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## EXCAVATIONS AT ECCLES, 1962

### First Interim Report

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#### INTRODUCTION

Excavations were carried out by the Lower Medway Archaeological Research Group during the 1962 season at Rowe Place Farm, Eccles, in the parish of Aylesford. The work was undertaken by kind permission of the landowners, Messrs. Associated Portland Cement Manufacturers Limited and the Reed Paper Group, and with the wholehearted co-operation of the farmers, Messrs. A. A. and A. C. Southwell, to whom grateful acknowledgment is here made for many acts of kindness ; it was financed entirely by generous grants<sup>1</sup> and public donations.

The excavations covered an area of about half an acre and continued every weekend from Easter to the end of September. My many thanks are due to the numerous volunteers who made this excavation possible by taking part in the work at one time or another, and it is only considerations of space that prevent me from mentioning each one of them individually. I must, however, record my appreciation to the following for their sustained support : Misses M. Bennett, P. Hagon, L. Smith ; Messrs. D. Bartram, P. Dives, D. Dorrington, L. A. Griffith, A. C. Harrison, B.A., T. Hetherington, E. R. Swain, M. Syddell, P. Whiteoak ; to Mr. R. G. Foord who took charge of the photography and kindly supplied all the photographs illustrating this report ; and to Mr. M. A. Ocock who completed a field survey of the site and, together with Miss W. I. Edridge, undertook practically all the field drawings, which form the basis of my plans and sections.

#### THE SITE

The site lies to the South-West of Eccles village and about half a mile East of the right bank of the Medway (N.G.R. TQ 722605 ; O.S. 6 in. Sheet TQ 76 SW) ; it is situated on the Gault Clay at about 85 feet above O.D. The valley to the East is covered with the solifluction

<sup>1</sup> From the Carnegie United Kingdom Trust, the Kent Archaeological Society and the Society of Antiquaries of London. My grateful thanks are also due to Miss B. de Cardi, F.S.A. and to Col. G. W. Meates, F.S.A. for much help on and off the field. I have also greatly benefited by the advice of Professor S. S. Frere, V.-P.S.A. who, besides visiting the site and offering several valuable suggestions, has kindly read this report in draft form.

(mud-flow) deposit known as 'Head', which would have formed in the late Pleistocene under periglacial conditions. There are also patches of the second terrace gravel of the Survey just to the South, and also the alluvium of the Medway to the South-West of the site.<sup>2</sup>

The earliest reference<sup>3</sup> to the presence of antiquities in this area is a communication<sup>4</sup> by the Rev. Beale Poste, in 1848, which mentions the discovery of Roman coins and 'sepulchral remains'. In 1908, George Paine re-visited the Rev. Beale Poste's site and added some further information,<sup>5</sup> although some of this does not refer to the present site owing to a probable misunderstanding on the part of his informant. The area is marked on the O.S. map as 'Roman Building (Site of)', at N.G.R. TQ 720606, on the basis of a reference to Roman foundations appearing in a local journal.<sup>6</sup> This is a little to the West of the site, but there is no doubt that the foundations referred to are those of a wall belonging to the villa.

On the basis of the above references and the presence of abundant surface débris, the area was covered by an air survey in 1961,<sup>7</sup> which provided sufficient indications to justify trial-trenching; this was undertaken by members of the Group in the late summer of 1961 and established that the crop-marks photographed from the air were in fact the result of the walls of a large building lying under this area.

Fig. 1 is a provisional plan of the site based on ground and air observation<sup>8</sup> as well as on a field survey of the crop-marks. It does not include a further semi-circular crop-mark to the South-East of the site, which is likely to be the original outline of the pond, nor does it take into account a further building, which is known to exist to the South-West of the site. Similarly, the centre of the surveyed area, between broken lines, where crop-marks were not so clearly discernible, has been left blank, though both excavation and the shape of the visible crop-marks strongly suggest that the whole area is probably occupied by the main section of the villa.

## THE EXCAVATION

Excavation during this first season of work was concentrated on the extreme west end of the site as known from the 1961 air reconnaissance.

<sup>2</sup> Information from Dr. R. P. S. Jefferies, F.G.S., of the British Museum (Natural History).

<sup>3</sup> I am indebted for the information contained in this paragraph to the generosity of Mr. J. H. Evans, F.S.A., F.R.G.S., and Mr. M. A. Ocock, who kindly made their records available to me.

<sup>4</sup> *Journal of the British Archaeological Association*, IV (1849), 81.

<sup>5</sup> *Arch. Cant.*, XXIII (1908), 12 ff.

<sup>6</sup> *Rochester Naturalist*, VI, no. 130 (1924), 53.

<sup>7</sup> Conducted by Mr. M. A. Ocock, on behalf of the Lower Medway Archaeological Research Group.

<sup>8</sup> In 1962, by Messrs. M. A. Ocock and H. V. Summerton, to whom I am grateful for several valuable prints.

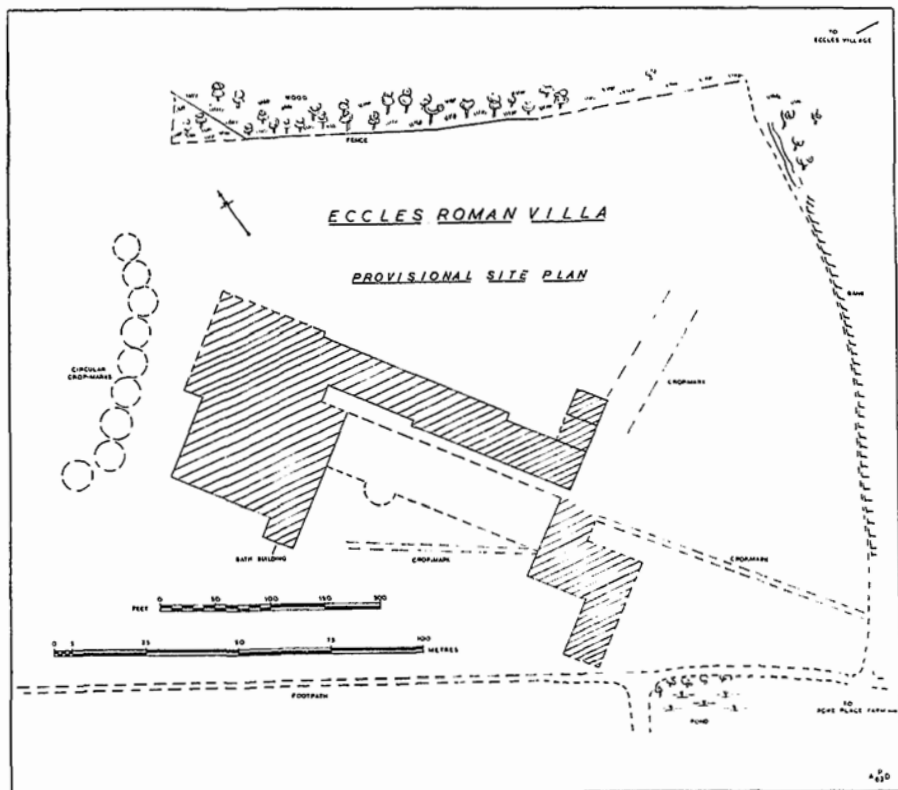


FIG. 1.

