.) in diameter. One piece is a quarter-column, the other represents about two-thirds of a half-column. They both bear part of the slot for a low balustrade. The sections have been hollowed out from behind.
Found in 1790 beneath the Pump Room.
- 1.4–5. Two fragments of a hollow column-casing decorated with stopped fluting, 29 in. (0.74 m.) in diameter. As above, one piece is a quarter-segment, the other is part of a half-segment.
Found in 1790 beneath the Pump Room.
- 1.6–7. Two sections of a hollowed Corinthian half-capital decorated with acanthus leaves and tendrils which spread up on to the abacus. When superimposed one on top of the other the two sections comprise an almost complete half-capital.
Found in 1790 beneath the Pump Room.

For nos. 1.2-7, Lysons 1803, pl. i; Scarth 1864, pl. ii; Haverfield 1906, fig. 12; Richmond and Toynbee 1955, 97.

Architrave (pl. xxix and fig. 5)

1.8 A small piece of an inscribed architrave 8 in. thick, broken on all sides. The letters,]VM[, $4\frac{1}{2}$ in. (0.114 m.) high, are carved on the lower, slightly concave, fascia. Above is a narrower uninscribed fascia.

Found in 1790.

Lysons 1803, pl. iv, no. 2; Haverfield 1906, 286, no. 6; Irvine 1873, pl. 13; *RIB* 177.

Cornice (pls. xxxi-xxxii)

All of the cornice blocks are very similar, each with a cyma decorated with acanthus leaves, a plain fascia and a cavetto soffit, without modillions, decorated with scrolls, sprigs, flowers, and bunches of fruit. For nos. 1.9-18 see Lysons 1803, pl. ii; Scarth 1864, pl. iii; Irvine 1873, pl. 13; Haverfield 1906, figs. 12 and 13; Richmond and Toynbee 1955, pl. xxvi. The removal by sawing of the back part of nos. 1.9-18 is likely to be recent.

1.9-15. Seven complete blocks measuring 19 (0.48), 23 (0.59), 26 (0.42), 28 (0.74), 29 (0.74), and 36 (0.91) in. (m.) in length. They have been sawn diagonally across the back.

Found in 1790.

1.16. Complete block forming the corner member of the right-hand racking cornice. The lower part of the soffit, ovolo, and dentils, which would have been obscured when the block was in position, have not been carved. Sawn diagonally across the back.

Found in 1790.

1.17. Broken block of maximum length 29 in. (0.74 m.). Sawn diagonally across the back.

Found in 1790.

1.18. Broken block of maximum length 21 in. (0.53 m.). The dentils have been removed. Sawn diagonally across the back.

Found in 1790.

1.19. Broken block of maximum length 14 in. (0.36 m.). The ovolo and dentils have been removed. This block has not been sawn across the back as have the others listed above.

Found by Irvine in 1867, lying on top of the west end of the podium, at the time when the Pump Room Hotel was being rebuilt.

Irvine 1873, 386.

The Pediment (pls. xxxiii-xxxv)

1.20-5. Six facing blocks, belonging to the Gorgon's Head Pediment, were recovered in 1790 during the construction of the Pump Room. Their precise find-spot is not known, but it seems likely that they were found on the western part of the site, perhaps

when the foundations for the west wall of the Pump Room were being dug, since they are unlikely to have fallen far from the temple front.

They have been illustrated and discussed by a number of writers with varying degrees of accuracy and skill. The principal contemporary references are Pownall 1793; Englefield 1792; Carter 1795; and Lysons 1803. Undoubtedly the best of these is Lysons's beautiful and accurately illustrated account. Later writers include Scarth 1864, pl. iii; Irvine 1873, 381-5; and Haverfield 1906, 234-6. More recently the problem has been reconsidered by Professor Toynbee, in a detailed and reasoned account which is unlikely to be superseded. In the article a new reconstruction was offered (Richmond and Toynbee 1955, pl. xxvii) which has been followed here.

The Temple Door (pl. xxix)

1.26. One block, evidently belonging to the cornice above the main door of the temple, survives: it is complete and measures 28 in. (0.71 m.) in length. Generally it is similar in form to the main cornice, but the soffit is flatter and narrower and the carving is less deep. The fascia is higher and grooved, and dentils and ovolo are omitted. At one end the moulding returns and is stopped.

There is no evidence of where or when it was found. Lysons does not record it among the ten which he illustrated but it was in existence by 1873, for Irvine (Irvine 1873, 386) says that twelve cornice blocks were then known (this number must be made up of ten found in 1790, one found by himself in 1867 and, presumably, the cornice block from above the door).

b. The Sacrificial Altar (fig. 8 and pls. xxxvi-xxxviii)

1.27. A corner block belonging to the altar; it is 4 ft. 2 in. (1.27 m.) high on a base 1 ft. 10 in. (0.56 m.) square. Two adjacent sides are carved with niches containing standing deities, below which is an integral base mould. The other two sides are plain, but have been tooled to receive abutting masonry. One of the deities is a naked male, to be identified with Bacchus. He holds a thyrsus in his left hand and pours a libation from a cup in his right to a panther crouching at his feet. On the other side is a heavily draped female pouring a libation from a vessel held upside-down by the right hand; her left hand steadies one of its handles. In the crook of her right arm is what appears to be a cornucopia.

Found in 1965 beneath the Pump Room; see p. 47.

Cunliffe 1966, pl. xxxii.

1.28. A corner block similar to no. 1.27. On one side is Hercules Bibax, naked except for a lion's-skin cape thrown across his shoulders with its forelegs knotted across his chest. He holds a cup in his right hand, his left rests on a knobbed club at his side. The second figure is a draped male, evidently Jupiter. He holds a trident in his right hand, whilst his left clasps a staff. At his left side stands an eagle.

Found in 1790 during the building of the Pump Room; its precise position is not recorded.

Lysons 1803, pl. viii, no. 1; Scarth 1864, pl. x; Haverfield 1906, fig. 32.

1.29. A corner block similar to nos. 1.27 and 1.28. The deities are considerably eroded but one is clearly Apollo, a draped god resting a lyre upon one raised knee. The other is a naked god holding unidentifiable objects at shoulder-height in each hand.

The stone is now in the north-east corner buttress of Compton Dando church, 7 miles west of Bath. How and when it came here is unknown, but it may well have been brought from Bath in a load of building-stone sometime during the medieval period. The church at Compton Dando belonged to the Convent of Bath, who also owned the land over the temple area.

Scarth 1864, pl. xi; Cunliffe 1966, pl. xxxiii.

1.30. Flat slab 6 in. (0.15 m.) thick and measuring 31 in. (0.79 m.) by 27½ in. (0.69 m.). Two adjacent edges are plain, the other two are moulded; its upper surface has been tooled smooth. The block is therefore a capping moulding, probably for the altar itself.

Found in 1965 beneath the Pump Room, close to no. 1.27 (see p. 47).

c. The Façade of the Four Seasons (fig. 9 and pls. xxxix–xli)

With the exception of nos. 1.35, 1.39, and 1.42, the pieces listed below were found in 1790, when the Pump Room was rebuilt. They have been illustrated several times in the past, e.g. Lysons 1803, pl. iv; Scarth 1864, pls. iv–vi, and Haverfield 1906, figs. 14–18 and 21. No. 1.39 was found in 1897–8 and was illustrated in Haverfield 1906, fig. 16. No. 1.42 was found in 1968 in trench 23 immediately to the south of the altar; it has not previously been published. Many of the blocks, including no. 1.39 found in 1897–8, are now set into a modern wall and their thicknesses cannot be fully examined, but of the ones which remain unattached all of those found in 1790 are no more than 9–12 in. (0.23–0.3 m.) thick, the backs of the blocks showing fresh chisel marks. It seems likely, therefore, that the pieces were thinned down some time soon after their discovery to lighten them and make their display a simpler matter. Support for this view was provided by the discovery, in 1968, of no. 1.42, which retained a thickness of 21 in. (0.53 m.) from the pilaster face to the back of the block. No. 1.35, which also seems to have been found after 1790, is 24 in. (0.61 m.) thick.

1.31. A pilaster capital.

1.32. A pilaster capital to which originally a two-line inscription, carved in the inter-pilaster, was attached. The cap and inscription are now separate and the first part of the inscription is missing, but for its original state see Lysons 1803, pls. vi, no. 6, vii.

The inscription reads:

C.] PROTĀCIV[S . . .
 . . . D]EAE SV̄LIS M[. . .

RIB 141d.

- 1.33. A pilaster base from a corner pilaster.
- 1.34. A section of a pilaster showing stopped fluting.
- 1.35. A fluted pilaster carved on the face of a block 24 in. (0.61 m.) thick. Provenance and date of find unknown, but possibly found by Davis in the 1890s north of the reservoir.
- 1.36. Part of a pilaster and the adjacent interpilaster decorated with a niche containing a naked Cupid holding a bunch of grapes in his right hand.
- 1.37. Part of an interpilaster decorated with a Cupid in a niche. The Cupid moves to his left; he is naked but for a cloak which hangs behind him, and he holds in his right hand a bunch of three flowers.
- 1.38. A fragment showing a niche containing a Cupid; only his right arm survives. Above the elbow it is clothed with the billowing folds of a tunic or cloak, and in his hand he holds a billhook.
- 1.39. Part of a niche cut in an interpilaster containing a Cupid wearing only a cloak. He is moving to his right and holds a bunch of corn in his right hand.
- 1.40. Joining to no. 1.39 is a block showing the head, shoulders, and wing of the same Cupid, part of an adjacent pilaster, and the bottom part of an inscription cut above the niche. This block was found in the excavations of 1897-8, north of the reservoir.
RIB 141e.
- 1.41. Part of a pilaster and the adjacent interpilaster in which is depicted the foot and lower drapery of a seated figure.
- 1.42. Part of a pilaster and the adjacent interpilaster. The interpilaster is plain except for the extreme bottom of a niche which impinges upon its upper edge and in which a block or stone can just be defined. This slab joins with no. 1.41, the block supporting the foot of the seated figure as in no. 1.44.
Found in 1968 in trench 23, just south of the altar.
- 1.43. A large slab representing an interpilaster space decorated with a heavily draped figure.
- 1.44. A section of a pilaster and an interpilaster. The latter is crossed by a ledge which supports a foot resting on a block. Presumably the figure to which it belongs is seated.
- 1.45. Part of a shell canopy shown in an interpilaster springing from the adjacent pilaster.
- 1.46. A shell canopy with part of an adjacent pilaster. Within the canopy is what appears to be a bud. Above is the lower corner of a rectangular niche containing a foot, probably belonging to a running Cupid.
- 1.47. Fragment of an inscribed frieze 12½ in. (0.31 m.) high and 33 in. (0.84 m.) long. Originally an uninscribed zone was attached to the lower edge, but this was sawn off

soon after the original discovery (Lysons 1803, pl. ii). The two-line inscription reads:

C]LAVDĪVS . LIGVR[...
... AE . NĪMĪA VĒTVST[...

Lysons 1803, pl. ii; *RIB* 141*a*.

1.48. Fragment of an inscribed frieze, now in two halves, similar to the above, 12½ in. (0.31 m.) high and 58 in. (1.47 m.) long. It reads:

C]OLĒGIO . LONGA . SĒRIA[...
... VĪA . RĒFICI . ĒT . RĒPINGI . CVR[AVIT

Lysons 1803, pl. ii; *RIB* 141 *b* and *c*.

1.49–50. Two blocks belonging to a string-course, or simple cornice. No. 1.49, which is a corner mould, is 52 in. (1.31 m.) long; originally it would have been about 26 in. (0.66 m.) deep but the back portion has been removed by relatively recent sawing. No. 1.50 is 36 in. (0.91 m.) long.

No. 1.49 was found in 1790, when the Pump Room was built (Lysons 1803, pl. viii, nos. 10 and 11); no. 1.50 may have been found at this time, but no evidence for this survives.

d. The Luna Pediment (fig. 11 and pl. XLII)

1.51–3. Three blocks, one of them broken into two halves, belonging to a pediment 18 ft. (5.49 m.) long and 5 ft. (1.52 m.) high. In the centre is a concave roundel containing the bust of a woman shown full-face and carved in high relief. She is draped and much of her copious hair is piled high on top of her head. In her left hand she carries a whip and behind her head, carved in lower relief, is a crescent. Evidently the figure represents a moon goddess, perhaps Luna or Selene. In the right-hand corner of the pediment is the edge of a circular object, possibly a globe—the left-hand corner is missing. The blocks have been thinned recently.

Lysons 1803, pl. vi; Irvine 1873, pl. 13; Haverfield 1906, fig. 20.

Found in 1790 beneath the Pump Room.

e. Pediment of an Unsited Monument (pl. XLIII)

1.54. The corner member of a pediment depicting what appears to be part of a crescent carved in low relief. The angle is such that it cannot belong to the Luna pediment, which has a much shallower rake. The block is 24 in. (0.61 m.) thick.

Found in 1968, in trench 23 immediately to the south of the altar (p. 53).

f. The Large Relief-decorated Monument (pl. XLIII)

Three blocks have been found which appear to belong to a large relief-decorated monument. Two of them, nos. 1.56 and 1.57, are clearly part of the same monument; the other, no. 1.55, does not certainly belong with them but is similar in character and scale.

1.55. A block 37 in. (0.94 m.) long and broken at one end. It depicts a plain pilaster with a simple cap moulding attached to an interpilaster in which has been cut a shallow niche containing an unidentified part of a figure or drapery. The niche does not round off at the top, as it might be expected to do before the entablature was reached. The block is 12 in. (0.3 m.) thick.

Found in 1968 in trench 23, immediately south of the altar.

1.56. A block depicting the waist and thighs of a lightly draped female figure, moving to the left. To the right is a representation of what appears to be a rock, from which water is issuing. The carved face measures 12 in. (0.3 m.) by 35 in. (0.89 m.) and the block is 23 in. (0.59 m.) thick.

Found by Davis, north of the reservoir, in about 1895.

1.57. A flake from a block identical to the above, showing a figure moving to the right.

Found by Davis, north of the reservoir, in about 1895.

g. The Niched Quadrangular Monument (fig. 12 and pl. XLIV)

1.58–9. Two similar slabs from the top of a quadrangular monument 6 ft. (1.83 m.) square, decorated with niches carved in each side. The corners are enlivened with engaged pilasters. The surviving pieces show the cornice of the monument; the cyma is decorated with acanthus leaves and above this is a panel containing flowers separated by leaves. In one of the niches the top of a helmet and spear survive. Both blocks have been worn on their upper surface, indicating re-use.

Found by Davis in about 1895, north of the reservoir.

Haverfield 1906, 252–3.

h. Dedicatory Inscriptions from the Temple Precinct and Surrounding Areas
(pls. XLV–XLVI)

1.60. Inscribed statue base 36 in. (0.91 m.) high. It reads:

Deae Sulis L. Marcius Memor harusp(ex) d(ono) d(edit)

‘To the Goddess Sulis, Lucius Marcius Memor, augurer, gave this gift.’

The ‘usp’ of ‘Haruspex’ had been added later as is shown by the irregular spacing.

Found in 1965 *in situ* on the precinct floor in front of (i.e. the west of) the altar.

See p. 47.

Cunliffe 1966, pl. xxxiv.

1.61. Altar 60 in. (1.52 m.) high by 28 in. (0.71 m.) wide. It reads:

[D]eae Sulis pro salute et incolumita [te] Mar(ci) Aufid[i] [M]aximi c(enturionis) leg(ionis) VI Vic(tricis) [A]ufidius Eutuches leb(ertus) u(otum) s(oluit) l(ibens) m(erito)

‘To the Goddess Sulis for the health and safety of Marcus Aufidius Maximus, centurion of the *Legio VI Victrix*, Aufidius Eutuches, his freedman, willingly and deservedly fulfilled his vow.’

Found below the Pump Room between 1790 and 1792.

Lysons 1803, pl. x, no. 2; *RIB* 143.

1.62. Altar 50 in. (1.27 m.) high by 22 in. (0.58 m.) wide. It reads:

Deae Sulis [p]ro salute et [i]ncolumitate Aufidi Maximi c(enturionis) leg(ionis) VI Vic(tricis) M(arcus) Aufidius Lemnus libertus u(otum) s(oluit) l(ibens) m(erito)

‘To the Goddess Sulis for the welfare and safety of Aufidius Maximus, centurion of the *Legio VI Victrix*, Marcus Aufidius Lemnus, his freedman, willingly and deservedly fulfilled his vow.’

Found below the Pump Room between 1790 and 1792.

Lysons 1803, pl. x, no. 1; *RIB* 144.

1.63. Altar 17 in. (0.43 m.) by 21 in. (0.53 m.) by 12 in. (0.30 m.) with both the top and base broken away. It reads:

Priscus Touti f(ilius) lapidariu[s] ciues Car[nu]tenus Su[li] deae u(otum) [s(oluit) l(ibens) m(erito)]

‘Priscus, son of Toutius, stonemason, a tribesman of the Carnutes, to the Goddess Sulis willingly and deservedly fulfilled his vow.’

Found during the excavation of the Baths and the surrounding areas in about 1880 or after.

Haverfield 1906, 271, no. 17; *RIB* 149.

1.64. Altar 13 in. (0.33 m.) by 10 in. (0.25 m.): the bottom has been broken off and the top moulding chiselled off. It reads:

Q(uintus) Pompeius Anicetus Sulis

‘Quintus Pompeius Anicetus to Sulis.’

Found in February 1879, built into a wall in York Street, to the south of the Baths.

Haverfield 1906, 270, no. 16; *RIB* 148.

1.65. Part of an altar 21 in. (0.53 m.) by 18 in. (0.45 m.). The only surviving letter is ‘M’, presumably part of the abbreviation *u s l m* (not illustrated).

Found during the excavation of the Baths in 1880, or soon after.

Haverfield 1906, 273, no. 24; *RIB* 176.

1.66. The base of an altar; the rest is lost but the base moulding survives on the front and side. It reads:

. . .]nu[s u(otum)] s(oluit) l(ibens) m(erito)

‘. . . nus willingly and deservedly fulfilled his vow.’

Exact provenance unknown but from the temple or Baths area (not illustrated).

JRS xiv (1924), 243; *RIB* 173.

1.67. Altar 48 in. (1.2 m.) by 2.5 in. (0.63 m.) across. The upper part is very battered and weathered. It reads:

*Dea[e] Suli [o] b s[alutem] sac(rum) G(ai) Iau[oleni Sa]tur[na]lis [. . . i]m[a]g[in]-
n(iferi) leg(ionis) II Aug(ustae)L(ucius) Manius Dionisias libe(r)t(us) u(otum) s(oluit)
l(ibens) m(erito)*

‘To the Goddess Sulis on behalf of the welfare of Gaius Javolenus Saturnalis, . . .
imaginifer of the Second Legion Augusta, Lucius Manius Dionisias, his freedman,
willingly and deservedly fulfilled his vow.’

Found in 1922 in Stall Street, quite possibly from the area of the temple.

RIB 147.

i. Miscellaneous Sculptured Stones from the Temple Area (pls. XLVII–XLIX)

1.68. Fragment of the edge of a figured relief 15 in. (0.38 m.) high and 3 in. (0.076 m.) wide showing a hand clasping a trident; both hand and trident are incorporated in the denticulated moulding which forms the edge of the relief.

Found in 1965 (see p. 47), lying on the floor of the temple precinct below the altar corner (no. 1.27).

1.69. Slab 24 in. (0.61 m.) long, 7½ in. (0.19 m.) high, and 5 in. (0.125 m.) thick, plain except for an eight-pointed flower carved in relief on the flat face. It is similar to the pieces belonging to the Façade of the Four Seasons, but it is impossible to say to which monument it belonged.

Found in 1790, beneath the Pump Room.

Lysons 1803, pl. ix, no. 9.

1.70. Block of stone measuring 27 in. (0.69 m.) long by 10 in. (0.25 m.) high. It bears part of a concave circular panel containing three pointed rays, possibly from a representation of the sun. Some writers have considered it to be part of a Solar pediment but, as Haverfield points out, it is not an ideal shape for a pediment block. It cannot now be found.

Lysons 1803, pl. ix, no. 6; Scarth 1864, pl. xxxiii; Haverfield 1906, 241, fig. 19.

1.71 Block of stone about 15 in. (0.38 m.) by 10 in. (0.25 m.) partly carved on all four sides; two bear rosettes, one has leaves, the fourth was too weathered to decipher. The piece is now lost and it is impossible to be certain what it originally represented. One possibility, however, is that it was part of a modillion belonging to a cornice.

Found in 1790, beneath the Pump Room.

Lysons 1803, pl. ix, nos. 2, 3, 4, and 5; Scarth 1864, pl. xxxiii.

1.72. Fragment of sculpture, now lost. Lysons’s illustration suggests that it depicted drapery which, he thought, might have belonged to one of the figures on the pediment. It is difficult to see how.

Found in 1790, beneath the Pump Room.

Lysons 1803, pl. iv, no. 4.

1.73. Slabs of stone depicting what appears to be a many-petalled flower in relief on a plain background.

Found in 1790, beneath the Pump Room, now lost.

Lysons 1803, pl. ix, no. 14; Scarth 1864, pl. xxxiii.

- 1.74. Block of stone 46 in. (1.17 m.) by 22 in. (0.56 m.) by 13 in. (0.33 m.) carved with letters 5 in. (0.125 m.) high, reading :

T . [

ET [

Found in May 1878 in the rubble lying against the east side of the reservoir, now lost.

Mann, letter to Irvine ; *RIB* 175.

j. Architectural Fragments from the Temple Area (pls. XLIX–L)

Quantities of plain architectural mouldings have been recovered from time to time from the area of the temple. Unfortunately, they were seldom recorded with the same thoroughness as were the more elaborately carved fragments, and many of them have since been lost. Of those which survive in the Roman Baths Museum, the provenance of very few has been recorded with certainty. Fortunately, the illustrations produced by Lysons and Mann enable the find-spots of some of the more important pieces to be deduced. Columns are described separately below, pp. 204–5.

- 1.75. Large block, 32 in. (0.81 m.) by 26 in. (0.63 m.) by 24 in. (0.61 m.), with a carved moulding along one edge.

Found in the 1965 excavation, in the area close to the sacrificial altar (p. 47).

- 1.76. Part of the cap of a corner pilaster. The block measures 40½ in. (1.04 m.) by at least 38 in. (0.96 m.); the pilaster is 20 in. (0.56 m.) wide. The back of the block has been cut off diagonally at a later date, as is shown by the positions of the lewis holes.

Found in 1790 during the building of the Pump Room. Lysons 1803, pl. ix, nos. 10 and 11.

- 1.77–9. Three cornice blocks with exactly the same moulding as no. 1.76 above, possibly therefore from the same monument. They are all about 37 in. (0.94 m.) deep; two are complete, measuring 32 in. (0.81 m.) and 22½ in. (0.57 m.) long, the third, 21 in. (0.53 m.) in length, is broken.

There is no record of where these blocks were found, but they may have come from the area of the Baths. Because of their likeness to no. 1.76 they are included here.

Another cornice block of closely similar type, 4 ft. 5 in. (1.37 m.) long, was seen projecting into the side of trench 23, dug in 1968, south of the altar. Since it has not, at the time of writing, been lifted it is not separately numbered here.

- 1.80. The cap belonging to an engaged corner pilaster with a similar cornice attached; the pilaster is 20 in. (0.51 m.) wide and projects 2 in. (0.05 m.) from the wall-face. The moulding is generally similar to no. 1.76, though not close enough to be from the same monument. Some doubt attaches to the provenance of this piece, but one of

Mann's drawings (Mann 1900) suggests that it may have come from the precinct just north of the door to the reservoir.

- 1.81-3. Three blocks from the frieze of a large monument; they measure 27 in. (0.69 m.), 33 in. (0.84 m.), and 17 in. (0.43 m.) in length. Two of them were found against the east side of the reservoir enclosure, just north of the culvert, in 1880 (Mann's drawings); the other, however, seems to have been found in the north-west corner of the ambulatory surrounding the Great Baths (Mann's drawings), together with a quantity of other stone-work.
- 1.84. Part of the base of a large pilaster; this section, measuring 22 in. (0.56 m.) long, presumably comes from the middle of the base. Similar bases can be seen *in situ* in the ambulatory along the west side of the Lucas Bath. This piece was illustrated by Scarth (Scarth 1864, pl. iv), together with parts of the Four Seasons Façade. Although it clearly does not belong to this monument, it must have been found before 1864 and may well, therefore, have come from the 1790 excavation. Another possibility, of course, is that it was recovered in 1755 from the Lucas Bath area.

2. THE BATHS (pls. LI-LXI)

a. *The Quadrant Monument* (pls. LI-LIV)

- 2.1-3. Three blocks of stone, evidently the frieze of a circular monument which would have been about 13 ft. 4 in. (4.06 m.) in diameter externally. Each of the blocks is carved elaborately on the inner face as well as on the outer—both were therefore intended to be seen. The inner face of all three bears an exceptionally skilful carving of a series of running leafy scrolls with open flowers in the centre of each. One of the scrolls moves to the left, the other to the right; they meet in a fleur-de-lis (no. 2.1).

The carvings on the outer faces of each block differ, but are clearly part of the same design. On no. 2.1 four panels survive; that on the left-hand side is vertical, 5 in. (0.13 m.) wide and filled with a stylized leaf pattern. Then comes a horizontal panel, 20 in. (0.56 m.) by 8 in. (0.20 m.), filled with leaves and buds. This is followed by a vertical panel similar to the first. Finally, on the extreme right, is a deeper recess apparently containing a figure, an unidentifiable part of which survives. Part of the design has been cut away by a roughly hewn recess cut into the under-surface of the block. This clearly is not part of the original conception, but when and why it was cut is uncertain.

No 2.2 bears the remains of three panels, each 12 in. (0.30 m.) wide. In the centre panel is a multiple fleur-de-lis, and on either side deeper recesses containing figures. Of the right-hand figure only a knee and foot survive, but the individual is clearly looking towards the central panel. The figure on the other side is rather more

complete. His knee is raised to support a curved object, possibly a lyre, and he seems to be sitting amid a rocky landscape.

No. 2.3 is rather mutilated, but two figures, each standing in a separate recess, are represented. Of the left-hand figure, one leg and the billowing folds of a short cape can be recognized. The other figure appears to be dressed in a tight skirt with a long cloak draped over her shoulders. In her left hand she holds a rod-like object which projects over her shoulder. The right hand is obscured, but one possible interpretation is that it holds, at arm's length, an upturned vase.

- 2.4. A block of stone carved on two sides and evidently part of the frieze and cornice of a curved monument. Both the inner and outer faces are ornamented in similar, though not identical, ways. On the outer face the cyma bears a simple overlapping leaf motif, below this is a flat area adorned with Greek-key patterns incorporating open flowers at intervals, and below this again is another flat surface with a running leafy scroll. The inner face is very similar, except that there are no flowers in the Greek-key motifs.

All four blocks were found during the excavation of the Great Baths. Nos. 2.1-2 were lying in the east ambulatory; the position of the others is uncertain. Haverfield 1906, 259-60.

b. Miscellaneous Fragments of Sculptured Stone (pls. LV-LVII)

- 2.5. Relief of Minerva, 27 in. (0.69 m.) high, 18 in. (0.46 m.) wide. The goddess, heavily draped, stands erect in a gable-topped niche. On her head is a helmet and in her right hand she holds a spear, whilst her left hand rests on a shield, upon which perches an owl. Across her stomach she wears a Gorgon's head mask.

Found April 1882, within the Great Bath.

Haverfield 1906, 259 and fig. 34.

- 2.6. Relief of Mercury, 14 in. (0.36 m.) high, 11 in. (0.28 m.) wide. The god is shown nude, but for a robe thrown over his left shoulder. In his left hand he holds a caduceus. The exact nature of the quadruped by his right side is uncertain.

Provenance unknown, but from the excavations of 1878-90.

Haverfield 1906, 259.

- 2.7. Relief, 17 in. (0.43 m.) high and 13 in. (0.33 m.) wide, depicting a god and goddess. The god, standing on the right, wears a short squared cloak over his shoulders, on his head is a horned helmet. He holds, in his left hand, a sceptre which rests on his left shoulder. The goddess is also holding a sceptre in a similar way, but she is shown heavily draped and sitting on a block. At the bottom of the panel, below the feet of the deities, are three small cloaked figures, either worshippers or *genii cuculati*, and an animal which may be the sacrifice.

Provenance unknown, but from the excavations of 1878-90.

Haverfield 1906, 259 and fig. 33; see also A. Ross, *Pagan Celtic Britain* (London, 1967), pp. 159 and 300, for a suggestion that the deities are Nemetona and Leucetius.

2.8. The head and shoulders of a lion, or sphinx, carved in the round. The body has been broken off and the face has been smashed, but sufficient survives to show that the body was covered with stylized carvings of curls of hair. The mane is represented as being closely cropped.

Found during the excavations of 1882 in the south-west corner of the ambulatory surrounding the Great Bath.

Davis 1895, 35.

2.9. The body of an animal carved in the round.

Provenance unknown but probably from the Baths.

2.10. Part of the body of an animal carved in the round.

Provenance unknown but probably from the Baths.

c. Inscriptions (pl. LVIII)

2.11. Block of stone, 28 × 17 × 21 in. (0.72 × 0.43 × 0.53 m.), carved with letters 6 in. high, reading:]SSIL[. Now lost.

Found in the excavation of the Great Bath before 1885.

Haverfield 1906, 268, no. 7; *RIB* 174.

