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SPRINGHEAD: MISCELLANEOUS EXCAVATIONS

By the late W. S. PENN, B.Sc., A.I.R.I.

INTRODUCTION

It had been known for some time that the single carriageway of the A2 (built 1921-22) was to be extended by the addition of a second carriageway south of it and this eventually took place between 1964 and 1966. Thus, most of the work which took place between 1960 and 1966 was of an emergency nature and in many cases full archaeological evidence could not be obtained. However, many buildings along the proposed line of the road were rescued from oblivion and in nearly all cases it is possible to offer some useful evidence.

The excavations described in this report took place between 1960 and 1964, apparently sufficiently in advance of the road works not to be considered in the light of a possible emergency. However, the road had been planned much earlier and it was thanks to the inevitable delays which seem to bedevil public works that gave us more time than we had anticipated.

The following are the features and buildings described in this report:¹

Feature	F.7	— a cremation burial.
„	F.8	— a chalk platform.
„	F.9	— a thick red burnt clay area.
„	F.25	— an oven.
„	F.26	— a kiln.
Building	B.9	— two walls of a building.
„	B.8	— contained a hypocaust.
„	B.10	— an agricultural building.
Road	R.6	
„	R.7	
„	R.8	
„	R.11	

These are not all of the discoveries made during these years and others will form the subject of future reports.

ACKNOWLEDGMENTS

First, I must thank various authorities for assisting with the finds. Mr. M. R. Hull, M.A., F.S.A., examined the fibulae; the coins were

¹ W. S. Penn, Springhead—Map of Discoveries, *Arch. Cant.*, lxxx (1965), 107. This gives the locations of all the features mentioned in the report.

examined in the field by Mr. E. W. Tilley and finally by Mr. R. A. G. Carson, M.A., F.S.A.; Dr. I. W. Cornwall examined soil samples; Mr. G. A. Matthews reported on the seeds; Mr. D. Kelly, B.A., gave a reference on the duck brooches, and Mr. K. S. Painter, F.S.A., commented on the pewter pot.

My own colleagues were generous with their assistance as usual. Mr. E. W. Tilley dealt with the small finds, acted as site secretary and helped in the preparation of the manuscript; Mr. W. Gee was responsible for all the artwork; Mr. S. Harker dealt with the pottery, and Mr. P. Connolly with the photography.

I must also thank the excavators for their support, and in particular would mention Messrs. E. W. Tilley, S. Harker, E. Ellett, F. Turner, M. Groombridge, G. Burles, P. Connolly, V. T. C. Smith, Dr. P. Mitchell and Miss C. Akers.

There was a change of tenant farmer during the period of these excavations and we now excavate through the courtesy of Mr. J. Banks.

Finally, the site is excavated by the Springhead Excavations Committee for the Gravesend Historical Society and we are grateful to the Society for its continued support.

BUILDING B.10

INTRODUCTION

This building is by the side of the Watling Street (R.1) so much so that its south wall provides a revetment for the road. During the excavations it was named 'The Watling Street Building' for convenience. On the Map of Springhead,^{1a} its walls are shown in the last phase since the earlier building, which possessed an additional room on the north-east (Room C, Fig. 1) had been robbed prior to conversion.

The various phases of the life of the building may be represented as follows:

- | | |
|--|--|
| <i>Phase I</i>
(Claudian) | A composite courtyard, or perhaps road.
(Stratum 1A, B, C.) |
| <i>Phase II</i>
(Flavian) | A thick silt layer (Stratum 2) on which a chalk road was built. |
| <i>Phase III</i>
(Early second century) | A thick layer of dark soil accumulated (Stratum 3) or was deposited on Stratum 2 and obliterated the road. A rectangular building was erected with Rooms A, B and C. Its foundations were cut through Stratum 2. |
| <i>Phase IV</i>
(Late-second/early third century) | Room C was destroyed and the wall bounding Room A was strengthened. A corn-drying kiln was inserted in Room A. |

^{1a} *Op. cit.*, note 1, page 163.

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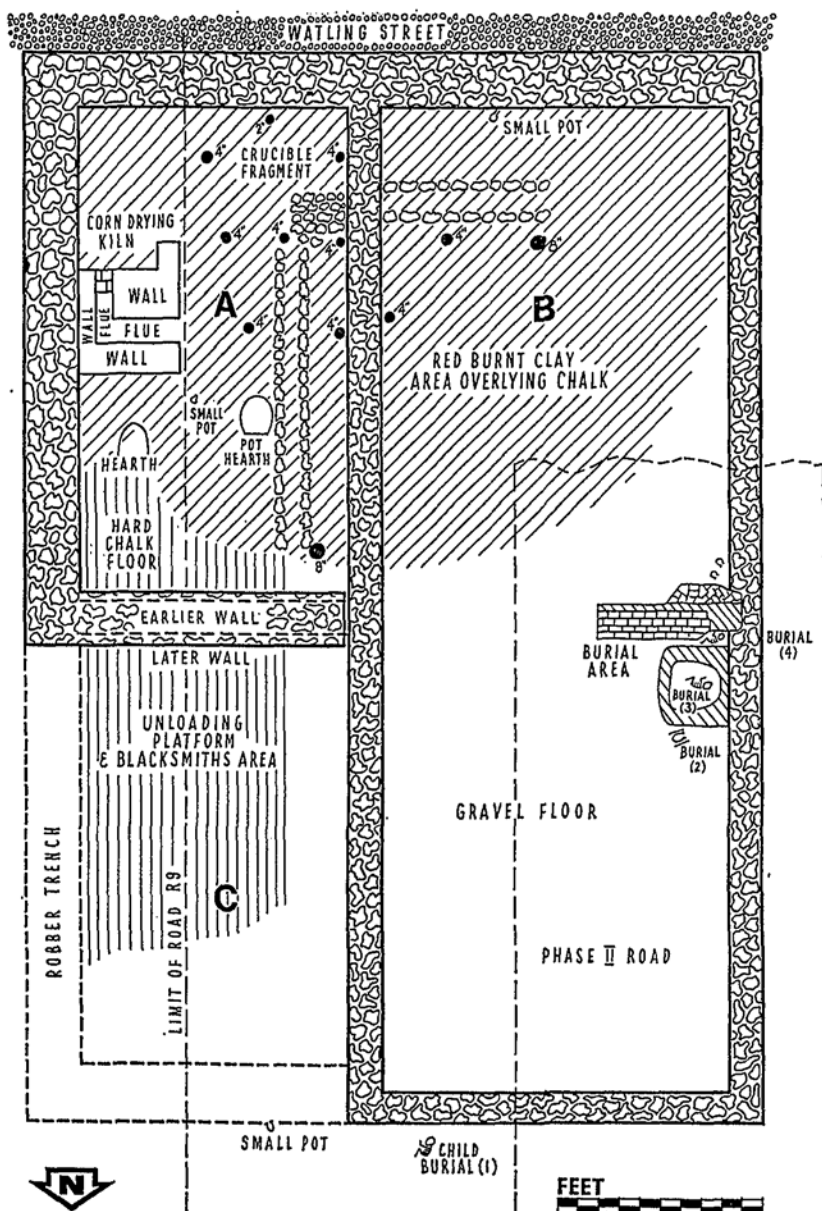


FIG. 1. Building B.10.

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- Phase V*
(Late third century) A most substantial loading platform was built (see Section Fig. 2) in the area previously occupied by Room C, presumably to service a blacksmith who erected a shelter in the now derelict Rooms A and B.
- Phase VI*
(Late fourth century) Road R.9 (perhaps replacing the earlier road) to the harbour (F5) was constructed up to the Watling Street partly covering Room A and the kiln.
- Phase VII*
(Fourth century) The north-west side of Room B was used as an infant burial area.

DATING OF STRATA AND PHASES

Details of the dating of strata and the phases in which they occur are given in Table 1. This indicates that the building, in one form or another, had a very long life.

There was some form of occupation on the site before the building was erected which probably was in the Hadrianic period. The building was probably used for agricultural purposes but became derelict by the end of the third century. However, it was taken over in this state by a blacksmith and it was used for iron-working for a long time.

This area produced one of the most significant coins so far found at Springhead. It is the latest stratified coin found, namely Coin No. 1, Table 2, of Valentinian 1, nearly 100 years later than the latest structure previously found.

It seems, therefore, that Road R.9 was laid down towards the end of the fourth century, a fact of the utmost significance. The temples had been destroyed by this time but here there is positive evidence of continuation of life in the town. Something of importance must have been going on at the time for a new road to have been built.

In the same connection, it is interesting to note that the burial area was for infants only. No adult burials have been found in the town which suggests that rules and the boundaries of the town were still being observed at a late date.

Phase I (Claudian)

This phase consisted of a thick layer of oyster shells (Stratum 1 A) presumably employed as a base on the natural grey silt of the valley. Over it is a further thin layer of silt (Stratum 1 B) and over this a thick layer of yellow gravel (Stratum 1 C).

This composite structure may have served as a courtyard or early road but insufficient was excavated to be sure.