It has been established that this part of the site is occupied mainly by an early building, and then the successive bath buildings<sup>9</sup> of the villa.

Three main building periods have so far been recognized, and they may tentatively be dated as follows :

Period I, c. A.D. 75-100 : The Early Building.

Period II, c. A.D. 100-140/160 : The Bath Building, First Phase.

Period III, c. A.D. 140/160-290 : The Bath Building, Second Phase.

This dating depends largely on a preliminary examination of the stratified pottery, and partly on the evidence of the few coins found in stratified layers.

Evidence has also been recovered for later periods, but as yet in insufficiently concrete form to indicate their chronological *termini* ;

<sup>9</sup> In the absence of any concrete evidence to prove that the structure was directly connected with the main block of the villa, the description of bath building is preferred to that of bath wing.



there is not much doubt, however, that the site remained in continuous occupation throughout the Romano-British period.<sup>10</sup>

*Period I, c. A.D. 75-100 : The Early Building*

This first period is represented by the vestigial remnants of an early building almost completely covered by the *opus signinum* floors of the succeeding bath buildings. Two different sections of walls belonging to this period could be recovered : (a) under and outside the north-west wall of the Period III Room 18, and (b) under the Period II Rooms 3, 8 and 9, though it is not beyond doubt that these two sections belong to the same structure.

The section of wall (a), partly overlaid by the north-west wall of Room 18, was built of ragstone set in yellow mortar, 2 feet thick and slightly wider than section (b), and was robbed right down to its foundation courses by the time the Period III walls were being built. It is clear, however, from the small part of this wall preserved under the north-west wall of Room 18, that this section of wall extended some way to the South-East, but whether to connect with section (b), it was impossible to ascertain because of the thickness of the *opus signinum* floor in Room 17. Further to the South-East, where it has been possible to excavate to the subsoil, no trace of any structure has been found which can be associated with this period.

The long section of wall (b) was 18 inches thick, built of ragstone set in bright yellow mortar and was, probably, an outer wall of this early building. The purpose of this early building is not at present determined ; that it was, however, of some importance and richness is suggested by the materials, clearly belonging to this period, which were used as make-up for later floors. They were laid over a hard-core, which contained several fragments of a coarse, white and green mosaic, found under the destroyed Period II floors, and two fragments of oolitic limestone pillar-bases of Bath stone<sup>11</sup> (Plate I) found under the hypocaust floor in Room 19.

Belonging also to this period are the two drains found (a) under Rooms 17, 18 and 19, and (b) under Room 9.

Drain (a) was first exposed in the eastern part of Room 18, traced under Room 17 and found once again in the east corner of Room 19 where a break in the hypocaust floor allowed excavation at depth ; it is not at present known where this drain outflowed, but it certainly did not exist under Room 20 for a test trench opened at the base of this room's south-east wall failed to find it. It certainly began where first exposed under Room 18 for no traces of it could be found further to the

<sup>10</sup> There are some structural remnants clearly pointing to much later occupation, supported by a stratified coin of Gratian.

<sup>11</sup> Identified by Dr. F. W. Anderson, F.G.S., of the Geological Survey.

South-East (Fig. 3, Section C-D). This drain was of very solid construction, with walls of bonding-tiles rendered with *opus signinum* and floored with tiles, which will have probably also been used to form a roof to the drain. No material at all was found stratified inside this drain and, where its roof had not collapsed, it was found completely empty and clean. Its attribution to Period I is, therefore, based on inferential grounds in view of the later structures built upon it, though it was certainly brought back into use again in Period II, even if only on a temporary basis.

Drain (b) is a section of drain, which was later re-used by the construction of a further channel of *opus signinum* over it; it had sides of ragstone faced with *opus signinum* and continued North towards Room 6.

The dating of this period to c. A.D. 75-100 is based almost completely on the pottery which was found securely stratified with the remnants of this early building, and that found in or close to the subsoil. Of the two suggested dates, the earlier is very tentative and relies on pottery which is not usually met in much later contexts, though it could, of course, have been in use at the site at a rather earlier date; the date assumed to mark the closing of this period is much more secure in that it is based upon coarse pottery and samian ware, which cannot be much earlier than the closing years of the first century A.D., or later than the first decade of the second century A.D.

It is hoped that much more of the plan and purpose of this early building will be forthcoming next year. It is certainly known, from air photography, that a structure did exist further to the North-West of the site and beyond the limits of the present excavation, and it is probable that part at least of this structure does belong to this period.

#### *Period II, c. A.D. 100-140/160 : The Bath Building, First Phase*

The first known bath building of the villa was constructed during this period upon the remains of the earlier building, which must have been methodically removed as none of its walls have been found incorporated in the bath building: it is, of course, quite possible that the Period I structure was itself a bath building, but this will only be ascertained after much more work on the site.

Before it was superseded by its successor, this bath building had a fairly long life during which at least three<sup>12</sup> phases of alterations and additions to the original plan have been distinguished; these phases can easily be recognized on a consideration of the building materials and techniques employed in their respective structures: Phase A is exclusively built of ragstone set in off-white mortar, Phase B has walls of bonding- and/or roofing-tiles set in yellow mortar, and Phase C uses chalk blocks and/or bonding-tiles set in off-white mortar.

