

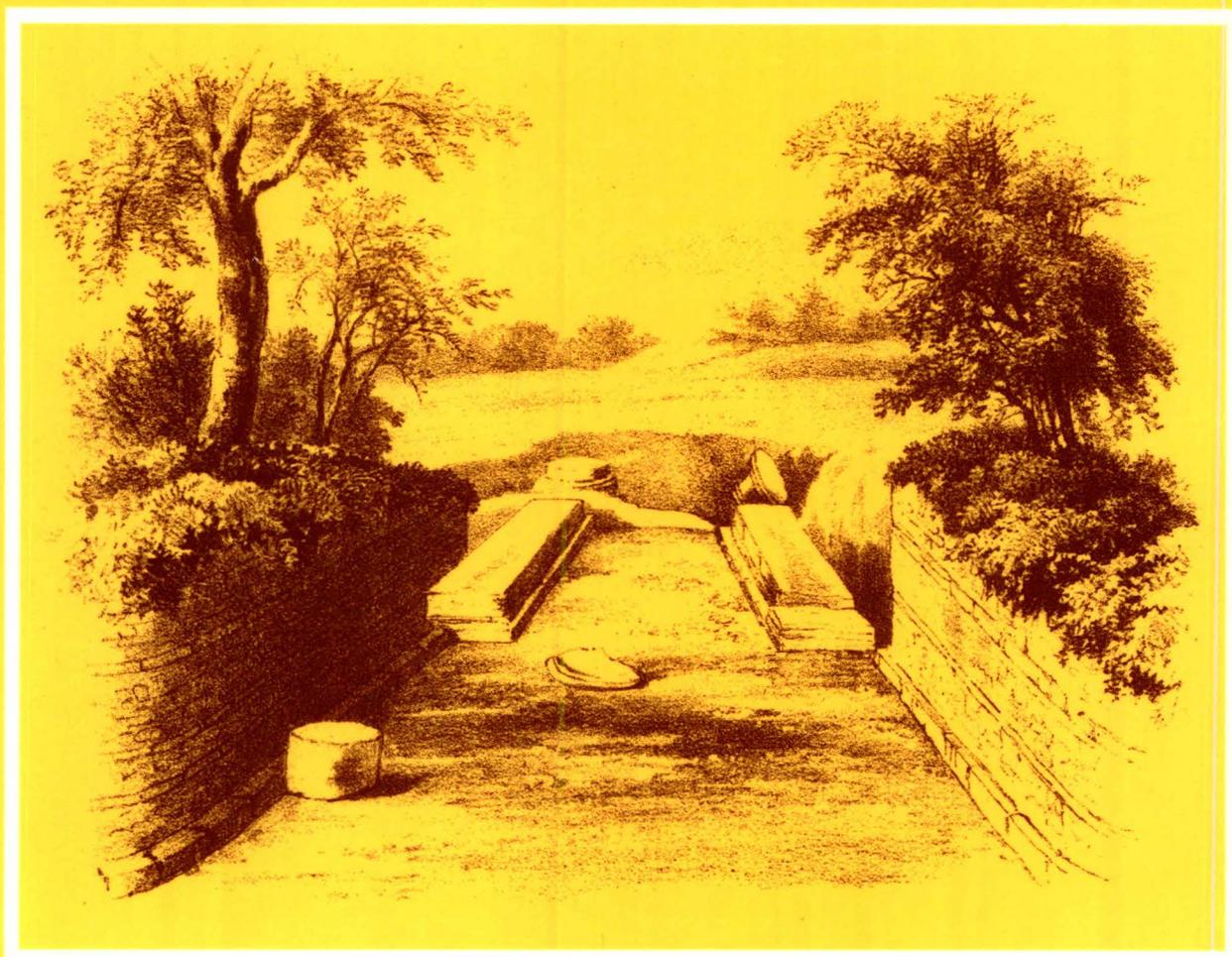
SILCHESTER DEFENCES 1974–80

MICHAEL FULFORD

with a

FIELD SURVEY OF EXTRA-MURAL SETTLEMENT

By MARK CORNEY



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1984

SILCHESTER

EXCAVATIONS ON THE DEFENCES 1974-80

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BY

Michael Fulford

AND

A FIELD SURVEY OF THE EXTRA-MURAL TERRITORY

BY

Mark Corney

with contributions from J. Bayley, J. Bird, G.C. Boon, M. Corney, A.S. Esmonde-Cleary,
R. Goodburn, T.K. Green, D. Hinton, M. Jones, D.M. Keith-Lucas, M. Maltby, M. Monk,
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ABBREVIATIONS

| | |
|--------------------------------|---------------------------------|
| Aubert | Aubert 1929 |
| <i>Cam, Camulodunum</i> | Hawkes and Hull 1947 |
| Déch. | Déchelette 1904 |
| Dr. | Dragendorff (for samian) |
| Dr. | Dressel (for amphorae) |
| F. | Feature |
| Gillam | Gillam 1973 |
| L.P. | Land Parcel |
| Late Roman Bronze Coinage/LRBC | Carson <i>et al.</i> 1972 |
| Mack | Mack 1964 |
| Margary | Margary 1973 |
| O | Oswald 1936 |
| Roman Imperial Coinage/RIC | Mattingly <i>et al.</i> 1923–67 |
| Pélichet | Pélichet 1946 |
| V.E. | Vessel-Equivalent |

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PREFACE

The first part of this report is concerned with the excavation of various elements of the defences of Roman Silchester (*Calleva Atrebatum*); Part II describes the finds from the excavation, and the third part reports on a field survey of the extra-mural territory of the Roman city. The town wall is in the Guardianship of the Secretary of State and, during the course of clearance work and consolidation, certain archaeological excavation became necessary. This was carried out by the writer on behalf of the Inspectorate of Ancient Monuments. The first excavation was completed in 1974 and was concerned with a section of the earthen rampart behind the town wall near the South Gate. This was followed in 1975–6 by the re-excavation of the South and the South-east Gates. In 1978 trial excavations were initiated at the south-west angle of the town wall and across the defensive ditches near to the South-east Gate. This work was funded by the Department of the Environment with assistance from the Department of Archaeology, University of Reading, whose students performed most of the work each season. The most recent excavation reported on here was carried out in 1980 in advance of the construction of a swimming-pool in the farmyard of Manor Farm which lies inside the walls close to the parish church on the eastern side of the city. This rescue excavation was funded by the Hampshire County Council. The total budget for all the excavations was £5000. The Department of the Environment also funded two research assistants (Joanna Bacon and Mark Corney) for a total of nine months.

The second aspect of this monograph (reported in both Parts I and III) concerns the extent of the Roman suburbs beyond the walls. During 1977 and 1978 the Inspectorate of Ancient Monuments reviewed the scheduling arrangements for the town and its immediate environment. Since scarcely any archaeological work had been done outside the walls it was imperative to attempt to define the extent of extra-mural settlement in order to arrive at a sensible scheduling policy. It was in this context that one of us (M.F.) was asked to investigate the course of the 'Outer Earthwork' which had generally been regarded as a former boundary of the town in the later first and second centuries. At the same time it was essential to combine this with a systematic collection of surface material and with analysis of the available aerial coverage. A survey of the extra-mural region had already been started (M.C.) and this was intensified in order to provide as much coverage as was practicable. The results of this field survey are presented in Part III.

ACKNOWLEDGEMENTS

It is a pleasure to acknowledge the advice and helpful cooperation of Jonathan Coad, the Inspector responsible for the monuments throughout the excavator's involvement with the site. It has been

enormously satisfying to gather so much fresh information from excavations in the wake of either one or two nineteenth-century investigations. At Silchester itself the success of each season owed a great deal to the energy and efficiency of the D.O.E. foreman, Mr. Frank Rivers and his assistant, the late Mr. Albert (John) Dowsett, who erected huts, organised equipment and helped to deal with day-to-day problems that arose during excavation.

In the first season the excavation was mounted at very short notice and was undertaken with the help of a small local group who willingly shouldered the burden of the work. I am very grateful to Mr. T.K. Green, the late Mike Jarvis, Mrs. C. Powell and the late Mrs. N. Willis for all their efforts. Subsequent excavation was carried out with the help of students from the department of Archaeology of the University of Reading with much appreciated assistance from Mike Jarvis in 1975 and 1976. It is very sad that, as a result of a tragic climbing accident in 1982, Mike Jarvis has not lived to see the publication of these excavations, for which he did so much. It is a pleasure to record the assistance given by Mr. V. Gaffney who supervised the excavation at Manor Farm in 1980.

For their willing help to further work on the 'Outer Earthwork' and the extra-mural survey, both authors wish to record their thanks to Mr. J. Cook and Mr. D. O'Connell of Church Lane Farm; Mr. R. Taylor of Chitty Farm, Mr. D. Hodge of Sheepgrove Farm and the Englefield Estate; and Mr. R. Gubbay of Lilyheath Estates. The help of Mr. D. Russell and Mr. M. Young who made an enormous contribution to the field survey is gratefully acknowledged.

I am extremely grateful to all the specialists who have contributed to the report on the excavations and also to those who assisted in the preparation of these reports: Geoff Dannell (samian), Roland Goldring (lithology of town wall), David Peacock (amphorae), Jaswant Sankla (pollen analysis), Bruce Sellwood (stone identification), Nigel Sunter (architectural reconstruction of south-east gate), Jane Timby (Gallo-Belgic pottery) and Alan Vince (medieval pottery).

The photographs in Part I were taken either by Mike Jarvis or the author and the prints were made by Ray Miller of the photographic section of the University Library at Reading. Reading Museum kindly provided prints of PL. 17. The aerial photographs in Part III (PLS. 27-40) are reproduced by kind permission of the Royal Commission on Historical Monuments (England), London.

The illustrations in this report are very largely the responsibility of Joanna Bacon and Mark Corney. The former drew all the pottery and some of the small finds, and did preliminary work on some of the site plans. Mark Corney produced the final version of all the site plans. John Johnston also provided invaluable assistance with the drawing of plans and small finds at an early stage of the project. Except where otherwise stated the responsibility for the excavation and finds reports rests with M.F. Help in the final stages of the preparation of this report was provided by Nigel Thomas, and the tedious task of typing the report was bravely taken on by Lorraine Mephram, who performed miracles with the authors' manuscript.

It remains for me to thank Mrs. E. Smyth who, with her late husband, then Chairman of the Trustees of the Calleva Museum, provided generous hospitality to all the participants each season, and Mr. and Mrs. N. West who, in the midst of resurrecting a home out of the derelict shell of Manor Farm, provided shelter and much needed help during the excavation in their back yard in 1980. Finally I must thank George Boon who, besides contributing to this report, has taken a continuous interest in the work at Silchester and has been a generous source of ideas, advice and practical assistance.

The finds and site records have been deposited with the Hampshire County Museum Service, Winchester.

Photographic Scales: All photographic scales are metric. Except where otherwise stated the ranging poles used as scales are sub-divided into units of 0.5m.