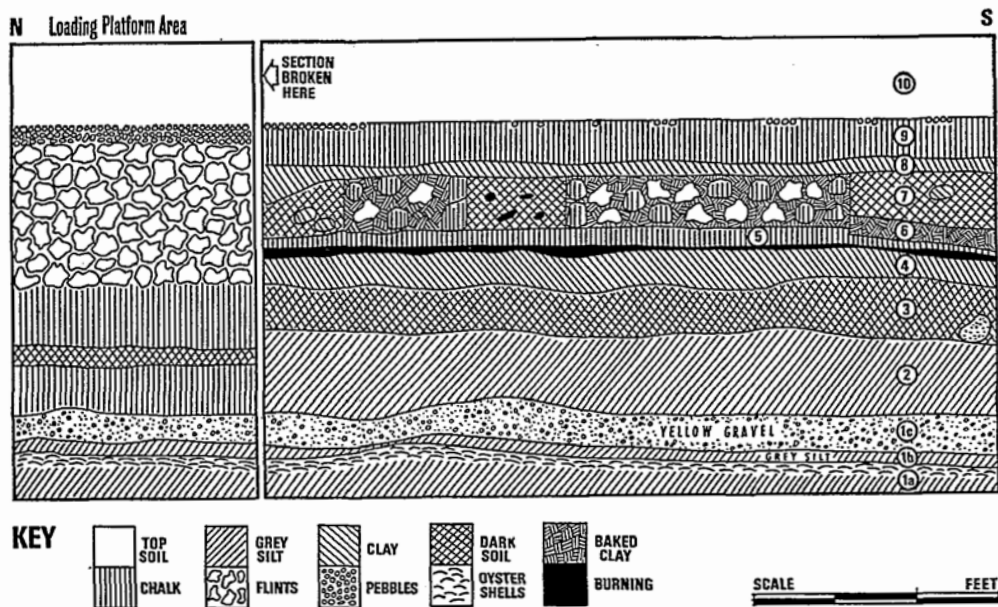


FIG. 2. Section through rooms A and C of Building B.10.

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Phase II (Flavian)

The valley was subject to extensive flooding from the tidal waters which may thus be responsible for the thick layer (Stratum 2) of ooze or silt. Presumably this necessitated the construction of a thick chalk road (with considerable camber) down to the harbour (F5).

This road only used chalk as a constructional material and, curiously, terminated some 20 ft. from the Watling Street.

Phase III (Early to mid-second century)

A thick layer of dark soil (Stratum 3) accumulated over the silt or, more likely, was deposited there. The reason for this belief is the occurrence of painted wall plaster (usual plain colours) mixed in the top of the soil. This plaster probably came from the building now erected on the site, the foundations for which were cut through the soil. These foundations must have been most insecure although, clearly, they were only the mortared flint footings for a light wall.

The building was rectangular, 53 ft. by 36 ft., divided into three rooms, A, B and C. All were floored with clay (Stratum 4).

There is no indication as to what the original building was used for. Since it later had considerable agricultural connections, this may well have been its original purpose.

Phase IV (Late second/early third century)

Extensive changes took place during this phase, both for utilitarian reasons and perhaps because the foundations of the building had subsided.

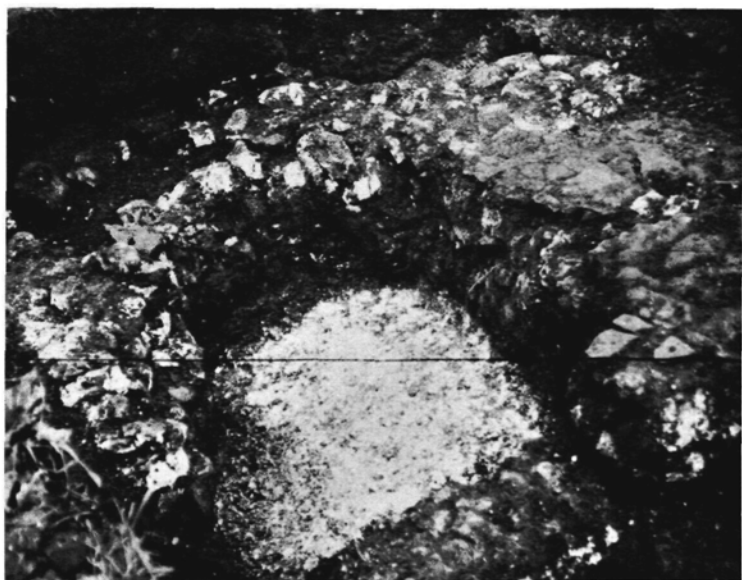
First Room C was eliminated and what had been the wall dividing Rooms A and C was strengthened. Second, the clay floor of Room B was overlaid with chalk in the southern half and gravel in the northern half. The clay floor of Room A was covered over with chalk (Stratum 5).

A small corn-drying kiln was now inserted in Room A (Plate IA). It was a fairly normal 'L'-shaped type, its walls being constructed of chalk blocks and (subsequently) baked clay. The stoke-hole was on the west side and much charcoal indicated its use. There were a number of tiles at the end of the cross-channel which suggests there may have been a sliding tile to control the draught. An example of the latter feature and the method of operating the kilns has been given by Goodchild.²

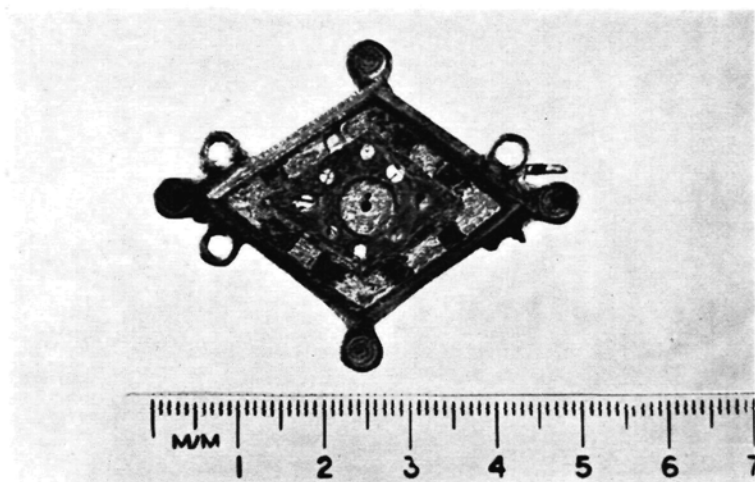
² R. G. Goodchild, *Wilts. Archaeological Mag.*, xlix, 93.



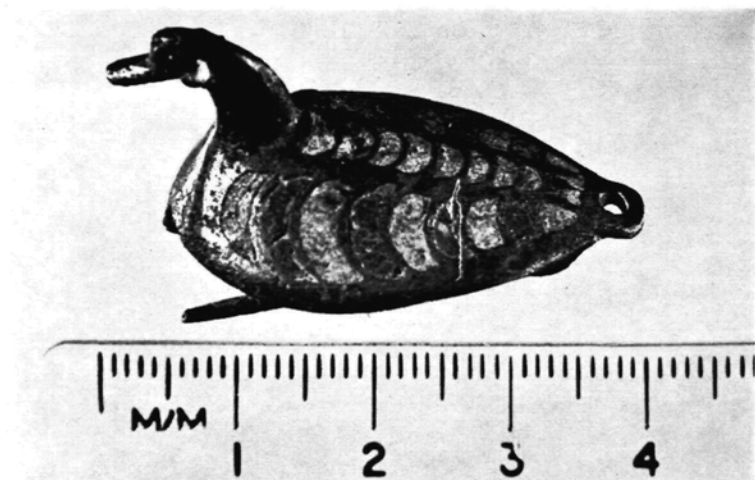
A. L-shaped Corn-drying Kiln. Building B.10.



B. Mausoleum. Building B.10.



A. Brooch 1, Table 3. Building B.10.



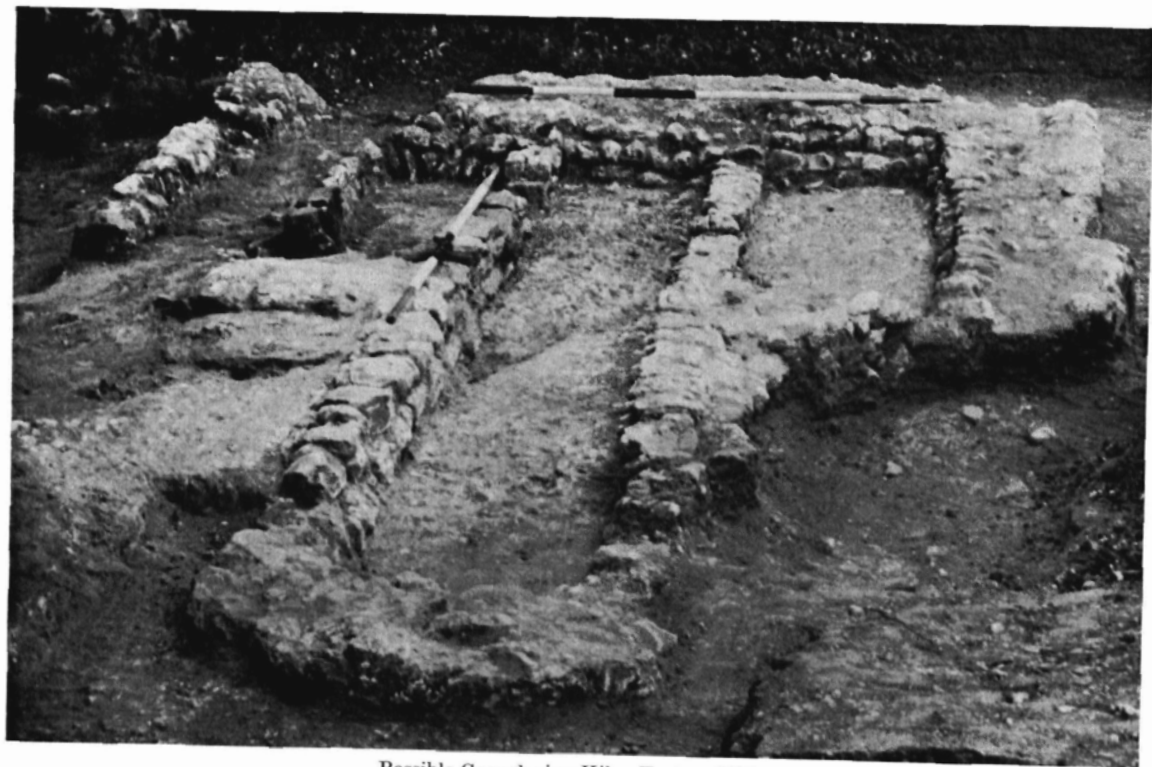
B. Brooch 2, Table 3. Building B.10.