2.12. Fragment of a column, 13 in. (0.33 m.) in diameter, deeply scratched with letters 2 $\frac{3}{4}$ in. (0.07 m.) high, below the moulding. It reads: AN[.

Found in the Baths some time after 1880. Now lost.

Haverfield 1906, 269, no. 9; *RIB* 178.

2.13. Fragment of a cornice of a small monument, probably an altar, with part of a gable above. Carved with letters 1 $\frac{1}{2}$ in. (0.037 m.) high, reading: VES . VII CO

[*Imp(eratore) Caes(are)*] *Ves(pasiano) VII co[(n)s(ule)]*

'In the seventh consulship of the Emperor Vespasian.'

Provenance unknown, but presumably from the Baths.

Haverfield 1906, 269, no. 10 and fig. 40; *RIB* 172.

d. Architectural Fragments from the Baths and Reservoir (pls. LIX–LXI)

It seems probable that most of the items listed below come from the excavations of the Baths between 1878 and 1886. Unfortunately the records of this work are so poor that, with rare exceptions, it is impossible to be sure of the exact find-spots of any individual piece. According to Mann's drawings, a large number of fragments were found together in the north-west corner of the ambulatory surrounding the Great Bath; a smaller collection came from the east ambulatory.

2.14. Part of a cornice, 44 in. (1.12 m.) long, with mouldings carved on both the inner and the outer faces. It seems possible that a pilaster was attached below the right-hand end. One of Mann's sketches (Mann 1900) suggests that this piece was found in the centre of the Great Bath.

2.15. Two sections of the cap of an engaged corner pilaster. If they fit, the pilaster would have been 32 in. (0.81 m.) wide, but they may be parts of different pilasters belonging to the same monument. The pilaster projects about 6 in. (0.15 m.) from the wall-face.

No provenance.

2.16. The cap of an engaged pilaster, the pilaster itself measuring 24 in. (0.61 m.) across and projecting 3 in. (0.076 m.) from the wall-face. Possibly found in the ambulatory along the east side of the Great Bath (Mann 1900).

2.17. The cap of a freestanding, rectangular pier measuring 19 in (0.48 m.) by 16 in. (0.4 m.) at its top.

No provenance.

2.18. Base of an attached pilaster; the pilaster measures 19 in. (0.48 m.) across and projects $3\frac{1}{2}$ in. (0.086 m.) from the wall-face.

No provenance.

2.19. Block constituting either an external corner of a cornice or the cap of an engaged pilaster. Two adjacent sides are moulded, the other two are plain; the upper part of the moulding is broken away. The base of the block measures $20\frac{1}{2}$ in. (0.52 m.) by $21\frac{1}{2}$ in. (0.54 m.).

No provenance.

2.20. Single block, 12 in. (0.30 m.) thick, with the capital of a half-column attached to one face. The column is 23 in. (0.59 m.) wide below the neck and projects $13\frac{1}{2}$ in. (0.34 m.) from the wall-face.

No provenance.

2.21. Single block, 14 in. (0.35 m.) thick, with the drum of a half-column attached to one face. The drum is 24 in. (0.61 m.) across and projects 14 in. (0.35 m.) from the wall-face.

No provenance.

2.22. Single block, 20 in. (0.51 m.) thick and 21 in. (0.53 m.) high. One face bears the drum of an attached half-column. The drum is 24 in. (0.61 m.) across and projects 14 in. (0.35 m.) from the wall-face. Similar to no. 2. 21; not illustrated.

No provenance.

2.23. Part of a block, 16 in. (0.40 m.) thick and 18 in. (0.46 m.) high. One face bears the drum of an attached half-column. The drum is about 23 in. (0.59 m.) across and projects $13\frac{1}{2}$ in. (0.34 m.) from the wall-face. Similar to nos. 2.21 and 2.22, but it has been sawn vertically through the centre of the drum, only one half surviving. Not illustrated.

No provenance.

2.24. Composite capital, originally 36 in. (0.91 m.) from volute to volute. Now much damaged. Taylor states that it was found in the reservoir in about 1878 (Taylor 1906).

3. THE MONUMENTAL BUILDING NORTH OF THE TEMPLE

(pls. LXII–LXIII)

3.1. About half of a block belonging to a cornice, the surviving part measuring 36 in. (0.91 m.) long. In what would have been the centre of the stone is part of a fantastic head, rather human in appearance, which might well be a representation of Medusa. The top surface of the block is dishd to collect rainwater, which was expelled in gargoyle-fashion through the mouth of the head.

The soffit is decorated with a deeply carved fleur-de-lis, below which is a running ribbon scroll. Irvine noted that red paint survived in the deep mouldings, but none remains today. He was of the opinion that the fragment was part of the side cornice of the temple, but since it is considerably larger than the known temple cornice it seems more likely that it belonged to a hitherto unknown monument.

Found in 1869 beneath the floor of the cellars attached to the Westgate Street frontage of the Pump Room Hotel.

Irvine 1873, pl. 1; Haverfield 1906, fig. 22.

3.2. Small fragment of a cornice similar to the above.

Found with no. 3. 1 in 1869.

Irvine 1873, pl. 1.

3.3. Small fragment of a face similar to no. 106.

Found with no. 3. 1. in 1869.

Irvine 1873, pl. 1.

3.4. Part of a cornice showing a soffit decorated with leaves and part of a modillion. Patches of red paint still survive in the recesses of the deep mouldings.

Found with nos. 3.1–3.3 in 1869.

Irvine 1873, pl. 1.

3.5–6. Two fragments of a large Corinthian capital.

Find-spot and date of find unknown.

4. OTHER RELIGIOUS SITES IN BATH (pls. LXIV–LXVII)

a. *The Hot Bath* (pl. LXV)

4.1. Altar 25 in. (0.63 m.) high. It reads:

Deae Sulis Minervae Sulinus Maturi Fil(ius) v(otum) s(oluit) l(ibens) m(erito)

‘To the Goddess Sulis Minerva, Sulinus son of Maturus willingly and deservedly fulfilled his vow.’

Found in the rubbish filling the Hot Bath spring in 1774.

Lysons 1803, ii, 9, pl. x, 4; *RIB* 150.

4.2. Altar 26 in. (0.66 m.) high. It reads:

[*Dea(e) Dia*]na(e) *sacratissima(e) votu(m) soluit Vettius B[e]nignus Lib(ertus)*

‘To the most hallowed Goddess Diana, Vettius Benignus, a freedman, fulfilled his vow.’

Found in the rubbish filling the Hot Bath spring, in 1776.

Lysons 1803, ii, 11, pl. xi, 4; *RIB* 138.

4.3. Inscribed block 19 in. (0.48 m.) by 18 in. (0.46 m.), probably the lower part of a dedication. It reads:

]Novanti *fil(ius) pro se et suis ex visu possuit*

‘... son of Novantius set this up for himself and his family as the result of a vision.’

Found when foundations were being dug for the United Hospital, in 1825.

Scarth 1862, 300; *RIB* 153.

b. The Cross Bath (pls. LXIV–LXV)

4.4. Altar 44 in. (1.12 m.) high. It reads:

Deae Sulis Min(ervae) et Numin(ibus) Aug(ustorum) G(aius) Curiatius Saturninus c(enturio) Leg(ionis) II Aug(ustae) pro se suisque v(otum) s(oluit) l(ibens) m(erito)

‘To the Goddess Sulis Minerva and to the Deities of the two Emperors, Gaius Curiatius Saturninus, centurion of the second legion Augusta willingly and deservedly fulfilled his vow for himself and his kindred.’

Found in the Cross Bath in 1890, 13 ft. (3.96 m.) below the street-level.

Lysons 1803, ii, pl. xiii, 2; *RIB* 146.

4.5. Block of stone measuring 30 × 18 × 10 in. (0.76 × 0.46 × 0.25 m.), carved on three sides; the fourth is broken. The front face depicts a reclining male (right) with drapery across his knees, holding out his hand to a naked woman standing to the left. Above the figures is an animal and a tripod. The reverse side is carved with a small panel containing a quadruped, possibly a dog, standing beneath a tree. On the short side is a scene showing a snake coiled round a tree.

The exact interpretation of the piece is uncertain, but it has been suggested that the dog and snake indicate a link with Aesculapius. If so, then the two main figures would be Coronis, the mother of Aesculapius, and Apollo.

Found in the Cross Bath in 1885, 20 ft. (6.09 m.) below the surface.

Davis 1887, 42–3; Scarth 1864, 104; Haverfield 1906, 285 and fig. 54; Winwood 1886, 79–84.

c. Inscriptions from Other Sites within the Town (pls. LXVI–LXVII)

4.6. Altar, broken at the top, measuring now 30 in. (0.76 m.) high. It reads:

Peregrinus Secundi fil(ius) civis Trever Loucetio Marti et Nemetona v(otum) s(oluit) l(ibens) m(erito)

'Peregrinus son of Secundus, a Treveran, to Loucetius Mars and Nemetona willingly and deservedly fulfilled his vow.'

Found in 'the lower part of Stall Street', in 1753.

Englefield 1792, 325; *RIB* 140.

4.7. Altar 36 in. (0.91 m.) high. It reads:

Locum religiosum per insolentiam erutum virtuti et n(umini) Aug(usti) repurgatum reddidit G(aius) Severius Emeritus c(enturio) reg(ionarius)

'This holy spot, wrecked by insolent hands and cleansed afresh, Gaius Severius Emeritus, centurion in charge of the region, has restored to the Virtue and Deity of the Emperor.'

Found in 'the lower part of Stall Street' at a depth of 5 ft., in 1753.

Lysons 1803, ii, 10, pl. xi, 1; *RIB* 152.

4.8. Statue base 23 in. (0.59 m.) high. It reads:

Sulevis Sulinus scultor Bruzeti f(ilius) sacrum f(ecit) l(ibens) m(erito)

'To the Suleviae Sulinus, a sculptor, son of Brucetus, gladly and deservedly made this offering.'

Found on the west side of 'the lower part of Stall Street', in 1753.

Lysons 1803, ii, 10, pl. xi, 3; *RIB* 151.

4.9. Inscribed slab of white crystalline marble, the surviving part measuring 9 × 7 in. (0.228 × 0.178 m.). The inscription is finely cut, it reads:

Deae S[uli] Ti(berius) Cl(audius) T[i(beri) fil(ius)] Sollem[nis] . . .

'To the Goddess Sulis, Tiberius Claudius Sollemnis, son of Tiberius . . .'

Found in 1861 on the site of the Mineral Water Hospital.

Scarth 1864, pl. xxx; *RIB* 145 (illustrated there only by a sketch).

4.10. Altar, now in two pieces, originally about 34 in. (0.86 m.) high. It reads:

Genio loci [.] leg(ionis) VI [Vic(tricis)] Forianus v(otum) s(oluit) l(aetus) l(ibens) m(erito)

'To the Genius of this place of the Sixth Legion Victrix, Forianus gladly, willingly and deservedly fulfilled his vow.'

Found in 1871 in the area of the market opposite the Guildhall.

Davis 1873, 281; *RIB* 139.

5. TOMBSTONES AND OTHER FUNERARY MONUMENTS

(pls. LXVII–LXXIII)

The tombstones of Bath have been fully listed on two previous occasions, first by Haverfield in the *Victoria History of the County of Somerset* (1906), and more recently

by Collingwood and Wright in *Roman Inscriptions of Britain* (1965). Since there is little to be added to these excellent accounts, I have merely summarized the main features of each stone here.

- 5.1. Tombstone in the shape of an altar, 53 in. (1.35 m.) high, found in, or near, Sydney Gardens in 1793. It reads:

D(is) M(anibus) G(aius) Calpurnius [R]eceptus sacerdos deae Sulis vix(it) an(nos) LXXV. Calpurnia Trifosa l[i]bert(a) coniunx f(aciendum) c(uravit)

'To the spirits of the departed; Gaius Calpurnius Receptus, priest of the Goddess Sulis, lived 75 years; Calpurnia Trifosa, his freedwoman (and) wife, had this set up.'

Lysons 1803, ii, 9, pl. x, 3; *RIB* 155.

- 5.2. Tombstone with gabled top containing a flower, 73 in. (1.85 m.) high.

Found in October 1708 near the London Road at Walcot, with two cinerary urns containing bones. It reads:

Iulius Vitalis fabricie(n)sis leg(ionis) XX V(aleriae) V(ictricis) stipendiorum IX an(n)or(um) XXIX natione Belga ex col(l)egio fabrice(nsium) elatus h(ic) s(itus) e(st)

'Julius Vitalis, armourer of the Twentieth Legion Valeria Victrix, of 9 years' service, aged 29, a Belgic tribesman, with funeral at the cost of the Guild of Armourers; he lies here.'

Musgrave 1719, i, 192, pl. xvi; *RIB* 156.

- 5.3. Tombstone, 36 in. (0.91 m.) high, with a triangular gable bearing a flower. Found in the sixteenth century on the London Road, about 1 mile from Bath. Now lost.

It reads:

G(aius) Murrius G(ai) f(ilius) Arniensis Foro Iuli Modestus mil(es) [l]eg(ionis) II Ad(iutricis) P(iae) F(idelis) [c(enturia)] Iuli Secundi ann(or)um XXV stip(endiorum) [...] h(ic) s(itus) [e(st)]

'Gaius Murrius, son of Gaius, of the Arnensian voting-tribe, from Forum Juli, soldier of the Second Legion Adiutrix Pia Fidelis, from the century of Julius Secundus, aged 25, of . . . years' service, lies buried here.'

Camden 1590, 169; *RIB* 157.

- 5.4. Tombstone, 38 in. (0.86 m.) high, with a plain triangular gable. Found in the sixteenth century on the London Road about 1 mile from Bath. Now lost. It reads:

Dis Manibus M(arcus) Valerius M(arci) fil(ius) Latinus c(ivis) Eq(uester) mil(es) leg(ionis) XX an(norum) XXXV stipen(diorum) XX h(ic) s(itus) e(st)

'To the spirits of the departed; Marcus Valerius Latinus, son of Marcus, citizen of Equestris, soldier of the Twentieth Legion, aged 35, of 20 years' service, lies buried here.'

Camden 1590, 169; *RIB* 158.

- 5.5. Tombstone, more than 61 in. (1.55 m.) high. At the bottom is an inscribed rectangular panel, above which is a relief of a cavalry man riding across a fallen enemy. The upper part of the relief is missing. Found in 1736 within the walled area of Bath, opposite the Guildhall. It reads:

L(ucius) Vitellius Mantai f(ilius) Tancinus cives Hisp(anus) Caurie(n)sis eq(ues) alae Vettonum c(ivium) R(omanorum) ann(or)um XXXXVI stip(endiorum) XXVI h(ic) s(itus) e(st)

‘Lucius Vitellius Tancinus, son of Mantaius, a tribesman of Caurium in Spain, trooper of the Cavalry Regiment of Vettones, Roman citizens, aged 46, of 26 years’ service, lies buried here.’

Gentleman’s Magazine, i (1736), 622; *RIB* 159.

- 5.6. The upper part of the tombstone of a cavalryman, similar to no. 5.5. The relief panel, smaller than no. 5.5, is surmounted by a triangular gable containing a flower. Found in Grosvenor Gardens.

Haverfield 1906, 276, no. 29.

- 5.7. Lower part of a broken tombstone found in 1792 when digging the foundation for a house at East Hayes, near London Road, about 1 mile from Bath. It reads:

. . .] Ser(gia tribu) A[nt]igonus Nic(opoli) emeritus ex leg(ione) XX an(norum) XLV h(ic) s(itus) e(st) G(auius) Tiberinus heres f(aciendum) c(uravit)

‘. . . Antigonus, of the Sergian voting-tribe, from Nicopolis, *emeritus* from the Twentieth Legion, aged 45, lies buried here; Gavius Tiberinus, his heir, had this set up.’

Lysons 1803, ii, 11, pl. xii, 2; *RIB* 160.

- 5.8. Part of the plinth of a monumental tomb (the surviving piece was 40 in. (1.01 m.) long and 15 in. (0.38 m.) high) seen in the seventeenth century built in the city wall west of Northgate but now lost. It reads:

. . .] dec(urio) coloniae Gleu[ensis. . .] uixit an(nos) LXXX VI[. . .]
‘. . . decurion of the colonia of Glevum. . . lived 80 years. . .’

Camden (5th edn.) 1600, 203; *RIB* 161.

- 5.9. Slab 24 × 24 in. (0.61 × 0.61 m.) with a plain gable top, from the end of a tomb originally held together with iron cramps. Found in 1809 in Upper Borough Walls near the Northgate. It reads:

D(is) M(anibus) Merc(atilla) Magni l(iberta) alumna uixit an(num) I m(enses) VI d(ies) XII

‘To the spirits of the departed; Mercatilla, freedwoman and foster-daughter of Magnus, lived 1 year, 6 months, 12 days.’

Arch. xxii (1829), 420, pl. xxxviii, 2; *RIB* 162.

- 5.10. Lower part of a tombstone 37 in. (0.94 m.) wide. Found in 1803 in the Borough Walls. It reads:

...]*Rusoniae Auent[i]nae c(iui) Mediomatr[ic(ae)] annor(um) LVIII h(ic) s(ita) e(st); L(ucius) Vlp(ius) Sest(ius) h(eres) f(aciendum) c(urauit)*

‘... to Rusonia Aventina, a tribeswoman of the Mediomatrici, aged 58; she lies here; Lucius Ulpius Sestius, her heir, had this erected.’

Lysons 1803, ii, pl. xiii, 1; *RIB* 163.

- 5.11. Tombstone, now lost, consisting of a central inscribed panel with human figures in relief at each side. Seen in the sixteenth century built into the city wall west of the Northgate. It reads:

D(is) M(anibus) Succ(essae) Petroniae uix(it) ann(os) III m(enses) IIII d(ies) IX Vet(tius) Romulus et Vict(oria) Sabina fil(iae) kar(issimae) fec(erunt)

‘To the spirits of the departed (and) to Successa Petronia, (who) lived 3 years, 4 months, 9 days. Vettius Romulus and Victoria Sabina set this up to their dearest daughter.’

Camden (5th. edn.) 1600, 203; *RIB* 164.

- 5.12. Tombstone, now lost, found before 1658 beside the London Road, near the Bell Inn, Walcot. It read:

Vibia Iucunda an(norum) XXX hic sepulta est

‘Vibia Jucunda, aged 30, lies buried here.’

Stukeley, *It. Cur.* (1776), pl. lxiv; *RIB* 165.

- 5.13. Tombstone, seen by Leland about 1533, built into the city wall. It was said to be flanked by two standing figures (not illustrated). It read:

]uixit annos XXX[

‘... lived 30 years.’

Leland (ed. Hearne) 1711, ii, fig. 36; *RIB* 166.

In addition to the inscribed tombstones several other objects of carved stone have been found, which in all probability belong to funerary monuments. These may be listed as follows:

- 5.14. Colossal head of a woman, now rather battered. She wears her hair in a mass of tight curls, in a style fashionable in the Flavian period. The head was found in 1714 or 1715, during roadworks at Walcot.

Haverfield 1906, 285.

- 5.15. A large head in the form of a theatrical mask resting on a plain block. Date and context of the discovery are unknown.

- 5.16. A relief showing a hunting-dog carrying a roe-deer across its back.

Possibly for a tomb. Found in 1860 in London Road, Walcot.

Scarth 1864, 35 and pl. ix; Haverfield 1906, 286.

- 5.17. Relief showing a man, wearing a short tunic and a cloak, standing in a niche;

his head and feet have been broken off. In his right hand he holds what appears to be a standard; in his left he clasps a scroll.

Probably found near the Northgate in 1803.

Gentleman's Magazine, ii (1804), 1006; Haverfield 1906, 286.

- 5.18. Two stones belonging to a monument which depicts a man standing in a niche. He wears a cloak and his hands are folded across his body, perhaps in order to clasp a scroll or similar object no longer recognizable. Above him, to the right, is a dolphin shown in shallow relief.

Found near the Northgate in 1803.

Scarth 1864, 81 and pl. xxxi.

6. MISCELLANEOUS INSCRIPTIONS AT ONE TIME BUILT INTO THE CITY WALL AND GATES (pl. LXXIII)

- 6.1. Stone block inscribed with large letters. Seen about 1600, built into the city wall between the west and north gates. Now lost. It was said to have read:

...]urn[...]

...]iop[...]

Camden (5th edn.) 1600, 204; *RIB* 167.

- 6.2. Inscription seen about 1600, built into the city wall between the west and south gates. Now lost. Its $4\frac{1}{2}$ -in. (0.10-m.)-high letters were said to have read:

...]ulia[...]

...]ilia[...]

Camden (5th edn.) 1600, 204; *RIB* 168.

- 6.3. Inscription first seen about 1600, built into the city wall between the west and south gates. It was last recorded in position in 1730. The letters, 5 in. (0.125 m.) high, read:

...]iliussa[...]

...]ius uxsor[...]

Camden (5th edn.) 1600, 204; *RIB* 169.

- 6.4. Inscription measuring 27 in. (0.69 m.) long, broken into two parts. It is likely to be the inscription found in about 1806, when foundations were being dug near the Northgate. The letters, 3 in. (0.076 m.) high, read:

...]s Cornelianu[s...]

Scarth 1852, 108; *RIB* 170.

- 6.5. Inscribed stone measuring 27×15 in. (0·69×0·38 m.). It was found built into the foundation of Westgate House when the building was being pulled down in 1776. Now lost (not illustrated). The reading is not clear, but appears to be:

AESV○V

E^SCAA

IEN

D M

No sure interpretation can be offered.

Bath Chronicle, 13 June 1776; *RIB* 171.

7. COLUMNS AND COLONNETTES (pls. LXXIV–LXXVIII)

Excavations in Bath have, from time to time, yielded a large number of fragments of columns and colonnettes; the museum now contains many of them. Unfortunately, with very few exceptions, the find-spots of the individual pieces are unknown, and it is impossible therefore to assign them to the monuments of which they once formed part. A selection of fragments found in the excavations of 1790 was illustrated by Lysons (Lysons 1803, pls. viii and ix). The examples now preserved in the museum are illustrated here; most of them will have been found during the excavations of the Baths and neighbouring areas in the late nineteenth century.

- 7.1. Column base. Found in 1790.
Lysons 1803, pl. ix, no. 7.
- 7.2. Column base. Found in 1790.
Lysons 1803, pl. viii, no. 12.
- 7.3. Column base. Found in 1790.
Lysons 1803, pl. ix, nos. 12 and 13.
- 7.4. Column cap. Found in 1790.
Lysons 1803, pl. viii, no. 7.
- 7.5. Column neck. Found in 1790.
Lysons 1803, pl. viii, no. 6.
- 7.6. Drum with attached bracket. Found in 1790.
Lysons 1803, pl. xiii, no. 9. Now lost.
- 7.7. Complete colonnette. Found in 1790.
Lysons 1803, pl. viii, nos. 2 and 3.
- 7.8. Column base *in situ* on the stylobate immediately south of the entrance to the temple precinct. Diameter of drum 15 in. (0·38 m).
- 7.9. Column base *in situ* on the stylobate south of the Great Bath. Diameter of drum 16 in. (0·4 m).

- 7.10. Column cap. Diameter of drum 15 in. (0.38 m.). Found by Wedlake in 1962, re-used in the hypocaust added to the south-west corner of the redefined temple precinct (p. 44).
- 7.11-19. Column caps. Provenance unknown.
- 7.20-8. Column bases. Provenance unknown.
- 7.29-33. Column necks. Provenance unknown.
- 7.34-41. Colonnets. Provenance unknown.

8. ROOF FINIALS (pl. LXXIX*b*)

- 8.1-3. Three roof finials in varying states of preservation are now preserved in the museum. Their find-spots are unrecorded but they probably came from the excavations of the baths.

9. MISCELLANEOUS

A number of small carved or inscribed objects have been recovered from Bath and its neighbourhood, unconnected with buildings or even specific occupation sites. Some of these have already been listed and described at various points above, but for the sake of simplicity they are listed together here.

- 9.1. Lead curse found in the reservoir. Described above, pp. 65-6 and pl. XIII*a*.
- 9.2. Lead pig from Sydney Gardens. Described above, p. 128 and pl. xxv.
- 9.3. Stamped lead pipe found in 1825 at the junction of Stall Street and York Street. Described above, p. 128 and pl. xxv.
- 9.4. Medicine stamp. A rectangular piece of greenish stone carved on all four sides. It reads:

T. Iuniani, thalasser(os) ad claritatem.

T. Iuniani phoebum ad qu[a]ecumque delicta a medicis.

T. Iuniani dioxum ad veteres cicatrices.

T. Iuniani c(h)r(y)somaelin(u)m ad claritatem.

It was found in 1731 in a cellar in Abbey Yard, but has since been lost.

Min. Soc. Ant. i (20 April 1732), 289; Haverfield 1906, 283, whence the above reading.

- 9.5. Schist plaque carved with three mother-goddess figures. Found in the garden on no. 7 Cleveland Walk, Bathwick, in 1966. The fragment is ragged and the carving

is crude but is sufficiently well-preserved to show that the three females are wearing pleated skirts and have their arms crossed on their chests.

Unpublished; pl. LXXXIXA.

- 9.6. Fragment of a bronze military diploma. Found at Walcot in 1815 and now in the Museum. The piece is $1\frac{7}{8} \times 1\frac{7}{8}$ in. (4.7×4.7 cm.) and is inscribed on both sides. It reads:

[*Imperator Caesar . . . equitibus et peditibus qui militaverunt in alis . . . et cohortibus . . . quae appellantur . . .*] et iii e[*t iv . . . et sunt in Br[itann(ia) sub P(?) . . .* [quinis et vicens plu]ribusve stipe[*ndiis emeritis, dimissis hon]est(a) mission[e, quorum nomina subscripta sun]t, ipsis li[beris posterisque eorum civitatem dedit, et conubium c]um uxo[ribus quas tunc habuissent cum]est civitas ii[s data, aut si qui caelibes essent c]um iis quas post[ea duxissent, dumtaxat sing[uli singulas.*

a.d] vii K(alendas) Octobr(es . . . Ti Lartidio Cele[re cos. [alae i Aug. Gallo]r(um) Proculeian(ae) cui p[raeest . . .] Propinquos . . . [ex grega]le . . .

Evidently the soldier whose name is unknown but who served as an auxiliary in the *ala I Gallorum Proculeiana* was granted citizenship as a time-expired veteran by an Emperor (unknown) during the consulship of Lartidius Celer. The exact date is uncertain, but is likely on stylistic evidence to be during the first half of the second century. The Commander's name is given as . . . Propinquus. A certain Pompeius Propinquus was procurator of Gaul about A.D. 69 and early in his career he probably commanded an *ala*, but this is surely too early to be the same man.

Published several times, the best account being that of Haverfield 1906, 280-1. Haverfield's reading was taken after he had cleaned the diploma.

VIII. GAZETTEER OF ROMAN SITES IN AND AROUND BATH

1. STRUCTURAL REMAINS

1. *Old Bond Street, 1795*

At the southern end of Old Bond Street, opposite the Mineral Water Hospital, Governor Pownall records 'a Roman wall 15 ft. [4.57 m.] thick built of a rubble and concrete core faced with large stone blocks'. He emphasized that this wall was below and distinct from the medieval city wall.

Pownall 1795.

2. *Saw Close, pre 1795*

Pownall mentions that a wall similar to that seen opposite Old Bond Street was found in the Saw Close area.

Pownall 1795.

3. *Mineral Water Hospital, City Wall still standing*

A section of the city wall still stands to its original crenellated top opposite the Mineral Water Hospital. It has evidently been patched, refaced, and repointed on a number of occasions and it is now impossible to distinguish work of different dates, but it may be remarked that the lower courses are of regular ashlar not unlike Roman work.

4. *Union Passage, 1954*

Whilst the shop at the north-west corner of Union Passage was being modified, Mr. E. A. Shore recovered a quantity of Roman pottery of second- and third-century date, presumably from occupation layers piled up against the rampart.

Information: E. A. Shore.

5. *Harvey's Building (Cater, Stoffel, and Fortts), 1963-6*

The site of the Harvey's building was excavated during rebuilding operations. For the details of the excavation see the report above, pp. 165-73.

6. *North Gate, 1803*

Building work in May 1803 uncovered a wall built of large ashlar blocks and much re-used Roman architectural material. These remains may possibly be of the Roman North Gate although a medieval date for the structure is not impossible. For surviving stones see above, p. 203.

Bath Herald, 7 May 1803; *Gentleman's Magazine*, ii (1804).

7. *East Gate, still standing*

The medieval East Gate still survives. None of the surrounding masonry appears to be of Roman date.

8. *Fernley Hotel, 1965*

A trench was dug in front of the city wall. For the details see above, pp. 173-4.

9. *Marks and Spencer's Car Park, City Wall still standing*

Four courses of the back-face of the city wall are still exposed in Marks and Spencer's car park. The work is of neat ashlar masonry, but is undated.

10. *Woolworth's, 1962*

Until the Woolworth's and Marks and Spencer's building was erected in 1962, a stretch of the south city wall survived to a considerable height. A trial trench dug at the east end of this sector is described above, pp. 174-5.

Further west, close to the now destroyed St. James's Church, the Camerton Field Club carried out an excavation, exposing the medieval Ham Gate and part of the adjacent city wall, which here was evidently a medieval rebuild. Behind the wall Roman levels were seen.

Wedlake 1966.