Michael Fulford

June 1983

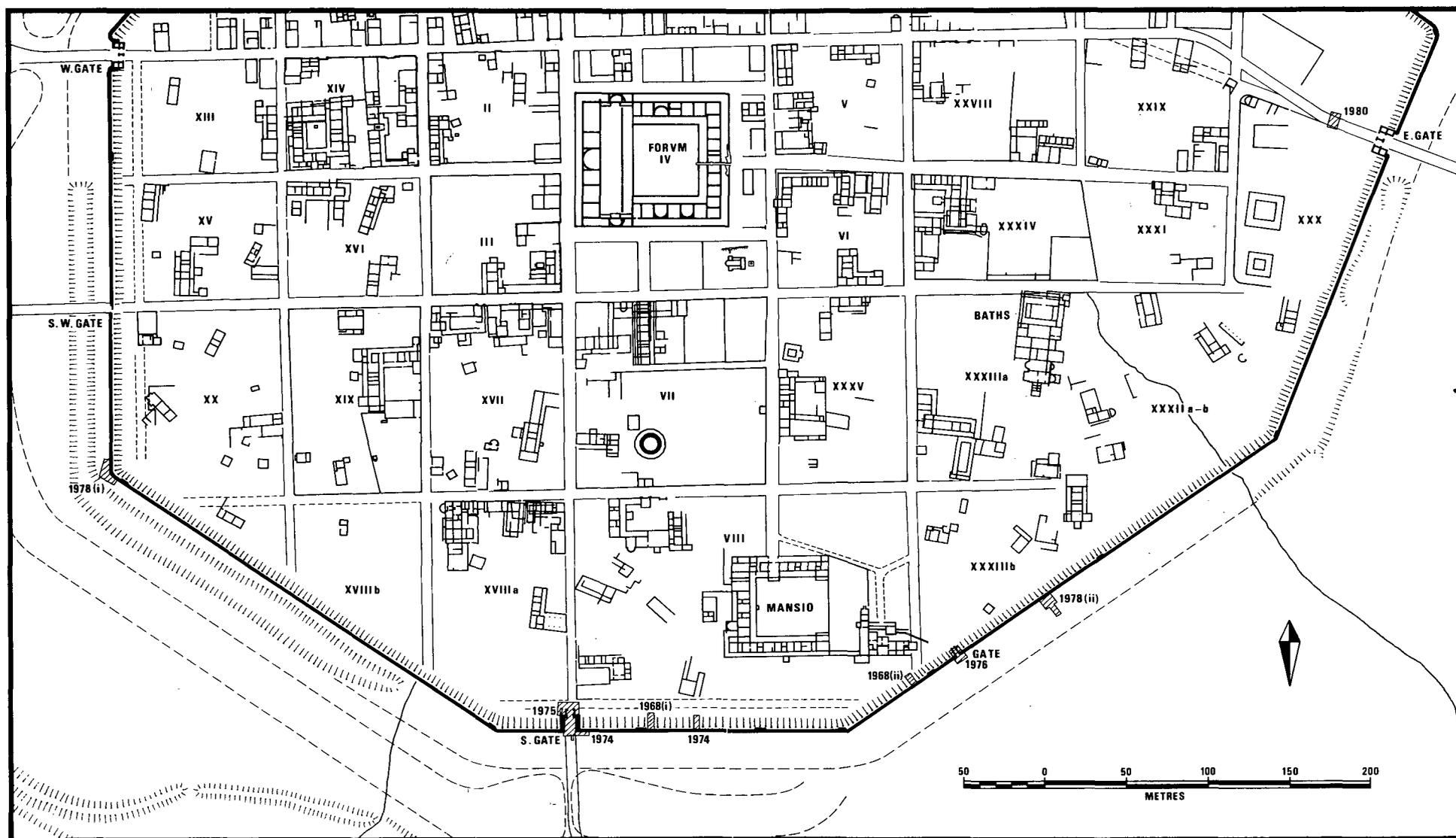


FIG. 1. Plan of the southern half of *Calleva* (after Boon 1974), showing the location of excavation trenches. Dr. J. Collis's excavations of 1968 are also indicated (Collis 1983).

PART I : THE EXCAVATIONS

BY MICHAEL FULFORD

Following the example of Mrs. Cotton's report on her excavation of the defences (1947), it has been decided to follow a chronological and thematic approach, rather than to describe the whole of each trench separately in turn. As a preliminary, however, it is appropriate to review briefly the location and purpose of each excavation (FIG. 1.).

1. 1974 : RAMPART SECTION

A section was cut through the rampart behind the town wall in order to expose the rear face of the wall. The west side of the trench was located exactly 78.7 m to the east of the eastern inturn of the South Gate. The trench, 8.5 m by 2 m, was laid out at right angles to the town wall. It was excavated throughout to the natural subsoil.

2. 1974-5 : SOUTH GATE

In 1974 a trial trench, 8.9 m (east-west) by 2.01-2.5 m (north-south), was dug to the east of the South Gate in order to reveal the basal plinth of the town wall. The trench ran eastwards along the front of the wall from the point where the latter turns inwards to form the passage into the South Gate. The town wall formed the northern limit of the trench. Except where it was sealed by the foundations of the wall, much of the stratigraphy — except for negative features — had been disturbed, leaving only traces of a general occupation-level.

In 1975 a much more extensive area was opened, including the entire road surface between the inturns, as well as the gate structure itself. Small areas of the rampart behind the gate-footings were also investigated. Initially the area was divided into six trenches (FIG. 16), but at a later stage Trenches 3 and 4 and parts of 5 and 6 were united. Trenches 1 and 2 were first excavated as one unit to the latest surviving surface of the road and then continued as separate trenches with a baulk 2 m wide between them in order to preserve a section of the stratigraphy. They provided a sample of the stratigraphy of the road, although they were not excavated to the subsoil. On either side of and between the gate-footings excavation was largely confined to the excavation of backfill from the Victorian excavations. Two small sections were cut through the rampart to the natural subsoil on either side of the gate-footings.

Previous excavations

The South Gate was first investigated by the Rev. J. Joyce in 1872 and subsequently published in *Archaeologia* (1881, 348-9, pl XV). The original account of the excavation, with water-colour illustrations, may be found in the excavator's *Journals* which are preserved in Reading Museum.

A ground plan of the gate was not published until 1890 after Fox and St John Hope had re-excavated part of the gateway in the context of the Society of Antiquaries research project to explore the Roman town in its entirety (Fox and St John Hope 1890, 752–54, pl. XXI). Except to the north of the gate, the character and limits of these earlier explorations were observed within the confines of the 1975 excavation. A further trench cut in 1909 to examine the ditches outside the gate was identified at the western edge of the 1974 trench dug in front of the town wall (St John Hope and Stephenson 1910, fig. 4).

3. 1976 : SOUTH-EAST GATE

This gateway was discovered in 1893, when it was interpreted as a sluice-gate controlling the flow of water draining the *mansio* baths (Fox and St. John Hope 1894, 230–31). In 1976 an area 7.0 m (east-west) by 3.5 m (north-south) was opened in front (i.e. to the south) of the gate while behind the wall an area of 5 m (east-west) by 3.8 m (north-south) was excavated. Although most of the excavation involved the removal of the backfill of the 1893 excavation, it nevertheless proved possible to investigate a small section of the earthen rampart behind the wall as well as pre-rampart levels in front of the gate. Excavation in these areas was eventually halted when the water-table was reached. Because of the limits of the Guardianship area it was not possible to reveal the full extent of the passage-way through the rampart, as had been done in 1893.

4. 1978 (i) : SOUTH-WEST ANGLE OF THE TOWN WALL

A small triangular area outside the south-west angle of the wall was excavated in order to establish whether or not an external tower had been sited at this point. Like an earlier attempt to resolve whether or not external towers had been added to the town wall (Boon 1969, 21), on this point the excavation proved negative. The limits of the trench were defined by the outer face of the wall and the inner edge of the later Roman defensive ditch. Excavation was limited to the latest surviving Roman layers except in one small area of c. 40 m², which was excavated to the subsoil. This area lay to the north of the trial trench dug in 1909 across the outer defences (Hope and Stephenson 1910, fig. 1).

5. 1978 (ii) : DITCH SECTION OUTSIDE THE TOWN WALL (NORTH-EAST OF SOUTH-EAST GATE)

A trench was dug at right angles to the town wall, 62 m north-east of the South-East Gate. It extended 15 m out from the face of the wall and was initially 3 m wide. Subsequently the northern end of the trench was widened to 8 m. The purpose of the trench was to investigate the location and number of defensive ditches associated with the wall and with the earlier rampart. Because of the high water-table (also observed at the South-East Gate), it proved impossible to excavate further than c. 1 m below the present ground level.

6. 1978 : INVESTIGATION OF THE COURSE OF THE 'OUTER EARTHWORK' (FIG. 35)

Nine trenches were excavated by machine to check the course of the hypothetical 'Outer Earthwork' to the east and south of the town wall (Boon 1969, pl. I). One trench was also dug to check the course of this earthwork on the north-western side close to the standing section in 'Sandy's Lands'. At the same time the opportunity was taken to check whether the Rampier Copse section of the earthwork contained part of an earlier enclosure, subsequently reduced where its projected eastern and northern circuit ran through Land Parcel 6805. This followed up an earlier suggestion of Boon's that there may have been an earthwork here comparable to that at Pond Farm (1969, 35).

7. 1980 : MANOR FARM

Excavation of an area 10.5 m by 5.5 m took place in the north-eastern corner of the farmyard (c. 22 m west of the site of the Roman East Gate) in advance of the construction of a swimming-pool. This was an area which had not been investigated by the Society of Antiquaries. Unfortunately only negative features, including an early Flavian defensive ditch, survived post-Roman disturbance.

OCCUPATION EARLIER THAN THE LATE SECOND-CENTURY TOWN RAMPART DEFENCES

Traces of occupation earlier than the construction of the late second-century earthen rampart were discovered at the south-west angle of the wall, at the South Gate and beneath the rampart section east of the South Gate. These three sites lie within the mid first-century A.D. 'Inner Earthwork'. The area around the South-East Gate, on the other hand, appears to have remained a marsh until the construction of the earthen rampart. This is also likely to be true of the area to the north, where excavation of the defensive ditches was curtailed by a high water-table. Neither of these two last excavations, which lie outside the line of the 'Inner Earthwork', produced any evidence of occupation earlier than the construction of the rampart. Although outside the line of the first-century defences, the excavation at Manor Farm did produce evidence of first- and second-century activity.

A. PRE-FLAVIAN OCCUPATION

1. AT THE SOUTH-WEST ANGLE (Section A-C, C-E; FIGS 6-8)

The earliest occupation was represented by a layer of black, charcoal-rich, gravelly soil (1/26) which extended over the entire area of c. 40 m² excavated to the subsoil. No negative features in the subsoil were observed. Given the small volume of soil, it was notably rich in pottery and animal bone. Maltby has reported (see below, p. 199) that much of the latter is derived from the primary butchery and skinning of carcasses, mostly of cattle. Thus fragments of skull and limb extremities are commonly represented. The dating of the deposit depends on the pottery which comprises pre-Flavian samian and coarse ware. Compared with Pit 1 beneath the 1974 rampart-section east of the South Gate, this group would appear to be largely Claudio-Neronian, with only a handful of possible pre-Conquest sherds (Pottery group 1.2, pp. 136-9). Possibly the latest sherd is a South Gaulish Dr 27 which could be pre- or early Flavian.

2. AT THE SOUTH GATE

The natural subsoil was reached in three small areas: behind both eastern and western gate-footings and in the small area fronting the wall on the eastern side of the gateway, excavated in 1974.

(a) *Area fronting the wall: east of the entrance (1974) (FIGS. 2-3)*

All but one negative feature, the well, appear to belong to the pre-Flavian period. In addition to two pits (1-2) and several small post-holes (1-12), the features included six parallel shallow gullies (1-6; 0.06-0.12 m deep) on a north-south alignment. The most westerly, and deepest, Gully 6 (0.12-0.28 m deep) may originally have served as a side-drain of the main north-south street. If so, its function was replaced by a rumble-drain which was inserted into the first metalled surface. After Gully 6 had silted up, two posts, represented by concentrations of flints (c. 0.3-0.4 m in diameter) which could have acted as packing, were inserted into the fill.

These might have formed part of a structure, or have acted as a boundary to a property fronting the main north-south street. Given their alignment, it is possible that all the gullies served at some time as shallow road-ditches until the first metalled surface was laid down in the later first century A.D. In general, the small size of the area prevents any firm interpretation being drawn about the remaining features.

An occupation-layer (7) above the natural subsoil at the eastern end of the trench produced Tiberio-Claudian samian and a bowl in the late Iron Age 'saucepan pot' style (FIG. 44, No. 107).

The latest material consists of sherds of Neronian to early Flavian pottery from the fill of Gully 6 and Pits 1 and 2 (Pottery group 1.3). Evidence of early first-century occupation was only to be expected in the proximity of Boon's Site J, which had produced evidence of occupation earlier than the 'Inner Earthwork' (1969, 13-15).