View of Hypocaust Building and Pilae.
Building B.8.



View of Arch from Stoke-hole,
Building B.8.



Possible Corn-drying Kiln. Feature F26.

Although the kiln found in Room A was L-shaped, there are many other shapes of which the most common is the T-shaped^{3, 4, 5, 6}. It used to be thought that kilns were usually inserted in derelict buildings as at Springhead and Verulamium,⁷ but many were not.

A section through this kiln is given in Section, Fig. 2. North of the kiln was a small 'U'-shaped hearth.

Phase V (Begins late third century)

Phase V began in the late-third century and may well have continued until the end of the fourth. First a very substantial loading platform was built over what had been Room C and extending slightly over the crosswall between Rooms C and A. This must have been for unloading heavy carts of iron ore or crude iron for use by the blacksmith who now established himself.

As the building was derelict it was necessary to erect a light structure or lean-to. The chalk floors of Rooms A and B formed the base of the hut but soon became covered with a layer of varying thickness of baked clay. This was probably from a number of destroyed furnaces. The whole structure was provided with a number of post-holes which presumably formed a shelter over the working area. In the middle of the shelter were the crude dry footings of two walls at right angles, but it is difficult to decide whether this formed part of the hut or the furnace, possibly the latter.

Evidence for the blacksmith is three-fold. First, there were a number of partly-worked pieces of iron, mostly unrecognizable, but clearly part of a blacksmith's stock. Recognizable finds included a plough-share tip, knife, lynch pin, candle-holder and bolt from a lock. There were possibly fragments of sickles (see Table 5).

Second, as already stated, the area was extensively covered with baked clay and fragments of a crucible were discovered. Finally, a sample of soil from what appeared to be the remains of a furnace were analysed and appeared to contain 'blacksmith's scales' (soil Sample 1, Appendix 1).

Two samples of a silty material were also analysed (Samples 2 and 3, Appendix 1) and appear to be natural sediment. This tends to reinforce the 'flooding' suggestion mentioned earlier. Various seeds were also discovered and analysed (Appendix 2).

Phase VI (Late fourth century)

A chalk Road R.9 was built over the east side of the building which

³ Silchester, Hants., *Archaeologia*, lix, 336.

⁴ Caerwent, *Archaeologia*, lix, 308.

⁵ Thundersbarrow Hill, *Antiquaries Journal*, xiii, 121-25.

⁶ Higdow Hill, *Sussex Archaeological Collections*, lxxxix, 1.

⁷ *J.R.S.*, 1, 227.

led from the Watling Street to the harbour. It completely covered the kiln and partly covered Room A. Its late date may well be significant.

Phase VII (Fourth century)

It is probable that much of the building was completely derelict during this phase, although a blacksmith was still probably working. The reason for saying this is that the burial area is mainly confined to the inside of the north-west wall, away from the blacksmith's area.

As will be seen from Fig. 1, the main features of the burial area are a small flint mausoleum (Plate 1B) with a chalk floor and a longish tiled feature. The latter may have been a platform for conducting cremations as the tiles had been extensively cracked by heat. Some support is given to this theory by the discovery of a cremation burial (No. 2) just north of the mausoleum. The burial was contained in a pot with an up-standing tile on either side. There had almost certainly been one on top also but it had been removed by the plough. Several bone pins were found nearby. The cremation platform was partly built over the wall of the building.

There was a young child inhumation inside the mausoleum (No. 3), although there were no grave goods. However, four small pots were found around the building and one was perhaps buried with each child. Pots apparently unconnected with burials were found inside the south wall of Room B, by the kiln in Room A and on the north robbed wall outside Room C. The latter had probably been associated with child burial (1), but here, as elsewhere, the plough had caused considerable disruption.

A final child burial (4) was found between the mausoleum and platform. It was crudely surrounded by stones and pebbles and may have been covered by a tile. Mussel shells accompanied the burials and may have possessed some religious significance.⁸

Two small pots were found south of the platform but no burials were associated with them. Part of a large hone covered them.

THE SMALL FINDS

There were a reasonable number of small finds, some of which should be noted.

1. Two fine second-century brooches were found (Plate II A and B).

2. The significant coin of Valentinian I has already been discussed (Coin 1, Table 2).

⁸ W. S. Penn, *Arch. Cant.*, lxxiv (1960), 121.

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3. The mussel shells with the burials may have had religious significance. The same applies to the number of bone pins found in the burial area (Table 6, Finds Nos. 3-9).

4. Another unstratified Belgic coin was found (Coin 9, Table 2), adding to the evidence of a Belgic occupation nearby.

5. A piece of glass with a swastika motif on it (Table 5, Find No. 2).

BUILDING B.8

INTRODUCTION

This is an isolated building having no connection with another, although it may have been intended that it should belong to Building B.9 to which it is quite close. However, there is no path connecting the two and both are connected separately by Roads R.6 (B.9 Building) and R.7 (B.8 Building) to the main branch road R.2.

An even more puzzling feature is that the building was never used. It was erected during the flourishing Antonine era which makes the circumstances even more difficult to understand.

THE BUILDING, PHASE I

The building is shown in Fig. 5 and was quite well preserved. The walls, on average, survived to a height of 27 in., although this is mainly because the hypocaust was below Roman ground level.

The walls were well made in flint and reinforced with brick (not re-used roofing tiles). Whenever walls end there is additional reinforcement. The floor was well made in concrete. Thus the building was exceptionally well made.

The *pilae* were square and consisted of alternate layers of flint and brick (Plate III). Part of a well-made arch (Plate IV) led into the hypocaust from where the stoke-hole would normally have been.

The superstructure must have been made on a grand scale. First, substantial chunks of mortar were found which were part of the floor and similar to the mortar found in Building B.9 described later. About 1-in. square tesserae were also discovered which suggests a tessellated floor very much like the one in Building B.9. It may well be, therefore, that the two buildings were erected at about the same time. Plain coloured wall-plaster was also found in the debris.

The most curious feature about this building is that the hypocaust was never used. There was no stoke-hole and, in fact, a chalk path leads away from the building and is located just outside the arch.

It is certain, however, that the building was in use for a time even without heating. There are several reasons for thinking this. First, the building itself seems to have been completed and would almost certainly have been used; secondly, a path (R.7) leads from it to Road R.2;

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third, two cess-pits were found immediately outside the building; fourth, Room 3 was not part of the original building but was added later, which could hardly have occurred if the building had never been used. Thus, the building was inhabited but the hypocaust was not brought into use, a fact which may possibly be explained on the grounds of economy.

The cess-pits contained little of interest. One, 3 ft. outside the north-east wall and positioned between Rooms 1 and 2, was 4 ft. in diameter, was mainly unlined and sterile. The other, 4 ft. outside the south-east corner, was 4 ft. square, unlined and sterile.

THE BUILDING, PHASE II

The building was derelict during Phase II. A number of infant burials were inserted in the debris (Nos. 1, 2 and 3), three inside the building and one outside (No. 4).

Only one burial possessed grave goods, namely No. 1 in Room 2, which was accompanied by a pewter pot. The latter (Fig. 3, 10) may be dated to the third century.

A number of the usual small finds were found among the debris (see tables), including bronze and bone pins, coins and various pottery, including Rhenish ware.

PHASE III

A thin chalk floor was inserted over the debris of the building in Rooms 2, 3 and 4. It was just below the extant level of the walls.

Thus it may well be that the walls of the building survived to a reasonable height and that the building was re-occupied for a period during the fourth century. It must have been a relatively crude structure.

DATING PHASES

The three phases may be dated in the following manner from the scarce evidence available.

Phase I. This is the original building, dated from finds under concrete floor.

Three sherds of pottery indicate that the building was erected in the Hadrianic-Antonine period (Sherds Nos. 17, 18, 19, Table 4).

Phase II. The derelict period dated from finds in the debris, namely, Rhenish ware, the pewter pot and two coins (Nos. 1 and 2, Table 7) indicating a late third-century date.