11. *Lower Borough Walls, 1865*

When a water tank was being built below Lower Borough Walls, opposite Hot Bath Street, part of the city wall of unspecified date was sectioned. It was $5\frac{1}{2}$ ft. (1.68 m.) thick and faced with ashlar masonry.

Irvine Papers.

12. *Pump Room Hotel, Abbey Yard and Adjacent Areas, 1790-1968*

Beneath this central area lies the site of the Temple of Sulis Minerva described in detail above, pp. 37-65, where full references are given.

13. *The Pump Room and Adjacent Areas, 1727-1968*

Beneath the Pump Room is the site of the Roman Baths described in detail above, pp. 89-147. Full references are given there.

14. *The United Hospital (West), 1864-6, and Hot Baths, 1774, 1776*

The site of a Roman bathing establishment, possibly with religious associations, exists in this area. The details are described and discussed above, pp. 131-41.

Irvine Papers; Haverfield 1906, 261-2; Scarth 1864, 136; *Bath and Cheltenham Gazette*, August 1864.

15. *The Cross Bath, 1809 and 1885*

The discovery of Roman remains including an inscription and a sculptured block suggests that the spring may have been used during the Roman period. See above, p. 154.

Haverfield 1906, 270; Lysons 1803, pl. xiii, 2; Warner 1811, 13; Scarth 1864, 48; Davis 1895.

16. *The 'Lower end of Stall Street', 1753*

Two altars and a statue base were discovered together. They might indicate a religious site. See above, pp. 154-5, for a discussion and references.

Published many times, but see Haverfield 1906, 272-3, and *RIB*, nos. 140, 151, and 152.

17. *No. 4 Abbey Gate Street, 1964-5*

The site of a Roman building excavated by the Bath Excavation Committee. For a detailed description see above, pp. 156-65.

18. *Westgate Buildings, 1964*

Superimposed Roman buildings were excavated by the Bath Excavation Committee on a vacant piece of land behind the Little Theatre. They are described in detail above, pp. 175-79.

19. *No. 30-31 Stall Street, 1964-5*

A Roman building was discovered during rebuilding operations. It is described above, pp. 179-81.

20. *United Hospital (East), 1864-6*

On the east part of the United Hospital site part of a Roman building was discovered between 9 and 10 ft. (2.7-3.0 m.) below modern street-level (see fig. 56). Several rooms were exposed, one of which contained a pillared hypocaust supporting a mosaic 10½ ft. (3.2 m.) square (pls. LXXX and LXXXI**b**). Irvine thought that a gravelled road, 10 ft. (3.0 m.) wide, ran along the west side of the building, dividing it from fragments of walls which may belong to a separate building.

Irvine Papers; Haverfield 1906, 262; Scarth 1864, 136; Browne 1894, 56-8.

21. *Mineral Water Hospital (South East), 1738*

Parts of a Roman building were recovered (pl. LXXXIVa). The exposed remains consisted of several rooms. One contained a pillared hypocaust, and in its east wall were vents, presumably leading the hot air into a heated room next door. Further east two mosaics were recovered; one, only 6 ft. (1.83 m.) wide, was probably a corridor; the second, 18 ft. (5.5 m.) across, was decorated with a pattern of interlaced circles. The north wall of this room was found to contain a wide doorway with two steps leading up to the flagged floor of the adjacent room, 1 ft. (0.3 m.) above the mosaic. The mosaic floor was 6 ft. (1.83 m.) down, the natural gravel a further 3 ft. (0.91 m.) below this.

Wood 1749, 270; Haverfield 1906, 261.

22. *Mineral Water Hospital, West Extension, 1859*

Remains of a building, or buildings, were found, consisting of a tessellated floor, concrete floors, walls, and traces of ?furnaces, 13 ft. (3.96 m.) below the road surface. The tessellated floor bore a Greek-key design in white and blue (pl. LXXXIII**b**). It was here that the inscribed slab put up by Tiberius Claudius Sollenus was found (4.9 and pl. LXVII). The floor is preserved *in situ*.

Bath and Cheltenham Gazette, 11 May 1859; Scarth 1859, 187; Scarth 1864, 89 (rough sketch of tessellated floor) and 94; Haverfield 1906, 261.

23. *Bridewell Lane, 1884*

A further extension to the Mineral Water Hospital exposed another mosaic, 7 ft. 9 in. (2.36 m.) down, under the edge of Bridewell Lane. The design of the pavement consisted of flower motifs set within octagonal panels (pl. LXXXIIa). One side was bordered with a band of tiles set in herring-bone fashion, the rest is said to have been largely destroyed by a drain and a sewer. To the north-west, part of another floor was seen decorated with plain squares with lines between.

Brown 1885, 37; Haverfield 1906, 261; *Bath Chronicle*, 4 September 1884.

24. *Mineral Water Hospital, 1912, 1914, 1963*

Isolated groups of Roman material have been found from time to time when alterations have been made to the Hospital. In 1912 an excavation for a new boiler produced third- and fourth-century coins, pottery, glass, etc. (Bush 1912). Two years later pottery and a bronze needle were found when a tunnel was dug below the road to join the Hospital to the building on the other side (Bush 1918, 53). Finally, when in 1963 the Hospital was being extended to the south, more pottery was recovered.

25. *Bluecoat School, 1859*

Part of a mosaic, now relaid in the Roman Baths, was discovered when the school was rebuilt. It depicts fabulous sea beasts in red, blue, and brown, against a white background (pl. LXXXIA).

The floor was 15 ft. (4.57 m.) below the present surface.

Scarth 1864, 89; *Bath and Cheltenham Gazette*, 9 June 1859; Haverfield 1906, 261.

26. *Westgate Street, 1814*

On the south-west corner of Bridewell Lane and Westgate Street a mosaic was uncovered, but was soon broken up. Scarth says 'it was not of superior elegance in design of workmanship'.

Scarth 1864, 90; *Bath Omnium Gatherum*, i, 25; Haverfield 1906, 261.

27. *Weymouth House Schools, 1897*

A mosaic was discovered 10 ft. (3.0 m.) below the modern surface. It was decorated with a red, white, and blue guilloche enclosing a central circle (pl. LXXXIIIA). Now in the Roman Baths Museum.

Haverfield 1906, 262; *Bath Chronicle*, 17, 25 June, 22 July 1897; *The Times*, 18 June 1897; *Antiquary*, August 1897.

28. *Abbey Green, 1813*

A red, white, and blue mosaic was said to have been found under the south (*sic*) side of Swallow Street. The floor 'at a considerable depth below the level of the present city' ran under neighbouring property.

Haverfield 1906, 262; *Bath Omnium Gatherum*, 20 August 1814; Scarth 1864, 89.

29. *The Abbey, 1833 and 1867*

Roman masonry was said to have been found in 1833, beneath the east end of the Abbey. Irvine saw masonry here.

Haverfield 1906, 263; Irvine Papers.

30. *Orange Grove, 1843*

Pottery and tesserae were found in 1843.

Gentleman's Magazine, i (1843), 521; Haverfield 1906, 263.

31. *Boat Stall Lane, 1824*

Masonry, a flue, and miscellaneous objects were said to have been found in 1824.

Bath and Cheltenham Gazette, 21 September 1824; Scarth 1864, 99; Haverfield 1906, 263.

32. *St. John's Hospital, 1954 and 1967*

During the rebuilding of Citizen House a quantity of Roman pottery, glass, tiles, and several bronze rings came to light including two almost complete samian vessels. Much of it was rescued by Mr. E. A. Shore from the contractors' work between July and September 1954. The Camerton Field Club also carried out a limited excavation in which stratified Roman floor-levels were examined.

Information from Mr. E. A. Shore and Mr. W. Wedlake.

Further rebuilding work in 1967 on the south side of the court uncovered substantial areas of Roman building rubble with traces of what may have been a timber building beneath.

Information from Mr. M. B. Owen.

33. *Nos. 5 and 6 Abbey Green, 1958*

The rebuilding of Nos. 5 and 6 Abbey Green exposed a quantity of Roman pottery including samian, now in the collection of Mr. E. A. Shore.

34. *St. Michael's Church, 1913*

When a new sewer was being laid in the centre of Northgate Street, 40 ft. (12.2 m.) south of St. Michael's Church, a series of features, possibly of Roman date, were recovered. On the blue lias clay (11 ft. 4 in. (3.46 m.) down) a 4-ft. (1.2-m.)-thick layer of rough stone was found with 4 in. (0.1 m.) of gravel on top of it. On this was laid a pavement of pennant slabs 2 ft. (0.6 m.) square and 1½ in. (0.038 m.) thick. Above was a layer of pitched cobbles, the surface of which lay at a depth of 8 ft. 8 in. (2.64 m.). Further to the south-east, on the level of the pavement, a drain was found, running north-east and south-west. It was composed of blocks of bathstone, 2 ft. (0.6 m.) by 1 ft. (0.3 m.) in section, carved with a channel 1 ft. (0.3 m.) wide and 6 in. (0.15 m.) deep. Part of the pennant slab paving overlapped the drain. Below the paving four coins of Vespasian were found.

Areas of pitched paving were also found between New Bond Street and Upper Borough Walls at a depth of 10 ft. (3.0 m.).

Taylor 1913.

35. *Walcot, 1815*

Whilst the Walcot Brewery was being constructed a coarse mosaic was said to have been found. Among the small finds was part of a military diploma (p. 206).

Bath and Cheltenham Gazette, 20 November 1816; Haverfield 1906, 263.

36. *Old Orchard Lane, 1902*

Just north of Old Orchard Lane, on the east side of Walcot Street, part of a colonnaded building was uncovered. Five square pier-bases 5½ ft. (1.67 m.) apart were seen, together with a 'flue'.

Falconer 1904, 241-3; Haverfield 1906, 263.

37. *Walcot Buildings, 1952*

Roman pottery including a few fragments of samian was recovered when a gas main was dug in front of nos. 2 and 3 Walcot Buildings on 11 May 1952 at a depth of between 5 and 6 ft. (1.5-1.8 m.).

Information from Mr. E. A. Shore.

38. *Paragon, 1949*

Pottery was recovered in quantity from the sites of bomb-damaged houses, when building began, by the late R. W. N. Wright, a former director of Bath Library and Art Gallery.

Information from Mr. E. A. Shore.

39. *Guinea Lane, 1854-5 and 1952*

Certain Roman remains were recovered when a sewer trench was being dug through Guinea Lane. The finds included coins, pottery, and flue-tiles.

Bath and Cheltenham Gazette, 31 January 1855, 11 December 1855; Haverfield 1906, 264.

In February 1952 a trench was dug from London Road, up Guinea Lane to Julian Road for the laying of telephone cables. Halfway along the road quantities of samian and coarse ware were recovered at a point where the trench reached a depth of 9 ft. (2.7 m.). A late third-century coin was found in the dump.

Information from Mr. E. A. Shore.

40. *St. Andrew's Church, 1869-70*

Traces of a gravelled road-surface, a wall, and other remains were found when alterations were being carried out to the church tower.

Irvine Papers; Haverfield 1906, 264.

41. *Norfolk Crescent, 1818*

A mosaic pavement was found behind the Crescent in Kingsmead. No further details are available.

Bath Chronicle, 15 October 1818; Haverfield 1906, 263.

42. *Bathwick Railway*

A fragment of a blue and white tessellated floor was found near the railway.

Bath Field Club, ii, 479; Haverfield 1906, 263.

43. *St. John's Church, Bathwick, 1861*

A wall, drain, and part of a column were found near the church, 7 ft. (2.13 m.) down.

Haverfield 1906, 263.

44. *Bathwick Street, 1900*

Coins, pottery, and an uninscribed altar were found in Kirkham Buildings.

Haverfield 1906, 264.

45. *Daniel Street, Bathwick*

A pavement is said to have been discovered here.

Haverfield 1906, 264; *Bath Field Club*, x, 16.

2. BURIALS by the REV. A. B. NORTON

Since the publication of Haverfield's article on the Roman cemeteries of Bath in the *Victoria County History* (Haverfield 1906), the city of Bath has expanded far beyond its early twentieth-century limits but the finds of stone coffins and burials in the extensive building alterations and housing developments since 1906 have not altered his general conclusions to any great extent.

The chief cemetery of Aquae Sulis lay along the Fosse Way to the north-east of the Roman town. Here were found in the eighteenth and nineteenth centuries the numerous funerary inscriptions noted in detail by Haverfield which imply some degree of sophistication and wealth. To this class of burial may be added the massive dry-stone tomb or sarcophagus discovered on the north side of the London Road in 1911 (Bush 1911*a*). The majority of burials in this cemetery, however, were in simple stone coffins with covers, and further examples of this kind have been found along Walcot Parade and in Snow Hill (Bush 1922 and *JRS* xlv. 140). Another extensive cemetery area seems to have existed on the south of the River Avon and east of the Roman town in Bathwick, perhaps with an associated building. Additional single burials in stone coffins have been recorded in this area in Sydney Gardens (Taylor 1914); in St. John's Road (Taylor 1923); and Henrietta Gardens (Grey 1931); and they seem to cluster close to the building noted by Haverfield on the south-west side of Sydney Gardens.

On the north side of Bath the recent discoveries in the grounds of the Domestic Science College and at Kelso Lodge on Sion Hill (*JRS* xlv. 140, and information, M. B. Owen), again with a possible building in the vicinity, probably represent a new cemetery, though Haverfield did record two coffins with a skeleton from the Hermitage above Lansdown Crescent and just east of the Sion Hill finds, but did not map them. Sited on the lower slopes of Lansdown, they do not relate to any known Roman road but undoubtedly there was a trackway down the spur of Lansdown Hill from the prehistoric and Roman settlement on the plateau to the site of the Bath springs. J. T. Irvine discovered a gravelled road-surface with what Haverfield interpreted as a burial enclosure,

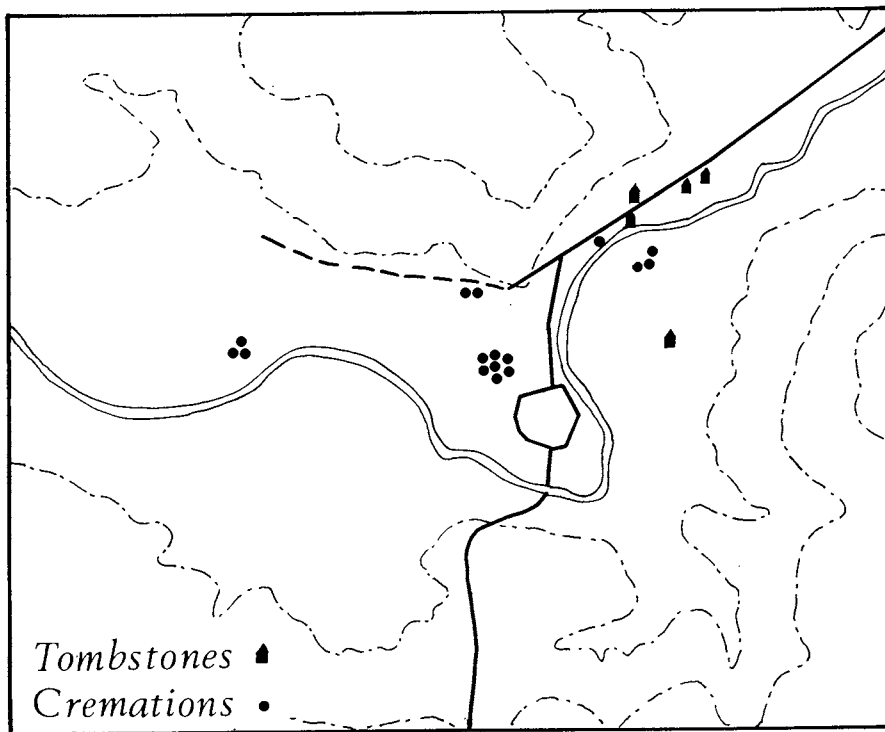
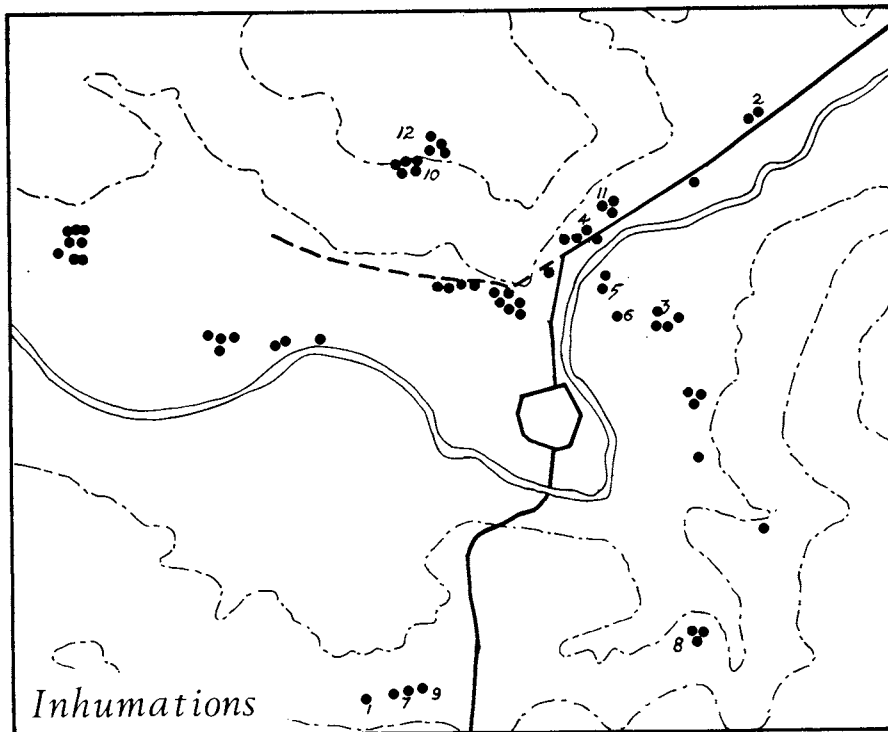


FIG. 71. The Roman burials in the neighbourhood of Bath

on the site of the now-demolished St. Andrew's Church, further down the slope towards Bath, but this was probably part of the supposed road into Bath from the west—the so-called Via Julia. No new burials have been recorded along this particular road since 1906, though further south along Newbridge Hill, M. B. Owen of the Roman Baths Museum has confirmed the Roman date of the coffins found at Partis College in the nineteenth century.

In addition to the cemetery along the Fosse to the north of Bath, there seem to have been burial grounds along the Fosse Way to the south. Half a mile east of the Fosse, the stone coffin with headless skeleton found in Abbey Cemetery, Perrymead (*JRS* xliii. 123) can be added to the coffins, skeletons, and coins (of Gallienus, Carausius, and Constantine) recorded by Haverfield from the then Lyncombe Cemetery as found in 1843 and 1859. On the west side of the Fosse a number of stone coffins have also been found recently along Englishcombe Lane. Coffins were noted in this area in the nineteenth century (Scarth 1854) and more have come to light since (Bush 1911; Crook 1943; and *JRS* xlv. 140). Dr. Crook who published the discovery of the coffin at no. 27 Englishcombe Lane (Crook 1943) also records that a workman informed her that another coffin had been excavated some years earlier about 100 yards east of no. 27.

Further out from Bath stone coffins have been noted at Bathampton in 1952 and 1955 (*Bath and Wilts. Chronicle*, 3 May 1952 and 31 December 1955); in the parish of Batheaston, 400 yards from the Fosse Way on Bannerdown slopes (Crook 1947) and in Millway Gardens, Bannerdown (*Bath and Wilts. Chronicle*, 9 July 1954); and in Combe Hay parish, just east of the Fosse (M. B. Owen in *Proc. Som. Arch. Soc.* forthcoming). These burials, however, are much more likely to be related to other extramural settlement-sites than to the cemeteries of Roman Bath.

With the exception of the dry-stone sarcophagus from the London Road, the stone coffins from the Bath cemeteries recorded since 1906 have all been of simple form—with rounded head and square foot, and tapering in width at the foot. All seem to have been worked from the local Bath Oolite—in the case of one from Englishcombe Lane, Bush suggested, from the Coombe Down quarries—and the majority show signs of only rough tooling, though one from the Domestic Science College grounds had a chamfered plinth (*JRS* xlv. 140). When buried they all probably possessed covers but not all of the reports mention their excavation. Several of the coffins were certainly disturbed in post-Roman times (e. g. Crook 1943). Dating evidence for the burials is slight. A coin of Marcus Aurelius was recorded associated with the dry-stone sarcophagus though this may have been contamination from outside. Pottery was found with the coffin in Walcot Parade (Bush 1922); there was red Roman pottery at the foot of the skeleton in the Henrietta Gardens coffin (Grey 1931); a few sherds of samian and grey pottery were found in the coffin at no. 27 Englishcombe Lane (Crook 1943); and one of the Snow Hill coffins sealed early third-century sherds (information, M. B. Owen). A date-range covering the third and fourth centuries would seem to fit the available facts.

The evidence for the Bath cemeteries, as a whole, has not been well recorded or published. In the following list, which includes finds mentioned by Haverfield, detailed sites and dimensions of coffins are given where known; in the case of dimensions, the external measurements are given first. All finds are plotted on fig. 71. Figures in brackets after the year of discovery in the gazetteer indicate finds made since 1906 which are noted separately on fig. 71. The best source of detailed information is given in brackets at the end of the entry.

1. *The Cemetery along the Fosse Way, North-east of the Roman Town*

- | | |
|------|---|
| 1592 | Inscribed tombstone of Gaius Murrius Modestus of the Second Legion. Foss Road, Walcot (above, p. 200, no. 5.3). |
| 1592 | Inscribed tombstone of Marcus Valerius Latinus of the Twentieth Legion. Foss Road, Walcot (above, p. 200, no. 5.4). |

- Before 1658 Inscribed tombstone of Vibia Iucunda. London Road, near Bell Inn, Walcot (above, p. 202, no. 5.12).
- 1708 Inscribed tombstone of Iulius Vitalis of the Twentieth Legion found with two cinerary urns containing bones. London Road, Walcot (above, p. 200, no. 5.2).
- 1792 Broken lower part of an inscribed tombstone of Antigonus of Nicopolis. Lower East Hayes, London Road (above, p. 201, no. 5.7).¹
- 1815 Two stone coffins, each with skeleton. Two samian sherds were found in the vicinity together with coins of Claudius I, Nero, Vespasian, Domitian, Carausius, and Constantine. One coin of either Claudius or Vespasian was in the coffin. Walcot Brewery (Scarth 1864, 98).
- 1818 Coffin with bones and ashes. Walcot (Haverfield 1906, 265).
- 1824 Sandstone coffin containing two skeletons, one adult and one child. Two bronze rings were found near coffin head, and three pins came from the vicinity. Lambridge, London Road (Scarth 1864, 98).
- 1867 Stone coffin containing a skeleton. Two stone cists with a single stone cover, containing cremations, were found close by. Pottery, including first-century samian, and a Republican *denarius* of Cordius Rufus was also recovered. Cleveland Place, opposite Eastern Dispensary (Scarth 1867, 9).
- 1900 Stone coffin containing fragmentary remains of the skeleton of a male about 28 years old. A few sherds of samian were also found, one with a stamp, --- MA, in a trench close to the coffin. Guinea Lane, opposite Walcot Church (Falconer 1904, 316).
- 1911(2) Stone sarcophagus, containing probable wooden coffin in which lay the skeleton of a female 5 ft. 4 in. (1.63 m.) tall. The sarcophagus measured externally 8 ft. 9 in. × 2 ft. 2 in. × 2 ft. 3 in. (2.67 × 0.66 × 0.68 m.) and internally 7 ft. × 2 ft. 2 in. × 2 ft. 3 in. (2.13 × 0.66 × 0.68 m.). A coin of Marcus Aurelius was found. No. 10 Lambridge, London Road (Bush 1911*a*).
- 1922(4) Stone coffin and cover, containing some pottery. A skull was found on the cover. No. 8 Walcot Parade, London Road (Bush 1922).
- 1954(11) Three stone coffins were recovered, one with a headless skeleton and one containing two skeletons. The latter measured externally 6½ ft. × 1 ft. 9 in. × 1 ft. 2 in. (1.98 × 0.58 × 0.36 m.) and internally 6 ft. × 1 ft. 2½ in. × 10 in. (1.83 × 0.37 × 0.25 m.). One of the coffins had early third-century sherds beneath it. Snow Hill (*JRS* xlv. 140 and information, M. B. Owen).

2. *The Cemetery on the East Bank of the Avon*

- 1795 Inscribed tombstone of Calpurnius Receptus, priest of Sulis. Sydney Gardens (above, p. 200, no. 5.1).
- Before 1819 Stone coffin. Sydney Buildings, near Coal Wharf (Scarth 1864, 99).

¹ To the list of inscribed tombstones noted in this gazetteer should also probably be added the stones to the decurion of Glevum, Merc(atilla) and Rusonia Aventina (see above, p. 201, nos. 5.8-10), found opposite the Town Hall; and the upper part of a rider relief (above, p. 201, no. 5.6) from Grosvenor Gardens—all of which would seem to have been

brought from the north-east cemetery for re-use as building material in Roman or later times. Some of the reliefs, noted by seventeenth- and eighteenth-century antiquarians, built into the town walls, may also have been funerary—see above, p. 202, particularly nos. 5.11 and 5.13.

- 1819 Twenty skeletons found together, some lying on one side, some on their faces. One is said to have had a nail through its skull. Close to another was bronze box containing eight bronze coins of the 'Lower Empire'. Three other coins, including a CONSTANTINOPOLIS issue, and a bronze fibula were found nearby. A lead coffin containing the skeleton of a male is also recorded. Sydney Buildings (Scarth 1864, 99).
- 1823 Stone coffin, with broken cover, containing a disturbed skeleton of a ?female. Pottery, including samian, and a fragment of bronze fibula were found in the coffin. Bronze coins of the 'Lower Empire' and a glass bead came from near the coffin. 'Slopes of Bathwick Hill' close to Sydney Buildings (Scarth 1864, 99-101).
- 1857 A wooden ?coffin with a skeleton. Three urns containing bones were found close by. Villa Fields (Scarth 1864, 101).
- 1861 A stone coffin, with cover, square at both ends, containing a skeleton of a female about 50 years old. Sydney Gardens (Scarth 1864, 101). Three other stone coffins were found: one disturbed, one with a cover and filled with sand, containing the skeleton of a female and a bronze bead, the third with a cover also sand-filled and containing the skeleton of a child of 14-15 years. Foot of Bathwick Hill—'point of divergence of Sydney Buildings' (Scarth 1864, 100-1).
- 1866 Two stone coffins; one contained the skeleton of a ?male, the other produced the skull of a horse. West part of Sydney Gardens (Scarth 1875, 28).
- 1914(3) Stone coffin and cover with skeleton of a woman 'of small stature'. Externally the coffin measured 5 ft. 10 in. × 1 ft. 9½ in. × 11 in. (1.78 × 0.54 × 0.28 m.): internally 5 ft. 5 in. × 1 ft. 4½ in. × 9 in. (1.65 × 0.42 × 0.23 m.). Sydney Gardens at the Bathwick Street end of Sydney Place (Taylor 1914).
- 1923(5) Stone coffin and cover, containing a skeleton and animal bones. Externally it measured 6½ × 2 ft. (1.98 × 0.61 m.): internally 5 ft. 9 in. × 1 ft. 7 in. × 11 in. (1.75 × 0.48 × 0.28 m.). St. John's Road (Taylor 1923).
- 1931(6) Stone coffin with the skeleton of a male. It measured internally 5½ ft. × 1 ft. 3 in. × 10 in. (1.68 × 0.38 × 0.25 m.). 'Red Roman pottery' was found at the foot of the skeleton. Henrietta Gardens (Grey 1931).

3. *The Cemetery to the North of the Roman Town*

- 1808 Two stone coffins with covers were found. One enclosed a possible wooden coffin containing the skeleton of a ?male 6 ft. (1.8 m.) tall. Outside the coffin was an inhumation lying in reverse orientation, together with the jaw of a horse. The other stone coffin had an inhumation lying on the cover. St. Catherine's Hermitage, near Lansdown Crescent (Scarth 1854, 52-3).
- 1818 Three 'perfect' skeletons side by side were found with several bronze coins of Vespasian. No. 11 Russell Street (Scarth 1854, 52).
- 1836 Stone coffin. Beneath it were two inhumations without coffins. No. 12 Russell Street (Scarth 1854, 52).
- 1840 One or two coffins, presumably stone, containing skeletons. St. Stephen's Church (Scarth 1854, 53-4).

- 1852 Seven stone coffins, four with covers, containing skeletons and bones. One inhumation without a coffin was found. Altogether there were remains of eleven individuals, six adults and five children aged 2, 6, 8-9 (two), and 10-12. One coffin contained two bronze pins and fragments of the jaws of two small animals. In another, an 'urn of dark pottery' was found. From the vicinity of the coffins pottery, including samian with stamps of MARTI and QUINTI.M., together with coins of Antoninus Pius, Constantine I, and Gratian were found. Also recorded is a fragment of an apsidal wall excavated at the same time. Top of Russell Street (Scarth 1854, 50-1, 56; 1864, 133).
- Before 1864 Eight 'sepulchral' urns. North-west corner of Queen's Square (Scarth 1864, 110).
- 1870 Stone coffin and several inhumations. There were also urns and ashes. Close by were walls and late Roman coins. Site of St. Andrew's Church, Julian Road (Haverfield 1906, 264).
- 1888 Skeletons and black pottery. Behind no. 11 Royal Crescent (Haverfield 1906, 266).
- 1954(10) Three stone coffins, one well-made with chamfered plinth, and at least two inhumations without coffins. In the grounds of the Domestic Science College, Sion Hill (*JRS* xlv. 140 and information, M. B. Owen).
- 1959(12) Stone coffin with cover containing the skeleton of a female. Externally it measures 6 ft. 6 in. × 1 ft. 11 in. (1.98 × 0.59 m.): internally 5 ft. 11 in. × 1 ft. 1½ in. × 9 ins. (1.82 × 0.34 × 0.23 m.). The cover is 7 ft. 6 in. × 2 ft. 1 in. × 6 in. (2.29 × 0.63 × 0.15 m.). Kelso Lodge, Sion Road (information, M. B. Owen).