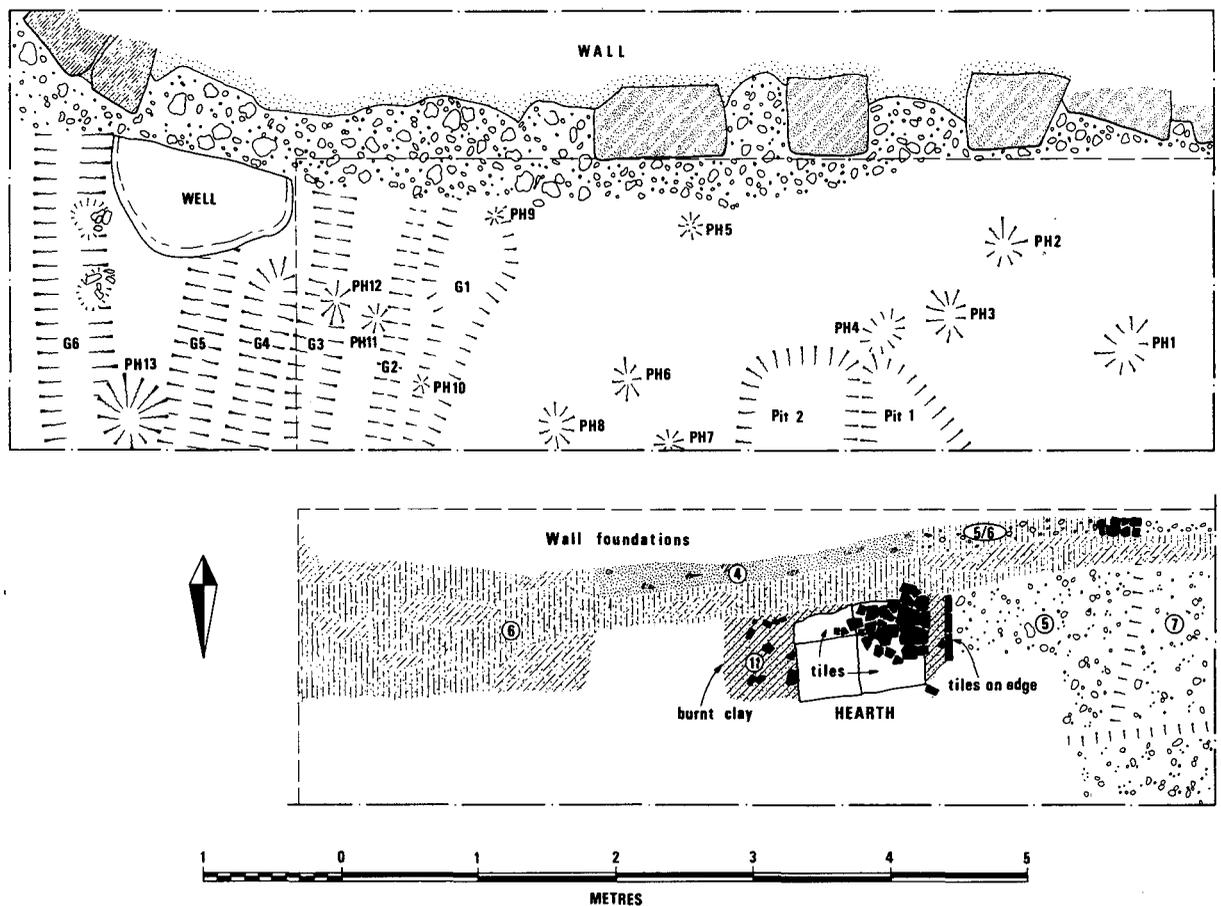


FIG. 2. South Gate (1974): Trench-plan showing features in the natural subsoil. The lower drawing shows a higher level with the Flavian(?) hearth and associated layers. Scale, 1:55.

Catalogue of Features (FIGS 2-3)

All features except where otherwise specified contained sherds of pottery consistent with a pre-Flavian date. Depths of features are measured from the surrounding natural gravel.

Pits 1 and 2: This feature was filled with dark earth and gravel; on excavation it showed as two shallow scoops, sealed by topsoil. Finds included pottery of Neronian to early Flavian date, animal bone, smithing slag and fragments of daub.

Gully 1: This (G1) ran almost north-south. It was 10-12 cm deep in the north section, but only 5 cm deep in the south. The fill was of a dark brown silty sand, which contained a sherd of pre-Flavian pottery.

Gully 2: This feature ran to the west of and parallel with Gully 1. It was 6 cm deep to the north and 7 cm deep to the south. It was filled with a grey to brown silty sand and fine gravel and its profile in the north section might be interpreted as that of a plough groove.

Gully 3: This feature ran to the west of and parallel with Gully 2. It was 8 cm in depth and was filled with grey to brown silty sand and fine gravel.

Gully 4: This gully ran to the west of and parallel with Gully 3, although it appeared to terminate south of the well. It was 10 cm deep and was filled with grey silty sand and fine gravel.

Gully 5: This feature ran to the west of and parallel with Gully 4. It was cut by the well and by Post-hole 13. The fill was of grey silty sand and gravel to a depth of 8 cm.

Gully 6: This feature ran to the west of and parallel with the other gullies, varying in depth from 28 cm (north) to 12 cm (south). Its primary fill consisted of a grey sandy silt, which was then sealed by a layer of dark grey to brown silty sand and gravel. In this upper silt two groups of flint, approximately 30-40 cm in diameter, were defined towards either end of the excavated section. The features had fully silted up by the time the well was dug. The latest pottery from the primary silt is of Neronian to early Flavian date.

The post-holes: No. 1. was excavated as an irregular-shaped hollow, some 0.4 m in diameter and 0.12 m in depth. The fill was of gravel and dark earth and the shape suggested interpretation as a natural hollow rather than as a post-hole.

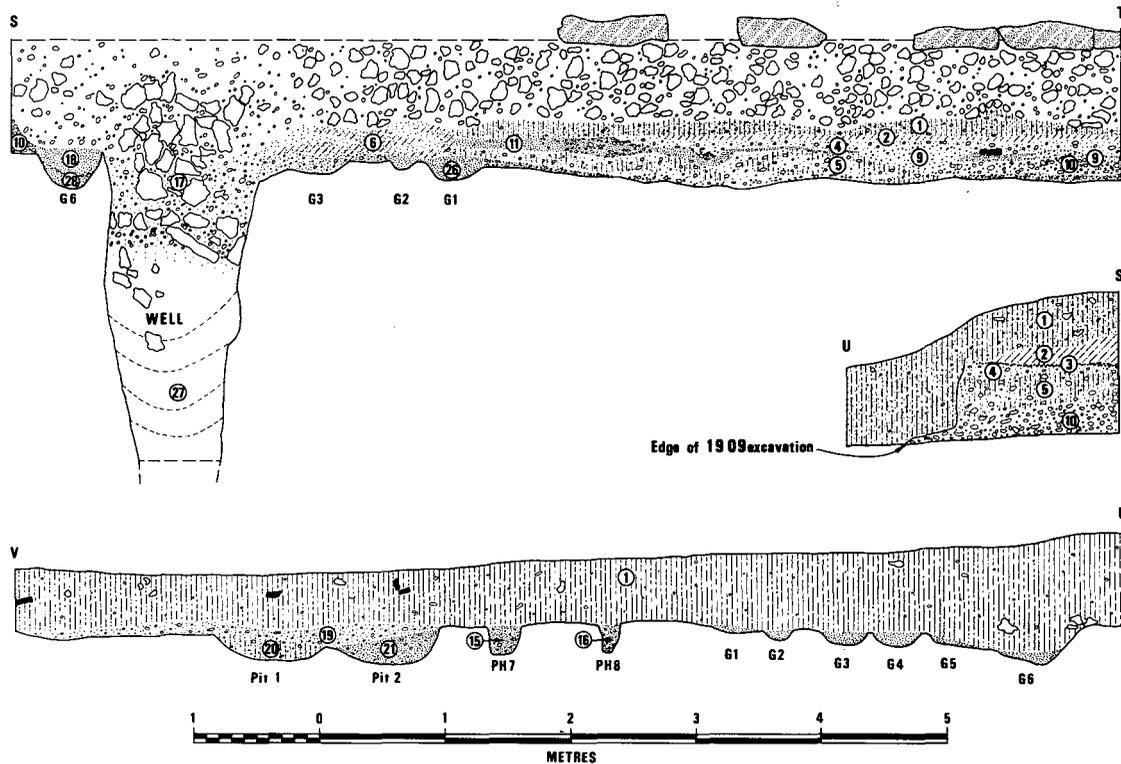


FIG. 3. South Gate (1974): Sections (for location of sections see FIG. 16). For key to conventions used, see FIG. 5. Scale, 1:60.

No. 2. This was similar in character to No. 1. It was 0.35 m in diameter and 0.14 m in depth with a fill of gravel and dark earth.

No. 3. This feature was similar in character to No. 1. It was 0.25–0.38 m in diameter and 0.2 m in depth with a fill of gravel and dark earth.

No. 4. This was similar in character to No. 1. It was approximately 0.25 m in diameter and 0.13 m in depth with a fill of gravel and dark earth.

No. 5. This feature was about 0.16 m in diameter and 0.15 m in depth with a fill of gravel and dark earth. The square bottom to the hole suggests that despite general irregularity in plan it may actually have served as a post-hole.

No. 6. This varied between 0.2 and 0.25 m in diameter with a depth of 0.18 m. It was filled with dark earth and gravel, but was only sealed by topsoil.

No. 7. This was about 0.22 m in diameter with a depth of 0.23 m. It was filled by dark earth and gravel and was sealed by the topsoil.

No. 8. This was between 0.26 and 0.34 m in diameter with a depth of 0.26 m. It was filled by dark earth and gravel and was sealed by the topsoil.

No. 9. This feature was excavated as a slight hollow, possibly of natural origin, within Gully 1. It was about 0.1 m in diameter and 0.05 m deep below the bottom of the gully. The fill was the same as that of Gully 1.

No. 10. As No. 8.

No. 11. This was about 0.2 m in diameter and 0.15 m in depth with a fill of gravel and dark earth. Gully 2 seems to avoid it and hence may be later.

No. 12. This was about 0.2 m in diameter and 0.15 m in depth with a fill of gravel and dark earth. It may be earlier than Gully 3, which seems to respect it.

No. 13. This feature was about 0.5 m in diameter and 0.15 m in depth with a fill of gravel and dark earth. It cuts both Gullies 5 and 6 and may even be recent, as its fill was very similar to the topsoil. Alternatively, it may relate to the concentrations of flint in the fill of Gully 6.

(b) *Sections beside the South Gate* (Sections C-A, E-F; FIGS. 16–18)

A section was cut through the tail of the rampart parallel with the western edge of 1975 Trench 3. No negative features were defined in the layers below the rampart or in the subsoil. However,

as in the area at the south-west angle, there was a dense black charcoal-rich occupation-layer (3/19) above the natural subsoil. This, and the grey and yellow sandy layers above (3/14, 16), produced several sherds of Claudio-Neronian samian as well as contemporary coarse wares (Pottery group 2.6).

No clear evidence emerged from the small sondage cut behind the eastern gate-footing for pre-Flavian occupation-levels. Indeed, given the limited area available for work, it was not clear whether the lowest layers of clay and gravel (5/16-18) did represent the top of the natural subsoil. Sherds of pre-Flavian 'Silchester' ware were, however, found at the interface between this and the overlying layer of clay and gravel (5/15) (Pottery group 2.6).