Phase III. Thin chalk floor dated from finds under it. One coin (No. 3, Table 7) and two flanged sherds of pottery (Sherds 4.14 and

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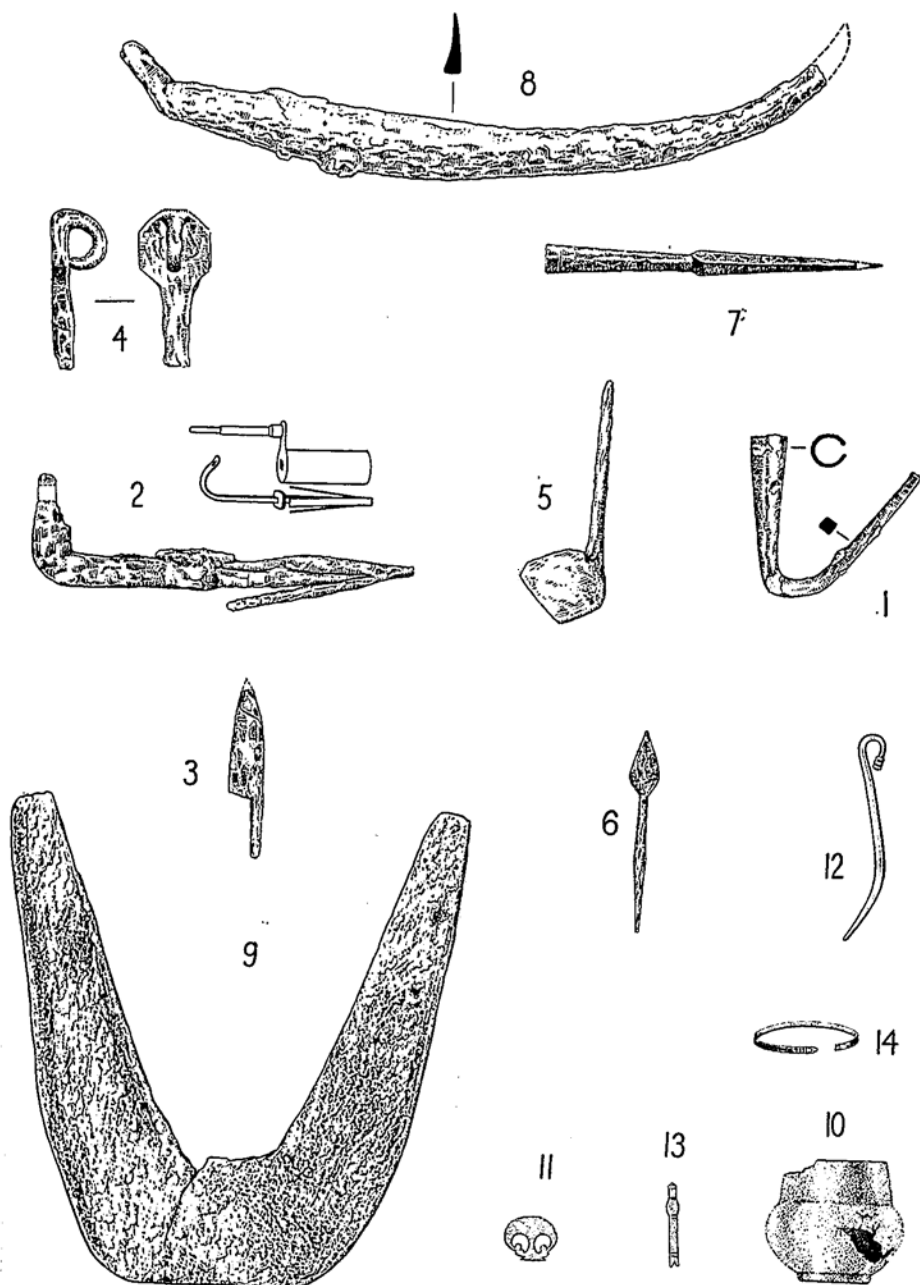


FIG. 3. Metal ware. (1/4)

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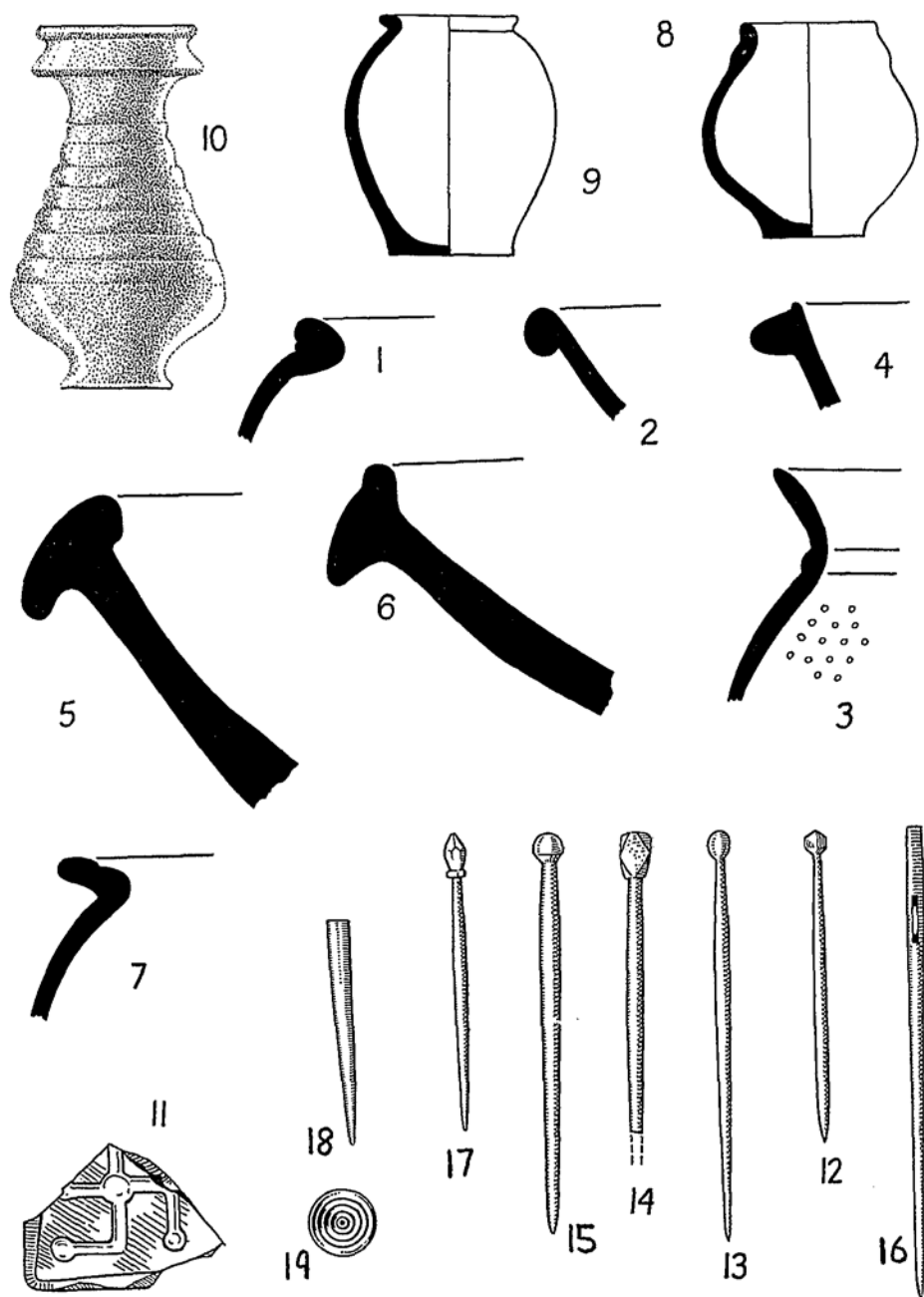


FIG. 4. Pottery, Glass and Bone. ($\frac{1}{2}$)

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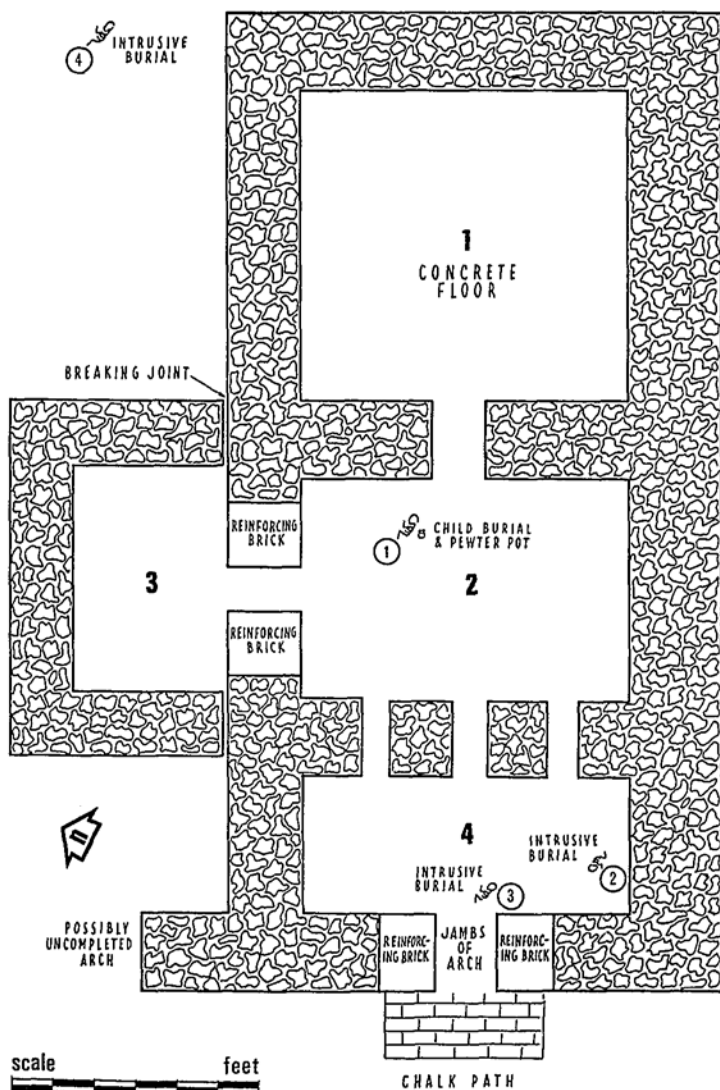


FIG. 5. Plan of Hypocaust. Building B.8.

4.15, Table 4) indicate a fourth-century date. This is confirmed by two coins (Nos. 4 and 5, Table 7) above the chalk floor and path as well as much fourth-century pottery debris.

The two coins immediately above the chalk floor do not necessarily give a date to the floor as they can hardly claim to be stratified. However, the general context of the situation indicates a fourth-century date for the floor, probably late.

The living conditions during the last phase must have been fairly dismal.