4. *The Burials to the West of the Roman Town*

- 1815 Skeleton and an urn. The Gasworks, Upper Bristol Road (Scarth 1864, 98).
- 1825 Two stone coffins with covers. In front of chapel of Partis College. Wooden (?) coffin. West wing of Partis College. Twelve stone coffins with covers. Behind Partis College (Scarth 1854, 57-8).
- 1863 Two stone coffins with covers, containing skeletons. A stone cist with a cremation and a number of urned cremations were also found. Lodge of Locksbrook Cemetery, Newbridge Hill (Scarth 1864, 103). Several human skeletons were noted in the gravel pit close to Cemetery Lodge (Scarth 1864, 103).
- 1863 Stone coffins. Windsor Place, Upper Bristol Road (Haverfield 1906, 266).

5. *The Cemetery along the Fosse Way, South of the Roman Town*

- 1843 Two stone coffins with covers. One contained the skeleton of a male 60-70 years old, the other, 6½ ft. (1.98 m.) long, contained the skeleton of a male of undetermined age. Coins of Gallienus, Carausius, and Constantine were found at the same time. Abbey Cemetery, Perrymead (Scarth 1864, 102).
- Before 1854 Stone coffins. Area of Englishcombe Lane (Scarth 1854, 59).
- 1859 Stone coffin with a cover composed of three stones, containing a skeleton. The internal measurements are 6 ft. 2 in. × 1 ft. 4 in. (1.87 × 0.4 m.); the cover was 8 in. (0.20 m.) thick. Abbey Cemetery, Perrymead (Scarth 1864, 102).
- 1860 Single inhumation without a coffin. A coin of Crispus was also found. Cemetery, Smallcombe Vale (Scarth 1864, 104).

- 1911(1) Fragmentary stone coffin with the skeleton of a male about 5 ft. 4 in. (1.62 m.) tall. Englishcombe Lane, 400 yards west of Bloomfield Road (Bush 1911).
- 1943(7) Stone coffin, containing disturbed human bones. It measured externally 6 ft. 4 in. \times 1 ft. 9½ in. (1.93 \times 0.54 m.): internally 5 ft. 10 in. \times 1 ft. 2 in. (1.77 \times 0.36 m.). A few sherds of samian and grey pottery together with sandstone pebbles, a sheep tooth and a quantity of iron (?sandal) nails were also found. No. 27 Englishcombe Lane (Crook 1943).
- 1952(8) Stone coffin containing a headless skeleton. The coffin measured 7 ft. \times 1 ft. 4 in. \times 10 in. (2.13 \times 0.40 \times 0.25 m.). Abbey Cemetery, Perrymead (*JRS* xliii. 123).
- 1954(9) Stone coffin. Fifty ft. (15.24 m.) south of Englishcombe Lane (*JRS* xlv. 140).

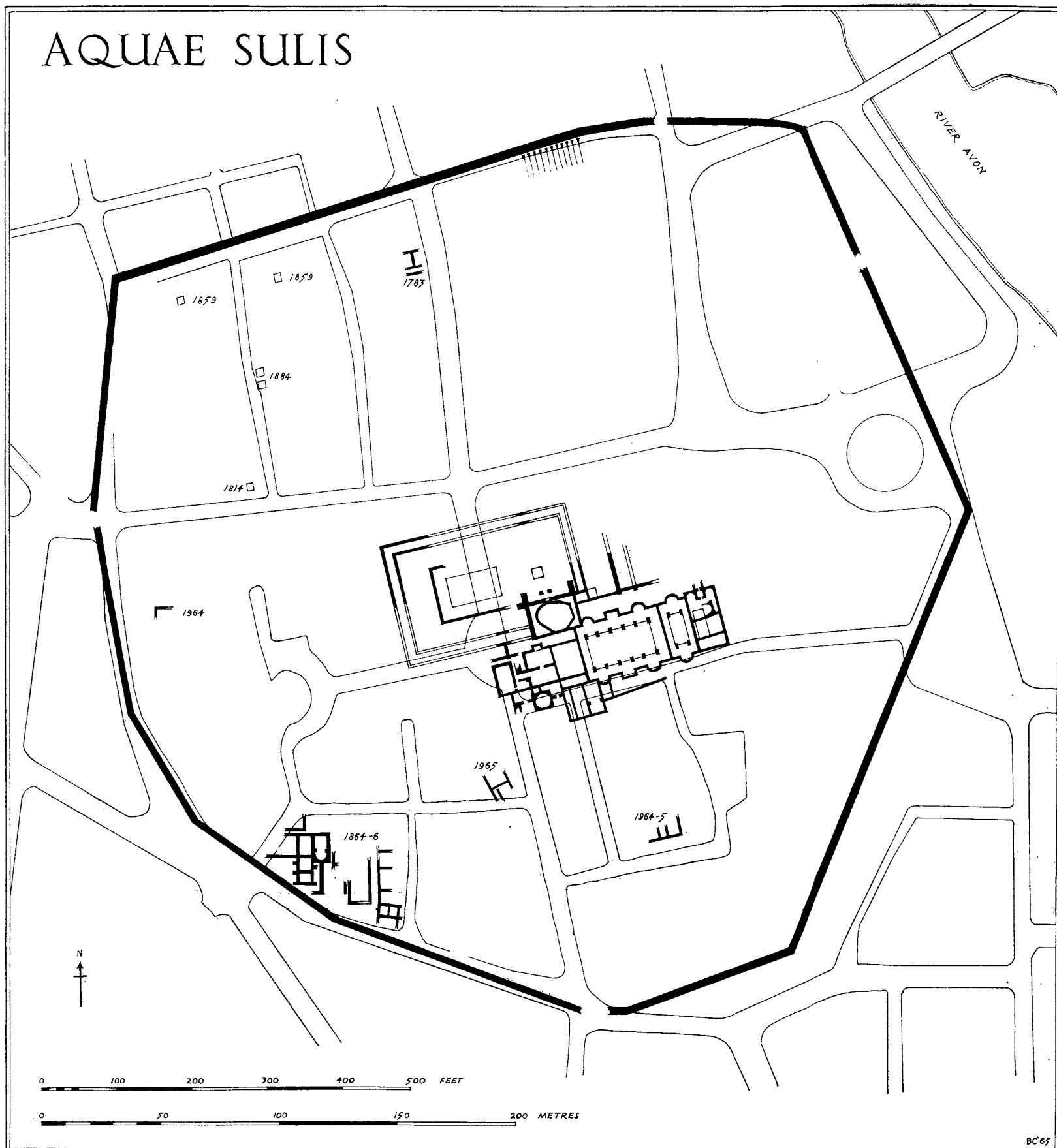


FIG. 72

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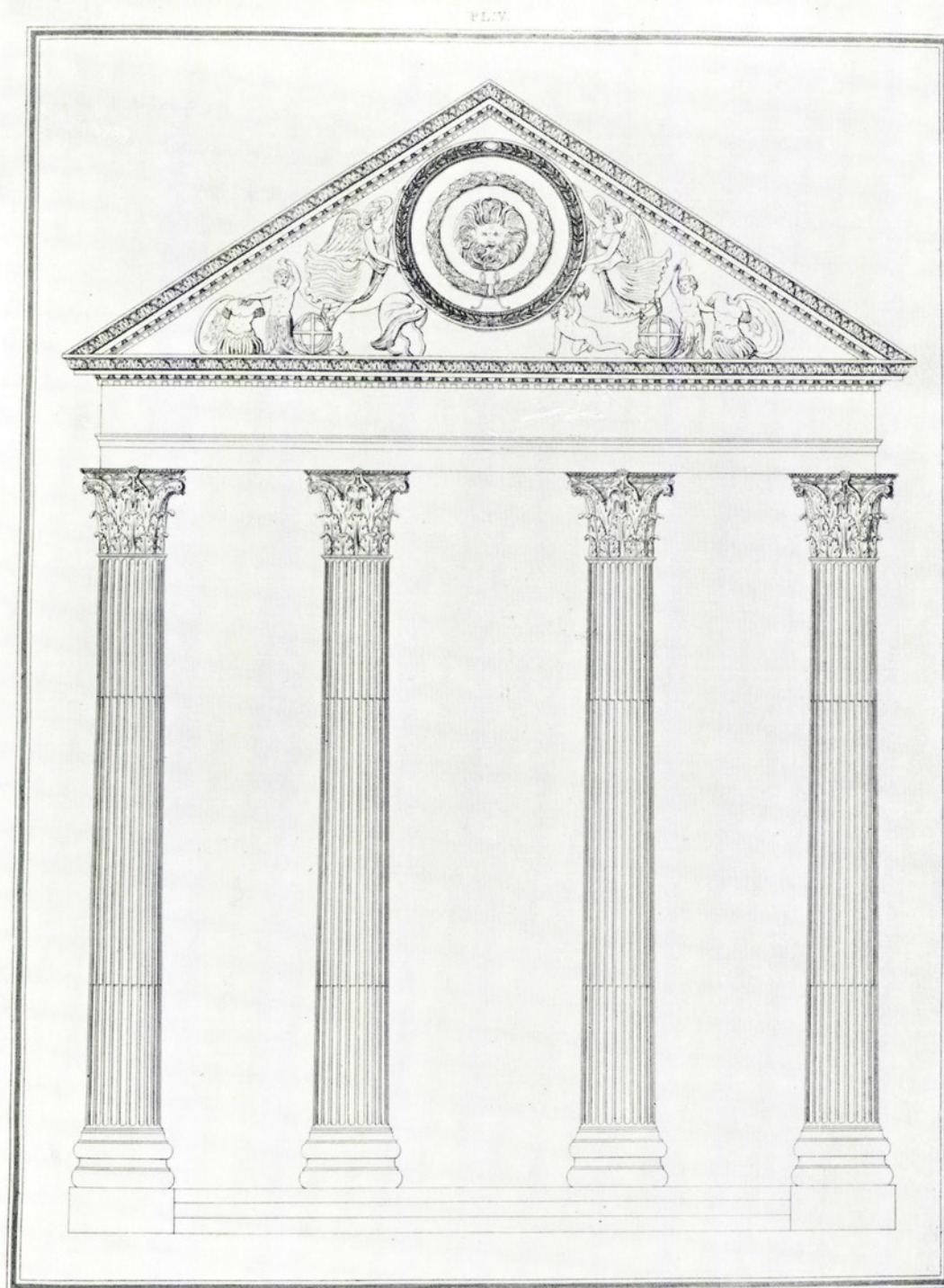
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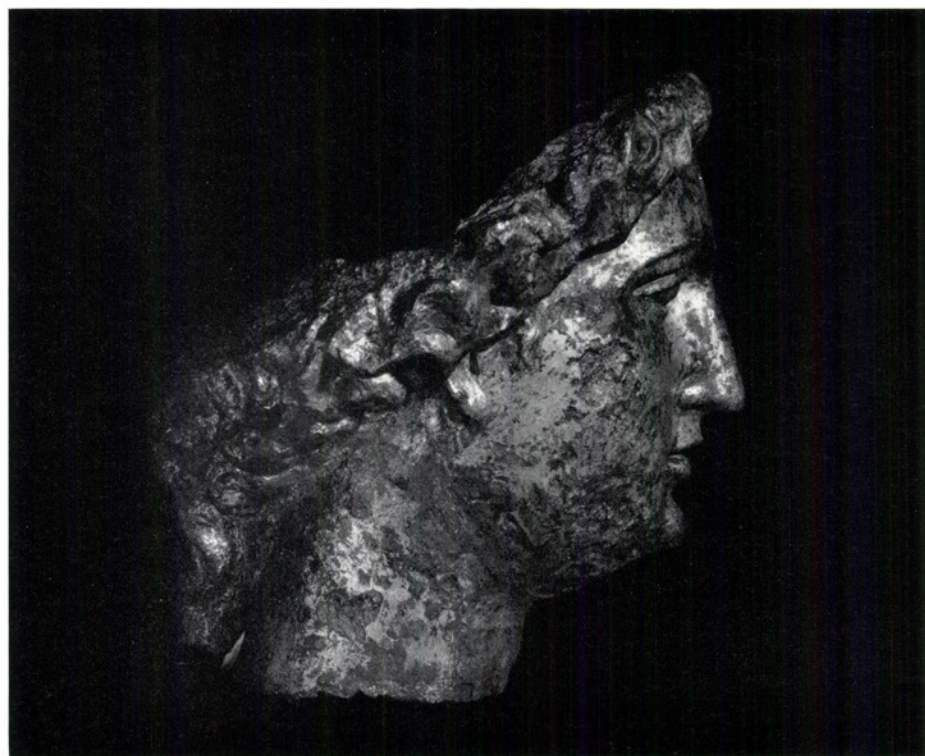
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- Vindonissa (Switzerland), gemstones from, 76, 77.
- Vitalis, Julius, armourer, tombstone of, 3, 200, 215.
- Vitruvius, cited, 11, 12, 35.
- Votive offerings, 19, 43, 65-7.
- Walcot (Somerset): burials at, 212, 214, 215; bronze military diploma found at, 206; mosaic from, 211; tombstones found at, 200, 202.
- Walcot Buildings, Roman pottery from, 211.
- Wall, The Roman (Northumb. and Durham), gemstones from, 77.
- Wall plaster, painted, 50, 159.
- Wedlake, W., cited, 9, 10, 22, 44, 210.
- Westgate Buildings: excavations at, 175-9, 208, 210; pottery from, 178-9.
- Westgate Street, carved fragments in cellar under, 42, 149.
- Weymouth House Schools, mosaic pavement found under, 210.
- Woolworth's, medieval city wall and Ham Gate on premises of, 208.
- Wroxeter (Shropshire): brooch from, 65; temple at, 35.
- Xanten (Rhine Province), gemstones from, 76, 77.
- York Street: 132, 133, 134, 135; altar found in, 190; hypocausts found near, 90; inscribed lead pipe from, 128, 205.



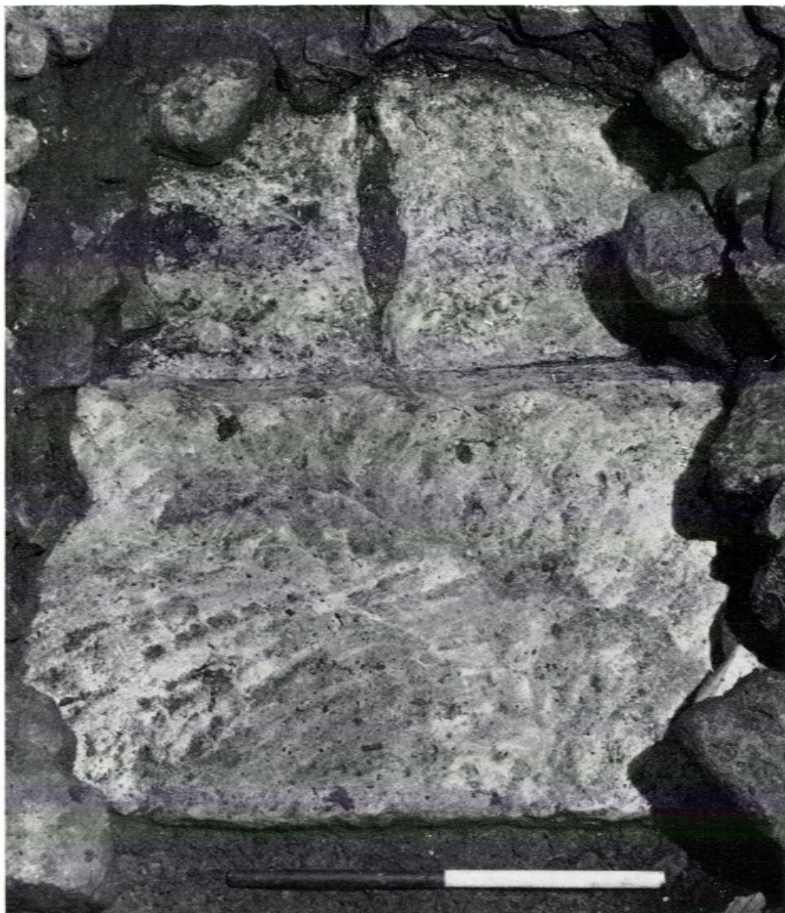
THE PORTICO OF THE TEMPLE OF MINERVA AT BATH RESTORED.

Scale of $\frac{1}{16}$ feet

Reconstruction of the Temple front (Lysons 1813, Pt. II, Pl. V)



Gilded bronze head of Minerva, 24.8 cm. high. Found in Stall Street in 1727 (p. 34)



a.

a. The Temple. Trench 9, showing the north step (bottom) and the lias paving of the precinct floor (p. 49)

b. The Temple. Trench 10. Below the scale are the facing blocks of the western masonry mass projecting from the west wall of the reservoir enclosure (p. 50)



b.



Opposed views showing the step flanking the western side of the inner precinct. The discolouration caused by differential weathering can just be made out (see fig. 19 and p. 50)



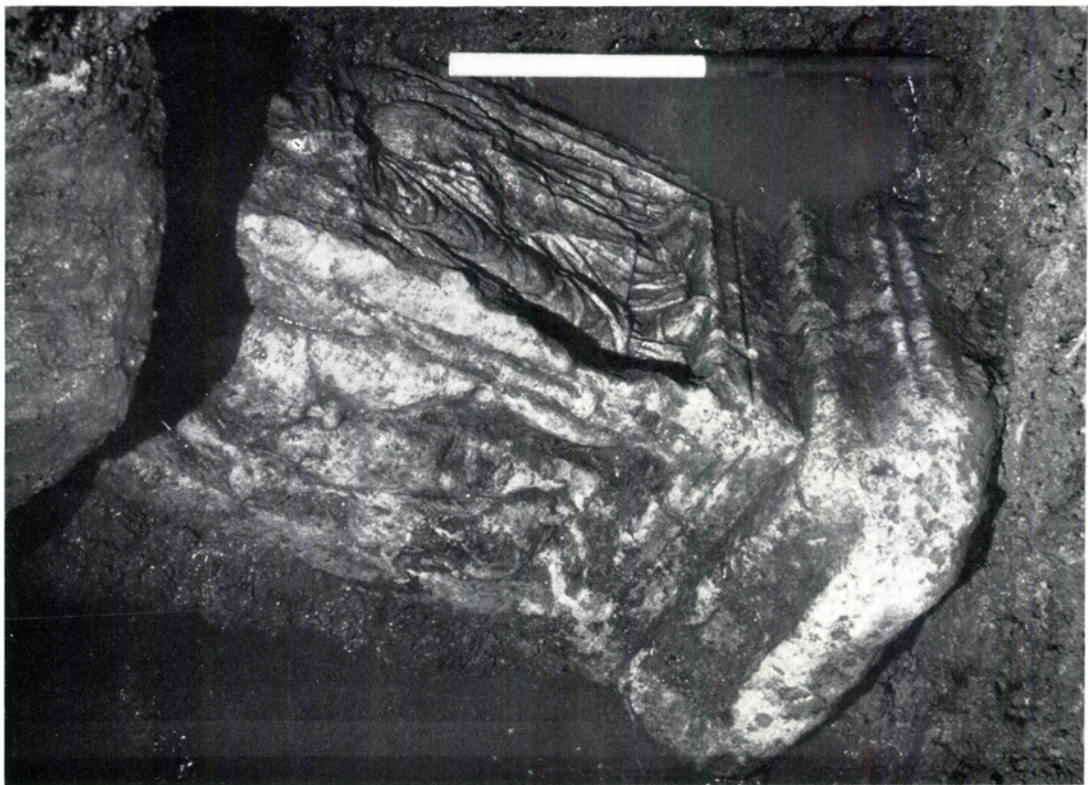
a. The Temple. Trench 5, below the Pump Room. The massive blocks are collapsed or dismantled masonry from the masonry base projecting north from the north-west corner of the reservoir enclosure



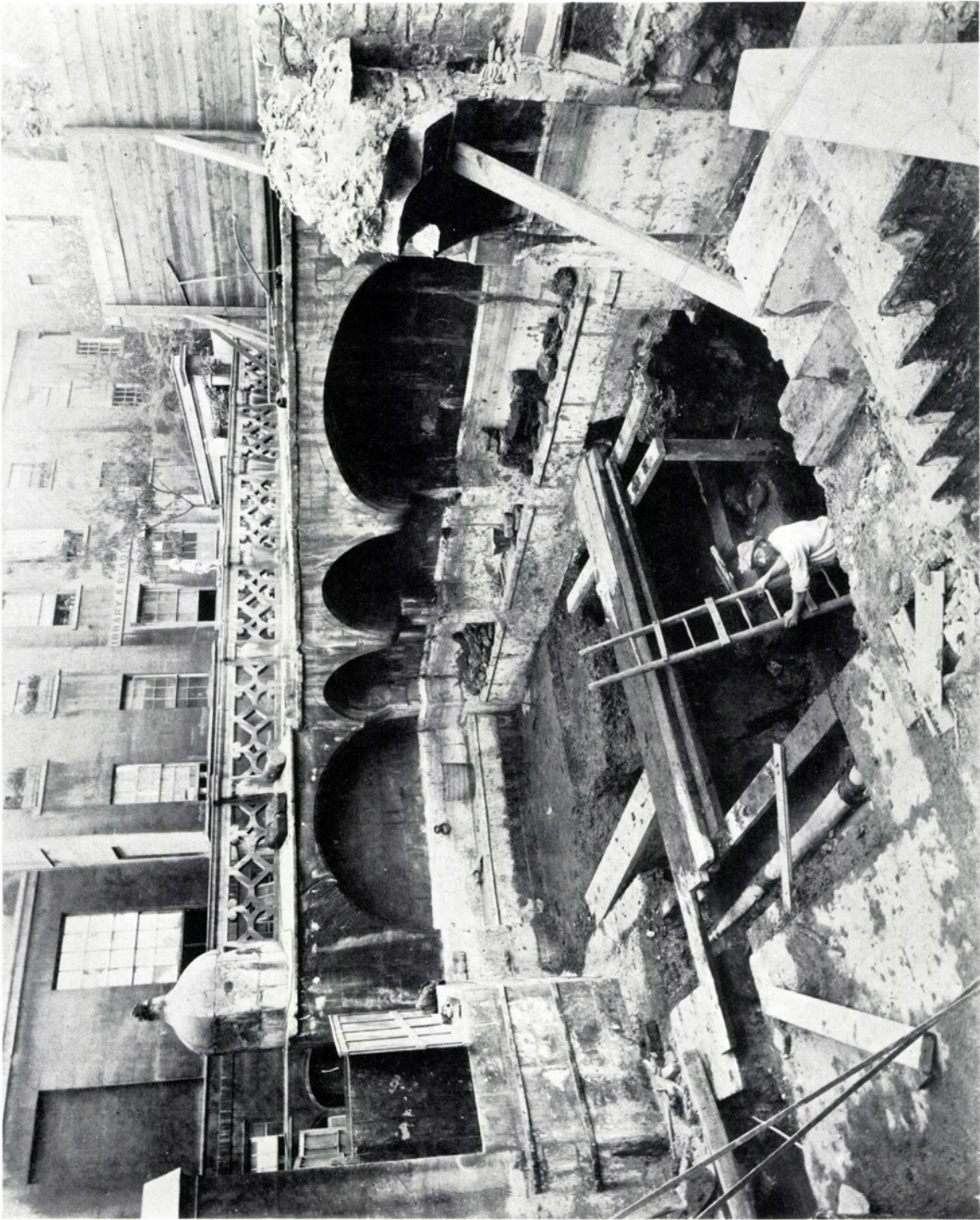
b. The Temple. Trench 6, below the Pump Room. Rubble from the collapsed vault lying *in situ* (p. 47)



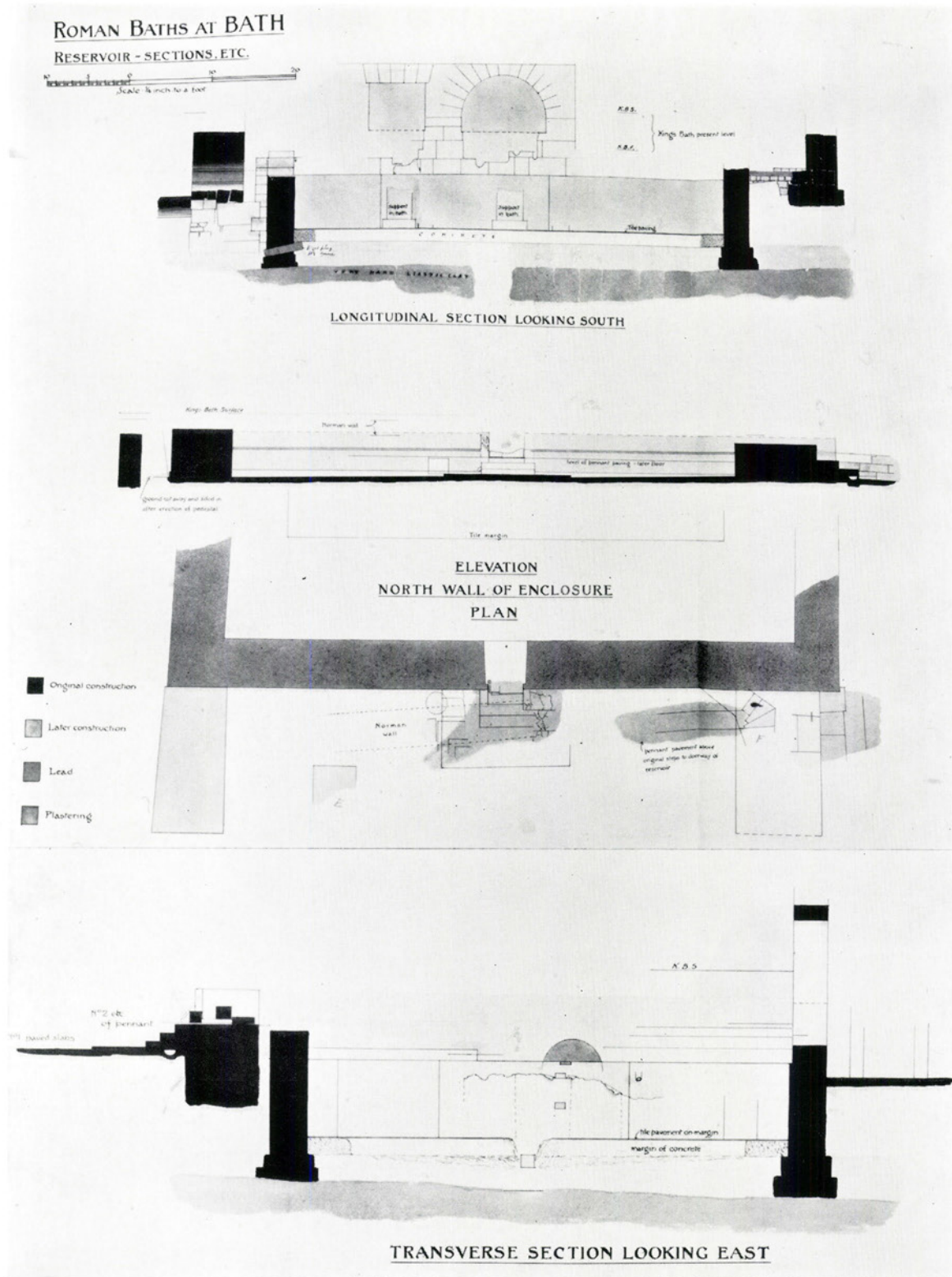
a. The Temple. Trench 6, below the Pump Room. The lias slabs paving the precinct floor can be seen to the right. The later repaving of pennant flags appears to the left (p. 47)



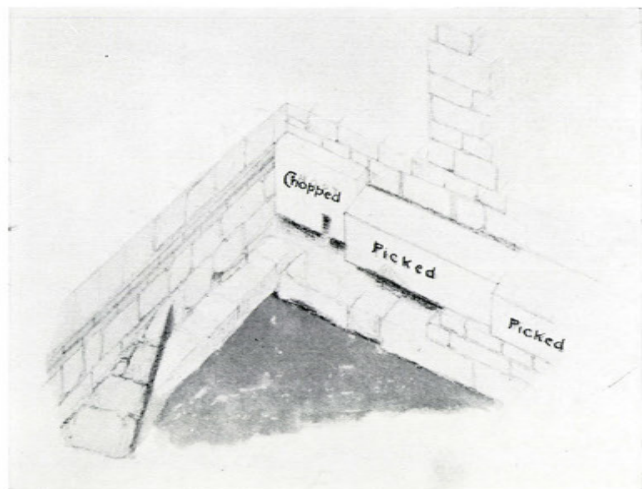
b. The Temple. Trench 7, below the Pump Room. The altar corner as found (p. 47)