3. IN THE RAMPART SECTION, EAST OF SOUTH GATE (FIGS 4-5, 25)

Pre-Flavian occupation was recorded beneath the cultivated soil (18) of the later first and second century A.D. Initially, and not altogether distinct from the layer above, an horizon of moist, dense, black gravelly soil, rich in charcoal fragments, was excavated (19). This contained pottery and animal bone. It sealed a further layer of dense black soil mixed with some gravel (20) in which there were patches of red burnt clay (? hearths) and yellow clay (FIG. 4 (a)). In defining this surface, an area of darker soil, surrounded by a band of yellow clay, proved to be the top of Pit 2. Other features tentatively recognised at this level and which also cut the subsoil included Pit 3 and some possible post-holes (FIG. 4 (b)). To the south, beneath 18 emerged a layer of grey sandy soil and gravel (21), much less black than 19 and 20. This sealed Pit 1 and Post-hole 11. In the northern half of the trench excavation revealed possible traces of an old ground surface. This consisted of a slightly sandy and gravelly soil (layer 26) somewhat comparable, but firmer in texture than layer 21 above. This possible buried surface appeared to seal several other minor features cut into the natural subsoil (FIG. 5).

Whereas Pit 2, perhaps Pit 3 and other features in the northern half of the trench (illustrated in FIG. 4) may be associated with layer 20 and the Claudio-Neronian occupation, the majority of the other features, notably Pit 1, seem to belong to an earlier, pre-Conquest phase. Pit 1 contained

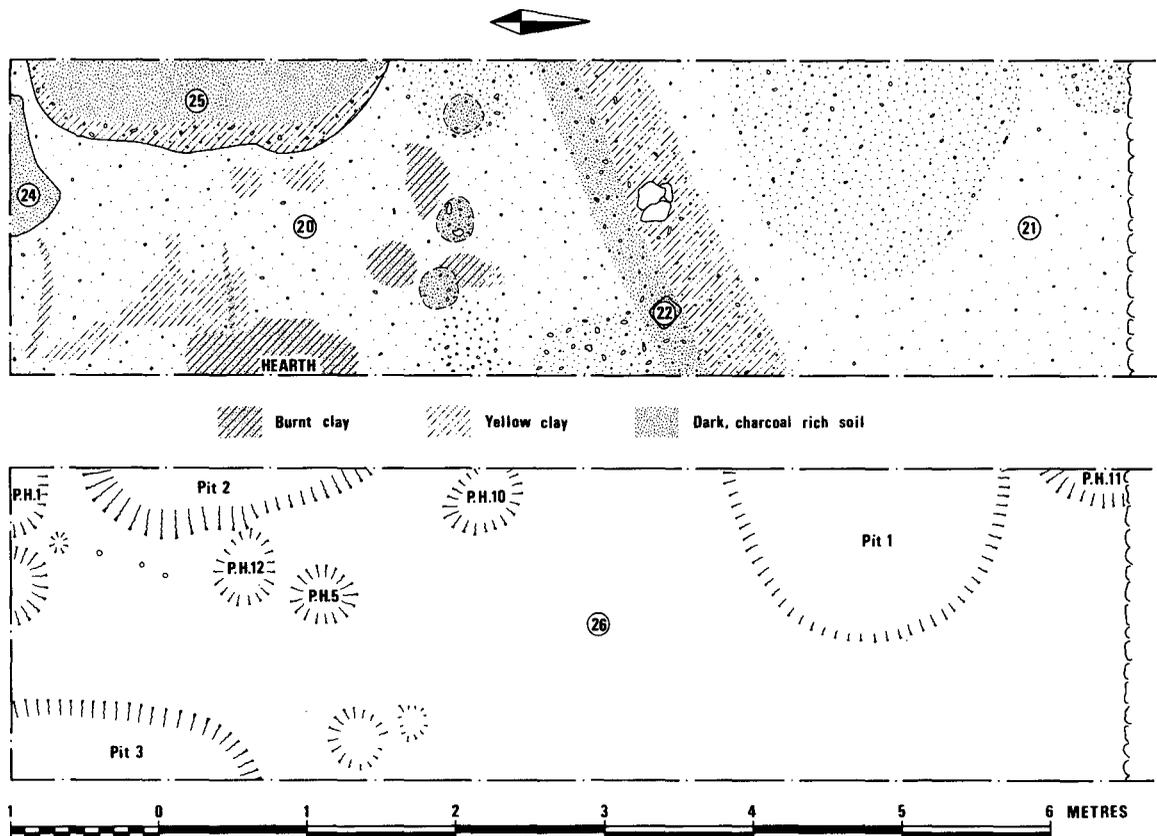


FIG. 4. Rampart section east of South Gate (1974): Pre-Flavian features and soil marks before (top) and after (bottom) excavation. For key to conventions used see FIG. 5. Scale, 1:50.

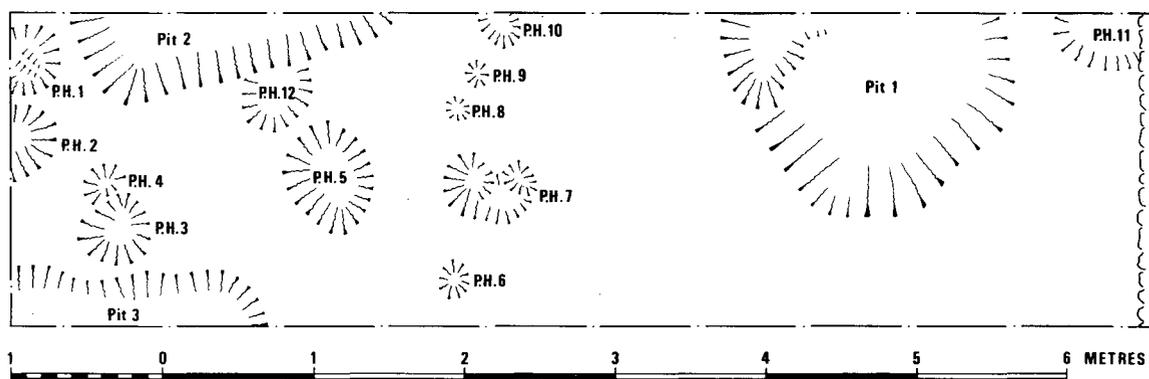
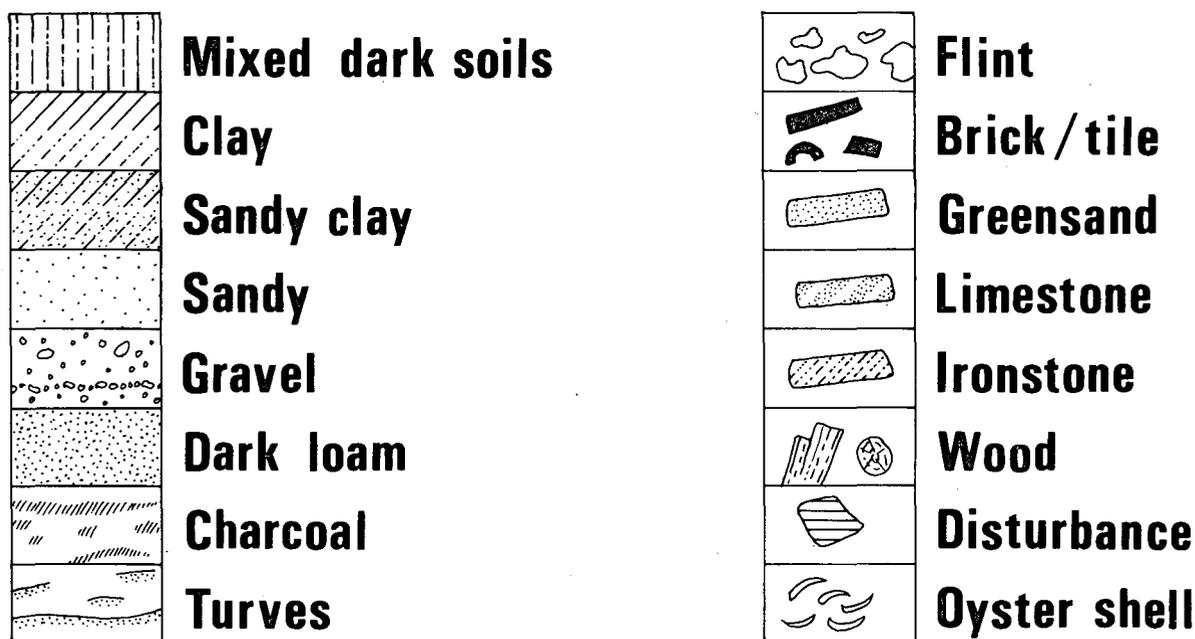


FIG. 5. (Top) Key to conventions used in drawn plans and sections. (Bottom) Rampart section east of the South Gate (1974): Plan of all features in the natural subsoil. Scale, 1:50.

the earliest datable assemblage from the 1974–80 excavation, including Tiberio-Claudian sigillata, Gallo-Belgic wares and a British LY coin. However, it is likely that this pit was not completely filled until the Claudian period, although it was almost certainly receiving rubbish earlier (Pottery group 1.1).

Thus this trench provided evidence of pre-Conquest occupation, although most of the activity and presumed structural evidence is of Claudio-Neronian date.

Catalogue of Features (FIGS. 4–5)

The depths of features are measured from the level of the surrounding natural subsoil.

Pit 1 (layer 23): This feature was a shallow, irregular scoop, *c.* 2.0 m north-south and *c.* 0.4 m deep, partly lost under the section. Towards the bottom the fill was of a sterile grey silty sand and gravel, while above it consisted of compacted dirty sand and gravel and yellow sandy clay mixed with flecks of charcoal. The pit was sealed by layer 21. Finds included animal bone, iron (nails), an early British LY10 coin (p. 109) and unidentifiable bronze fragments. Amongst the pottery was Tiberio-Claudian Italic (?) and early Gaulish sigillata, Tiberio-Claudian and Claudian Gallo-Belgic wares, sherds of a Dressel 2–4 amphora, and briquetage as well as local hand-made coarse wares.

Pit 2: Although this pit, *c.* 2.0 m long (north-south) and *c.* 0.4 m deep, was largely lost under the section, it appeared to be regular in shape with steep sides; it had a primary fill of rich black soil mixed with some

small gravel (layer 30). The finds from this included a nail, some bone and pre-Flavian pottery sherds. Over the primary fill was a thick layer of yellow clay mixed with some gravel (layer 31); there were no finds. In the section (FIG. 25) may be seen the profile of a charred stake (0.10 m by 0.05 m in diameter). As the primary filling subsided, more black soil mixed with charcoal flecks filled the top of the pit. This layer is contemporary with the dark occupation-layer spreading over the southern half of the trench (layer 20). Finds from it included animal bone and pre-Flavian pottery sherds.

Pit 3: This was an irregular, shallow feature (at least 1.7 m north-south, extending *c.* 0.5 m into the trench and 0.3 m deep) filled with dark silty soil, charcoal and small gravel (layers 28, 35). After final excavation the plan suggested that it may have been formed by three interlocking post-holes. Pre-Flavian sherds were the only finds. Below layer 19 this feature showed as a mixture of burnt red clay (FIG. 4(a)) and unburnt clay, suggesting that at an early stage it may have served as a hearth.

The Post-Holes. No. 1. Post-holes 1 and 2 showed clearly as one feature on the clearance of layer 19. The fill was of dark soil, mixed with charcoal flecks (layer 24) giving way to grey soil and gravel at the bottom of the fill. Maximum diameter: 0.44 m. Depth: 0.20 m.

No. 2. Until excavated, this feature could not be distinguished from Post-hole 1; the fill was identical. Maximum diameter: 0.48 m. Depth: 0.20 m.

No. 3. Until excavation, this feature (layer 34) was indistinguishable from Pit 3; the fill was identical. It appeared to cut Post-hole 4. Maximum diameter: 0.48 m. Depth: 0.22 m.

No. 4. Until excavation, this feature was indistinguishable from Pit 3; the fill was identical. It appeared to have been cut by Post-hole 3. Maximum diameter: 0.26 m. Depth: 0.17 m.

No. 5. (section, FIG. 25). This feature was not defined until the natural subsoil had been reached. Its fill consisted of dark earth and discrete lumps of yellow clay (layer 32), with some pre-Flavian sherds. Maximum diameter: 0.7 m. Depth: *c.* 0.41 m.