SMALL FINDS

The small finds require little comment. The pewter pot with the intrusive burial has already been mentioned.

Two finds north of the building possess the most interest. These were found in the modern roadside ditch of the A2 (the 1921-22 carriageway as a new carriageway has now been added and the ditch obliterated) and thus their dates cannot be certain.

The first was a socketed iron lance or spear head (Fig. 3.7) which does not appear to be a Roman type. A very similar one is illustrated in the *London Museum Medieval Catalogue*, 1954 (see Table 5.17). Since Springhead was not occupied after the Roman period, this may represent a loss by a traveller who was following the line of the old Roman road.

The second find was an iron arrowhead, probably Roman, which was pushed into the ditch during ploughing (Find No. 5.16 and Fig. 3.6).

FEATURE F.26

THE STRUCTURE AND ITS PURPOSE

This feature has been called a corn-drying kiln, but its identification is by no means certain. It was a structure of maximum dimensions just over 14 ft. by 8 ft. divided into three corridors, none of them as much as 2 ft. wide (Fig. 6). The walls were made from chalk, simply lying on a chalk raft or platform (Fig. 7). They survived to a height of only 6 in., and this was probably their original height as there was a flint surround all the way round up to the level of the walls (see Plate V).

It seems reasonable to make certain deductions from these facts. First, the walls were so short and so unsubstantial that they could not have supported a building of any height. Second, the 'rooms' were so small as to be useless for any functional purposes. It may be added that the feature was quite isolated and was not, therefore, part of another structure.

The best possible suggestion, therefore, is that the walls were part of a corn-drying kiln of unusual shape. The procedure would have been

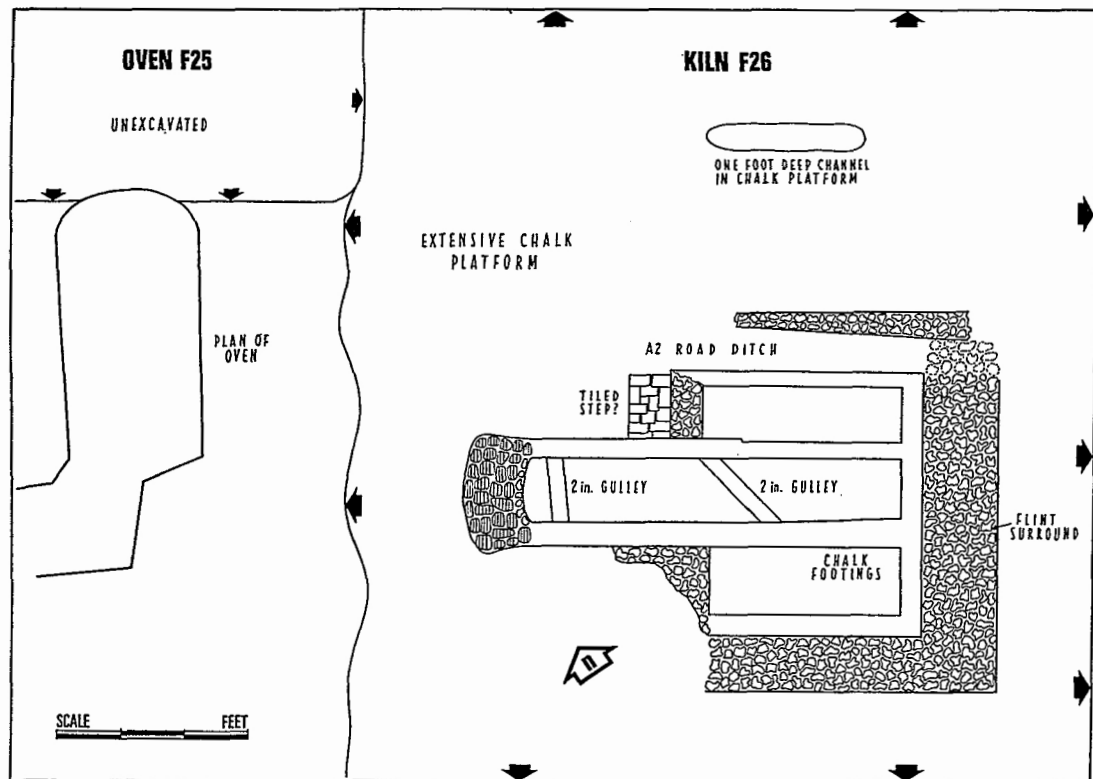


FIG. 6. Oven (F25); Kiln (F26).

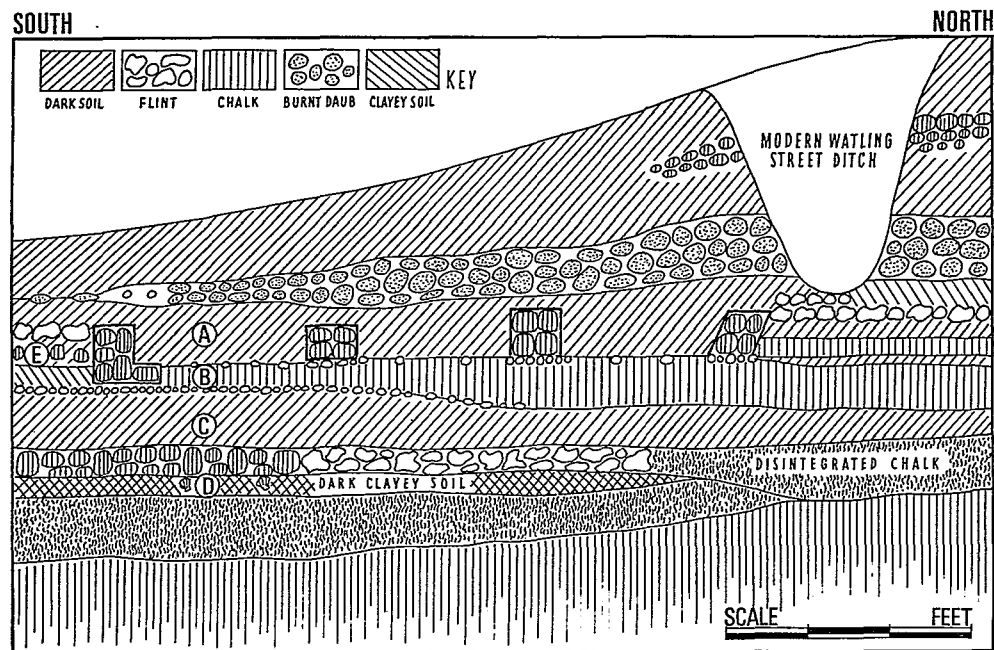


FIG. 7. Kiln (F26).

to cover the walls with poles, on top of which would have been laid straw, on top of which would have been laid the corn for drying. Hot gases from a stoke-hole would have been passed underneath.

This seems to be a reasonable argument, but nevertheless there is one strong objection. There were no signs of burning and no sign of a stoke-hole which was essential. The nearest to the latter was an oven (Feature F.25) which was separated from the kiln by a distance of 12 ft. and the entrance to which pointed away from the kiln. It could, therefore, have hardly been the stoke-hole of F.26 in the second phase of the kiln (see below), although this is not impossible in the first phase.

The use of the second phase structure must therefore remain doubtful.

Another point worth noting is that a substantial chalk platform surrounded the structure and almost certainly extended up to the Roman Watling Street north of it, but which could not be excavated because it was covered by the modern road. Such a substantial platform might mean the transportation of raw materials (e.g. corn) to the feature from the main road.

DATING THE STRUCTURE

There is no direct sealed evidence for the building. A coin of Claudius was found in Stratum D but is of little help. Two sherds of pottery (Table 4, 21 and 22) of first-century date were found in Stratum A and may thus imply a first-century date for the structure.

However, the indirect evidence is much more impressive. There was an intrusive cremation burial with an iron instrument (Fig. 3.8) and a large round stone in the south-west end of the south corridor. The burial pot was a poppy-head beaker (Table 4.20) of late first- or early second-century date, which means that the building must have been built before that and was out of use by then. It may also imply that this part of the settlement was not in use at the time and the structure may originally have belonged to the 'military ditch' phase as the structure is quite near to the corner of the ditch (F.28). If the latter went out of use early, then the kiln may also have no longer been required.

There seems to have been a second phase to the building. The floor surround was built later, since it seals a samian spread (latest date of the samian was first quarter third century) from the destroyed Building B.18. This means that the second phase ended at least when Building B.18 was destroyed. Two coins (Table 7, Nos. 6 and 9, latest A.D. 155) in Stratum A also confirm this later date.

It may well be that the structure had another use during the second phase, although it is difficult to visualize what. The end of the long 'corridor' gives the impression that it was subsequently sealed (it was

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impossible to distinguish two phases in an entirely broken and rammed chalk construction) and it may have been here that there was a stoke-hole and the long 'corridor' may have been the central flue.

FEATURE F.25

This feature was an oven, the plan of which is shown in Fig. 6 and a section of which is shown in Fig. 8.