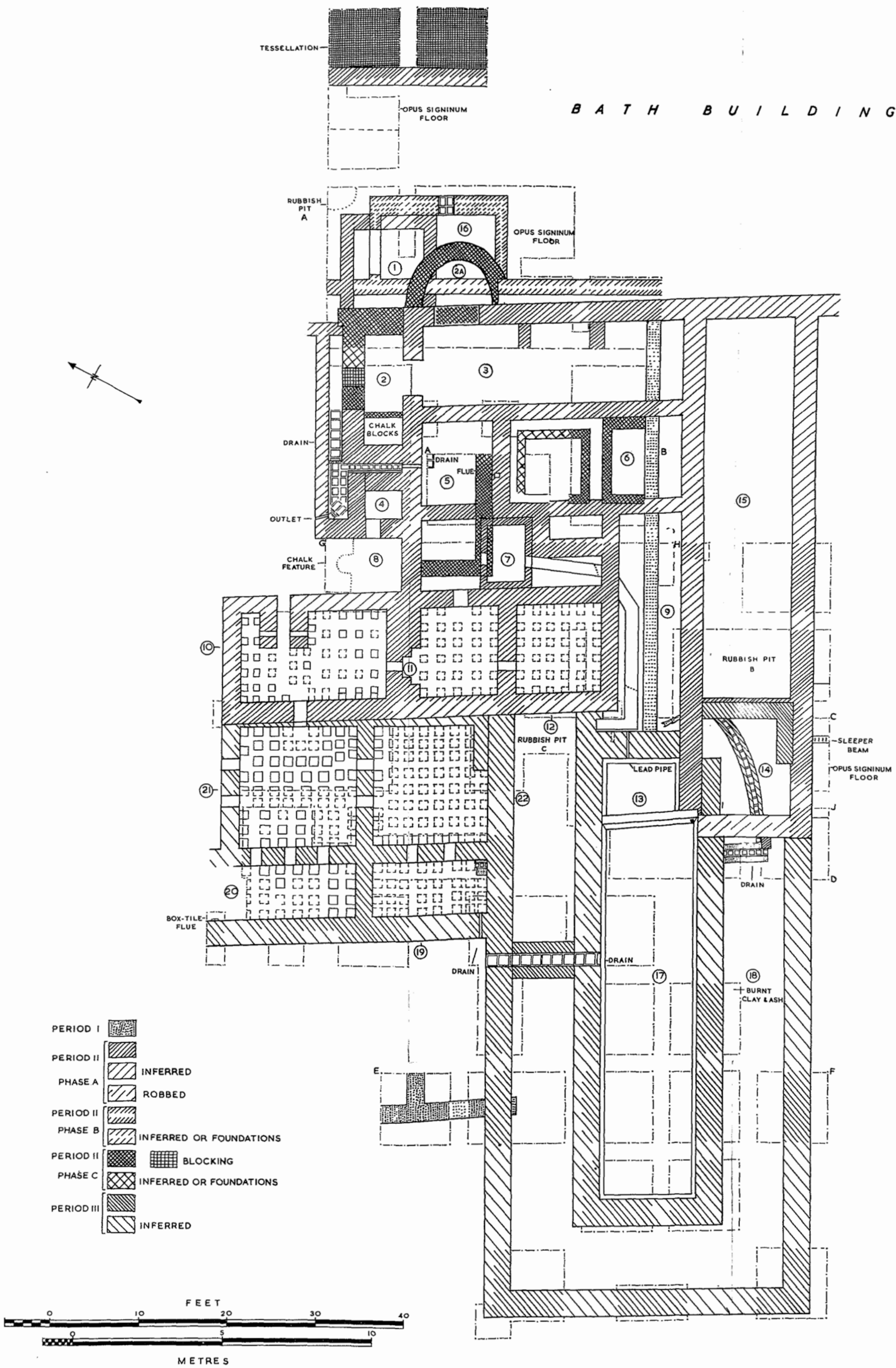
<sup>12</sup> A fourth phase was recognised in 1963.

The original bath building was a fairly large suite comprising a range of at least twelve rooms serving the usual functions in such a structure ; no attempt, however, is here made to attribute a definite purpose to each one of the bath building's rooms, except in passing and where certain, as this will have to await the completion of the excavation for discussion in the definitive report. The walls of all these rooms were almost exclusively built of ragstone set in off-white mortar, with an occasional levelling course of bonding-tiles, particularly at the top of the slightly wider foundation courses.

*Room 2.* This narrow room with much of its north-west and north-east walls covered by the later Phase C walls is thought to have served either as a latrine or an *apodyterium* ; it had a yellow mortar floor and a doorway leading South-East into Room 3. A gap in the north-west wall, which was later filled in with ragstone, was probably an outlet into the drain immediately beyond the north-west wall. This drain, which was partly robbed at its north-eastern end, was floored with bonding-tiles, and care was taken to prevent seepage by facing its containing walls with *opus signinum*, and even by adding a strip of *opus signinum* quarter-round moulding at the junction of the flooring tiles and the north-west wall of Room 2. In the original plan of the building, Rooms 1 and 2 may have been one unit, as it is suggested by painted wall-plaster preserved *in situ* by later walls, and divided into two separate rooms first in Phase B ; in Phase C, this Room 2 seems to have become smaller still with the building of new north-east and north-west walls against the north corner of Room 3, and the laying down of large ragstones as foundation material for a floor of chalk blocks faced with ragstone, which formed a sort of ledge at the southern end of the room. At the close of this period, Room 2 was used for the deposition of surplus building material, and was found filled with the powdered brick and tile material used in the composition of *opus signinum*.

*Room 3.* A long and rather narrow room, the south-east end of which may not terminate on the conjectural south-east wall ; this room was so thoroughly demolished in subsequent times as to render its purpose rather problematical. Its three established walls were built of the usual ragstone and off-white mortar, and must have been internally faced with painted wall-plaster on the analogy of its contemporary Rooms 1 and 2. The north-west wall of this room was pierced by a doorway leading into Room 2 ; there was no sleeper-wall across this entrance, but a strip of yellow-green clay at the foot of the opening in Room 2 suggests that it may have served as the foundation for a wooden screen. The north-east wall of this room had another door over a sleeper-wall, which was probably one of the original entrances into the bath house until it gave access into the later Room 16 and before it

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FIG. 2

was blocked in Phase C. A thin mortar floor was found at the foot of the north-east wall with the remnants of dwarf walls of bonding-tiles, which indicate the possibility that this room may have been heated by means of a channelled hypocaust ; indeed, this must have been the case, if the later apsidal Room 2A were to have contained a hot-water bath or basin, but where the heat may have been supplied from is not at present known—certainly not from the hypocaust in Room 6 as the north-east wall of this room was found to be continuous and without any flues ; but a further stoke-hole may have existed in the unexcavated part of the conjectural Room 15.

*Room 5.* This small room (8 feet by 9 feet) contained the hot plunge-bath of the suite, with an *opus signinum* floor of unknown thickness, which was probably laid over a channelled hypocaust as its south-east wall contained a vertical flue ; the floor still bore traces of the tiles set into its north corner for the drain used for the disposal of water through an outflow in the room's north-west wall leading into the main drainage system North-West of Room 4. This Room 5 was probably supplied with hot water from the tank, or tanks, thought to have been placed near or over the stoke-hole in Room 7. It is also likely that a door, leading into Room 3, existed through the north-east wall of Room 5.

*Room 6.* This room was probably not one of the original heated rooms of the building. Its probable dimensions, assuming that its inferential south-east wall is accurate, were 19 feet 6 inches by 9 feet, and it had an *opus signinum* floor, probably forming the base for a coarse mosaic several fragments of which were found in the debris sealed under the Phase C floor ; its walls were decorated with painted wall-plaster, which was found in large quantities though, unfortunately, neither *in situ* nor sufficiently well preserved to indicate its decoration, beyond the fact that it appears to have consisted mainly of geometric patterns and polychrome borders. At a later stage, which on reflection is more likely to be Phase B rather than Phase C as on the plan, a channelled hypocaust was inserted in this room, which must have been supplied with heat from the furnace in Room 7, although no direct evidence was found for this to be certain ; this channelled hypocaust was inserted in the débris of wall-plaster of the earlier room, with its faces of bonding-tiles finished internally, but externally resting against the débris.

*Room 4.* A very small room (4 feet by 3 feet 6 inches) with a doorway leading South-West into Room 8, and quite clearly another latrine with drain-pipes (not shown on the plan) out-flowing through its north-west wall into the drains immediately to the room's North-West.