No. 6. This feature appeared as a patch of dark earth and gravel below layer 20; it cut an area of burnt red clay. The fill consisted of dark soil mixed with small gravel. Maximum diameter: 0.25 m. Depth: 0.31 m.

No. 7. This feature appeared as both a patch of very dark soil and a mixture of dark soil and gravel below layer 19. On excavation, the fill proved to be also of dark soil and gravel. Some difficulty was met in distinguishing this feature from the surrounding subsoil; the recorded plan suggesting two post-pits is doubtful. Maximum diameter: 0.22 and 0.32 m. Average depth: 0.30 m.

No. 8. This feature was only defined on natural subsoil, but it underlay a patch of dark soil and gravel visible below layer 19. Its fill consisted of dark grey soil mixed with small gravel. Maximum diameter: 0.15 m. Depth: 0.10 m.

No. 9. Defined on natural subsoil; fill as Post-hole 8. Maximum diameter: 0.15 m. Depth: 0.085 m.

No. 10. Defined on natural subsoil; fill as Post-hole 8. Maximum diameter: 0.26 m. Depth: 0.075 m.

No. 11. (section, FIG. 25). Defined on natural; the fill consisted of dark grey soil mixed with clay and small gravel (layer 29). This feature was sealed by layer 21. Maximum diameter: 0.66 m. Depth: 0.17 m.

No. 12. This is a shallow scoop, probably cut by Pit 2. The fill consisted of dark earth and small gravel (layer 33). Maximum diameter: 0.45 m. Depth: 0.07 m.

4. AT MANOR FARM (FIGS 10–11; east section, FIG. 12)

The earliest Roman feature was a subrectangular pit whose maximum excavated dimensions were *c.* 1 m wide by *c.* 0.9 m deep. This had been cut into the natural gravel and its upper fill (layer 86) had been truncated by the early Flavian ditch (below, p. 38). The lowest layers (92–3) consisted of a spread of black gravel sealed by a lens of greenish clay, flecked with charcoal (layer 91). The main fill was of a sandy orange clay (layer 86) and this contained most of the pottery finds (Pottery group 1.4) and the iron fibula (FIG. 37, p. 113). The pottery indicates a pre-Flavian and probably a Claudio-Neronian rather than a pre-Conquest date. To judge by the nature of its fill, the feature served neither as a rubbish pit nor a post-pit (though of this we can be less certain). Its function may have been ritual, given that the adjacent area to the south is regarded as a temple precinct (Boon 1974, 155–7).

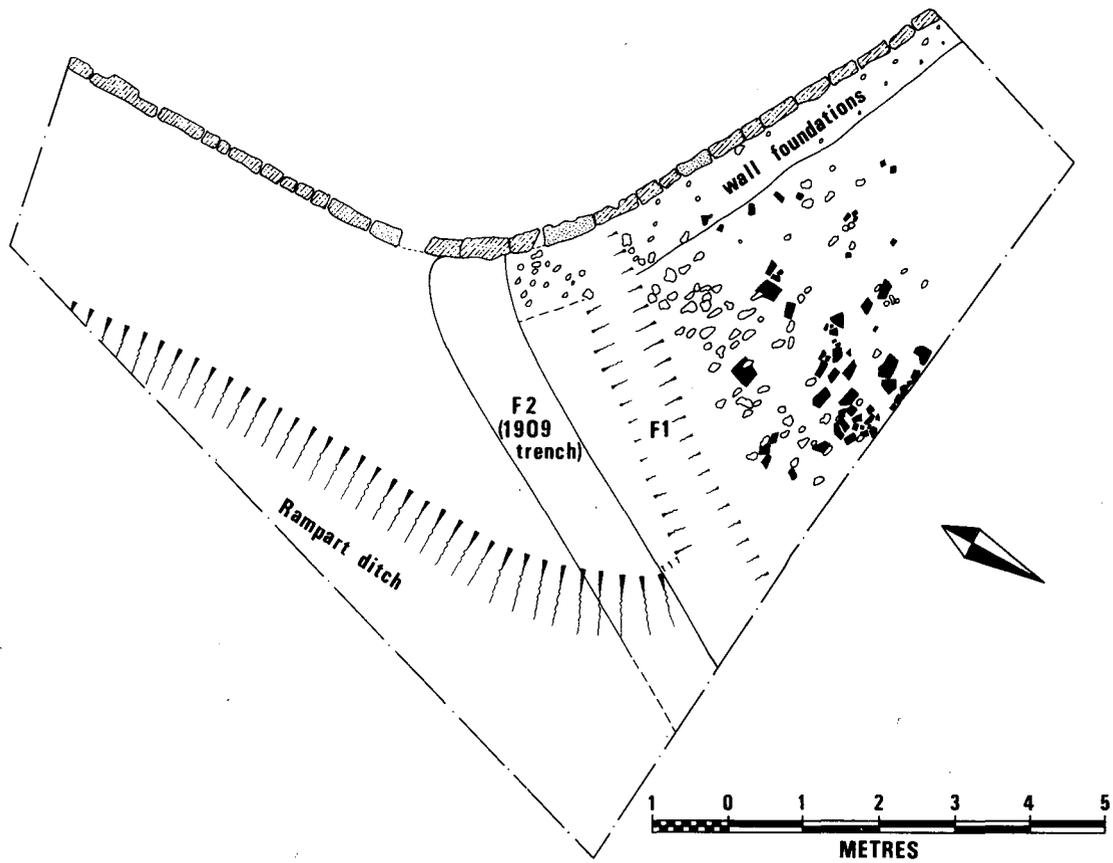


FIG. 6. S.W. Angle (1978(i)): Trench plan. Scale, 1:100.

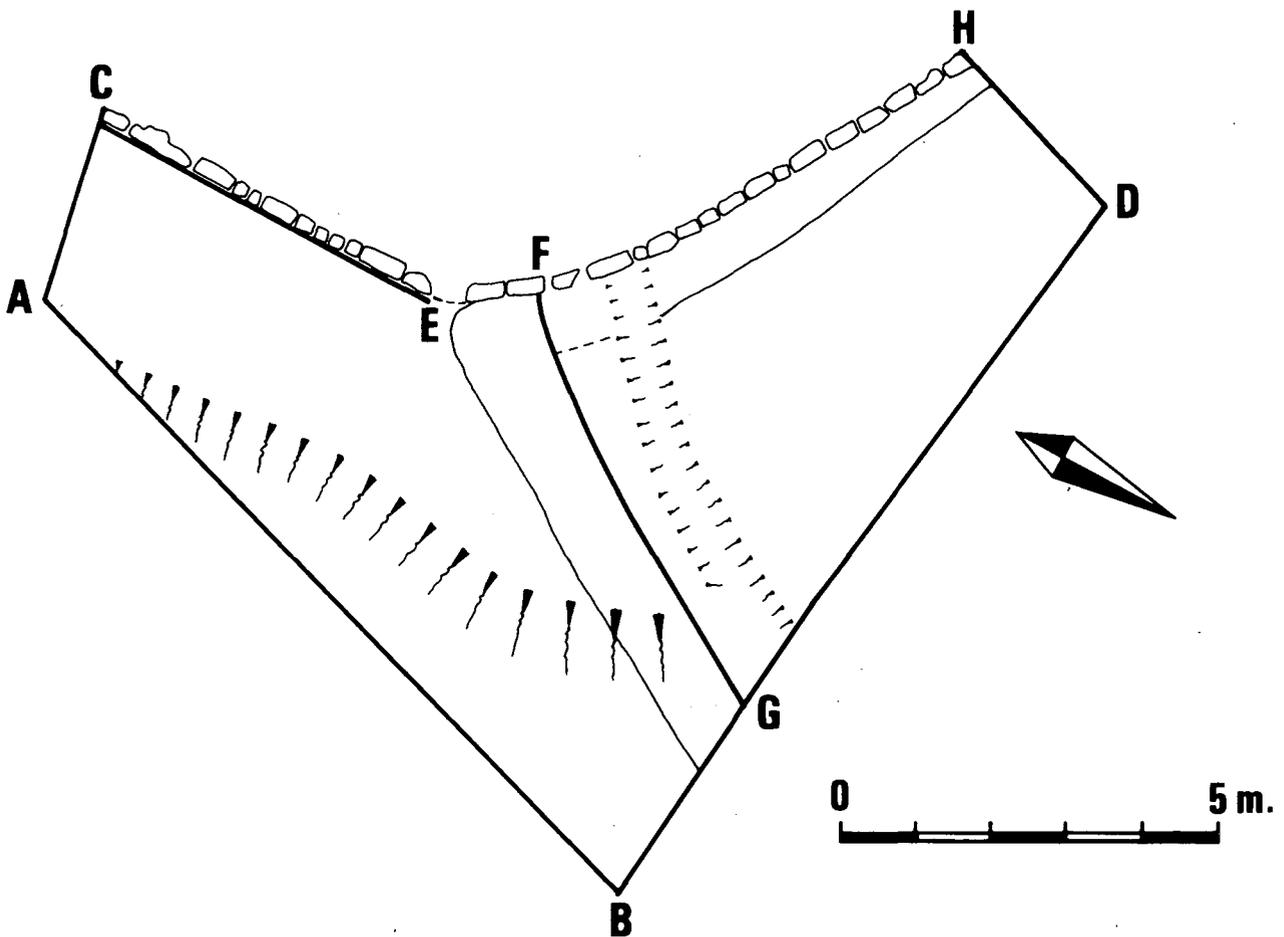


FIG. 7. S.W. Angle (1978(i)): location of sections. Scale, 1:100.

B. FLAVIAN TO MID/LATE SECOND-CENTURY OCCUPATION

1. AT THE SOUTH-WEST ANGLE (FIGS. 6-9; Section A-C, C-E, F-G)

The black rubbish layer (26) described above was sealed by a layer of clean orange gravel, 15-20 cm thick (25). It is not clear whether this represents part of a general metalling for a yard or lane, or whether it was simply a way of sealing what must have been a noisome area. That we have part of one of the main streets is improbable since the trench falls just outside the corner of one of the south-west insulae of the town (XX A). This metalling is likely to be of Flavian date, unless we are to suppose a break in the use of this area prior to the dumping of the gravel.

Above the metallated surface and below the earthen rampart was an accumulation to a depth of 40 cm of a well-sorted, grey to brown, sandy or slightly gravelly loam. Although differences of colour and texture were observed (as the above description indicates), the degree to which these were interleaved with one another prevented consistent excavation. A thin lens of gravel (19) offered the only possibility of making a firm horizontal division within the deposit; but even this was not detected over the entire area. A conspicuous feature of the whole deposit was the small size of both pottery and animal bone recovered. For this reason it is suggested that this accumulation developed its characteristics through cultivation, and that this activity accounts for the degraded nature of the material. A similar explanation is offered for the Flavian to later second-century accumulation in the rampart section east of the South Gate (below, p. 37). The material from this build-up has been divided into two phases by the gravel lens. The earlier material (from layers 20, 23, 24, 27) contains pottery of which the latest sherds date from about A.D. 120 (Pottery group 2.1). The upper material (from layers 18, 21) contains Antonine sherds with a *terminus post quem* of c. A.D. 140 or 160, and one sherd (Gillam 226 or 227) which could date to the very end of the second century (Pottery group 2.2). There is comparatively more Flavian to early second-century pottery than there is of Hadrianic and later second-century date. The gravel lens (19) may represent a lull in cultivation.