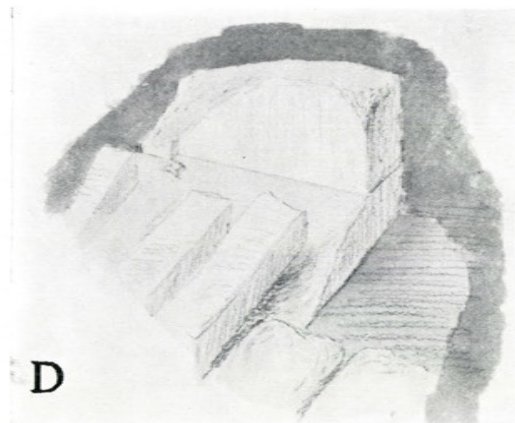
The excavation of the sacred spring about 1879 (p. 42-3)



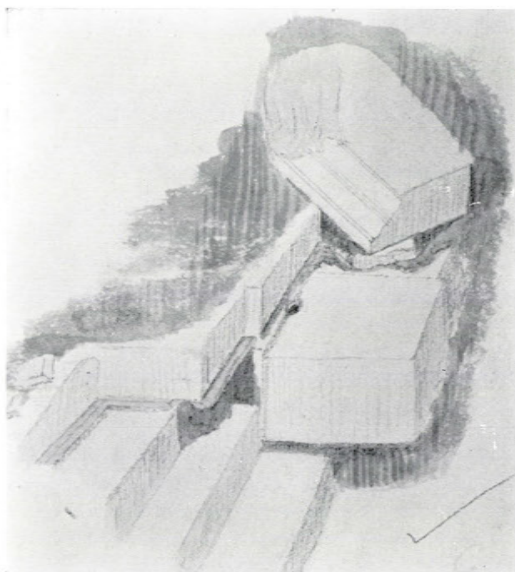
Plans and sections of the Spring and Reservoir excavated in 1879. The drawings, in watercolours and ink, are by Richard Mann and are now preserved in the Library of the Society of Antiquaries (pp. 16-20)



a. The south-west corner where the enclosure wall abuts the north wall of the Baths



b. The door in the north wall of the enclosure, showing the worn sill



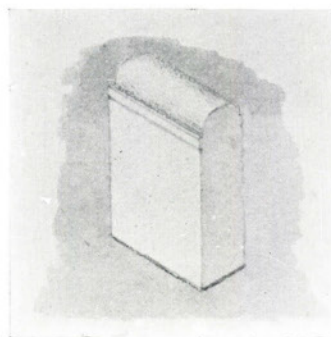
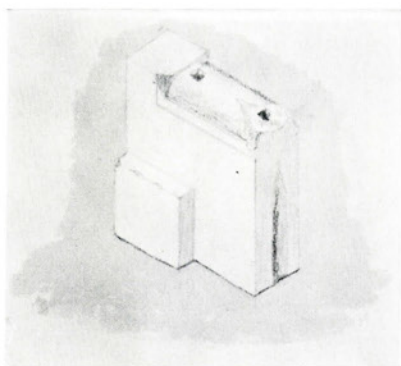
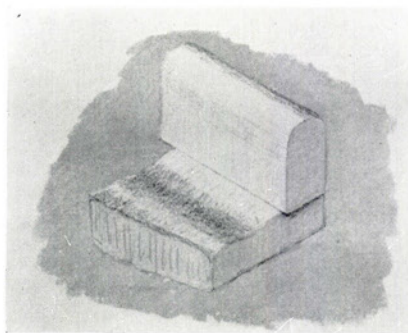
c. The steps leading to the door with later floor of pennant slabs in section



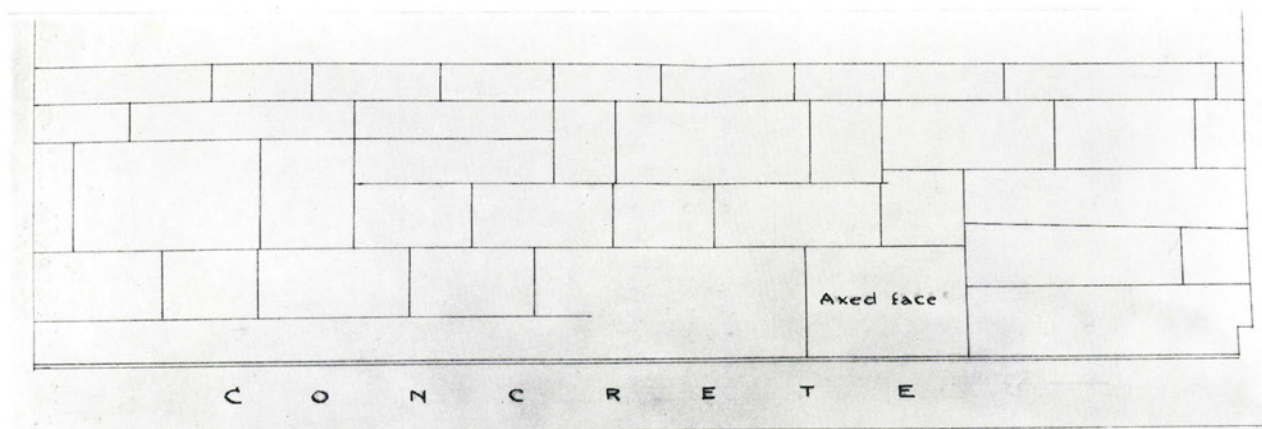
d. The interior of the lead-lined reservoir showing one of the columns in position on the ledge

Drawings by Richard Mann of details uncovered during the excavation of the Reservoir in 1879. The original drawing, *c.* 1900, is in the Library of the Society of Antiquaries (pp. 16-20)

PLATE X



a. Coping-stones from the top of the Reservoir wall, found in the filling of the Reservoir (p. 17)

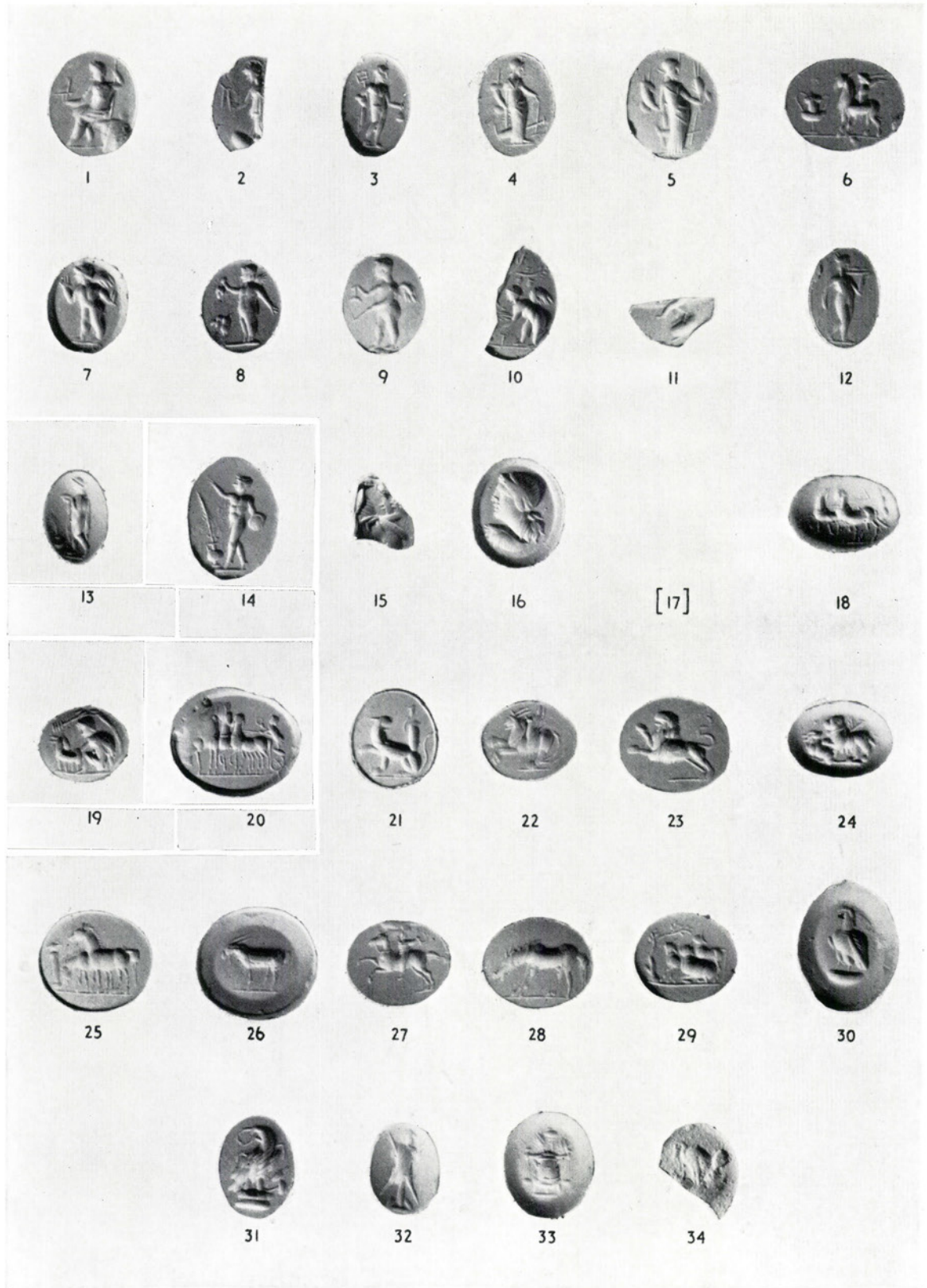


b. The south-west interior face of the Reservoir wall (p. 17).

Drawings by Richard Mann in the Library of the Society of Antiquaries



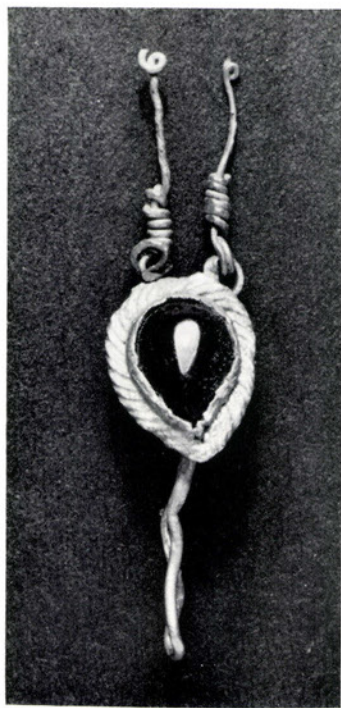
Mask of tin, 33 cm. high, found in the main drain (p. 66)



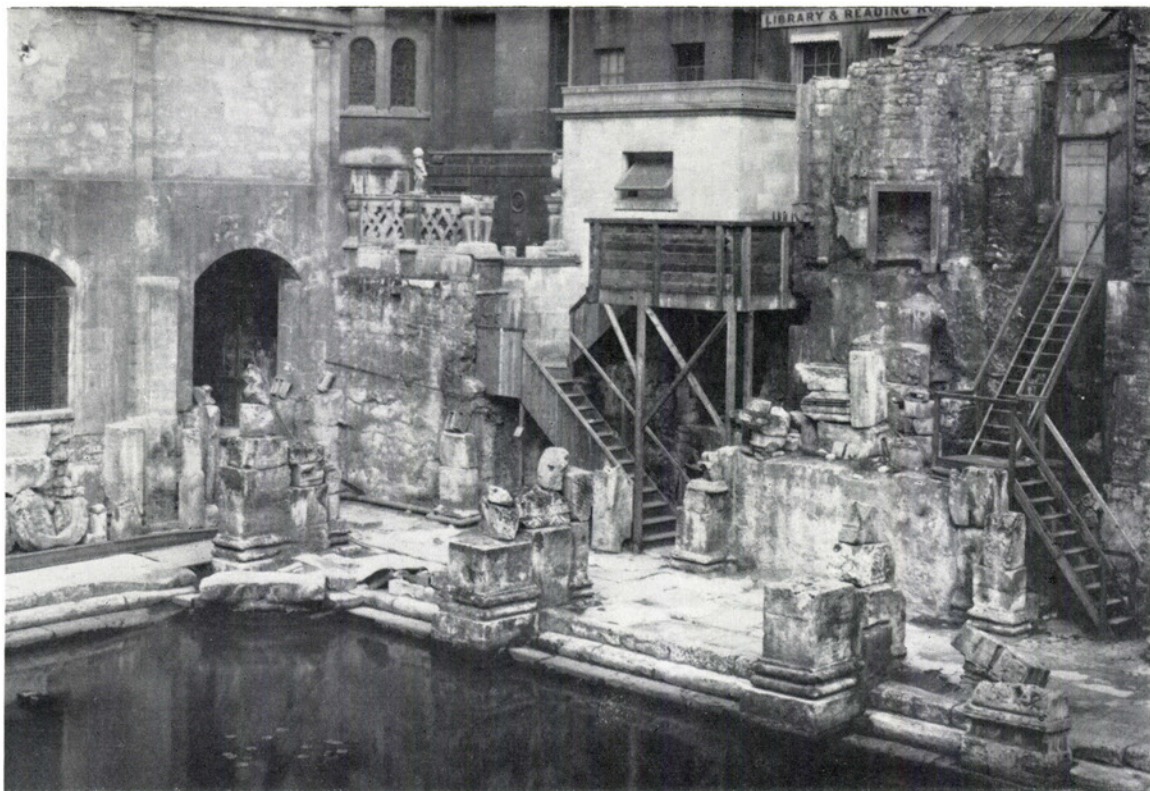
Gemstones from the culvert. Photographs of casts reversed. Scale $\frac{3}{2}$



a. Lead curse from the Reservoir (p. 65)
Scale $\frac{1}{4}$



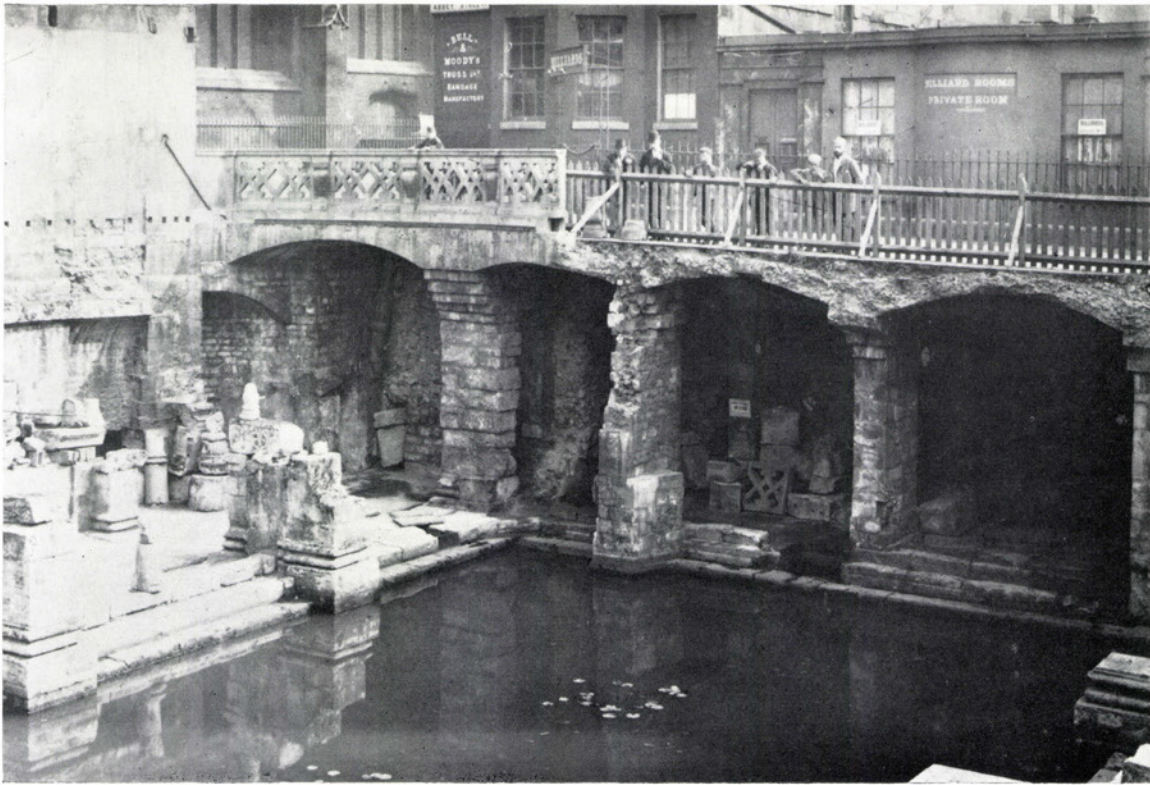
b. Gold ear-ring with inset carbuncle, from the Reservoir (p. 66)
Scale $\frac{2}{3}$



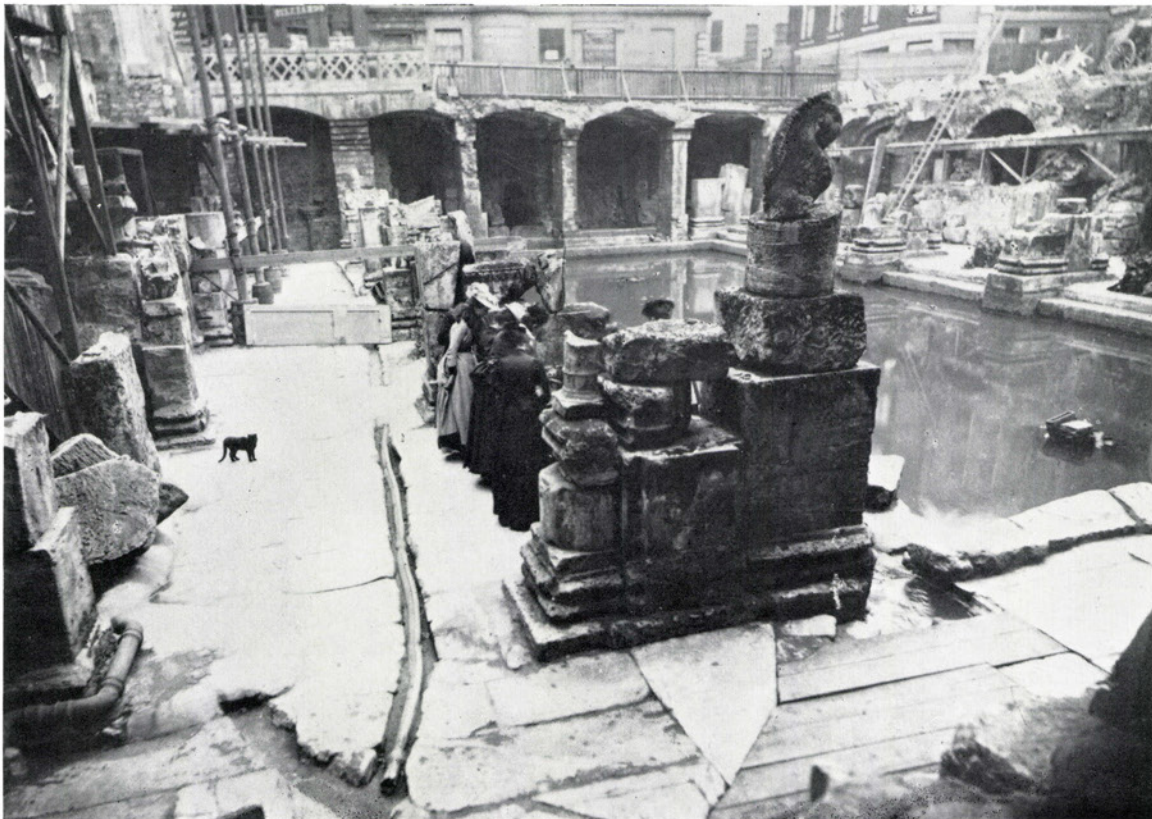
a. The north-west corner of the Great Bath, about 1890 (p. 91)



b. The Great Bath, looking east, about 1890 (p. 91)



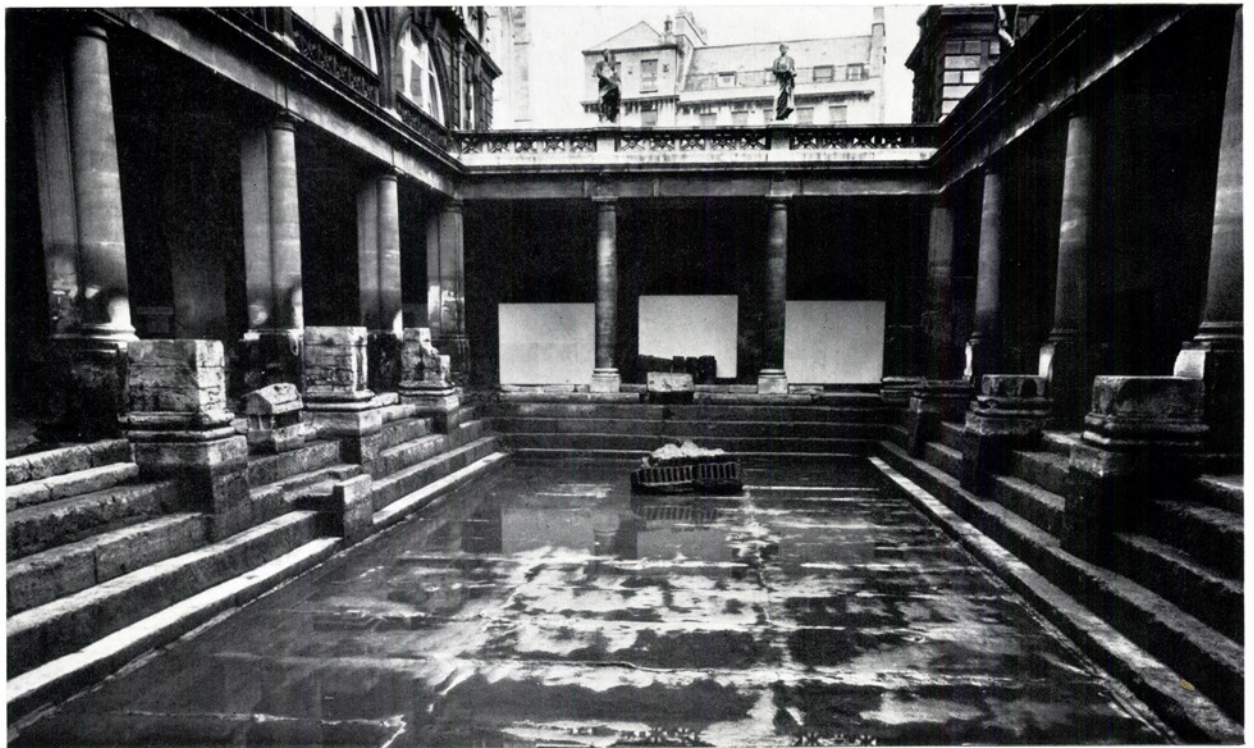
a. The east end of the Great Bath, about 1890 (p. 91)



b. The north ambulatory of the Great Bath, about 1890 (p. 91)



a. The Great Bath: one of the first-period piers on the north side of the bath, showing the additional strengthening piers of the third period (p. 98)



b. The Great Bath: general view looking east (p. 95)



a. The Great Bath: the fountain in the centre of the north side. Below is the base upon which the earlier fountain would have stood (p. 100)



b. The Great Bath: the north-west corner showing the point at which the water enters the bath (p. 95)



a. The lead pipe in position in the ambulatory of the Great Bath (p. 100)



b. The north face of one of the piers in the north part of the hall showing the fluting (p. 103)



a. The rectangular recess opening from the north ambulatory of the Great Bath, showing the third-period piers and paving (p. 97)



b. The hypocaust of the *tepidarium* west of the Circular Bath (p. 110)



a. The south side of the Great Bath, showing the run-off channels cut into the top step (p. 96)



b. The facing of the vaulting which once covered the Great Bath (p. 98)



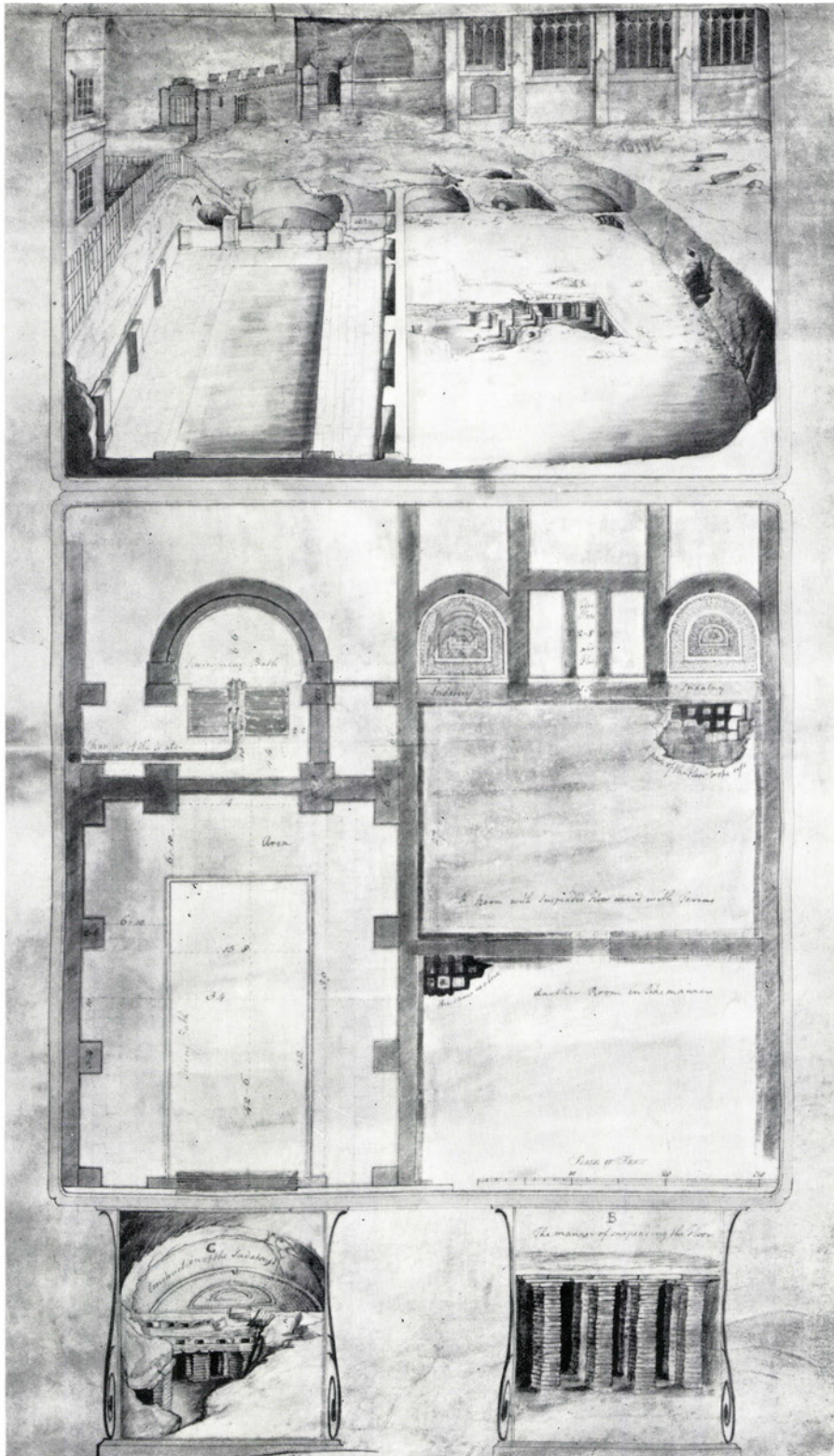
The east end of the Great Bath looking north. The drain sluice can be seen in the north-east corner of the bath. In the centre of the east side is the outfall leading to the Lucas Bath. The mass of masonry lying on the lead sheets is part of the vaulted roof (p. 95)



a. The East Baths showing the fourth-period hypocaust. The relieving arches can be seen in the east wall behind (p. 114)



b. The East Baths showing the first-period tank lined with lias slabs, with the second-period outlet running across it (p. 113)



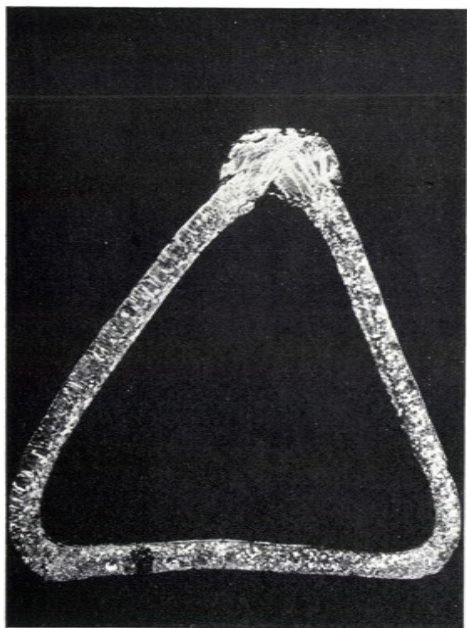
Plan of about 1755 showing the east end of the Roman Baths exposed when the foundations of the Kingston Baths were being dug. The original is in the British Museum, No. Add. 21577 Bi (p. 132)



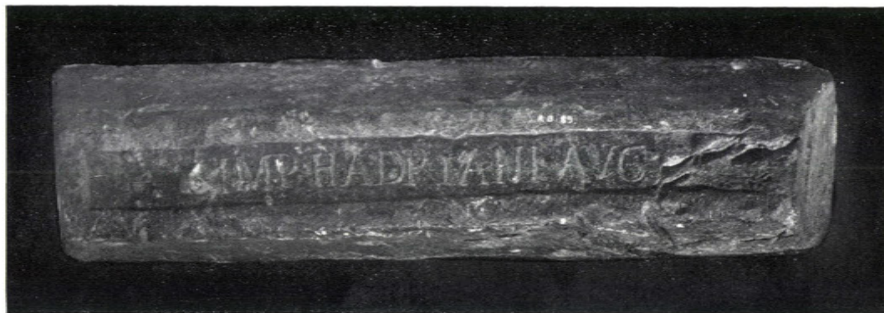
a. Trench 2, south of the Circular Bath. The first-period doorway can be seen with its third-period blocking (p. 136)



b. Trench 1, south of the Circular Bath, showing the north wall of the first-period bath with the second-period wall on top (p. 135)



a. Section of a lead pipe prepared to show the crystal structure (p. 126). Width at base 7.5 cm.



b. Lead pig found in Sydney Gardens (p. 128). Length 66 cm.



c. Stamped lead pipe found in York Street (p. 128). 16.5 by 5.5 cm.



a. Square window opening of first-period date in the north wall of the hall overlooking the Reservoir (cf. fig. 35) (p. 103)



b. Third-period pier for the blind arcade south of the Circular Bath (cf. fig. 36) (p. 103)



a. Abbeygate Street excavations, showing the chambered hypocaust (p. 157)



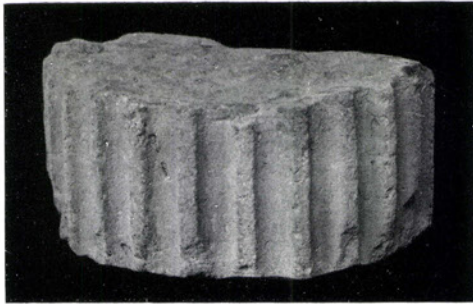
b. Abbeygate Street excavations. Left of the rod is the late wall; to the right is the oven and human skull in position (p. 159).



a. Abbeygate Street excavations, showing the sixth-period wall lying above the earlier third-period wall (p. 159)

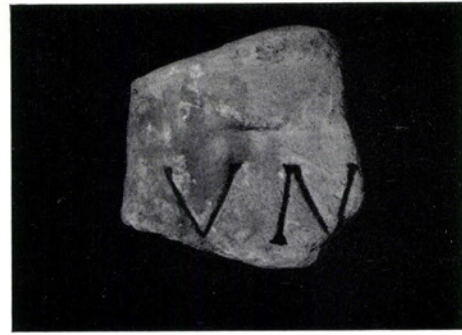


b. The lowest step in front of the Temple podium in trench 4. Only the masonry upon which the scales are placed is Roman. The rest dates to 1790 (p. 46)



a.