*Room 7.* This room may be divided into three parts : a furnace at the centre of the room, a stoking area to its South-East, and a north-western part used to support water-tanks over *pilae* (traces of which were still visible despite the wholesale demolition of the room in Phase C) for the hot-water supply of Room 5. The stoke-hole had ragstone walls, 1 foot thick, with one course of bonding-tiles (Plate II) and a clay floor, about 4 inches thick ; most of this floor was covered with lumps of the destroyed *opus signinum* roof of the furnace, and with a thick deposit of soot and ash, which contained much charcoal and mineral coal. A curious feature of this room, so far defying reasonable explanation, is a slightly hollowed *opus signinum* channel leading off the presumed stoking entrance of the furnace and continuing under Room 9 where it became the upper part, probably a drain, over a Period I drain.

*Room 9.* A long and narrow room (8 feet by 24 feet), which led directly into Room 13. It had a clay floor beneath which was found deposited an early second-century carinated beaker with bird bones, obviously put down as a votive offering at the time of the laying of the floor. A drain ran under this room, with solid sides rendered with *opus signinum* and clearly belonging to Period I ; it was, however, re-used in Period II by the laying over it of a further *opus signinum* channel, and outflowed just beyond the west corner of Room 9.

*Room 13.* This room was the cold plunge-bath of Period II ; it measured 8 feet by 6 feet, and had an *opus signinum* floor with a quarter-round moulding of *opus signinum* at the junctions of floor and walls, which were largely covered by the later plunge-bath (Plate III). Only the south-east wall was retained in the later period, but reinforced by the addition of another length of wall against its face, which probably also masked the entrance to the bath ; the north-east and north-west walls were superseded by the later structure whilst the south-west wall was partly removed and partly covered by the steps leading down into Room 17. Room 13 was originally drained out through clay pipes flowing into the lower and earlier of the two superimposed drains at the west corner of Room 9 ; later, however, and obviously at the same time as the building of the upper of the two superimposed drains, a lead pipe was let into the room's north-east wall to conduct water first towards the drains at the west corner of Room 9 and later towards the curving drain constructed to the East and under Room 14 ; none of this lead piping was recovered, but its position in the wall was quite plain (Plate IV).

*Room 15* is largely unexcavated and conjectural. It is possible



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BATH BUILDING

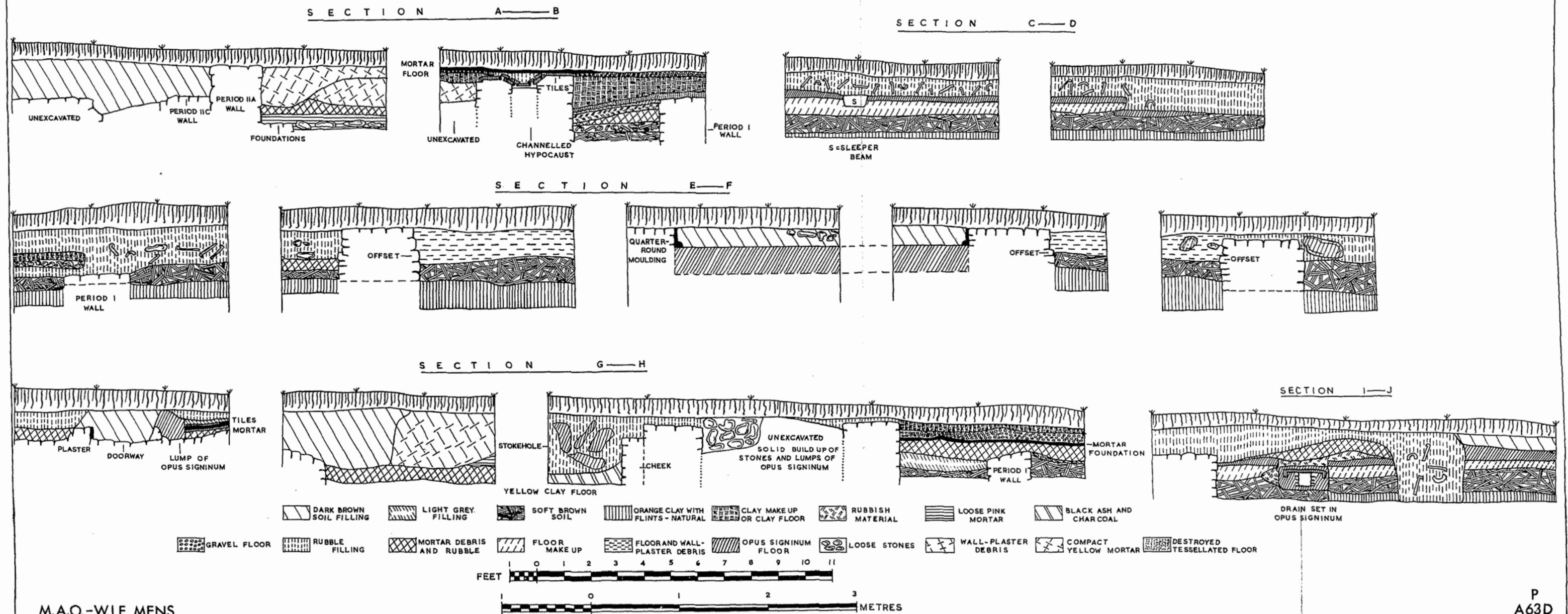


FIG. 3

that its south-east wall continues beyond its junction with the bath building's north-east wall, and there may be further partition walls in the unexcavated part of this room as well as the possibility of another stoke-hole mentioned above. Its south-western part ended on a wall 2 feet 6 inches thick, built of ragstone and off-white mortar, which divided it from Room 14, and had a thin (2 inch) floor of yellow mortar laid directly upon the Roman plough-soil; this floor was mostly covered by a deposit of domestic refuse (Fig. 2, Rubbish Pit B), which provided good dating evidence for the end of Period II. The north-west wall of the room was badly robbed down to its foundation courses. South-East of the outer wall there were signs of further structures, and later floors were exposed in the restricted area available for excavation.

Room 14 was a fairly small room (8 feet by 9 feet) giving access to Room 13 through a presumed doorway, later blocked by the Period III reinforcing wall. Its south-west wall was completely robbed out, though there is no doubt about its position. The room was floored with yellow mortar to the same thickness as in Room 15, and this floor was cut through when the later drain for Room 13 was built. This drain was of very solid construction, with bonding-tiles encased in a layer of *opus signinum*, which was first deposited as a lining into the construction trench dug for the drain; its roof and bottom were made of *tegulae*, and the whole drain was finally sealed with an upper layer of *opus signinum*. There was no material at all found in this drain, which was carried under the room's south-west wall in order to connect with the Period I drain just to the South-West of this wall; it was also carried through and under the line of the north-east wall of the room, which had to be partly removed at this point to allow for the drain to be carried upwards by means of *imbrices* to a point at the south corner of Room 9 where it would have been joined by the lead pipe from Room 13. The removed section of wall was made good by the construction of another section partly over the existing walls. It is assumed that this drain was built through the floor of Room 14 at a time when this room was no longer in use, except as a dump for rubbish; this is clear from the fact that the repaired wall-corner has been built directly upon this rubbish deposit. The only apparent reason for the construction of this drain seems to be that it was required to carry out water from Room 13 at a time when the plunge-bath was continuing in use during the building of the Period III extensions; as the previous outflow area, in the west corner of Room 9 was now being incorporated into the new structures, the plunge-bath had to be drained out temporarily by means of this and the Period I drain until the later building was completed, and brought about the incorporation of Room 13 into Room 17. If this is the case, then Room 13 must have continued into use right to



the end of Period II. South-East of the external wall of Room 14, another *opus signinum* floor was exposed ; it was some 4 inches thick and may have been tessellated—a few *tesserae*, cut from bricks and tiles, were found upon it, but there was so much débris from the roof in this restricted area that the tessellation is not beyond doubt. Nor was any conclusive evidence found for any walls North-East or South-West of this floor ; if they were totally robbed, which must be the case, the nature of the filling has concealed any traces of these walls in the relevant sections (Fig. 3, Section C-D). It is clear, however, that this floor was divided into two unequal parts by a partition, probably of wattle and daub, as a trench was found cutting through the floor ; it must have contained a sleeper-beam.