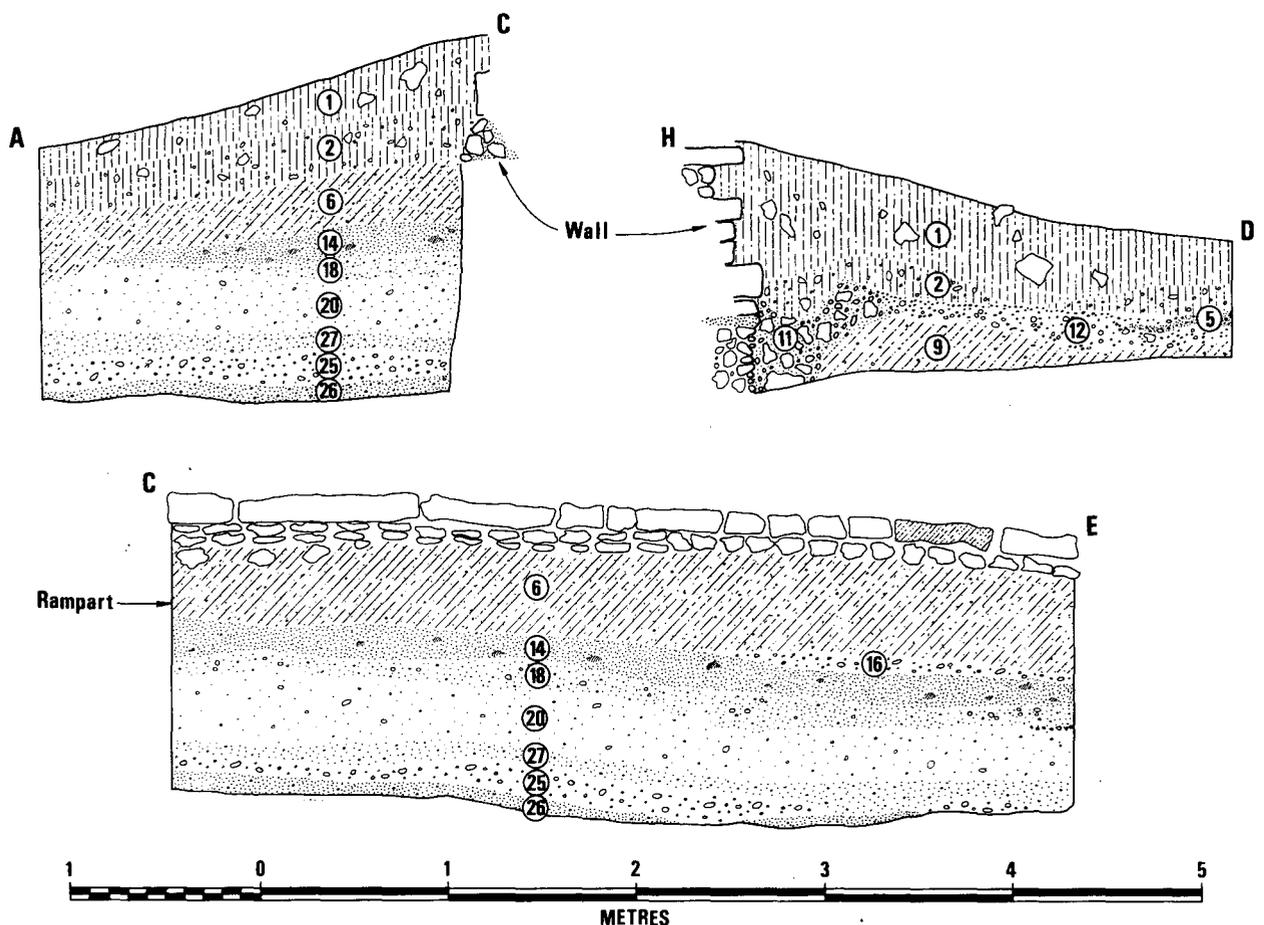


FIG. 8. S.W. Angle (1978(i)): Sections (for location of sections see FIG. 7). Scale, 1:40

2. AT THE SOUTH GATE

(i) Occupation outside the gate (1974 excavation): Flavian/Trajanic to mid/late second century

There are three elements in the occupation of this area in this phase:

- (a) A Hearth and associated occupation
- (b) A Well
- (c) A Boundary along the north-south street.

Although it was difficult to establish stratigraphic relationships between them, these elements would appear to have been contemporary.

The negative features in the natural subsoil were sealed by a layer of gravelly loam. Although attempts were made to distinguish differences both vertically and horizontally, the resulting divisions (layers 5, 7, 8, 9, 10) probably do not have much significance, except in relation to the date of the hearth and its associated occupation. None of the material from these layers is later than Neronian or early Flavian.

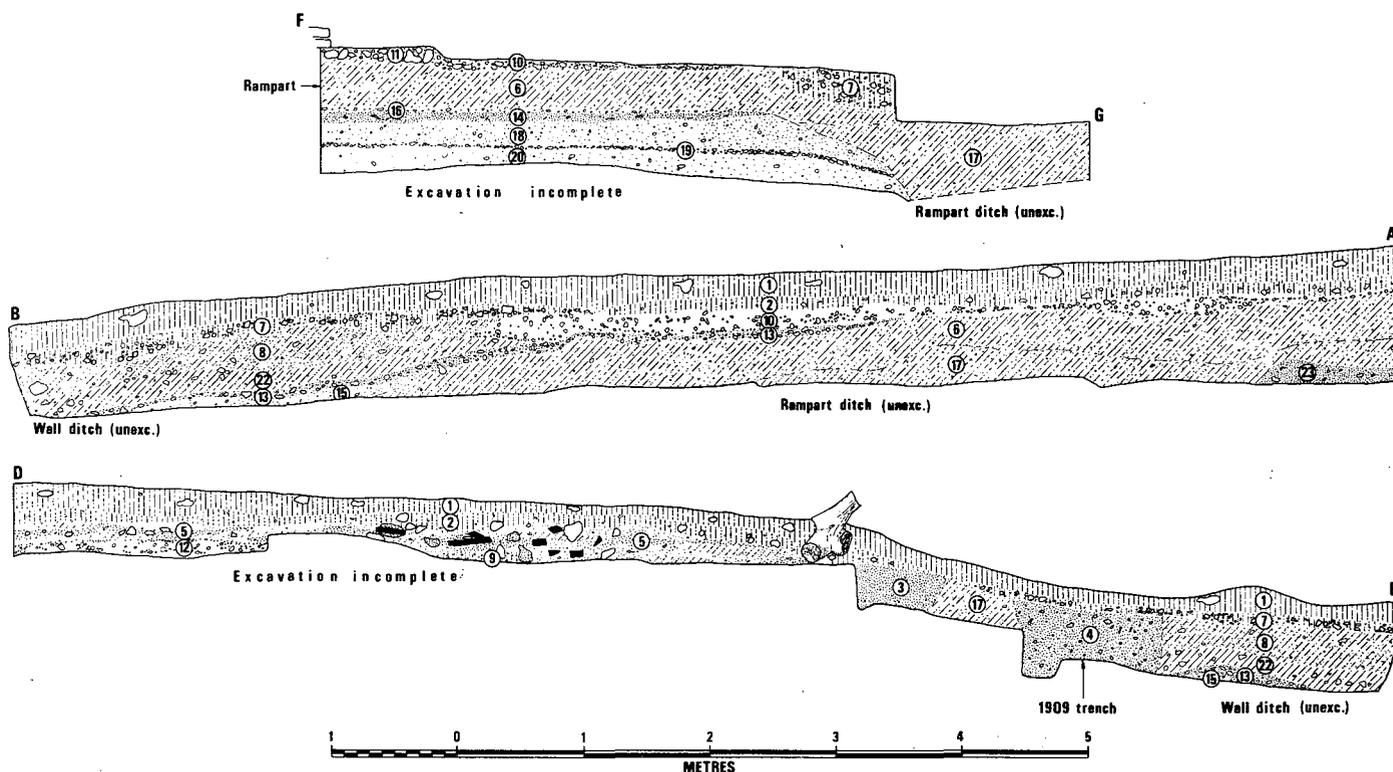


FIG. 9. S.W. Angle (1978(i)): Sections (for location of sections see FIG. 7). Scale, 1:60.

(a) Hearth and associated occupation (FIG. 2, PL. IA)

The hearth consisted of four flat bonding-tiles set in a rectangle (*c.* 0.9 m by *c.* 0.7 m). The northern pair had been cut by the slot (layer 6). Tiles set upright formed a clear eastern edge to the feature. Numerous fragments of broken tile found lying on top of the complete specimens suggest either a second phase or more substance to the original setting. That the arrangement has served as a hearth is indicated by traces of burning and the severely crazed appearance of the tiles. To the west of and adjacent to the hearth, and probably contemporary with it, was a layer of dark earth and gravel with patches of burnt clay (11). This produced two sherds probably later than *c.* A.D. 120 (Dr31(?) and No. 273). Further pottery of early to mid second-century date (Nos. 268–71) was found in another layer of dark earth and gravel (4) overlying layer 11 (Pottery group 2.4).

(b) Well (FIGS. 2–3)

In the north-west corner of the trench and partly sealed by the foundations of the town wall was a well. Because of the erosion of superficial layers south from the well it was difficult to

establish the relationship of this with the sequence in the rest of the trench. The cutting of the well-shaft would seem to be later than the filling of Gullies 5–6 and there is also a strong indication that it cut some of the soil-accumulation above the natural gravel subsoil. This would point to a Flavian or later date for the cutting of the well.

It was only possible to excavate the well-shaft to a depth of 2.5 m and, although the finds were arbitrarily divided between an upper and lower fill, none from the former was of a date later than those from the lower fill. The lower fill (27) consisted of lenses of soft dark brown sand and fine gravel with some pottery, animal bone, oysters and iron smithing slag. Above this, the fill (17) included larger gravel and large flints together with pottery, animal bone and fragments of iron. The latest sherds include samian dated *c.* A.D. 125–50 and coarse wares probably later than *c.* 130/40 (Pottery group 2.5, Nos. 284, 289). This would indicate that the final filling of the well took place after the accumulation of the surviving occupation-layer contemporary with the hearth. It is a reasonable assumption that, even if the well was not directly underneath, it would still have needed to be back-filled before the construction of the earthen rampart. The sand and gravel fill of the well is quite different from the sandy clay of the earthen rampart and this in itself suggests that the filling of the well took place at a different time from the construction of the rampart. The lack of pottery later than *c.* A.D. 140/50 and the rarity of material later than *c.* 120 would seem to confirm that the well was indeed filled before the construction of the rampart. Settlement of the well-fill caused large flints similar to those used in the foundations of the wall to be piled in, probably at the time of the building of the wall.

Despite incomplete excavation, the size of the pit and the date of its fill argues against other interpretations, such as that it might have served as a massive post-pit for a timber gate contemporary with the rampart.

(c) The Boundary alongside North-South Street (FIG. 2)

That the alignment of Gully 6 continued to form a boundary or street-frontage(?) from the late first century until the construction of the town rampart is suggested by the two concentrations of flint (post-packing(?)) cut into the fill of the gully and by a third post-hole to the south (Post-hole 13). Further support for the presence of a north-south boundary towards the western edge of the trench is offered by the stratigraphy recorded in the western section. None of the layers recorded – notably the metallated surface – extended beyond the eastern edge of Gully 6. This observation may be explained in part by the extent of subsequent disturbance in the area such as the trench of 1909, which was cut southwards from the corner of the eastern inturn of the South Gate and which is visible in the western section of the 1974 trench (FIG. 3)

Discussion

Although the area examined was small, the evidence of the hearth, well and boundary-line(?) suggests the existence of a structure (house, shop or workshop) which fronted the main north-south street of the town. This structure is not earlier than Flavian in date and could be as late as the early second century. The scarcity of Antonine pottery suggests that it had been abandoned before the construction of the rampart.

(ii) *South Gate: Rampart Sections* (FIG. 16–18)

The areas excavated to the natural subsoil behind the west and east gate-footings in Trenches 3 and 5 were small, and revealed little trace of further pre-rampart occupation. In Trench 5, east of the eastern footing, a distinctive black charcoal-rich horizon (5/13) was identified above the layer with pre-Flavian material (above, p. 30). The top of this black layer was the level from which the gate-footings were dug. The layer contained pottery of late first- to mid second-century date (Pottery group 2.6).

The western rampart section revealed no occupation-layers that could certainly be dated to the Flavian to mid second-century period. A layer of grey silt or sand (layer 16) produced one sherd probably later than *c.* A.D. 150 (No. 309). It is likely, but by no means certain, that this layer did not form part of the rampart (below, pp. 59–61).