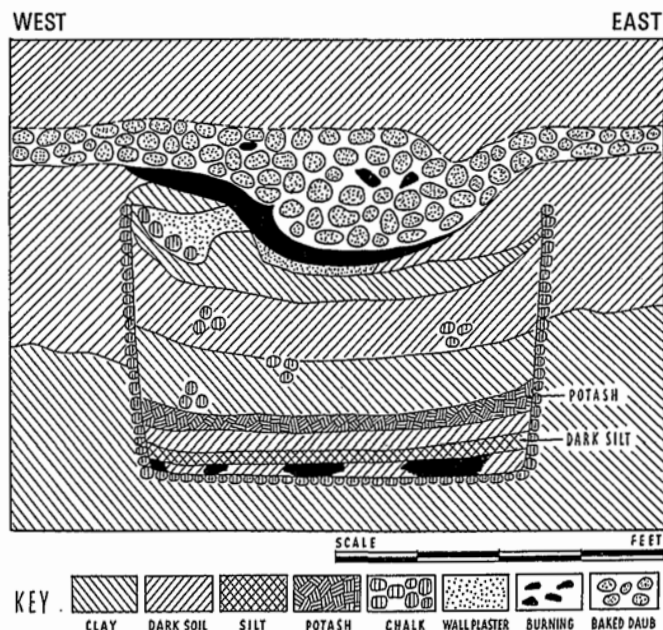


FIG. 8. Oven. Feature F25.

Unfortunately its purpose could not be ascertained. It is certainly not like a typical bread oven, there were no pottery or tile wasters and no signs of iron or bronze working. It may therefore only be classified generally as an 'oven'.

One thing is certain. A considerable amount of wood was burnt in it which may be determined from the surviving layer of potash. It may have been connected with Feature F.26, but this is unlikely as already explained.

The oven was cut out of an existing bank but lined with a thin layer of chalk. Pottery was scarce and standard Springhead forms (S.18 and S.20) indicated a late first- to early-second century feature.

There was a third-century intrusive cremation burial in a pot in the filling.

Road 11 was just west of the oven Feature F.25. It was a simple chalk road 6 in. thick in the centre and 8 ft. wide. It led from the Roman Watling Street, R.1, in a south-westerly direction, possibly to service the oven F.25 with which it was contemporary. It continued on in the direction of F.27 and its ultimate purpose may eventually be discovered during future excavations.

FEATURES F.7, 8 AND 9

Feature F.8 is a 4-in. thick chalk base extending as shown in the Map of Springhead over an area of approximately 40 ft. by 40 ft. The discovery of a cremation pot (Feature F.7), with lid let into it, inspired the hope that an urnfield had been discovered. This was not so and the burial was the only one found. The pot was of first-century date, and, according to theory, should have been outside the then settlement, and it probably was.

By the side of the chalk feature with its burial was a very thick clay base (Feature F.9) which had been subjected to considerable heat. There were also remains of burning and the area is presumably where the cremation was carried out. As the whole thing was an isolated feature it may have represented the burial of some special person.

BUILDING B.9

This building was under the verge of the then single carriageway of the A2. Only one day was allowed by the authorities for this excavation and the evidence is thus extremely limited. It was decided to excavate here because a deep cable trench, dug along the verge at the very edge of the road had revealed a 12-in. thick section of cement at the top of which was part of a well-made tessellated floor (red *tesserae* approximately 1 in. square).

The position of the building is indicated on the Map. Some 20 ft. of the south-west wall was exposed and this was 18 in. wide. Just 1 ft. of an inner wall was exposed to give a corridor 12 ft. wide. The building may well, therefore, have been quite large.

However, the evidence is that the corridor had a wooden floor as debris had collapsed through it when it rotted away. Underneath was a thick chalk base, a feature so common in the temple area.

In the debris which had once been on top of the floor were found red, pink, white and blue *tesserae*, indicating much greater richness elsewhere, wall-plaster, nails, many tiles and much pottery, most of the latter Antonine (Standard forms S.6, S.11, S.21, S.26). The only utilitarian object was the iron shoe of a spade (Fig. 3.9). A small section just outside the building revealed some coloured wall-plaster and a potter's stamp. (PATERNVS of Lezoux—late-Antonine).

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Thus we have a picture of a well-made house, certainly with a tessellated floor in one part of it and possibly a mosaic floor. The walls were covered with plaster and there was a tiled roof. It was probably Antonine.

It should be noted for future reference that the building still exists under the road.

The small chalk road up to it (R.6) connects it to the main branch road R.2.

TABLE 1
DATING OF STRATA, BUILDING B.10

<i>Stratum</i>	<i>Object</i>	<i>Reference</i>	<i>Date</i>
<i>Stratum 1, Phase I</i>			
<i>Early Gravel Courtyard</i>	Brooch 3	Table 3.3	Late Claudian.
<i>This courtyard is probably Claudian or Neronian.</i>			
<i>Stratum 2, Phase II</i>			
<i>Silt Deposit and Chalk Road</i>	Coin 5	Table 2.5	Vespasian.
<i>This silt deposit and road probably extended over the Flavian period.</i>			
<i>Stratum 3</i>			
<i>Dark Soil</i>	Brooch 4	Table 3.4	Neronian.
<i>Late first-century date.</i>			
<i>Stratum 4</i>			
<i>Clay Floor, Room B</i>	Coin 3	Table 2.3	Hadrian
<i>Chalk Floor, Room B</i>	Sherd 11	Table 4.11	A.D. 80-120
	Sherd 12	Table 4.12	Potter's stamp, c. A.D. 150-190.
<i>Date: Early to mid-second century.</i>			
<i>Phase III</i>			
<i>First erection of Building.</i>			
<i>This phase is associated with Strata 3 and 4 and must therefore be of mid-second-century date.</i>			
<i>Stratum 5, Phase IV</i>			
<i>Chalk (second) floor of building</i>	Coin 2	Table 2.2	Domitian.
	Coin 4	Table 2.4	Mark Antony.
	Coin 13	Table 2.13	Antoninus Pius.
	Brooch 1	Table 3.1	Second century.
	Brooch 2	Table 3.2	Late second century.
<i>Date: Late second or early third century.</i>			
<i>Stratum 6, Phase V</i>			
<i>Clay of blacksmith's furnace</i>	Coin 7	Table 2.7	Tetricus I.
	Coin 11	Table 2.11	Tetricus I.
	Sherd 3	Table 4.3	Antonine.
	Sherd 4	Table 4.4	Late second century.
	Sherd 5	Table 4.5	Antonine.
	Sherd 6	Table 4.6	A.D. 160-190.
	Sherd 9	Table 4.9	Third/fourth centuries.
<i>Date: Late third and fourth centuries.</i>			

SPRINGHEAD: MISCELLANEOUS EXCAVATIONS

TABLE 1 (*continued*)

<i>Stratum</i>	<i>Object</i>	<i>Reference</i>	<i>Date</i>
<i>Stratum 7</i>	Coin 8	Table 2.8	Commodus.
<i>Soil covering furnace</i>			
<i>Date: On basis of Stratum 6, should be fourth century.</i>			
<i>Stratum 8</i>	Coin 1	Table 2.1	Fourth century.
<i>Under Road R.9</i>	Sherd 7	Table 4.7	Valentinian I.
<i>Under Road R.9</i>	Sherd 10	Table 4.10	Third/fourth centuries.
<i>Date: Fourth century.</i>			
<i>Stratum 10</i>	Top soil containing much fourth-century rubble.		
<i>Phase VI</i>	Coin 12	Table 2.12	Constantine II.
Of doubtful provenance as intermingled with top soil.			
<i>Date: Fourth century.</i>			

TABLE 2

COINS FROM BUILDING B.10

Reported on by R. A. G. Carson, Esq., M.A., F.S.A., and
E. W. Tilley, Esq.

<i>Coin No.</i>	<i>Position</i>	<i>Description</i>
1.	Under latest road (R.9). Stratum 8.	Valentinian I. 3 AE. L.R.B.C. II/1390.
2.	Chalk floor, Room B. Stratum 5.	Domitian. 2 AE. As. Obv.: Illegible. Head, r. Rev.: Completely worn off.
3.	Clay floor, Room B. Stratum 4.	Hadrian. 2 AE. As. Obv.: Illegible. Head, r. Rev.: Illegible. Standing figure.
4.	Under chalk floor, Room B. Stratum 5.	Republic. Mark Antony. AR. Denarius. Sydenham. No. 1230.
5.	Just above Phase II Road. Stratum 2.	Vespasian. 2 AE. As. R.I.C. II. No. 478.
6.	Over Burial 4. Stratum 10.	Antoninus Pius. 2 AE. As. R.I.C. III. No. 678.
7.	Blacksmith's clay. Stratum 6.	Tetricus I. 3 AE. R.I.C. V. No. 56.
8.	Soil over blacksmith's clay. Stratum 7.	Commodus. 2 AE. Dupondius. R.I.C. III. No. 1585.
9.	Unstratified.	Cantii, coin of. Early first century A.D. Obv.: Bear, r. Rev.: Horse, r. Cf. Mack, No. 296.
10.	Unstratified.	Arcadius/Honorius. 4 AE. Obv.: Inscription off flan. Bust, diademed and draped, r. Rev.: SALVS REIPVBLICAE. Victory to l., trophy on shoulder, dragging captive. In field l, P.
11.	Blacksmith's clay. Stratum 6.	Tetricus I. Imitation radiate. AE. Obv.: Inscription off flan. Bust, radiate, r. Rev.: Illegible. Invictus type. Cf. R.I.C. V. No. 82.

SPRINGHEAD: MISCELLANEOUS EXCAVATIONS

TABLE 2 (continued)

Coin No.	Position	Description
12.	Mixed with soil around burials.	Constantine II. AE. K. No. 87.
13.	Chalk floor, Room B. Stratum 5.	Antoninus Pius. 1 AE. Sestertius. R.I.C. III. No. 635.

REFERENCES USED IN THE COIN LISTS

R.I.C.	Mattingly and Sydenham, 'Roman Imperial Coinage'.
L.R.B.C.	Carson, Hill and Kent. 'Late Roman Bronze Coinage.' (1960.) Parts I and II.
K.	Kent. 'The Pattern of Bronze Coinage under Constantine I.' <i>Numismatic Chronicle</i> , 1957.
Sydenham.	Sydenham, E. A. 'The Coinage of the Roman Republic.' (London, 1952.)
Mack.	Mack, R. P. 'The Coinage of Ancient Britain.' (London, 1953.)