*Rooms 10-12.* These three heated rooms were supplied with heat mainly by the unexcavated furnace to the North-West of Room 10.

Room 12 (9 feet 6 inches by 10 feet) was found filled with rubble containing several lumps of the destroyed *opus signinum* floor suspended over the room's hypocaust floor made of the same material. All the *pila* tiles in this room had been totally robbed, but their position could be ascertained from the masons' trowel marks on the hypocaust floor. All four walls of the room were of ragstone and off-white mortar, 2 feet in thickness and largely robbed ; the junctions of walls and hypocaust floor were neatly finished by carrying the *opus signinum* of the floor a few inches upward on to the face of the walls. Heat was let into this room through a single flue in its north-west wall.

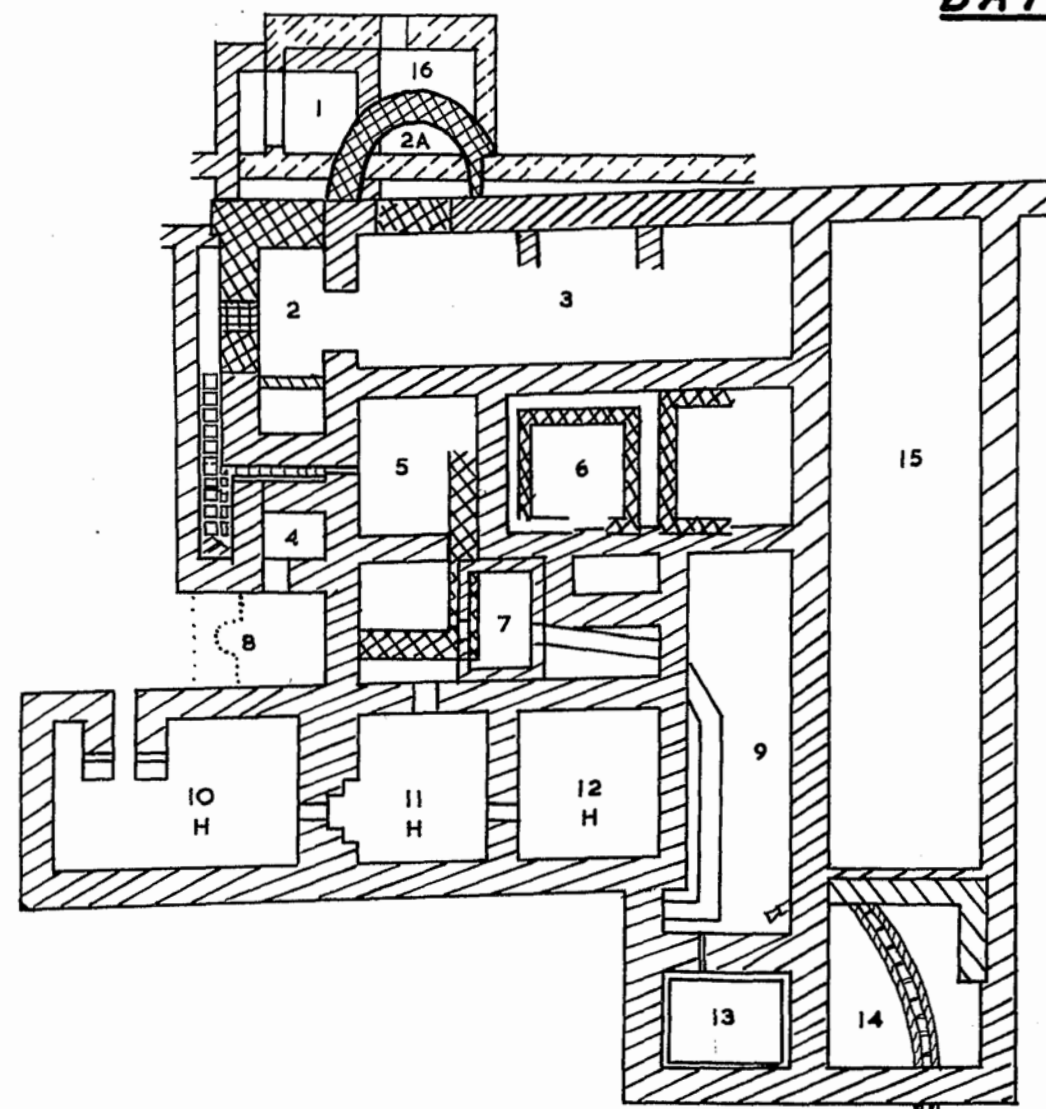
Room 11 (9 feet by 10 feet) was similarly floored by *opus signinum* and largely robbed of its *pilae* ; some soot was found deposited over the floor close to the south-west wall. It was supplied with heat both through a single flue in its north-west wall and also through another flue in its north-east wall admitting heat from the stoke-hole in Room 7. The north-west wall is much thicker (4 feet) than the other three (2 feet), but all were built of the usual ragstone and off-white mortar.

Room 10 is much larger (16 feet by 10 feet) than the other two rooms and was, like them, floored with *opus signinum* up to the line of the flue through its north-east wall, with *pilae* supporting both the suspended floor and the inferred water-tanks. The *pila* tiles used in these three rooms are rather smaller than those used in Period III ; the base tiles were  $10\frac{1}{2}$  by  $10\frac{1}{2}$  by 2 inches, and the remainder  $7\frac{1}{2}$  by  $7\frac{1}{2}$  by  $1\frac{1}{2}$  inches. The suspended floor was laid over these *pilae*, which consisted of a base tile and eleven smaller ones set in yellow mortar to a total height of 25 inches, and was placed upon large bridging-tiles, 2 inches in thickness ; the thickness of the floor itself was about 3 inches. The flue through the room's north-east wall was lined on either side by two short walls built of bonding-tiles, which had box-tile flues let