(iii) *The North-South Street* (FIG. 13, PL. VII)

The main north-south street running through the South Gate was excavated to a number of different levels throughout its length within the limits of the 1975 excavation. Between the gate-footings and as far as the northern section, excavation proceeded only as far as the latest metallised surface (Areas 3–6). In Trenches 1 and 2 excavation was initially taken to the top of the latest surviving (rubble) surface (1/2; 2/3) (below, p. 74). Subsequently, with a baulk 2 m wide left between Trenches 1 and 2, excavation was continued, reaching the natural subsoil in part of both trenches. Otherwise work stopped at what appeared to be the earliest metallised surface. Victorian disturbance was confined to trenches dug to define the course of the wall-plinth alongside both inturns, and a deeper trench was dug across the mouth of the gate, probably in 1890.

Earliest metallised surface

Trench 1 was excavated generally to the earliest surviving metallised surface (1/12, 1/18). This consisted of an evenly-laid metallising of small, rounded flint gravel (3–5 cm in diameter). A small sondage parallel with the northern section of Area 1 established that this metallising overlay tips of loose gravel and brown clay (1/19–21) (FIG. 17). Although this gravel may have served as a road rather than as make-up, it was clearly different in texture and composition from the laid surface. A small area of this metallising was also exposed in Area 2 (2/14).

Findings from beneath the metallising included body-sherds of an imitation butt-beaker, 'Silchester' ware and a large fragment of a Roman flat brick. Given that there is no evidence for the use of such brick at Silchester before the reign of Nero, this fragment cannot be earlier than Neronian or, more probably, early Flavian. Support for a Neronian or early Flavian *terminus post quem* is provided by the small group of pottery from Gully 6 at the west end of the 1974 trench outside the gate. On the other hand, it seems odd that a well (p. 35) should have been dug so close to the course of the road, unless, of course, it just pre-dates the regularising and metallising of this street and the associated grid. This piece of circumstantial evidence argues for a late(?) Flavian *terminus post quem* for the north-south street at this point. Previous evidence also indicates a Flavian date for the streets (Cotton 1947, 137; Boon 1969, 6–12).

3. IN THE RAMPART SECTION (EAST OF SOUTH GATE) (FIG. 25)

Following the pre-Flavian occupation described above (p. 30), there is evidence for a build-up of dark, gravelly loam over the entire area within the trench (layer 18). No structural evidence was detected in this layer. A thin lens of orange gravel (16) may have been deposited at an early stage in the construction of the rampart.

Given the otherwise homogeneous character of this layer, it seems reasonable to interpret it as a cultivated soil (not dissimilar from late or post-Roman 'black earths' from other Romano-British towns (Macphail 1981)). A lump of chalk which must have been imported to the site may have been used as marl. A comparable accumulation of cultivated soil has been observed at the south-west angle. A study of Mrs. Cotton's report on her excavations of the earthen rampart suggests that cultivated soils of this kind were widespread (see discussion, p. 234).

The majority of the finds are of first-century date and therefore residual (Pottery group 2.7). The latest samian includes a Trajanic-Hadrianic Dr 31 and examples of Dr 27 and Dr 36 dated to c. A.D. 100–150. Above the gravel lens described above and just beneath the rampart, the lower part of an Antonine Dr 38 was recovered.

4. AT MANOR FARM (FIGS 10–12; PLS. IB, II)

The site at Manor Farm lay on the course of the main east-west street (as predicted by St John Hope (1909, pl. LXXXII)), where it veers south-east to pass through the East Gate of the town. Whatever the precise direction of the street at this point, given the proximity of the East Gate to the trench, it seemed reasonably likely that traces of this street would emerge.

However, this was not to be, as all stratigraphy above the subsoil had been removed in modern times to create the farmyard. Only negative features remained, of which the most prominent was a ditch which ran N.N.W. to S.S.E. across the northern end of the trench. It is not possible to be

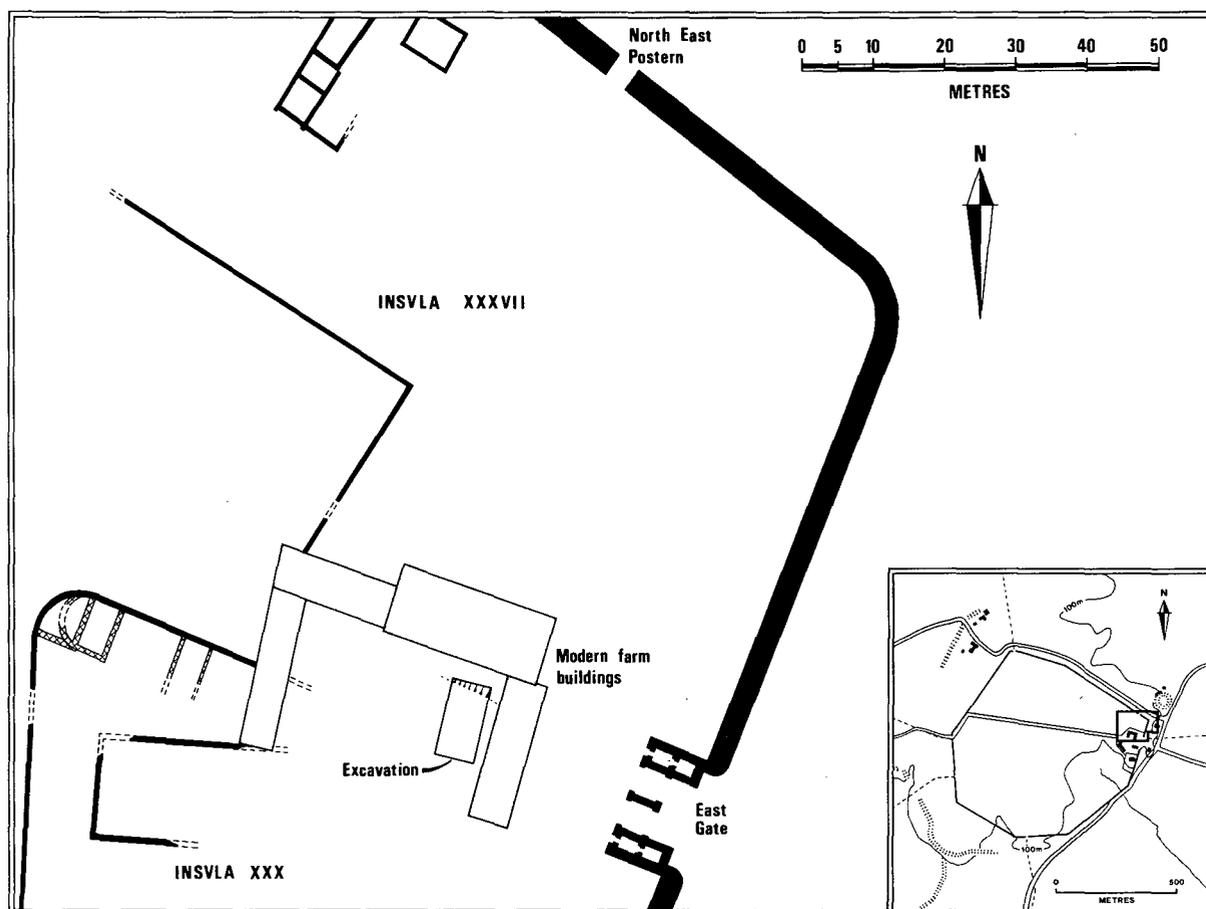


FIG. 10. Manor Farm (1980): Location of trench.

certain of our interpretation because only part of a cross- and longitudinal section were obtained. At its deepest point the excavation reached 4.2 m below the present ground surface. It was not clear in the area available whether this represented the lowest part of the feature. Thus, although a ditch is the most likely interpretation, we cannot rule out the possibility that it originated as, say, a gravel-quarry.

(i) Ditch: Primary silts

The lowest layer consisted of a black, stone-free silt. Above were layers of gravel, interleaved with a greenish, sandy clay (76–8, 87, 94). A thin black stone-free layer, rich in charcoal (69, 75) sealed all the layers just described. It seems likely that this layer represents an interruption in the silting and in the filling up of the feature and may be regarded as sealing the primary silts. Seeds and charcoal were recovered from this turf-line(?), of which the former are mainly from plants associated with damp, meadow-like environments, such as might have grown in such a place (p. 223).

The latest datable sherd from this phase of silting is from the turf-line(?) and gives a date of *c.* A.D.75 for the primary silts. The latter contained only coarse pottery which is clearly Flavian in character, quite different from the earliest assemblages recovered from the excavations along the line of the town wall (Pottery group 2.8).

(ii) Ditch: secondary silts

Above the presumed turf-line (69/75) were layers of greenish or orange sandy clay, interleaved with lenses of black soil, rich in charcoal (72–4). Above these were layers of a more homogeneous sandy gravel composition, and it was through these that the slot (F42) was cut. The pottery from all these layers was little different from the assemblage from the primary silts. The latest samian is from layer 75, dating from *c.* A.D. 75, while two coarse-ware sherds (Nos. 377 and 384) are probably of Trajanic-Hadrianic date (Pottery group 2.9)

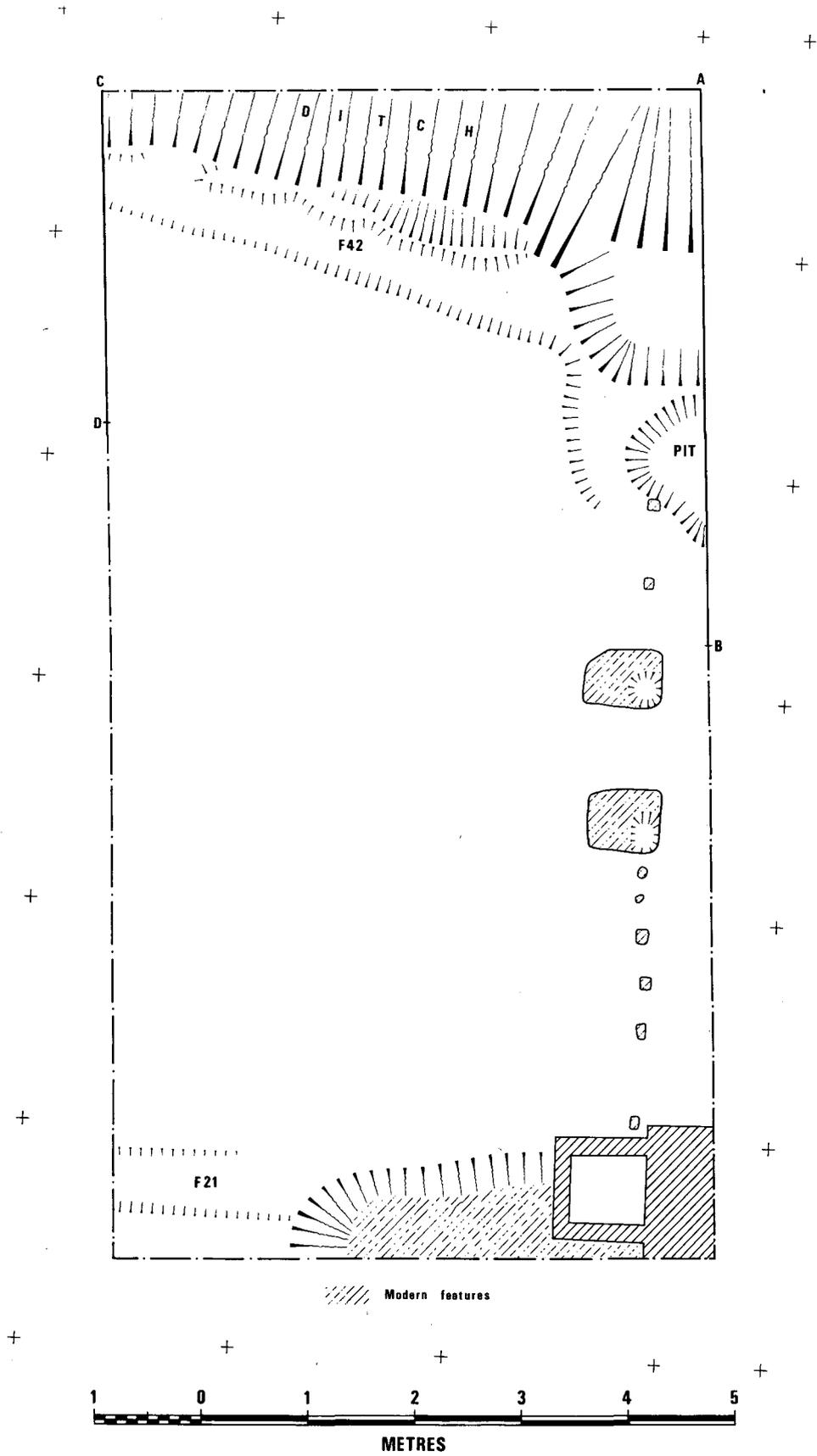


FIG. 11. Manor Farm (1980): Plan of all features in the natural subsoil. Scale, 1:60. North at top.