1·1



b.

1·8



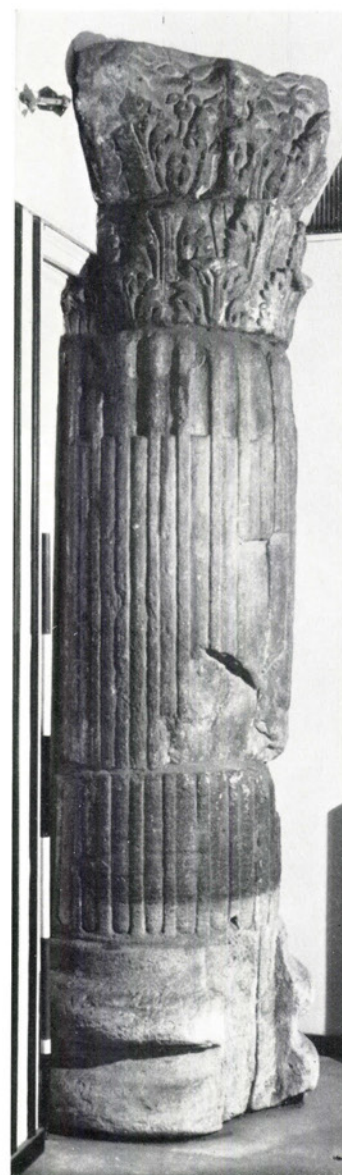
c.

1·26

- a.* Section of column drum from the Temple (p. 183). Scale $\frac{1}{10}$
b. Fragment of inscribed architrave, possibly from the Temple (p. 183). Scale $\frac{1}{10}$
c. Door cornice from the Temple (p. 185). Scale $\frac{1}{5}$



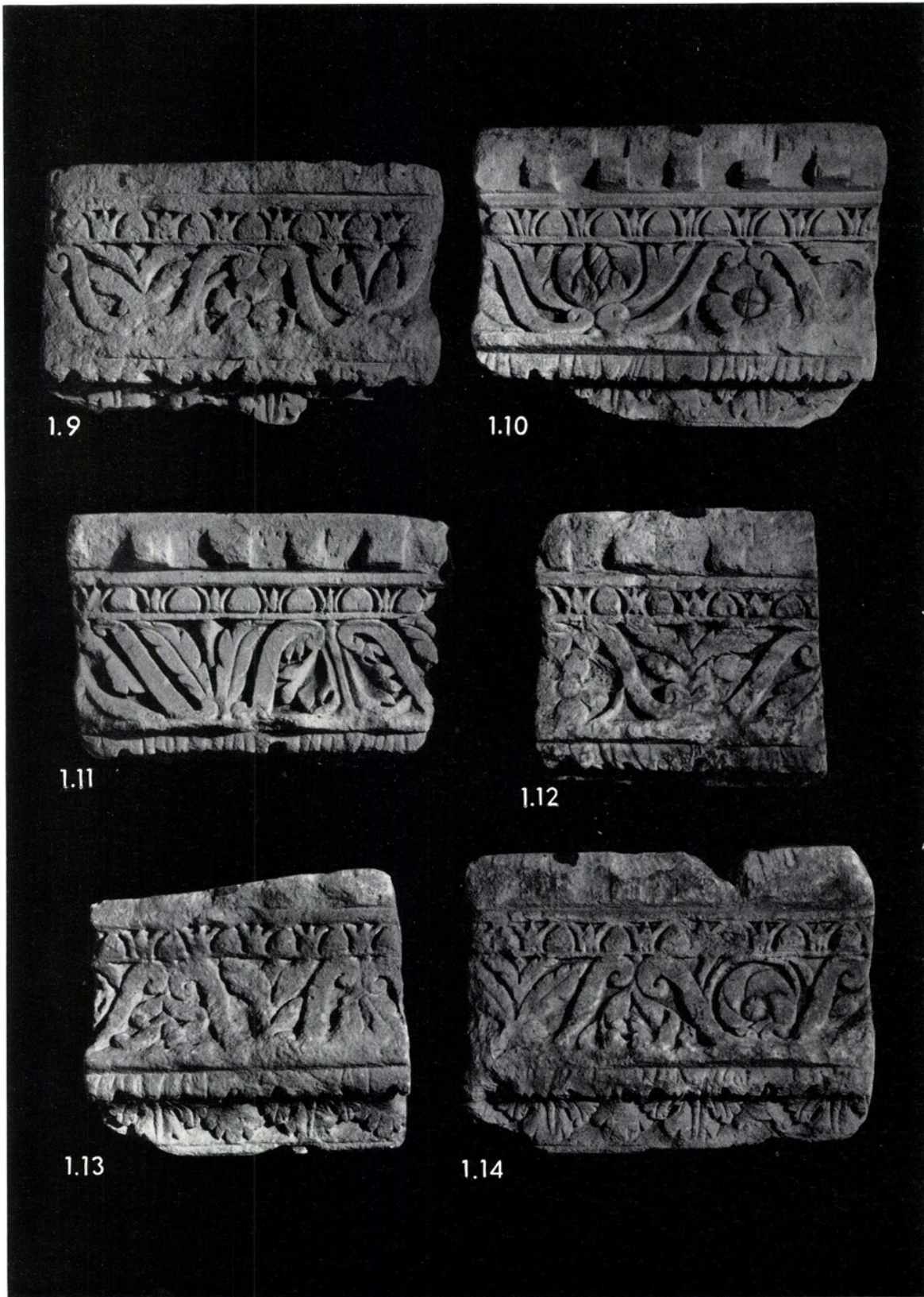
a.



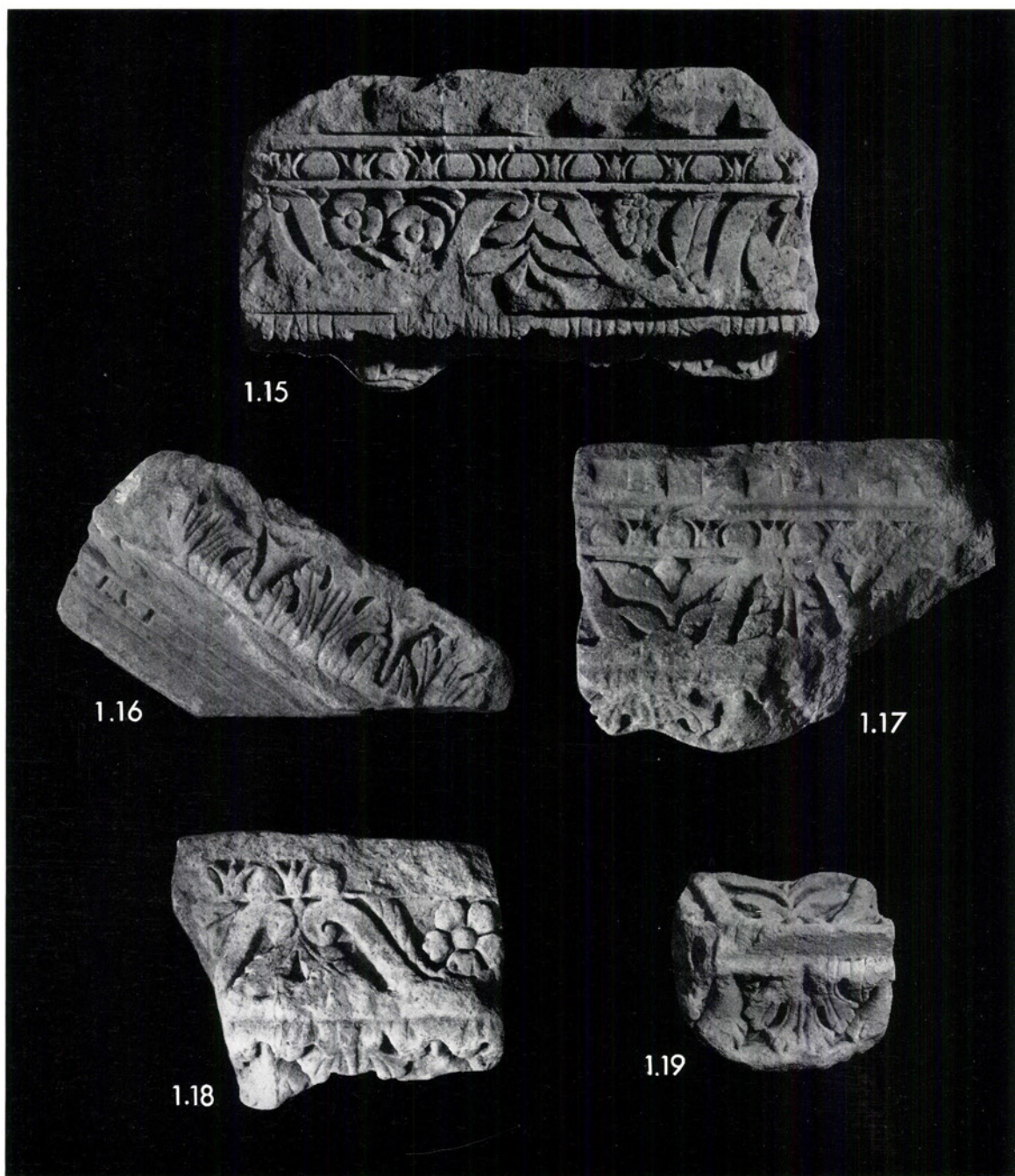
b.

1. 2-7

a Part of the column of the Temple discovered 1790. From Lysons 1813, Pt. II, Pl. I
b. The surviving fragments of the Temple column (nos. 1. 2-7). The scale is in feet (p. 183)



Blocks belonging to the cornice of the Temple (p. 184). Scale $\frac{1}{16}$



Blocks belonging to the cornice of the Temple (p. 184). Scale $\frac{1}{16}$



I. 20-5

The pediment of the Temple of Sulis Minerva (pp. 184-5)



I.21



I.20



I.22

Individual blocks belonging to the Gorgon's head pediment. Scale $\frac{1}{16}$



1.23



1.24



1.25

Individual blocks belonging to the Gorgon's head pediment. Scale $\frac{1}{16}$



a.



b.

I.27

The corner of the altar found in 1965 depicting *a*, Bacchus and *b*, a female deity (p. 185). Scale $\frac{1}{16}$



a.

1.28



b.

The corner of the altar found in 1790 depicting *a*, Jupiter and *b*, Hercules Bibax (p. 186). Scale $\frac{1}{16}$



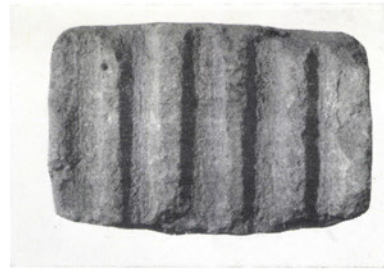
I.29

Altar corner built into the corner buttress of Compton Dando church, 8 miles west of Bath. The block is 4 ft. (1.2 m.) high (p. 186)

I.32



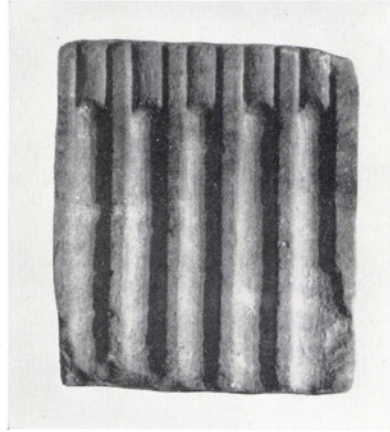
I.35



I.33



I.34



I.44



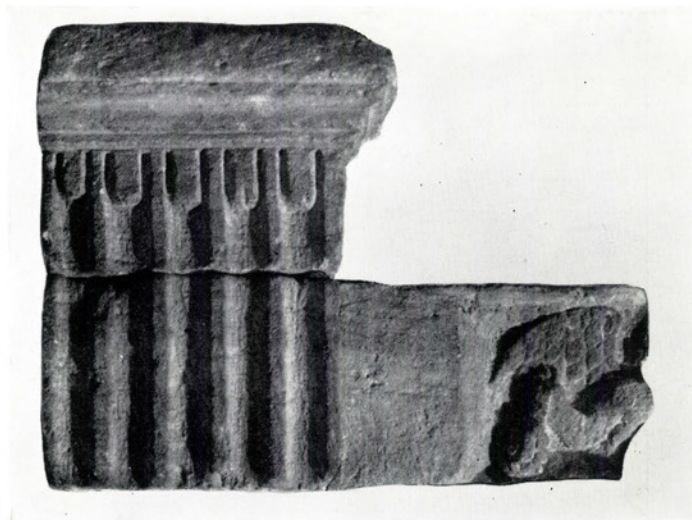
I.41



I.42



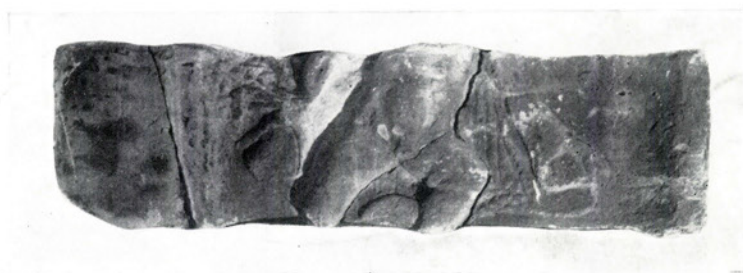
Blocks belonging to the Façade of the Four Seasons (pp. 186-8). Scale $\frac{1}{10}$



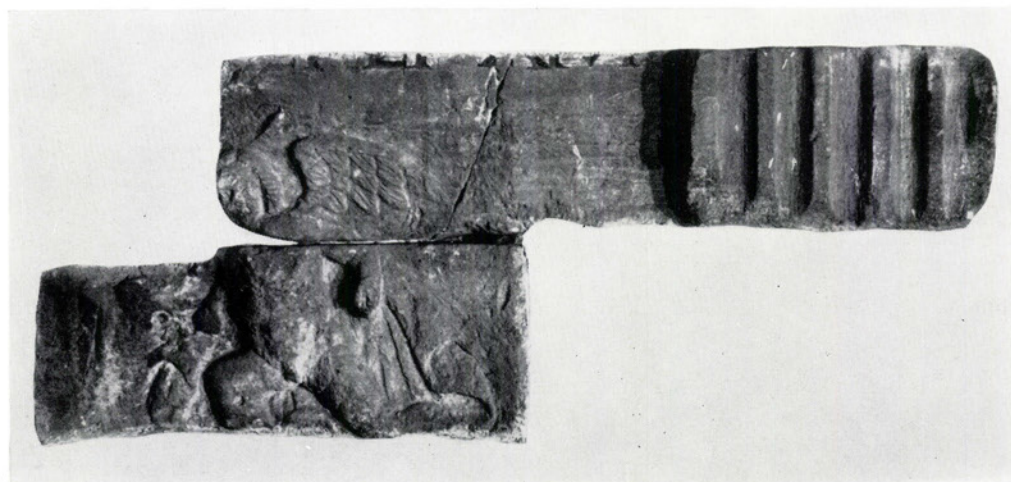
I.31, 36



I.38



I.37



I.39, 40

Blocks belonging to the Façade of the Four Seasons (pp. 186-8). Scale $\frac{1}{16}$



1.49-50



1.48



1.32



1.47



1.45



1.46



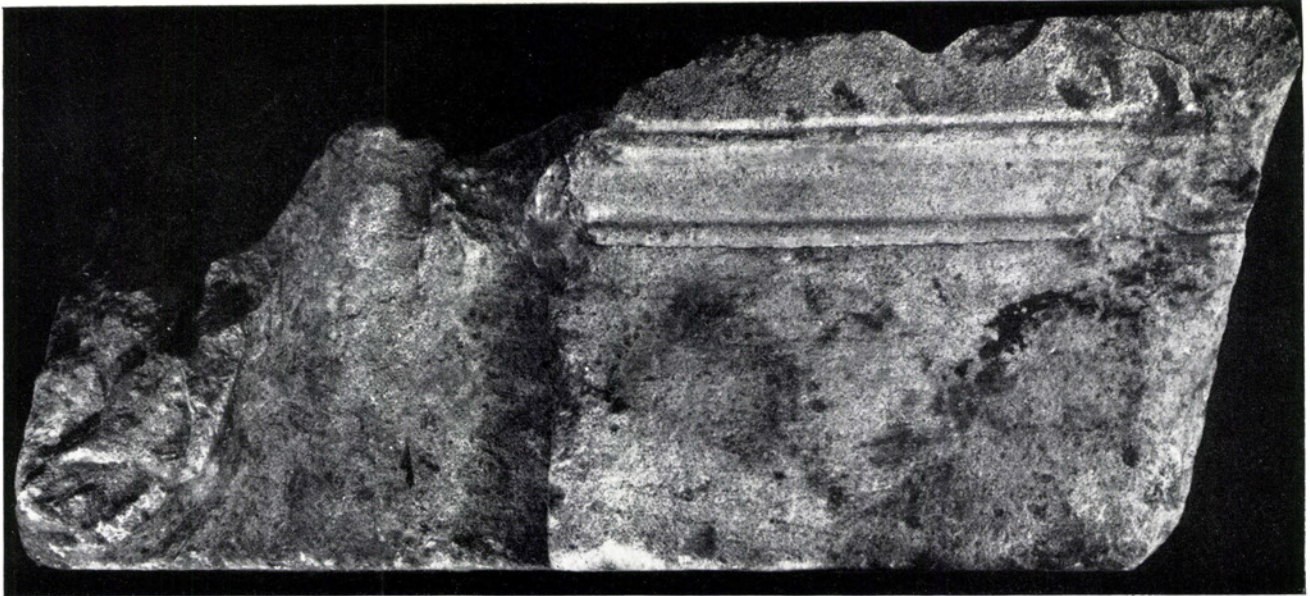
1.43

Blocks belonging to the Façade of the Four Seasons (pp. 186-8). Scale $\frac{1}{16}$

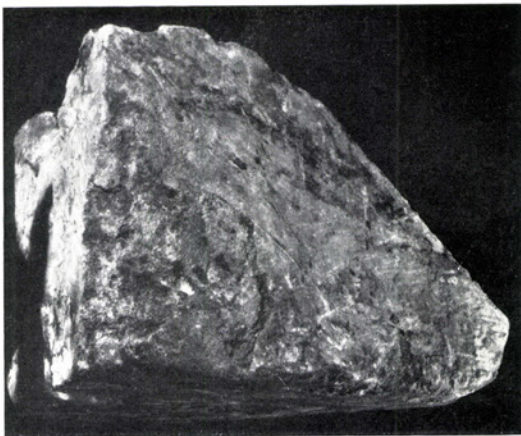


1.51-3

The Luna Pediment (p. 188). Scale $\frac{1}{16}$



I.55



I.54



I.57



I.56

Fragments of monuments from the Temple precinct (pp. 188-9). Scale $\frac{1}{2}$, except I.54, $\frac{1}{10}$



I.58



I.59

Monument of quadrangular form with niches in each side. Found in 1895 north of the Reservoir (p. 189). Scale $\frac{1}{3}$

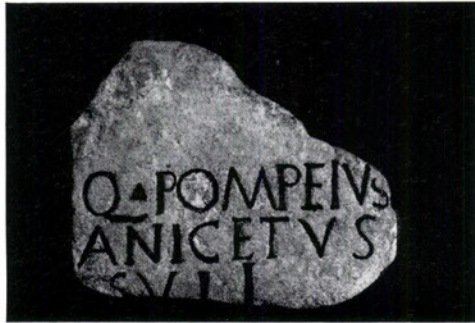


b. Inscribed statue base *in situ* on the precinct floor

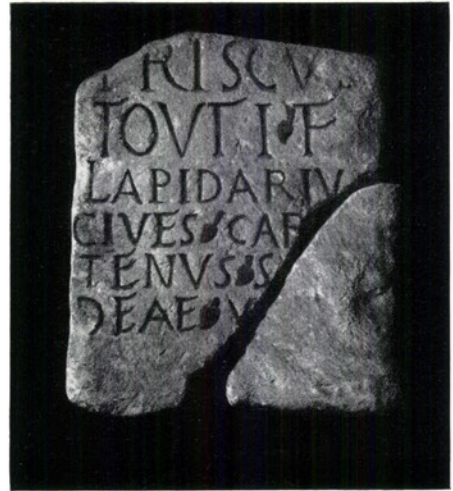


a. Inscribed statue base (p. 189)

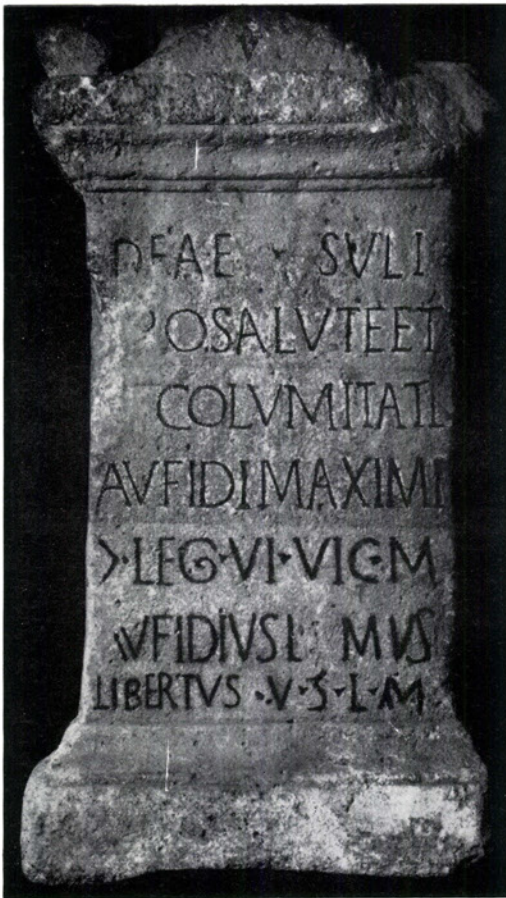
1.60



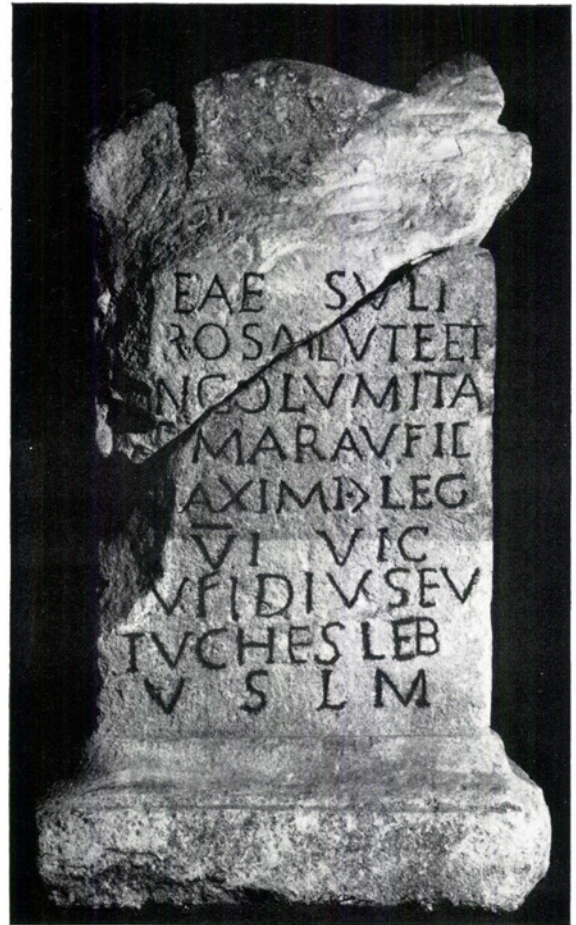
I.64



I.63

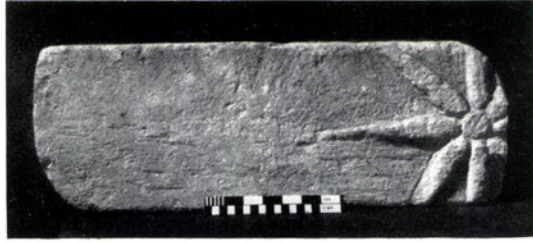


I.62



I.61

Altars found in or near the Temple precinct (pp. 189-90). Scale $\frac{1}{16}$



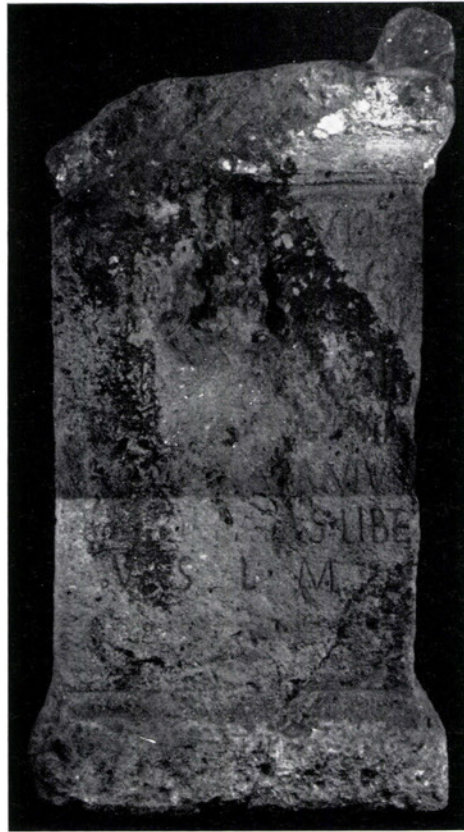
a.

1.69



b.

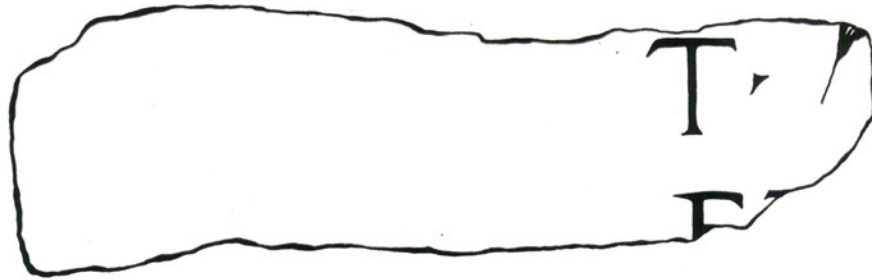
1.68



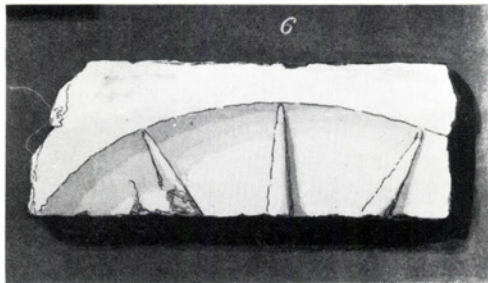
c.