# ECCLES ROMAN VILLA

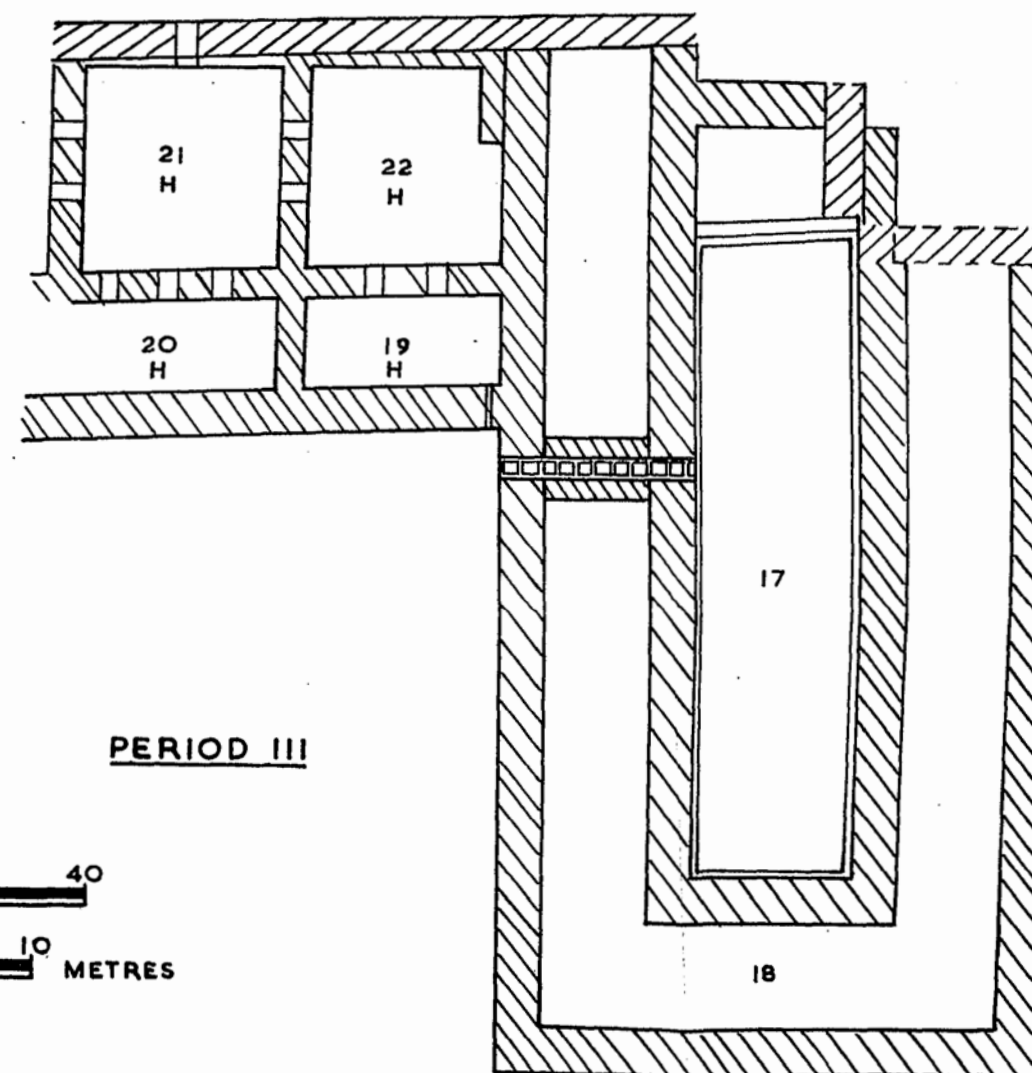
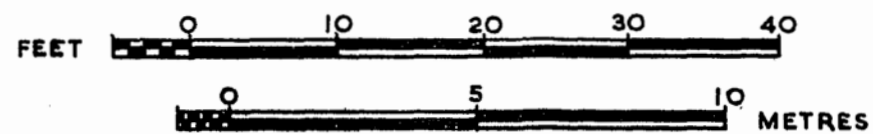
1962

## BATH BUILDING



PERIOD II

PHASE A  
 PHASE B  
 PHASE C  
 H = HYPOCAUST



PERIOD III

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FIG. 4

into them; the flue itself was lined with yellow clay, which had been baked to a deep brick-red colour. The north-western part of this room had a clay floor, which was partly burnt, and the south-west wall was badly burnt, particularly opposite the flue. *Pilae* were set in the narrow space between the flue and the north-west wall, and this space is assumed to have been occupied by a water-tank for hot water, which would have been heated both from the box-tile flue through the side of the main flue and through another flue in the conjectural north-east wall at the north corner of the room.<sup>13</sup> Whether another hot-water tank was also placed immediately to the South-East of the main flue is less certain, though the box-tile flue through the south-eastern side of the flue wall would strongly suggest this. The south-west wall of this room was pierced in Period III to allow some heat to penetrate into the new rooms to the South-West.

*Room 8* (8 feet by 7 feet), whose north-west wall is immediately beyond the excavated area<sup>13</sup> and not shown on the plan, had an early yellow mortar floor sloping up towards a curious feature to the North-West built of chalk. Lumps of chalk were mortared together to present a regular face to the South-East, with a hollow niche about their centre; the purpose of this feature is not known, but the use of chalk as building material would suggest its construction in Phase C. A later *opus signinum* floor, laid over rubbish material and débris, raised the level of this room to the height of the doorway leading into Room 4.

*Room 2A*, together with alterations to Room 2, is the main addition to the bath building in Phase C. Its construction meant the destruction of Room 16, and necessitated the partial removal of the south-west wall of Room 16, which was exposed as foundation layers underneath the floor of Room 2A. Room 2A was apsidal in shape and built entirely of blocks of chalk set in yellow mortar, which must have also been used to render the internal surfaces, from the evidence of a few patches found *in situ* in the east corner of the room. The apse was built against the north-east wall of Room 3, and preserved *in situ* the painted wall-plaster face of Room 1 at its south corner. The doorway through the north-east wall of Room 3 was blocked with lumps of mortared chalk. This apsidal room had a yellow mortar floor, some 3 inches in thickness, under which was found an infant burial. The usual purpose assigned to an apse in a bath house is that of hot plunge-bath or hot-water basin, but it is rather difficult to see how this function could be fulfilled in this case as Room 2A is so distant from any source of heating water; nor was any evidence found for any piping, which may have fed water

<sup>13</sup> These features were proved in 1963.

into a hot bath in the apse. On the other hand, it could have held a pedestalled basin, filled either by can or by a pipe at a higher level.<sup>14</sup>

*Room 1* is a small room (8 feet by 9 feet) just North-East of the main bath suite of the period, and it may have been an outside latrine or store-room; its painted wall-plaster, however, would rather suggest some other use for this room. The whole of the north-west wall was recovered; it was surfaced with painted wall-plaster, which was preserved *in situ* by the Phase B wall and by the later Phase C wall outside the north corner of Room 2; it is possible that a doorway existed at this point before it became blocked by the Phase C wall. The south-east wall of Room 1 was removed in Phase B, but enough of it was left as foundation courses under Room 16 to establish its course all the way to the north-east wall of Room 3. Room 1 was floored with yellow mortar and had a rough tessellation of red and buff *tesserae* cut from tiles.

*Room 16*, which superseded Room 1 in Phase B, was much larger than the earlier room (12 feet by 7 feet), had a doorway through its north-west wall and a drain, floored with *pila* tiles, through its north-east wall. Its walls (2 feet 6 inches thick) were built entirely of bonding-tiles set in thick yellow mortar, and it had a floor of similar material. South-East of this room, there was an *opus signinum* floor, some 2 inches in thickness, laid over a hard core of roof débris and partly over another *opus signinum* projecting beyond the north-east wall of Room 3; this latter floor may have been that of an open verandah to the North-East of the bath building, and was cut through to allow for the building of the south-west wall of Room 16.