TABLE 3

FIBULAE FROM BUILDING B.10

Brooches 1 and 2 reported on by M. R. Hull, Esq., M.A., F.S.A.

Brooches 3 and 4 reported on by E. W. Tilley, Esq.

No. 1. Chalk floor, Room B. Stratum 5. Date: second century. A well-preserved, brass, lozenge-shaped, enamelled plate-brooch. The decoration consisting of two bands of enamel surrounding a central disc of green enamel. The outer band is made up of alternate sections of blue and green enamel; the inner, blue with white spots. At each corner there is a solid round lug with additional pairs of loops at the hinge and catchplate ends. Many examples are known but the following are the nearest parallels to the Springhead one: Icklingham (Ashmolean Museum). Hambleden (Northampton Museum). Nor'nour. Scilly, Ministry of Works. In this example the lateral lugs are triple, with three stamped eyes; lozenge subdivided in a totally different pattern.

Cf. Sellye, *Les Bronzes émaillés de la Pannonie romaine*, pl. xii, 14, 15, 16, and Exner, in *B.R.G.K.*, xxix, *Taf.*, xi, 5 (but this has an oval centre).

Nor'nour has produced over 250 brooches, and seems beyond doubt to have been a factory. The Springhead brooch may well have been made there, although it could, of course, equally well have been made at the Villa Anthée in Belgium. This type is usually ascribed to the second century.

No. 2. Under floor, Room B, Stratum 5. Date: late second century. A very fine, well-preserved, brass brooch moulded in the form of a sitting duck. The upper surface of the back is divided up into three panels of crescent-shaped segments to represent feathers and filled in with blue and green enamels. The eyes are in white enamel and the tail is represented by a small loop, at which end is the hinge of the pin. It is an uncommon type and no exactly similar examples have been located. The following are the nearest

SPRINGHEAD: MISCELLANEOUS EXCAVATIONS

TABLE 3 (*continued*)

parallels recorded. Chester (Chester Museum). Brettenham (Ashmolean Museum). Saltersford (Grantham Museum), published in Grantham Museum Report. Colchester (Colchester Museum), found in a grave of late-second-century date. York (Yorkshire Museum, H.31), one of a group of six cremations (Region IV (h) iv) had a pair of similar enamelled plate brooches. Published, Royal Commission on Historical Monuments, Roman York: Eburacum, p. 91, pl. 34. Associated pottery was late second century.

No. 3. In early gravel courtyard, Stratum 1 C. Date: late Claudian. Brass brooch with weakly curved bow, thin and flat with edges nearly parallel, and decorated with longitudinal ridges and flutings. Below it a cross-moulding, below which the plain, flat foot tapers to a terminal moulding. The pin (now missing) was hinged. Camulodunum Type, XVIII. Cf. Verulamium Report, fig. 43, no. 10.

No. 4. Under massive loading platform, associated with Stratum 3. Date: Claudian/Neronian. Small, much-corroded bronze brooch of the Camulodunum Type, VII form. A simple one-piece La Tène III brooch distinguished by a four-turn spring with internal chord, flat tapering bow, and a solid catchplate (now missing).

We are indebted to Mr. D. Kelly, B.A., of Maidstone Museum for the reference to the pair of duck brooches from York.

TABLE 4
POTTERY

Reported on by S. Harker, Esq.

<i>Sherd No.</i>	<i>Figure No.</i>	<i>Position</i>	<i>Description</i>
1.	4.1	Building B.10. In clay of furnace. (Stratum 6.)	Jar, hard light brown fabric, slight bead at base of rim.
2.	4.2	Building B.10. In clay of furnace. (Stratum 6.)	Dish, soft brown fabric.
3.	—	Building B.10. In clay of furnace. (Stratum 6.)	Standard Springhead form S.6. Antonine.
4.	—	Building B.10. In clay of furnace. (Stratum 6.)	S.10. Late second century (two examples).
5.	—	Building B.10. In clay of furnace. (Stratum 6.)	S.12. Antonine.

SPRINGHEAD: MISCELLANEOUS EXCAVATIONS

TABLE 4 (*continued*)

<i>Sherd No.</i>	<i>Figure No.</i>	<i>Position</i>	<i>Description</i>
6.	4.3	Building B.10. In clay of furnace. (Stratum 6.)	Poppy-head beaker in hard greyish fabric fired brown in parts. Cordon at root of rim. A.D. 160-190. Verulamium, Fig. 27, No. 12.
7.	4.4	Building B.10. Under Road R.9.	Dish, hard grey fabric flanged rim. Antonine.
8.	—		S.6. Antonine.
9.	4.5	Building B.10. In black-smith's clay.	Mortarium in grey fabric, fired orange externally cream slip inside. Heavily gritted. Third/fourth centuries.
10.	4.6	Building B.10. Under Road R.9.	Mortarium in grey fabric fired orange. Third/fourth centuries.
11.	4.7	Building B.10. Clay floor, Room B.	Jar in hard grey fabric with coarse black surface. Bead rim recessed for lid. Richborough III, 245, A.D. 80-120.
12.	—	Building B.10. Chalk floor, Room B.	Form 18/31. Potter's stamp AVITVS, c. A.D. 150. (See <i>Arch. Cant.</i> , lxxi (1957), p. 92.)
13.	4.8	Building B.10. Burial area.	Small jar in hard light brown (external) fabric. Vestigial rim with a slightly suggested cordon on the neck.
14.	4.9	Building B.10. Burial area.	Small jar in coarse fairly hard grey fabric with small flat-topped bead rim.
15.	4.10	Building B.10. By kiln, but from burial area.	Very hard, cream ware. A similar pot was found in Coventina's Well on the Wall.
16.	—	Building B.10. Top soil.	Lion's head spout from Form 45 mortarium. Late second to early third century.
17.	—	Building B.8. Under concrete floor.	Jar in hard grey fabric. Slight offset at shoulder. See Richborough III, 264, A.D. 80-120.
18.	—	Building B.8. Under concrete floor.	Narrow-necked jar in hard grey fabric burnished externally. Cordon at root of rim. Girth groove and wavy decoration below. A.D. 80-100. Richborough I, p. 92, No. 2.
19.	—	Building B.8. Under concrete floor.	Jar in dark grey fabric, calcite gritted, with flat topped angular rim. Variant S.20. First century A.D.
20.	—	Kiln F.26, Stratum A.	Poppy-head beaker in hard grey fabric with usual barbotine dots in irregular zones. Early second century.
21.	—	Kiln F.26, Stratum A.	Standard Springhead Form 19. c. A.D. 100.
22.	—	Kiln F.26, Stratum A.	Standard Springhead Form 20 variant. First century A.D.

SPRINGHEAD: MISCELLANEOUS EXCAVATIONS

TABLE 5

IRON WARE

Reported on by E. W. Tilley, Esq.

<i>Object No.</i>	<i>Location</i>	<i>Fig. No.</i>	<i>Object</i>
1.	Blacksmith's hoard. Building B.10.	3.1	Candlestick, iron bracket type. Cf. Ward, 'Roman Era in Britain' (1911), fig. 61, E.
2.	Blacksmith's hoard. Building B.10.	—	Key, iron, with a ring through the handle for suspension. Cf. Wheeler, 'London in Roman Times', <i>London Museum Cat.</i> , No. 3, pl. xxxi, no. 11. Penn, Springhead, Site A, <i>Arch. Cant.</i> , lxxi (1957), fig. 16.3.
3.	Blacksmith's hoard. Building B.10.	3.2	Bolt from a lock. See illustration of model in 'Antiquities of Roman Britain', British Museum (1951), fig. 41. Cf. Verulamium Report, pl. LXV.A, no. 16.
4.	Blacksmith's hoard. Building B.10.	3.3	Iron knife, small and of the usual common type.
5.	Blacksmith's hoard. Building B.10.	3.4	Head of an iron lynch-pin. Cf. a similar one in the Chantry Museum, Gravesend, from Springhead.
6.	Blacksmith's hoard. Building B.10.	—	Iron key, similar to No. 2.
7.	Blacksmith's hoard. Building B.10.	3.5	Iron tool, staple-shaped, like a small draw-hoe. The large flat head is set at right angles to the shank.
8.	Blacksmith's hoard. Building B.10.	—	Nails or spikes, square section shanks, various heads, length 5.9 in. to 6.3 in.
9.	Blacksmith's hoard. Building B.10.	—	Iron knife, usual common type.
10.	Blacksmith's hoard. Building B.10.	3.7	Iron socketed spike, square-sec- tioned point, but circular socket to receive haft. Length 5 in. Cf. Greenfield, 'The Romano-British Shrines at Brigstock', <i>Antiq. J.</i> , xliii (1963), pt. II, fig. 7.9.
11.	Blacksmith's hoard. Building B.10.	3.13	Iron object, possibly a bolt from a small lock.
12.	Blacksmith's hoard. Building B.10.	—	Part of a ploughshare tip.
13.	Mausoleum area. Building B.10.	—	Stylus, usual common iron type.
14.	Mausoleum area. Building B.10	—	Iron knife, small with undecorated bone handle.