1.67

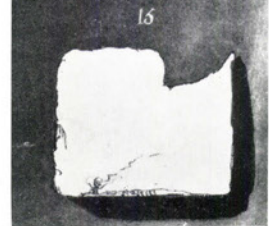
- a.* Fragment of relief. Scale $\frac{1}{2}$
b. Fragment of a relief from the Temple precinct. Scale $\frac{1}{10}$
c. Altar from the Temple precinct (p. 190). Scale $\frac{1}{10}$



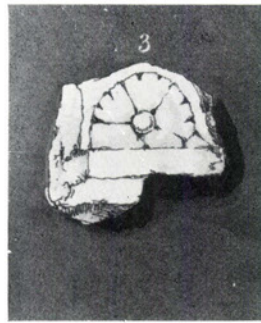
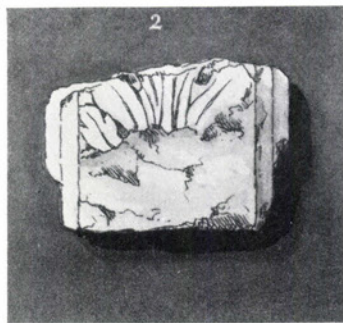
I.74



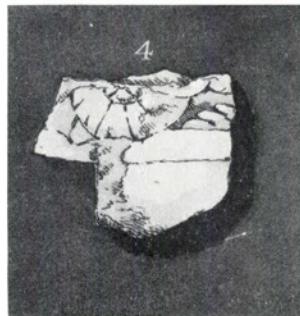
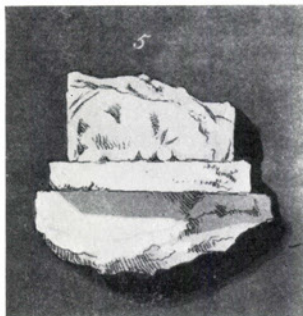
I.70



I.73

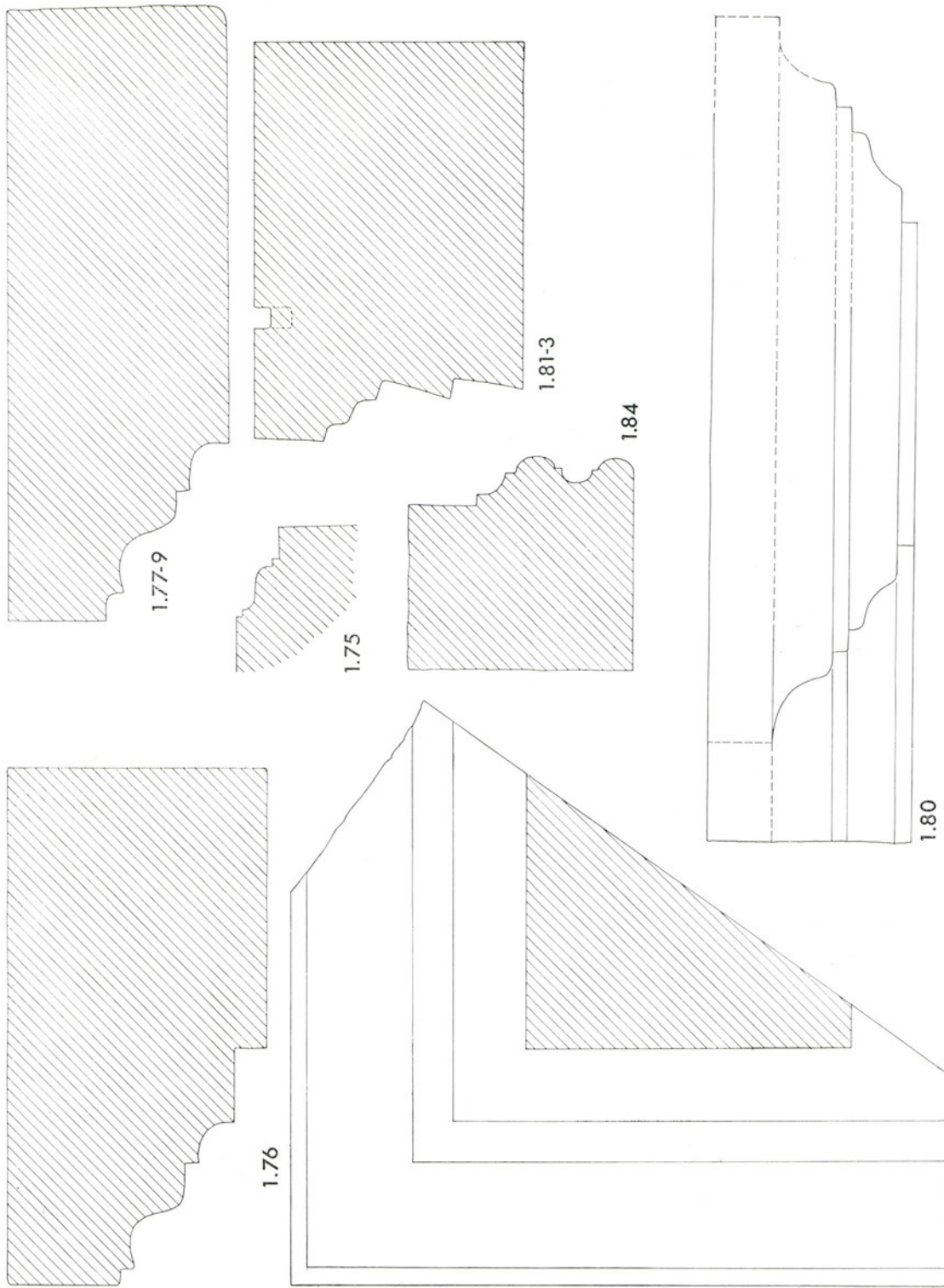


I.71



I.72

Carved stones found in 1790 in the precinct of the Temple and now lost (pp. 190-1). No. I.74 is from *RIB*, the others from Lysons 1813, Pt. II, Pl. IX. Various scales



Architectural mouldings from the Temple area (pp. 192-3). Scale $\frac{1}{16}$



a.

I.81-3



b.

I.77-9

- a. Frieze found during the excavation of the Baths and Temple (p. 193). Scale $\frac{1}{16}$
 b. Cornice found during the excavation of the Baths and Temple (p. 192). Scale $\frac{1}{16}$



2.1



The Quadrant Monument: above, outer face; below, inner face after Haverfield 1906 (p. 193). Scale $\frac{1}{3}$



2.2



The Quadrant Monument (p. 193). Scale $\frac{1}{5}$



2.3



The Quadrant Monument (p. 193). Scale $\frac{1}{5}$



2.4



The Quadrant Monument: above, outer face; below, inner face after Haverfield 1906. (p. 194). Scale $\frac{1}{2}$



a.

2.6

a. Relief of Mercury (p. 194). Scale $\frac{1}{3}$

b. Relief of Minerva from the Baths (p. 194). Scale $\frac{1}{3}$



b.

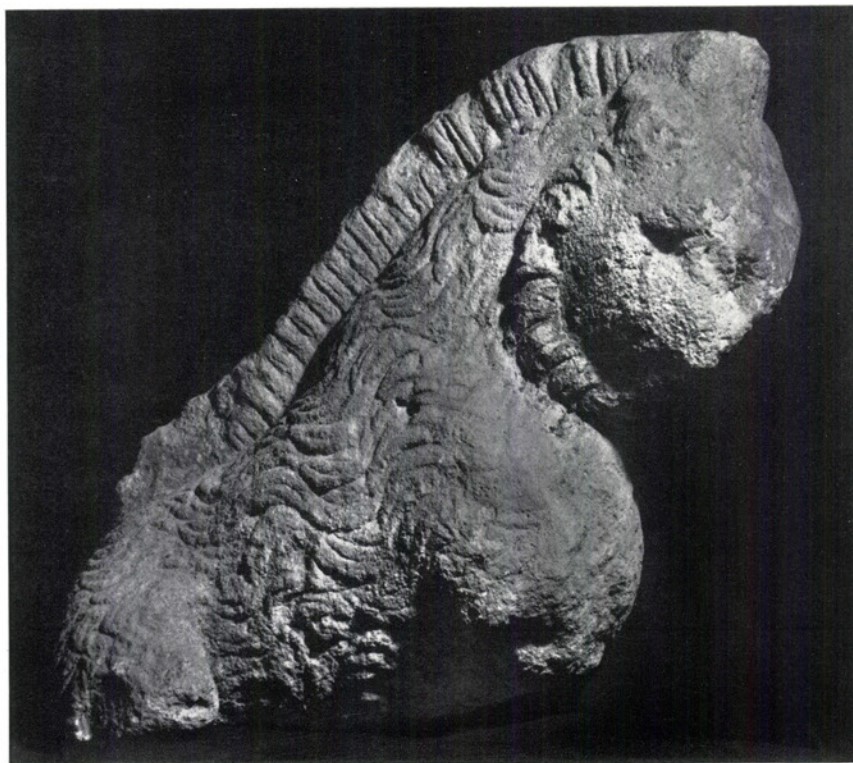
2.5

- a.* Relief of Nemetona and Leucetius
from the Baths (p. 194). Scale $\frac{1}{5}$
b. Lion or Sphinx from the Baths (p.
195). Scale $\frac{1}{5}$



a.

2.7



b.

2.8



a.

2.9



b.

2.10

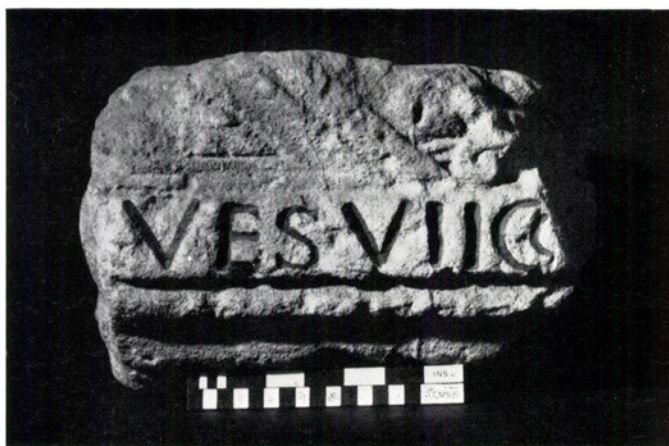
a, b. Reliefs of animals from the Baths (p. 195). Scale $\frac{1}{5}$



2.11

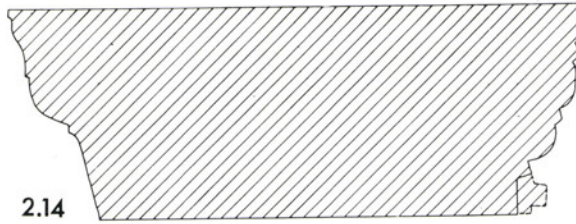
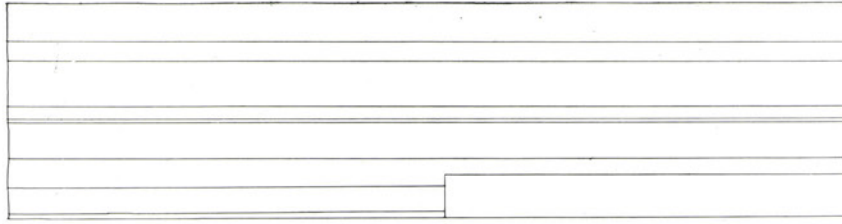


2.12

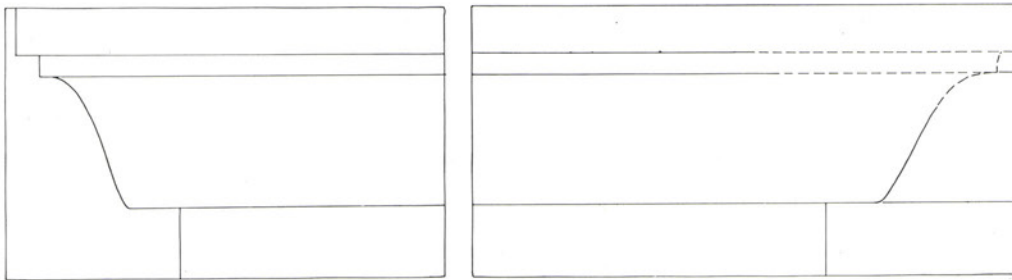


2.13

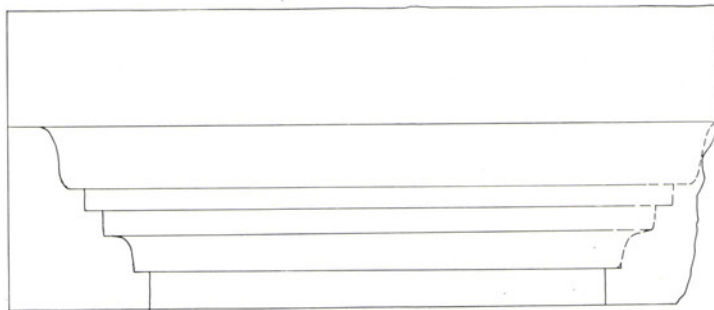
Inscriptions from the Baths (nos. 2. 11-12 after *RIB*) (p. 195).
Scales: 2. 11-12, $\frac{1}{10}$; 2.13, $\frac{1}{5}$



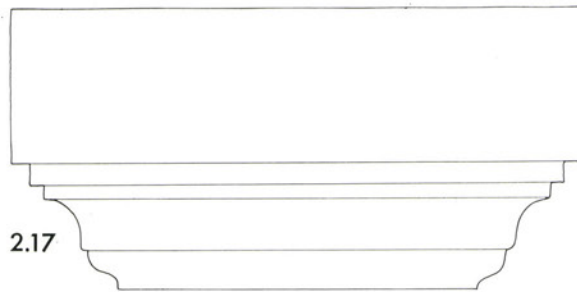
2.14



2.15



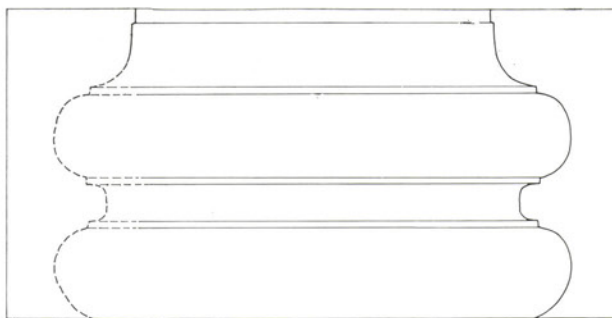
2.16



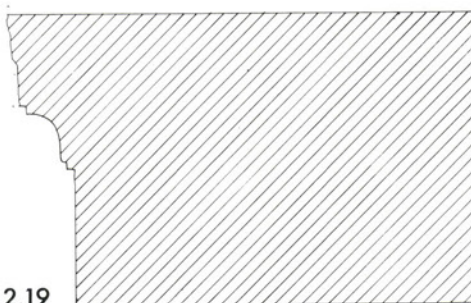
2.17

Architectural mouldings from the Baths (pp. 195-6). Scale $\frac{1}{16}$

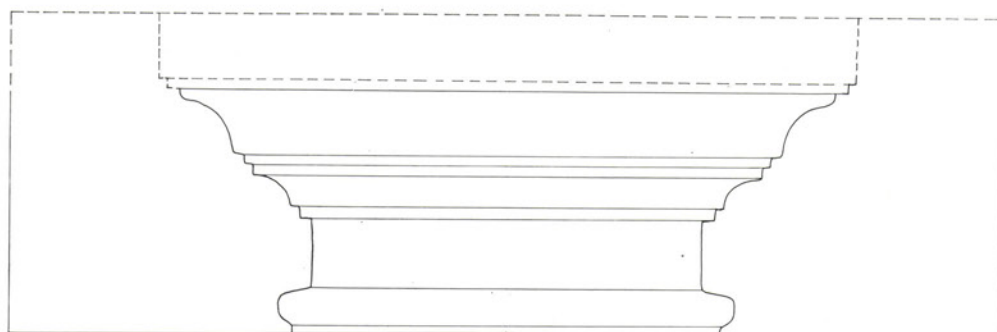
2.18



2.19



2.20



2.21



Architectural mouldings from the Baths (p. 196). Scale $\frac{1}{16}$



a.

2.24



b.

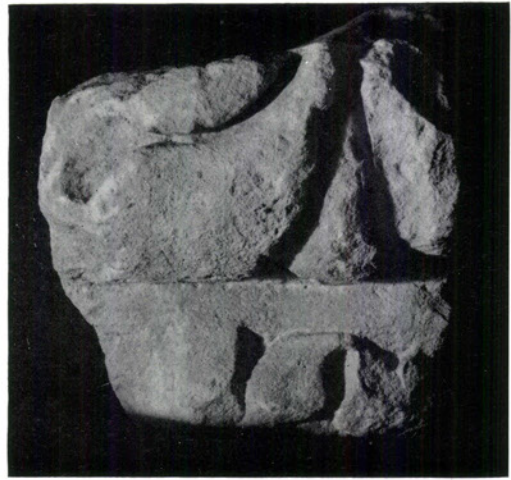
2.20-21

a. Composite capital found in the Reservoir (p. 196). Scale $\frac{1}{3}$

b. Engaged half-column found during the excavation of the Baths (p. 196). Scale $\frac{1}{10}$



3.3

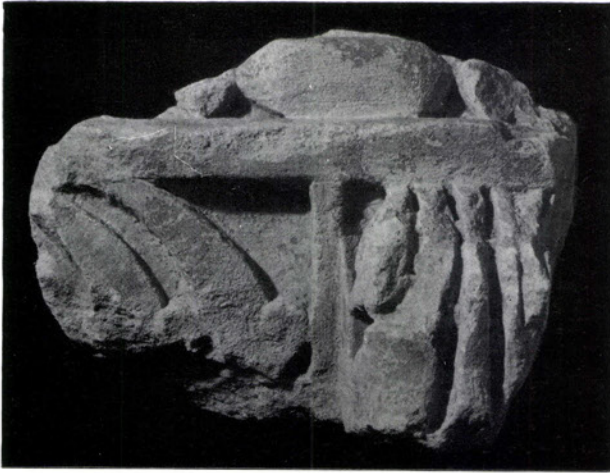


3.2



3.1

Cornice from a large unsited monument (p. 197). Scale $\frac{1}{5}$



3.4



3.5



3.6

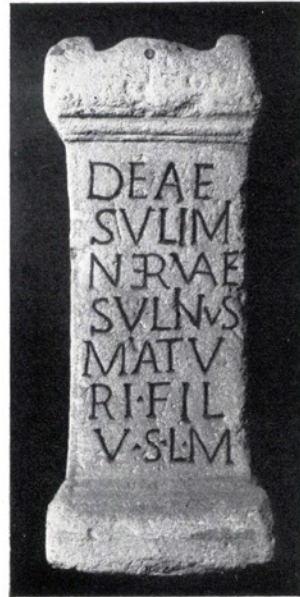
Fragments belonging to a large monument. Nos. 3.5-6 are pieces of Corinthian capitals, no. 3.4 is part of a cornice (p. 197). Scale $\frac{1}{5}$



Carved block depicting scenes from the Aesculapius legend, found in the Cross Bath (p. 198). Scale $\frac{1}{16}$



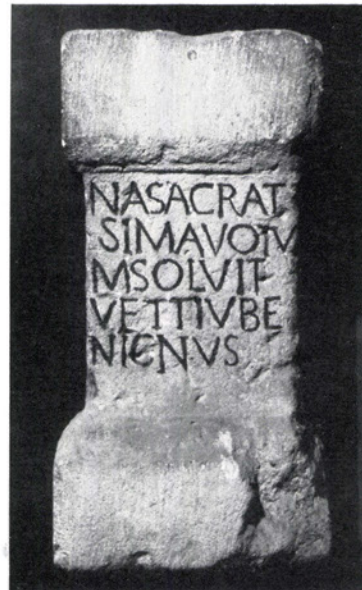
4.3



4.1



4.4

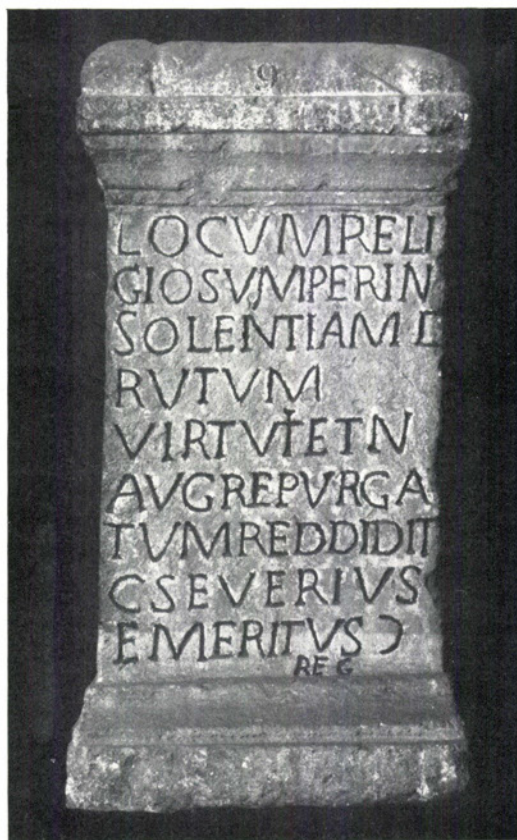


4.2

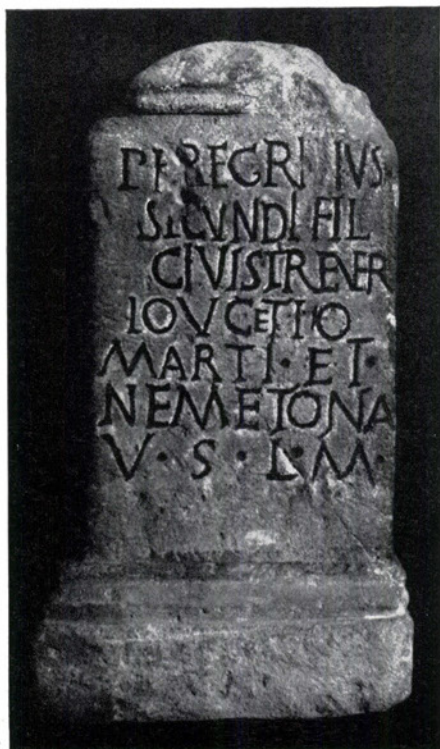
Altars from various sites in Bath (pp. 197-8). Scales: 4.1-3, $\frac{1}{10}$; 4.4, $\frac{1}{20}$



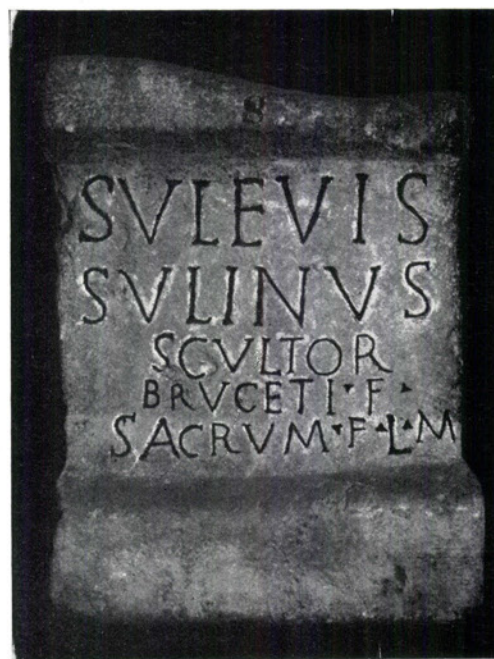
4.10



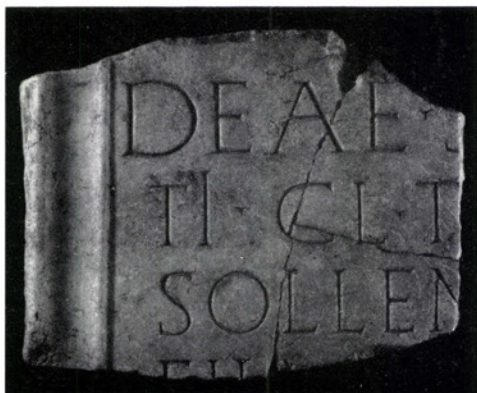
4.7



4.6

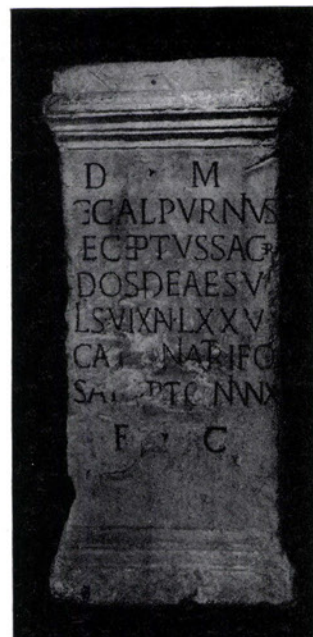


4.8



a.

4.9



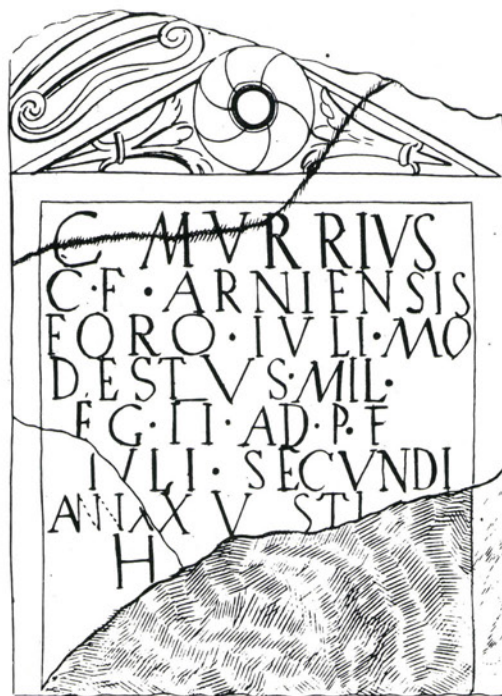
b.

5.1



c.

5.2



d.

5.3

a. Inscription from the Mineral Water Hospital (p. 199). Scale $\frac{1}{3}$
 b, c, d. Tombstones from various localities (p. 200). Scales: 5.1-2, $\frac{1}{20}$; 5.3, after Horsley, approx. $\frac{1}{10}$



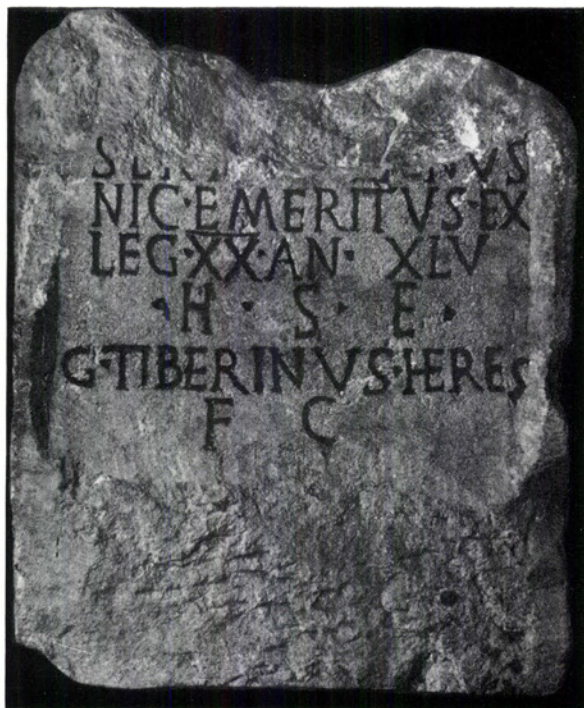
5.6



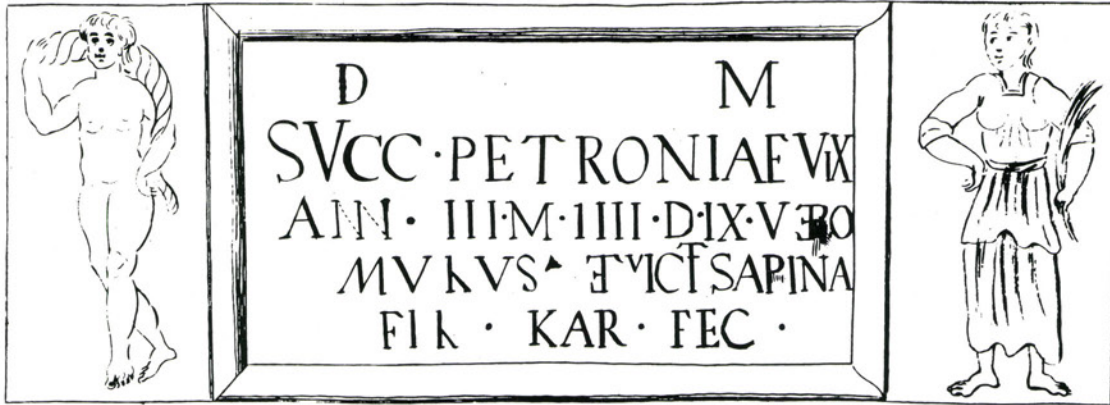
5.4



5.5



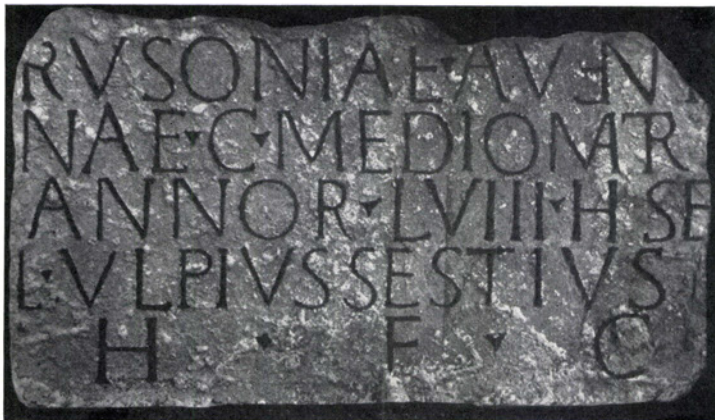
5.7



5.11



5.8



5.10



5.9

Tombstones from various localities (nos. 5.8, 5.11 after Horsley) (pp. 201-2). Scale $\frac{1}{16}$



5.14

Colossal head of a female wearing a first-century hair-style (p. 202). Scale $\frac{1}{3}$



a.