The dating of this period is based mainly on the pottery found stratified in the various rooms. The date suggested for the beginning of the period relies on much late first-century coarse ware, including the carinated beaker deposited under the floor of Room 9 which is not later than the first years of the second century, and on early second-century figured samian ware; the dates suggested for the closing of the period are based on the coarse pottery found in Rubbish Pit B (Fig. 2), which is largely of mid-second-century date, and on Antonine samian ware found under the floor South-East of Rooms 14 and 15.<sup>15</sup>

### *Period III, c. A.D. 140/160-290 : The Bath Building, Second Phase*

During this period, the villa's bath building underwent drastic alterations and was considerably extended by the addition of several

<sup>14</sup> I am indebted to Professor S. S. Frere, V.-P.S.A., for this suggestion.

<sup>15</sup> An *as* of Hadrian, found in 1963, in the debris of a further hypocausted room, clearly belonging to this period, provided additional support for the dating of the closing of this period to not earlier than about A.D. 140.



Period I : Fragment of Pillar-Base.

*Photo: R. G. Foord*



Period II : Stoke-Hole, partly overlaid by Phase C wall.

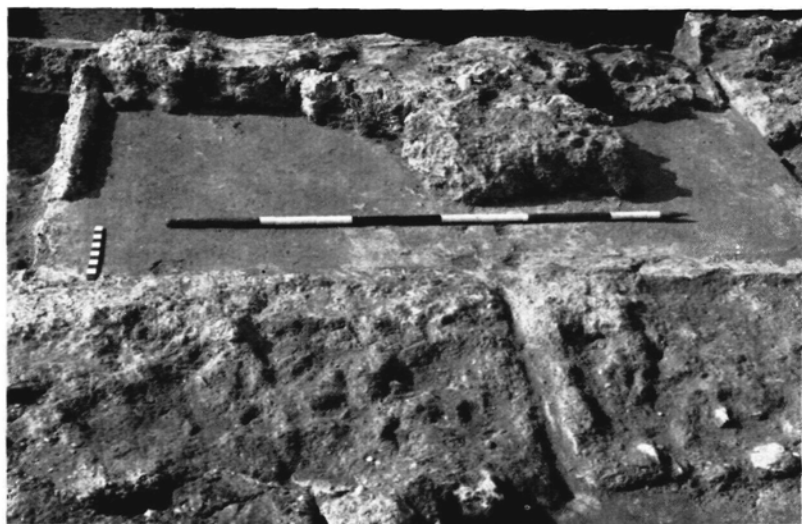
*Photo R. G. Foord*

PLATES III AND IV



*Photo: R. G. Foord*

Rooms 13 and 17 : Periods II and III.



*Photo: R. G. Foord*

Room 13 : Quarter-Round Moulding and Position of Lead Pipe.



Period III : Construction Technique.

*Photo: R. G. Foord*



Room 21 : Flue and collapsed Floor.

*Photo: R. G. Foord*

PLATE VII



*Photo: R. G. Foord*

Rooms 20 and 21 : Flues and Bridging-Tile.



new rooms to the existing Period II building, which was thus eventually superseded by the new structure ; these extensions were generally to the South-West of the range of Rooms 10-14, some of which are known to have certainly continued into use for some time at least as integral parts of the new bath building.

From the construction point of view, the distinguishing feature of this new building is the almost exclusive use of ragstone set in yellow mortar as the main building material, with the occasional levelling course of bonding-tiles, for the main walls in their increased width of 3 feet, and the use of bonding-tiles rendered with a thick coating of yellow mortar for the partition walls of the hypocausted rooms. The standard technique for the building of the main walls was to lay stones, pitched at an angle, into the construction trenches, to cover them with a spread of *opus signinum* in order to consolidate this loose foundation, to repeat this for a second layer, and then to build the solid ragstone walls over this foundation. The purpose of these pitched stones and the unfilled gaps between them (Plate V) would seem to be to allow for the circulation of air and, by the easier dispersal of water, to prevent excessive dampness rising into the overlying structures.

The outstanding room of this period is the unusually large cold plunge-bath, Room 17, surrounded on three sides by a corridor, Room 18. The corridor was 7 feet wide, had the standard ragstone walls, 3 feet thick, faced with painted wall-plaster ; none of this plaster was found *in situ*, but broken up in the debris which filled the corridor, and consisted mainly of borders and geometrical patterns of blue, red, green and yellow on contrasting light-coloured backgrounds. The corridor was floored with *opus signinum*, 2 inches thick, which was laid directly upon the Roman topsoil between corresponding offsets built for this purpose in its enclosing walls (Fig. 3, Section E-F). The floor was apparently methodically destroyed when the walls were robbed, and was nowhere recovered intact.

Room 17, enclosed within this corridor, was the cold plunge-bath, approaching the size of a modern swimming-pool, and measured 44 feet by 11 feet ; its north-west, south-east and south-west walls were very solid structures, 3 feet thick, of the same ragstone and yellow mortar—such a thickness is a little surprising for an internal structure, but quite necessary to withstand the pressure of the volume of water contained within these walls. At its north-east end, the wall of this bath was built around the north-east side of the earlier plunge-bath (Room 13), and the latter's *opus signinum* floor was overlaid by a platform leading down into the plunge-bath by means of the double step set at a slight angle to the walls at the north-east end of Room 17. The floor was of the usual *opus signinum*, but unusually 1 foot thick, very well preserved,

and it defeated almost all efforts to cut a section through it by normal means, except at the west corner of the bath where it was possible to establish its thickness ; the junctions of the floor and its enclosing walls were secured against seepage by the laying of a quarter-round moulding of *opus signinum* over the whole length and width of the bath, except at the north-east end where the double step made this unnecessary.

Water was drained away from the bath by means of a large drain built about the middle of its north-west side, and carried under the corridor floor to flow out immediately South-West of the south corner of Room 19 ; how this effluent was disposed of beyond this point has not yet been established, but it may have been through pipes, probably connecting with the Period I drain beyond the limits of the present excavation, though it is quite certain that the Period III drain did not itself continue beyond the north-west wall of the bath. Similarly, it is not precisely known what was the form of the outlet from the bath into the drain below it, for the north-west wall of the bath was robbed at this point down to its foundation courses, thus obliterating any signs of the outlet which must have been sited there. The drain was very solidly constructed, with walls about 18 inches thick, probably built of bonding-tiles, slightly at an angle to the corridor and bath walls, and had a floor of roofing-tiles, which were also used for the internal surfaces ; presumably, such tiles would have also been used to provide a roof for this drain along its course, and particularly at the point where it was intended to pass under the north-west wall of the corridor.

The slight depth of the plough-soil over the plunge-bath and the extensive robbing have prevented the discovery of any evidence about the water supply of this large bath, to show where from and how water was conducted into it ; likewise, it is a matter for conjecture, at present, whether the supply was obtained from a well still awaiting discovery, or from the Medway itself, though there are factors, such as distance and the tidal nature of the river near the site, which would seem to preclude the latter source of supply.