SPRINGHEAD: MISCELLANEOUS EXCAVATIONS

TABLE 5 (*continued*)

<i>Object No.</i>	<i>Location</i>	<i>Fig. No.</i>	<i>Object</i>
15.	Building B.8. Alongside Path R.7.	—	Iron stylus, length 5.5 in.
16.	In modern road (A2) ditch, by side of 1921/22 carriageway.	3.6	Iron arrow-head with a leaf-shaped head and a long tang. Length 4 in.
17.	In modern road (A2) ditch, by side of 1921/22 carriageway.	—	Socketed iron lance or spearhead, with a point of triangular section. Length 6.2 in. This does not appear to be a Roman type. A very similar one is illustrated in the London Museum Medieval Catalogue (1954), pl. XVI, no. 3. From the Walbrook.
18.	Kiln F.26. Stratum A.	3.8	Curved, single-edged iron blade with the remains of a tang at one end. Length 14.25 in.
19.	Building B.9. Under floor.	3.9	A fine, well-preserved, iron spade-shoe. Width across arms 9.25 in., length 10 in.

TABLE 6

MISCELLANEOUS FINDS

Reported on by E. W. Tilley, Esq.

<i>Object No.</i>	<i>Location</i>	<i>Fig. No.</i>	<i>Object</i>
1.	Building B.10. Stratum 4.	—	Gaming counter. A small disc of blue opaque glass, flat below and convex above, made by pouring the molten material on to a flat surface. Cf. Richborough II, pl. XIV, No. 1.
2.	Building B.10. Top soil.	4.11	Base fragment of square, green glass bottle bearing in low relief a swastika with the arms anti-clockwise.
3.	Building B.10. Mausoleum area.	—	Short bone pin with pointed head. Length 2.6 in.
4.	Building B.10. Mausoleum area.	4.12	Bone pin with spherical head. Length 3.1 in.
5.	Building B.10. Mausoleum area.	4.13	Bone pin with spherical head. Length 4.1 in.
6.	Building B.10. Mausoleum area.	—	Fragment of bone pin with spherical head.
7.	Building B.10. Mausoleum area.	4.14	Bone pin with head roughly shaped into thirteen flat surfaces.

SPRINGHEAD: MISCELLANEOUS EXCAVATIONS

TABLE 6 (*continued*)

<i>Object No.</i>	<i>Location</i>	<i>Fig. No.</i>	<i>Object</i>
8.	Building B.10. Mausoleum area.	4.15	Large bone pin with spherical head. Length 3·9 in.
9.	Building B.10. Mausoleum area.	4.16	Long bone needle with a spatulate end and a long eye. Length 4·6 in.
10.	Building B.10. Stratum 3.	—	Bronze nail of square section and round flat head. Length 1·3 in.
11.	Building B.10. Stratum 4.	—	Small circular bronze disc, ·45 in. diam., with brass piece through centre.
12.	Building B.10. Top soil.	—	Bronze hollow domed stud.
13.	Building B.10. Top soil.	—	Part of a finger-ring, composed of three silver wires twisted to- gether.
14.	Building B.8. Over concrete floor with intrusive infant burial.	3.10	Pewter pot. This pot is unlikely to be earlier than the third century because pewter was not in pro- duction before then. This date would also fit the pot's resem- blance to colour-coated pots of the same date being manufac- tured in the Rhineland, in the Nene valley and at Colchester.
15.	Building B.8. In debris over cement floor.	—	Bronze nail-cleaner and tweezers on a split ring.
16.	Building B.8. In debris over cement floor.	3.11	Small bronze mounting with open- work ornament. Two studs on the back were probably for fastening to leather.
17.	Building B.8. In debris over cement floor.	—	Bronze pin with pointed head.
18.	Building B.8. By side of Path R.7.	3.12	Heavy bronze pin with rolled-over and squared off head.
19.	Building B.8. In debris over cement floor.	—	Bone, dome-shaped gaming coun- ter.
20.	Building B.8. In debris over cement floor.	—	Bone pin with spherical head.
21.	Building B.8. In debris over cement floor.	4.17	Bone pin with large pointed head and collar below.
22.	Kiln F.26. Stratum A.	—	Pair of bronze tweezers.
23.	Kiln F.26. Stratum A.	—	Bronze nail-cleaner.
24.	Kiln F.26. Stratum A.	—	Bronze needle.

SPRINGHEAD: MISCELLANEOUS EXCAVATIONS

TABLE 6 (*continued*)

<i>Object No.</i>	<i>Location</i>	<i>Fig. No.</i>	<i>Object</i>
25.	Kiln F.26. Unstratified.	—	Bronze pin with sharp pointed head. Length 3·5 in.
26.	Kiln F.26. Unstratified.	—	Bronze nail, square section, flat head. Length 1·5 in.
27.	Kiln F.26. Stratum C.	—	Bronze hasp from a casket.
28.	Kiln F.26. Stratum E.	3.14	Small, thin bracelet. Formed of a band of bronze with snake's head terminal and a central raised ridge decorated with transverse striations.
29.	Kiln F.26. Stratum A.	4.18	Short, thick, bone pin with flat head. Length 2·3 in
30.	Kiln F.26. Stratum A.	4.19	Bone counter decorated with concentric circles.

We are indebted to K. S. Painter, Esq., F.S.A., Assistant Keeper, Department of British and Medieval Antiquities, British Museum, for the information on the pewter pot.

TABLE 7

COINS FROM BUILDING B.8 AND KILN F.26

Reported on by R. A. G. Carson, Esq., M.A., F.S.A. and E. W. Tilley, Esq.

<i>Coin No.</i>	<i>Position</i>	<i>Description</i>
1.	Building B.8. In rubble over concrete floor.	Tetricus II. (Imitation.) 3 AE. Obv.: Illegible. Bust, radiate and draped, r. Rev.: Illegible. Prototype, Spes I, holding flower and catching up dress. Cf. R.I.C. V. No. 271.
2.	Building B.8. In rubble over concrete floor.	Tetricus I. 3 AE. Obv.: IMP TETRICVS P F AVG. Bust, radiate and draped, r. Rev.: LAETITIA AVGG. Laetitia stdg., l., with wreath and anchor. R.I.C. V. No. 90.
3.	Building B.8. Under top chalk floor.	Constantine I. 3 AE. Obv.: CONSTANTINVS AVG. Bust, helmeted and cuirassed, r. Rev.: BEATA TRANQVILLITAS. Altar inscribed VOTIS XX. Mint of Trier. K.207.
4.	Building B.8. Over the chalk floor.	Valentinian II. 4 AE. Obv.: D N VALENTINIANVS P F AVG. Bust, draped and diademed, r. Rev.: VICTORIA AVGGG. Victory l., holding wreath and palm. Cf. L.R.B.C. II/389.
5.	Building B.8. Over chalk path.	Theodora. Obv.: F L MAX THEODORAE AVG. Bust, laur. and draped, r. Rev.: PIETAS ROMANA. Empress stdg., holding two children. Trier mint. L.R.B.C. I/105.

SPRINGHEAD: MISCELLANEOUS EXCAVATIONS

TABLE 7 (*continued*)

<i>Coin No.</i>	<i>Position</i>	<i>Description</i>
6.	Kiln F.26. Stratum A.	Faustina Senior. Sestertius. Obv.: DIVA FAUSTINA. Bust, r., without veil. Rev.: AVGVSTA S C. Pietas stdg., l., holding patera and palladium, at her feet an altar. R.I.C. III. No. 1127.
7.	Kiln F.26. Unstratified over site.	Imitation. (Hybrid.) AE. c. A.D. 330-335. Obv.: Type of 'Urbs Roma', bust, helmeted, l. Rev.: Type of 'Constantinopolis' stdg. on prow, holding spear and resting on shield.
8.	Kiln F.26. Stratum D.	Claudius I. 2 AE. As. Obv.: TI CLAVDIVS CAESAR AVG P M TR P IMP P P. Head, bare, l. Rev.: S C. Minerva advancing r., hurling javelin and holding shield. R.I.C. I. No. 66.
9.	Kiln F.26. Stratum A.	Antoninus Pius. 2 AE. As. Obv.: ANTONINVS AVG PIVS P P TR P XVIII. Head, laureate, r. Rev.: BRITANNIA COS IIII S C. Britannia seated on rock. R.I.C. III. No. 934.
10.	Oven F.25. Intrusive burial.	Claudius II Gothicus. 3 AE. Obv.: DIVO CLAVDIO. Bust, radiate, r. Rev.: CONSECRATIO. Eagle facing, head r. R.I.C. V. No. 266.

APPENDIX I

SOIL SAMPLES (BUILDING B.10)

Reported on by Dr. I. W. Cornwall

No. 1. *From the iron furnace area.*

Black. Charcoal is present, but not in large amount. There is no humus. The black colour is due to quantities of small scales of highly magnetic black material, mineralogically speaking magnetite, $\text{FeO.Fe}_2\text{O}_3$, but, more specifically, 'blacksmith's scales'. This suggests that the area was a forge or blacksmith's workshop.

No. 2. *From a narrow gully in the blacksmith's area.*

Grey. This is mainly calcareous, the colour being due to a small amount of contained humus. There is no iron and few quartzes. It appears to be a slightly humic, probably water-laid, natural silt, such as would be expected in a chalk environment.

SPRINGHEAD: MISCELLANEOUS EXCAVATIONS

No. 3. *From the baked clay, blacksmith's area.*

Light grey. Contains quartz, no iron, a few pieces of charcoal only, little humus and, indeed, closely resembles No. 2 in being predominantly composed of chalk mud. It looks like natural sediment also.

APPENDIX II

SEED SAMPLES (BUILDING B.10)

Reported on by G. A. MATTHEWS, Esq.

Two samples of seeds taken from vicinity of corn-drying kiln.

Both specimens

Polygonum convolvulus L. Black Bindweed.

This species is recorded from the site of the Roman City of Silchester, Hants.

Clement Reid: 'A note on the plant-remains of Roman Silchester,' *Archaeologia*, lviii (1902).