5.15



b.

5.16

a. Theatrical mask from a tombstone (p. 202). Scale $\frac{1}{3}$

b. Relief of a mastiff carrying a stag, presumably from a tomb (p. 202). Scale $\frac{1}{3}$



5.17



5.18

Reliefs from various localities (pp. 202-3). Scale $\frac{1}{16}$

VIBIA
IVCVN
DA
ANXXX
HIC SEPVL
TA EST

5.12

V R N
I O P

6.1

/ L I A
I L I A

6.2

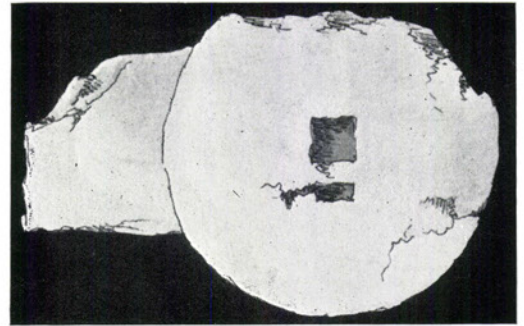
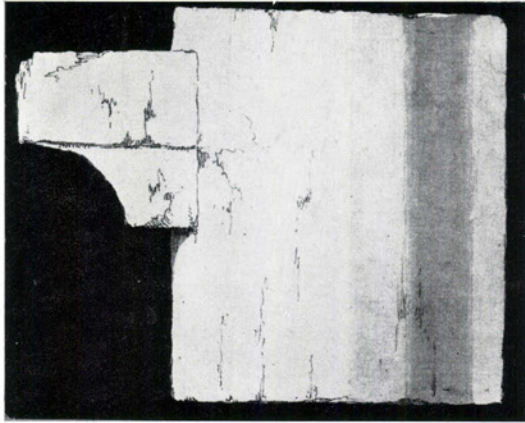
III V S S A
V S Y X S C

6.3

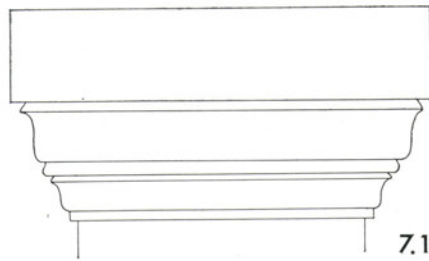


6.4

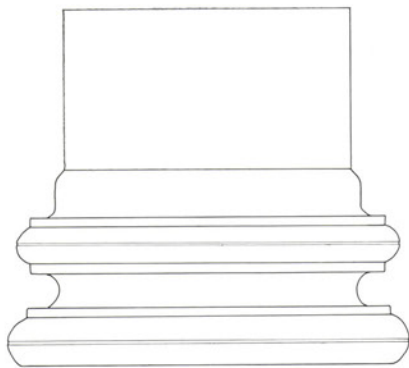
Miscellaneous inscriptions (pp. 202-3). Scales: nos. 5.12 (after Stukeley) and 6.1 (after Horsley) unknown; 6.2 (after Horsley) and 6.3 (after *RIB*), $\frac{1}{16}$; 6.4, $\frac{1}{8}$



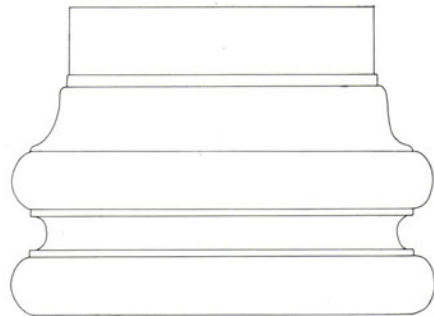
7.6



7.10

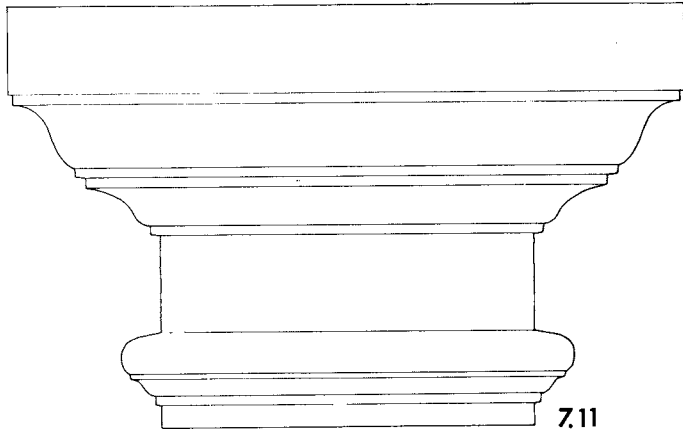


7.8

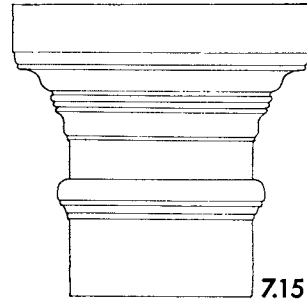


7.9

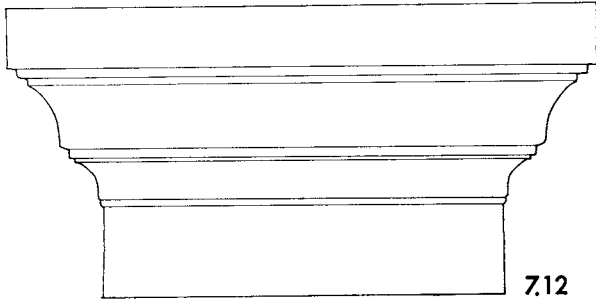
Above, column from the Temple, after Lysons
Below, columns from known positions in the Baths and Temple (pp. 204-5). Scale $\frac{1}{16}$



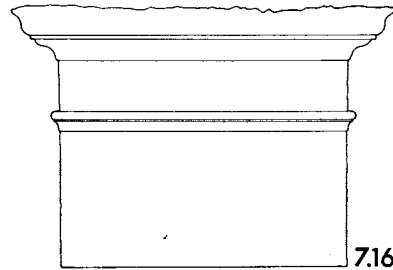
7.11



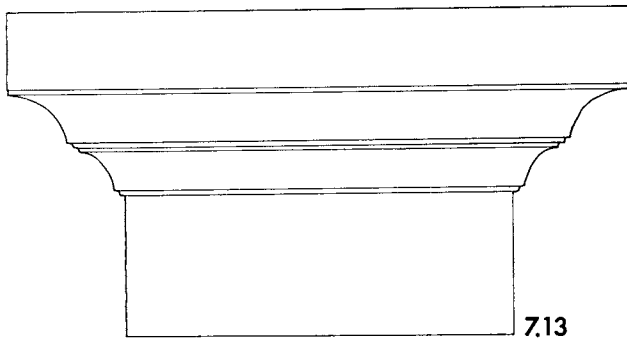
7.15



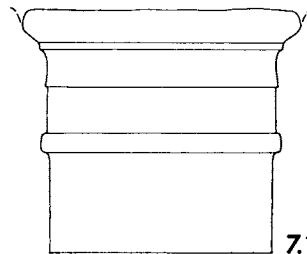
7.12



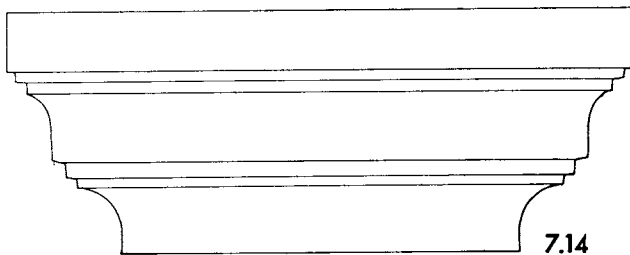
7.16



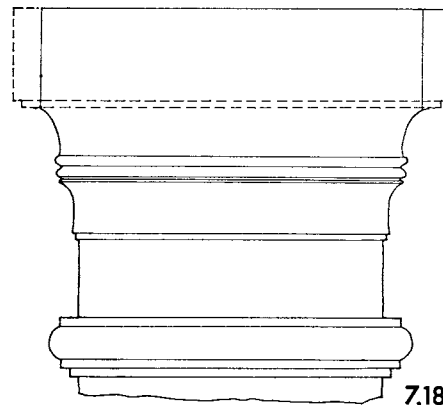
7.13



7.17

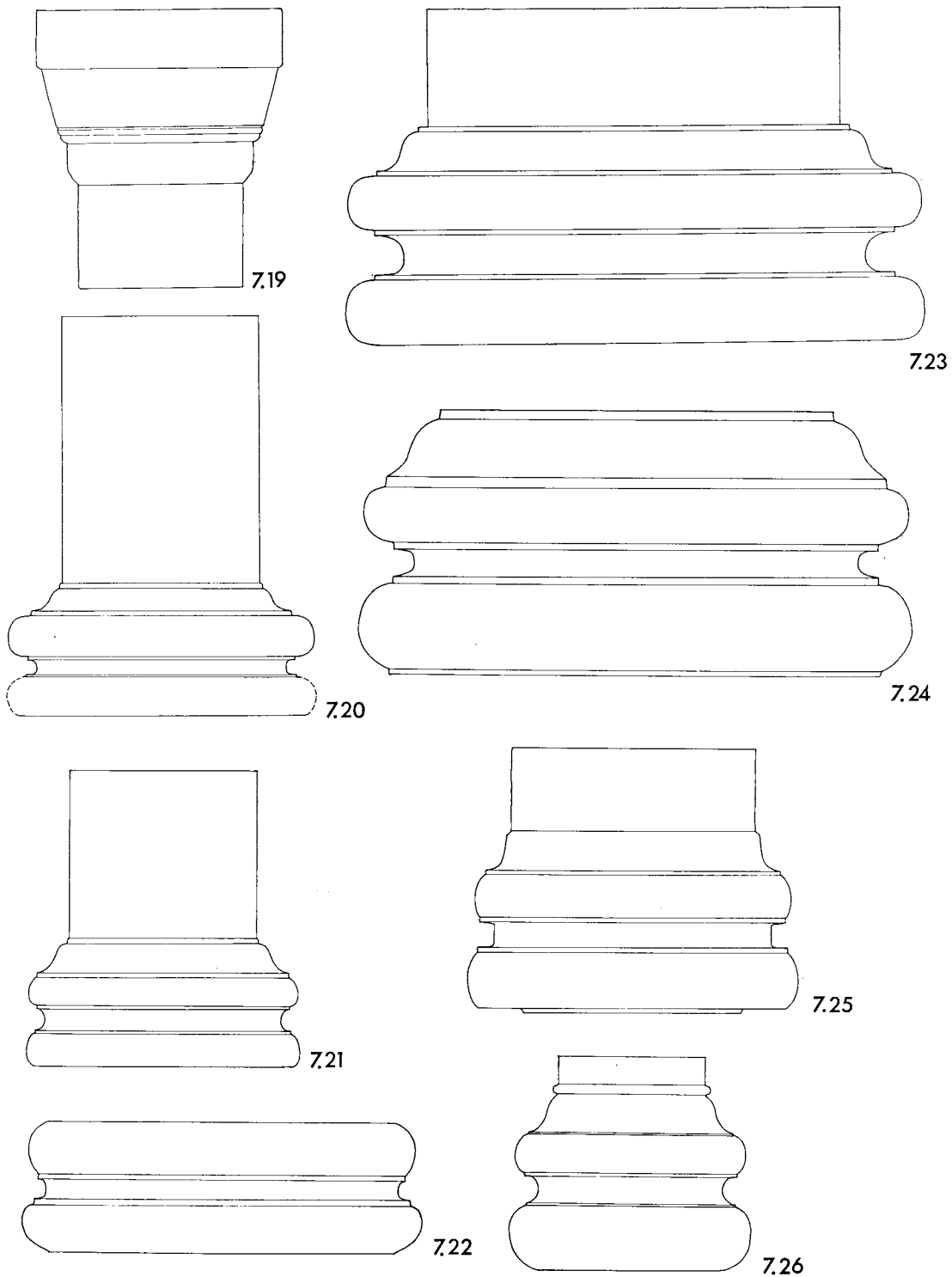


7.14

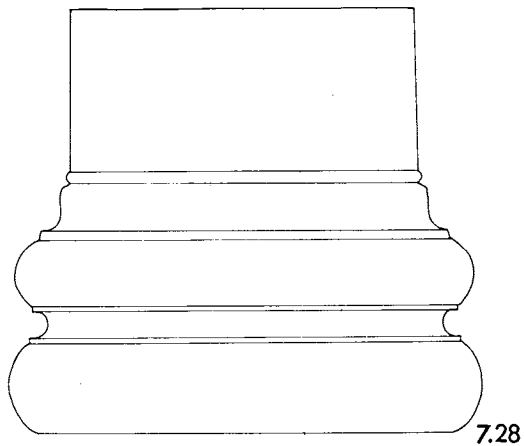
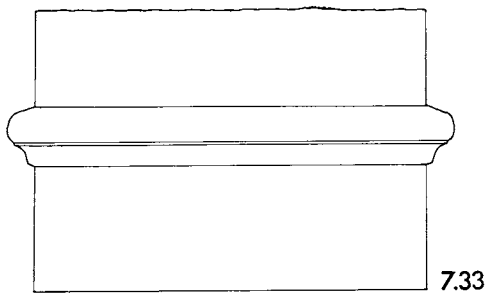
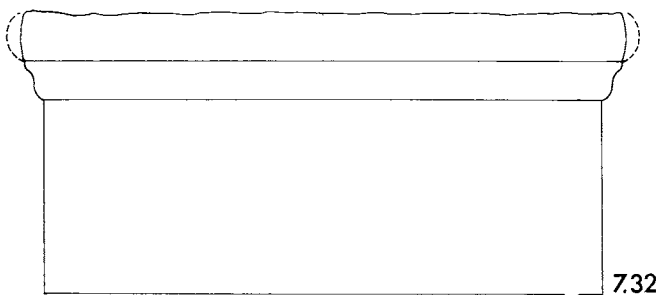
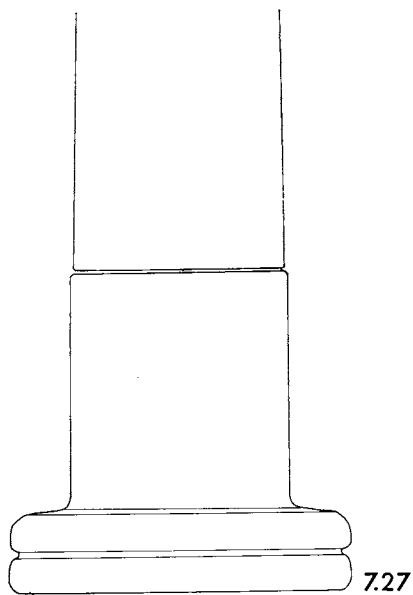
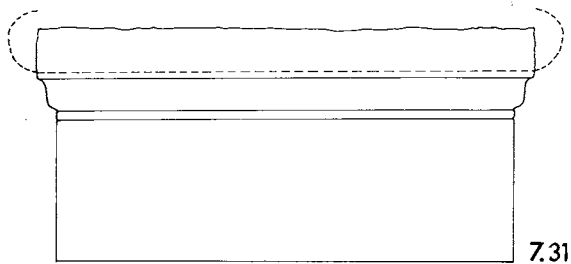
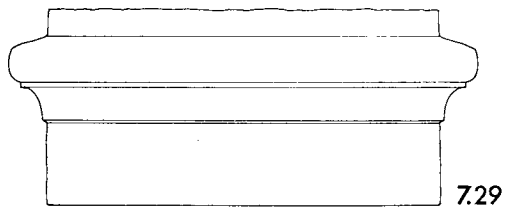
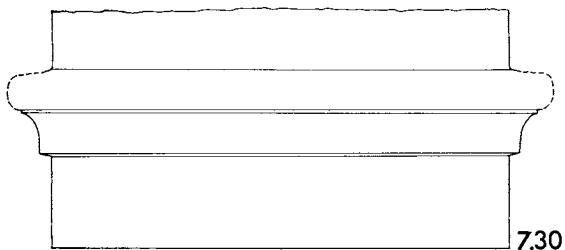


7.18

Capitals of columns from various localities in the Baths and Temple (p. 205). Scale $\frac{1}{16}$

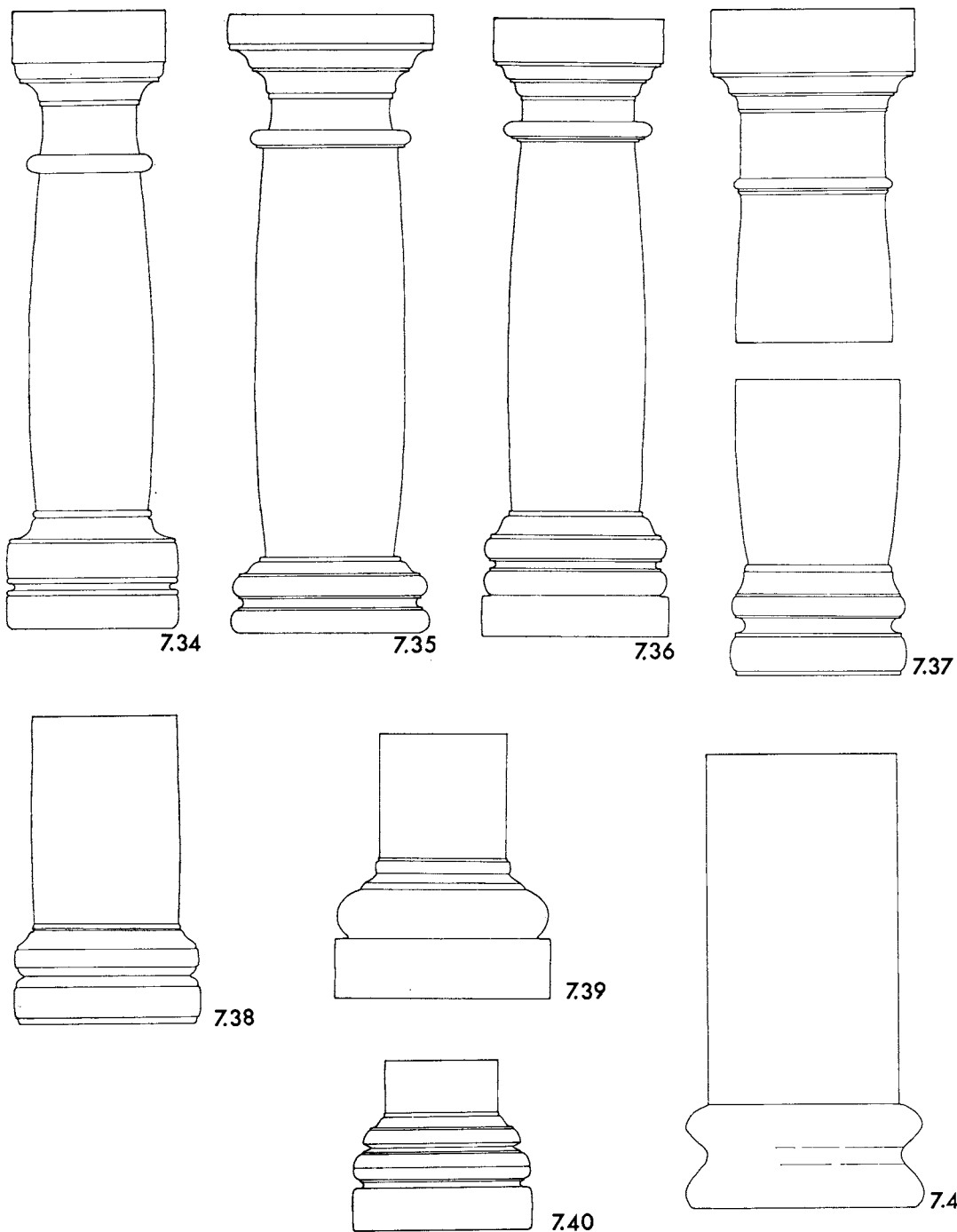


Columns from various localities (p. 205). Scale $\frac{1}{16}$



Columns from various localities (p. 205). Scale $\frac{1}{16}$

PLATE LXXVIII



Baluster columns and a simple base from various localities (p. 205). Scale $\frac{1}{16}$



a.

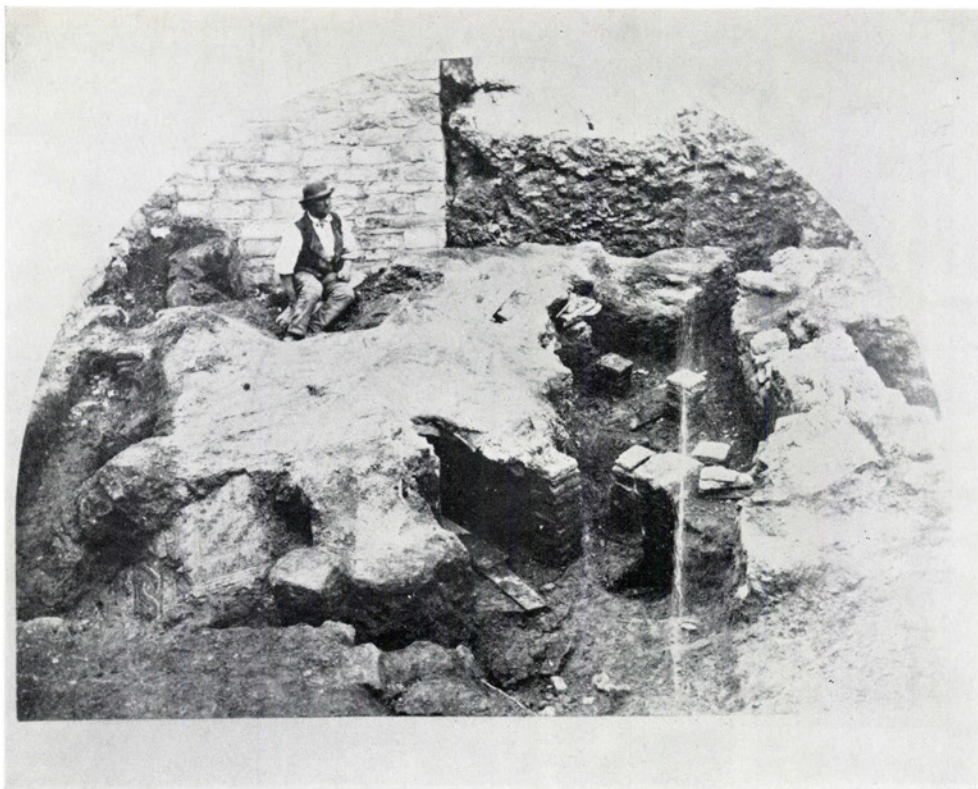
9.5



b.

8.1-13

a. A schist plaque from Cleveland Gardens (p. 205). Width 17.6 cm.
b. Roof finials from the Baths (p. 205). Scale $\frac{1}{5}$



a. Excavation of the mosaic beneath the Royal United Hospital, 1867 (see Pl. LXXXII for a reconstructed drawing) (p. 209). Photograph: Irvine Collection



b. The baths beneath the Royal United Hospital showing the excavation in progress, *c.* 1867 (p. 151). Photograph: Irvine Collection



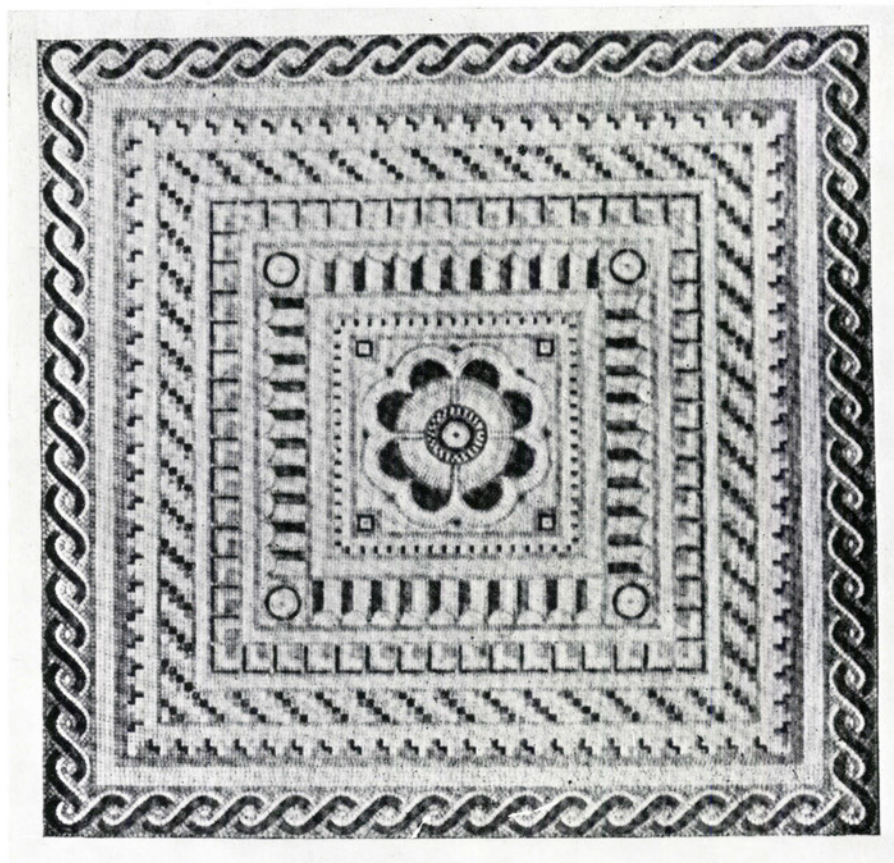
a. Mosaic from the Bluecoat School in Saw Close, now preserved in the Roman Baths (p. 209)



b. Mosaic *in situ* beneath the Mineral Water Hospital (p. 209)



a. Mosaic found in Bridewell Lane (p. 209). From a photograph in *BFC*



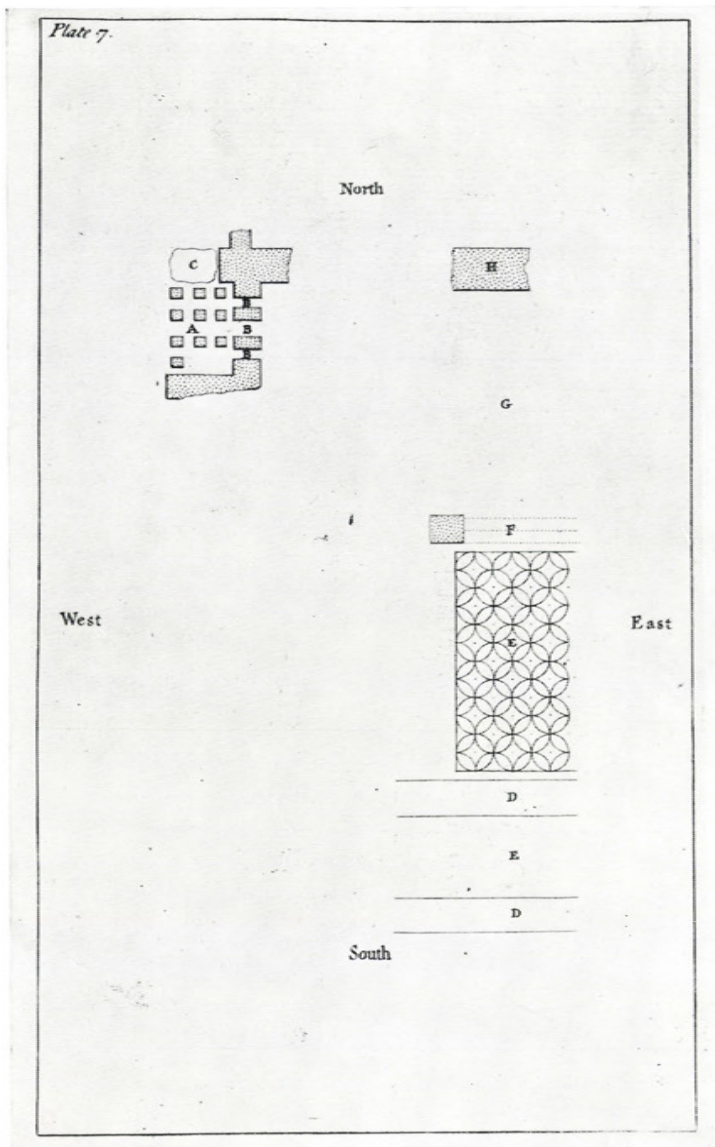
b. Reconstruction of Mosaic found below the Royal United Hospital (p. 209).



a. Mosaic now in the Roman Baths Museum but originally found on the site of the Weymouth House Schools (p. 210)



b. Mosaic in the north-west apse of the East Baths (photograph of a mirror image) (p. 114)



a. Wood's plan of the Roman building beneath the eastern part of the Mineral Water Hospital (p. 209)



b. The front of the City wall at the Fernley Hotel (p. 174)