The plunge-bath and its associated corridor fell into disuse before the end of the occupation of the site, and were used for various purposes. Evidence was found for some effort at levelling up the floor of the bath by laying down large river boulders set in grey-blue clay, probably originating in the river-bed, and for some indeterminate industrial activity centred about a hearth and ash-pit built about the middle of the bath and cut through the destroyed floor of the corridor. A rubbish pit (Fig. 2, Rubbish Pit C), containing much ash and calcined animal bones, was dug at the north-east end of the corridor, and its pottery has provided conclusive evidence for the end of the bath's use as such.

At least four heated rooms (Rooms 19-22) were added to the original

bath building during this period directly to the South-West of the earlier hot rooms. The south-west wall of the earlier structure was now the north-eastern limit of the new suite. The south-west wall of these heated rooms is the same 3 feet thickness as the plunge-bath complex to the South-East and likewise built of ragstone set in yellow mortar. A short drain was let into the south corner of Room 19, probably to disperse water from a hot bath.<sup>16</sup> The partition walls of these four rooms were 2 feet thick, built of bonding-tiles set in yellow mortar, which was also used as a thick coating to render these walls below the level of the suspended floors; these walls were pierced at intervals by arched flues (Plate VI), except for the short wall between Rooms 19 and 20. The arches of these flues were built mostly of tufa voussoirs to allow for maximum heat convection, and heat was conducted up the walls through box-tile flues set in them—two of these flues were found *in situ* in Room 20.

The floors of the hypocaust were of *opus signinum*, about 2 inches thick, laid over a hard-core foundation of bricks, tiles, blocks of chalk and ragstone and, in Room 20, some material from the destroyed Period I building. The suspended floors, 3 inches thick, of the usual *opus signinum*, were built over the usual *pilae*. These consisted of a large base tile (of three sizes: 11 by 11 by 1½ inches, 11 by 12 by 1½ inches, or 13 by 12 by 1½ inches) and ten smaller tiles (invariably, 7½ by 7½ by 1½ inches) held together by layers of yellow mortar to a total height of 2 feet.<sup>17</sup> Large bridging-tiles (19½ or 20½ by 22½ by 2½ or 2¼ inches) were placed upon these *pilae*, and the *opus signinum* was finally laid over them; a few of these bridging-tiles were recovered intact (Plate VII), and showed signs of much burning and flaking, except at their four corners which had rested upon the *pilae*. Of these *pilae*, many were still *in situ*, consisting of a base and one or two smaller tiles, a few were found intact, but most of them were robbed and possibly re-used elsewhere; it was, however, possible to deduce their original position upon the floors either from the surviving traces of mortar or from the masons' trowel marks.

Room 19 measured 13 feet by 6 feet, the complete size of Room 20 is not yet known, Room 21 was 14 feet by 12 feet, and Room 22 12 feet by 13 feet. An additional strip of bonding-tiles was built from a little South-West of the east corner in Room 22 and continued in ragstone along the whole length of the south-west walls of Rooms 10 and 11, but in decreasing thickness towards the north corner of Room 21 where it joined its north-west wall; obviously, the purpose of this

<sup>16</sup> I owe this suggestion to Professor S. S. Frere, V.-P.S.A.

<sup>17</sup> '... altitudinem autem pilae habeant pedes duo.' (Vitruvius, *De Architectura*, V x 2).

strip was to reinforce the bonding of the thick Period III wall into the earlier and slighter wall forming the north-eastern limit of these rooms.

Heat was supplied partly from the furnace lying North-West of Room 10, by means of a flue opened through the south-west wall of this room ; in view of the size of the four rooms in question, however, it is very likely that another furnace is yet to be found. Indeed, the flues through the north-west wall of Room 21 strongly indicate that a second furnace may well lie immediately beyond Room 21 ; similarly, that Room 20 extends beyond the line of the north-west wall of Room 21 would again point to the location of this presumed furnace in the area North and West of these two rooms.

At the close of this period, these four heated rooms seem to have become redundant, their suspended floors were allowed to collapse over their robbed *pilae* (Plate VI) at the more easily accessible points, and much plaster and mortar débris, singularly devoid of any amount of stratified material, was deposited in them. They were also used as a burial ground for at least three skeletons, one of which was recovered practically undisturbed in the east corner of Room 20 (Plate VIII). However, the area occupied by these rooms came into renewed use later still in the occupation of the site ; the arched flues were then levelled down, and the débris was consolidated (this would also account for the very disturbed condition of two of the three burials) before the laying down of another *opus signinum* floor ending on the line of the south-west wall in Room 21, with a quarter-round moulding of *opus signinum* to suggest the likelihood of a very late plunge-bath. This is so far, however, a period of which only very vestigial traces have been found owing to the slight depth of plough-soil.

The pottery found in Rubbish Pit C (Fig. 2) provided the evidence for the closing years of this period ; it is consistently of a late third- to early fourth-century date and has since been lent additional support by coins found in 1963, in the débris of the furnace-rooms to the North-West of Room 10 which, clearly, were destroyed at the same period as this bath building.

#### *Period IV*

Very little has so far been recovered, which must be of a later date than Period III. As far as the bath building is concerned, the only available evidence is that of some sort of industrial activity in Room 17, and the new *opus signinum* floor laid over the demolished Room 21.

To this later period may also belong the wall and tessellated floor exposed immediately below the plough-soil North-East of the bath building, which was tentatively assigned to Period II in the plan,<sup>18</sup> and

<sup>18</sup> It was established, in 1963, that this tessellated floor belongs to the second period of the site's occupation.



*Photo: R. G. Foord*

Room 20 : Burial in Hypocaust Débris.



*Photo: R. G. Foord*

Room 2A; Period IIC.

which belongs to the villa's living quarters. The tessellation consisted of *tesserae* cut from the standard red and buff tiles, and was laid upon an *opus signinum* floor, about 3 inches in thickness and showing signs of subsidence to the North-East; this pavement was badly damaged by the plough, and ended upon a ragstone wall, which was 2 feet thick. South-West of this wall, there was another *opus signinum* floor, about 2 inches thick, laid over a hard-core foundation of bricks and tiles, and similar to that found East and South-East of Room 16; it did not extend as far as the north-eastern limit of the bath building, but there was a space between the floor and the bath building seemingly unoccupied by any structures and where at least one rubbish pit (Fig. 2, Rubbish Pit A) was dug. The function of this floor South-West of the tessellated pavement is not clear, unless it were the floor of a covered corridor or verandah in front of the living accommodation.

#### SUMMARY

On present evidence, it is quite clear that this site is occupied by a large Romano-British villa, which remained in occupation from the early years of the Roman conquest to the end of the Romano-British period. No evidence has so far been forthcoming for any pre- or post-Roman occupation of the site.

This villa would appear to be at the centre of a large estate, with at least one other building known to have existed in its immediate vicinity.

There are signs that the villa was also the centre for some unspecified industrial activity, but much further work is needed before anything at all can be said about the economic background of the villa.