(iii) The Palisade Slot (F42) (FIGS 11–12, PL. II)

As indicated above, a narrow trench (F42) was cut through the secondary fill of the ditch, parallel with the southern edge. Varying between 0.4 m and 0.5 m in width, with a minimum depth of 0.5–0.6 m, it was filled with brown earth and gravel and occasional larger flints (up to *c.* 0.25 m). Some of these were concentrated together, which suggests that they might have acted as packing for vertical posts. If so, it is unlikely that such posts would have exceeded *c.* 0.2 m in diameter, although no distinct post-pipes were recognised during excavation. It was not easy to define the uppermost fill of this feature, but it was clearly cut through layers 65 and below (FIG. 12), and was sealed by layers 42, 59 and 62. With its indication of vertical posts, packed tight with flints, the trench may have served to take a fence or palisade, following the course of the silted ditch and presumably continuing the latter's function as a boundary. The confused patterning of the flints argues for the posts having been removed, rather than left *in situ*. None of the pottery from this feature is necessarily later than that from the silts of the ditch through which it was cut. These produced two sherds with *terminus post quem* of *c.* A.D. 90/100. The pottery from the layers above indicate a *terminus ante quem* of *c.* 125/50.

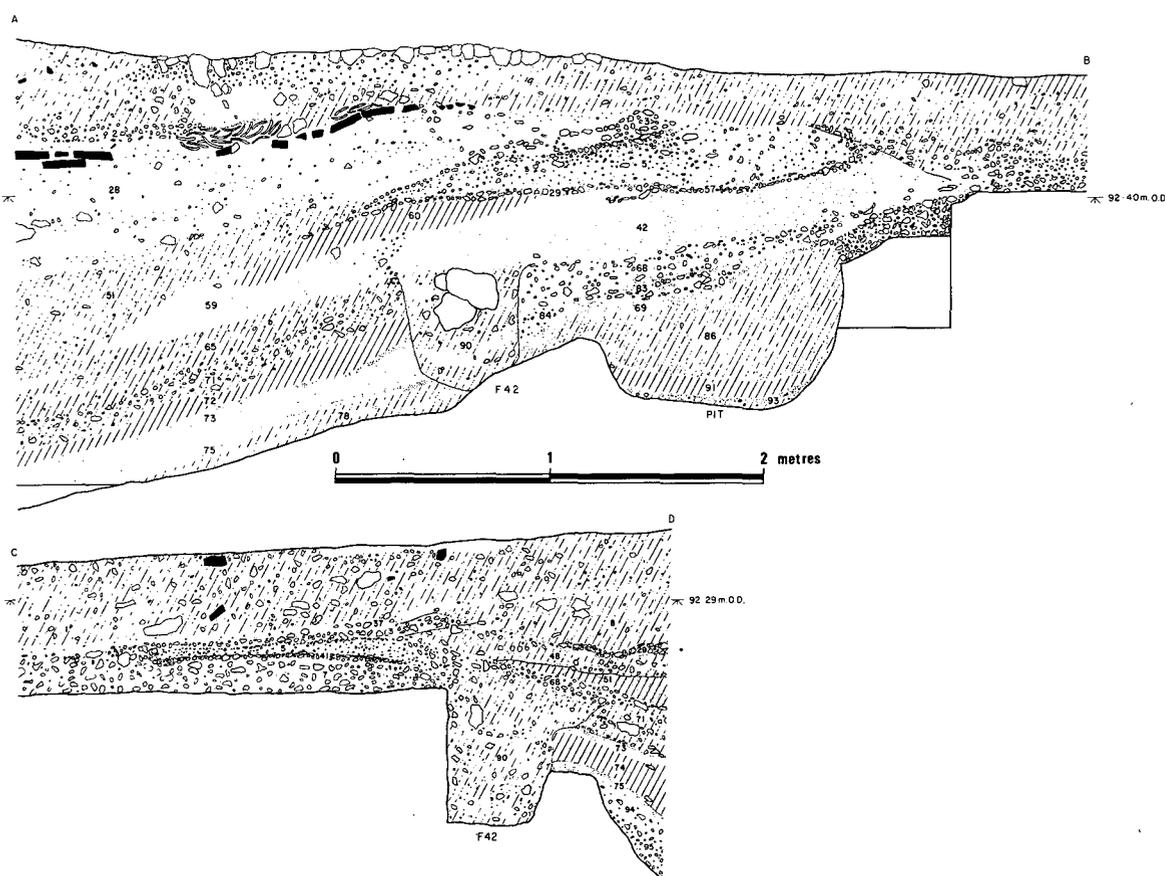


FIG. 12. Manor Farm (1980): Sections (for location of sections see FIG. 11). Scale, 1:35.

(iv) Ditch: upper fills

Sealing the palisade trench (F42) were layers of brown sand, interleaved with patches of clay (42, 59–60). Above these was a layer of grey silty clay which contained lumps of ironstone (51). The uppermost fill (28) consisted of a greenish sand, flecked with charcoal and containing some flint and larger gravel. In the north-east corner of the trench was a layer of flat Roman tiles which may have served as a floor to a structure otherwise destroyed in the creation of the modern farmyard. The latest pottery from the upper fills of the ditch dates to *c.* A.D. 125–50 (Pottery group 2.10). This represents the latest stratified Roman material from the trench.

(v) Other Roman Features

At the southern end of the trench remains of a wall and its foundation-trench were discovered (F21). It was *c.* 0.6 m wide and extended *c.* 1.5 m east from the western trench-edge, where it was truncated by the excavation for a modern drainage sump (F40). This disturbance removed all but 0.3 m of the stump of the wall-foundations, which were of packed flint. No dating evidence was recovered from this feature.

Discussion

Although only a limited length was available for excavation, the profile and character of the fill argue strongly for the main Roman feature of the excavation having been a ditch, rather than an irregular gravel-quarry. The character of the fill suggests that the ditch silted up gradually over a period of less than 100 years, from a little before *c.* A.D. 75. If we extrapolate from the angle of the silts, a *maximum* width of 10 m is envisaged, though the *maximum* depth may not have been much more than was excavated. The ditch was completely filled by *c.* A.D. 150 or possibly a little earlier in the first half of the second century A.D. The only significant episode in the filling up of the feature was the construction of a fence or palisade along its southern lip. This has a *terminus post quem* of *c.* A.D. 90/100, although given the high point in the silts from which it was cut, a date of *c.* 100–125 cannot be ruled out.

At first, this ditch was interpreted as a side-ditch of the main east-west street, where it turns south-east towards the east gate; but its size and date preclude this possibility. Furthermore, no trace of street-metalling was found, although the recent truncation of stratigraphy could explain this absence. However, two other interpretations are possible, assuming the feature is a ditch. First, it may have served a defensive function for which a parallel may be found in Winchester, dating from the early Flavian period (Biddle 1965, 235–8; 1970, 281–5). Indeed, with a *terminus ante quem* of *c.* A.D. 75 for the bottom silts, it is possible that the initial excavation occurred at the time of, or shortly after, the Boudiccan revolt. In this instance the '1955 ditch' at Verulamium offers a parallel (Frere 1983). The construction of the fence or palisade in the early second century argues for some continuity of function, if only as a boundary. Given the dimensions of F42, design as a defensive structure seems unlikely. If we assume that F42 did originally serve a defensive function and that it was not a large gravel-quarry, it would be reasonable to postulate an entrance further to the south-east, possibly on the line of the street leading eastwards from the forum entrance, which also lines up with the Roman road to London. If originally a defensive feature, the fact is interesting that it finally went out of use about the time when work on the main gates and town rampart had started.

An alternative interpretation is that the ditch formed part of the *temenos* of the temple precinct to the south. This does seem unlikely, given its reconstructed dimensions and that the area within it would probably have been bisected by the street mentioned above.

At the southern end of the Trench were the remains of a small flint wall (F21) which followed the same course as the wall discovered in 1909 further to the west (FIGS. 10–11; St John Hope 1909, pl. LXIII). The latter is regarded as the *temenos* of the temple area and indeed it may be so, perhaps replacing the ditch and fence to the north. Although there is no evidence, the fact that the wall is of stone argues for it being second-century or later, and therefore later than the features to the north. Interestingly, if the course of this line is projected further, it meets the southern guard-house of the East Gate and thus allows for the passage of an east-west street immediately to the north.

As for the precise course of the street, no firm evidence has emerged on the site. However, the very presence of the ditch-like feature and the later palisade argues strongly for the presence of a main street leading eastwards across our trench, at least before the mid second century. The absence of evidence for the main street from the West Gate diverging across our trench to the East Gate is not conclusive in view of the truncation of the stratigraphy above the subsoil.

TOWN DEFENCES: LATE SECOND CENTURY

Summary of Dating

The building of the South and South-East Gates was followed, probably after a very short interval, by the erection of the earthen rampart. The latter is certainly later than A.D. 180 and probably nearer A.D. 200 in date. The town wall was constructed between *c.* 260 and 280. The dating evidence is listed in greater detail on pp. 59, 62–3, 65, and summarised on pp. 235–6.

The excavation of the late second-century rampart and gates will be described in the following order:

1. SOUTH GATE
 - (i) Gate Structure
 - (ii) North-South Street
2. SOUTH-EAST GATE
3. RAMPART AND DITCHES
 - (i) At the South-West Angle (1978(i))
 - (ii) At the South Gate (1975)
 - (iii) To East of South Gate (1974)
 - (iv) At the South-East Gate (1976)
 - (v) To North of South-East Gate (1978(ii))

1. SOUTH GATE

(i) *The Gate Structure*

Excavation Strategy

Initially, the gate-footings and the whole area north of the inturns of the later town wall were opened as four separate trenches (3–6). After the removal of the back fill from the Victorian excavation had exposed the latest surviving Roman layers, all but the area of trenches 5 and 6 that lay behind the gate-footings were continued as one trench. Excavation was confined to the later Roman layers and features inside the gate and on the tail of the rampart, except for the two limited trenches behind each of the footings, which were excavated to the natural (above, pp. 29–30).

The Gate-Footings (FIGS. 14–15; PLS. VIII B - XIII A)

The ground surface at the time of the construction of the South Gate can be identified on Section E-F (FIG. 17), to the east of the eastern footing. The tile offset discovered behind that gate-footing corresponds with the ground surface at the time of construction. A foundation-trench approximately 1 m deep was dug and then backfilled with flint, mortar and gravel to fill the trench completely. In the small area examined, there was no indication of coursing below the tile offset. After the excavation of Victorian or conceivably late Roman negative features, an alignment of unmortared flints (cross wall?) was seen to run between the southern ends of both gate-footings (FIG. 15). This suggests the possibility of either a box-like foundation for the gate or that the entire area of the gate, including the contemporary street-surface, was excavated for the foundations.

On top of the foundation-offset, the eastern gate-footing rose in a series of regular mortared courses. Tiles were used to face the outer (southern) end (PL. XIII A) and at least one course of tiles was observed three courses above the foundation offset in the deep section cut behind the eastern footing. The commonest building material was nodular flint, although some blocks of ironstone

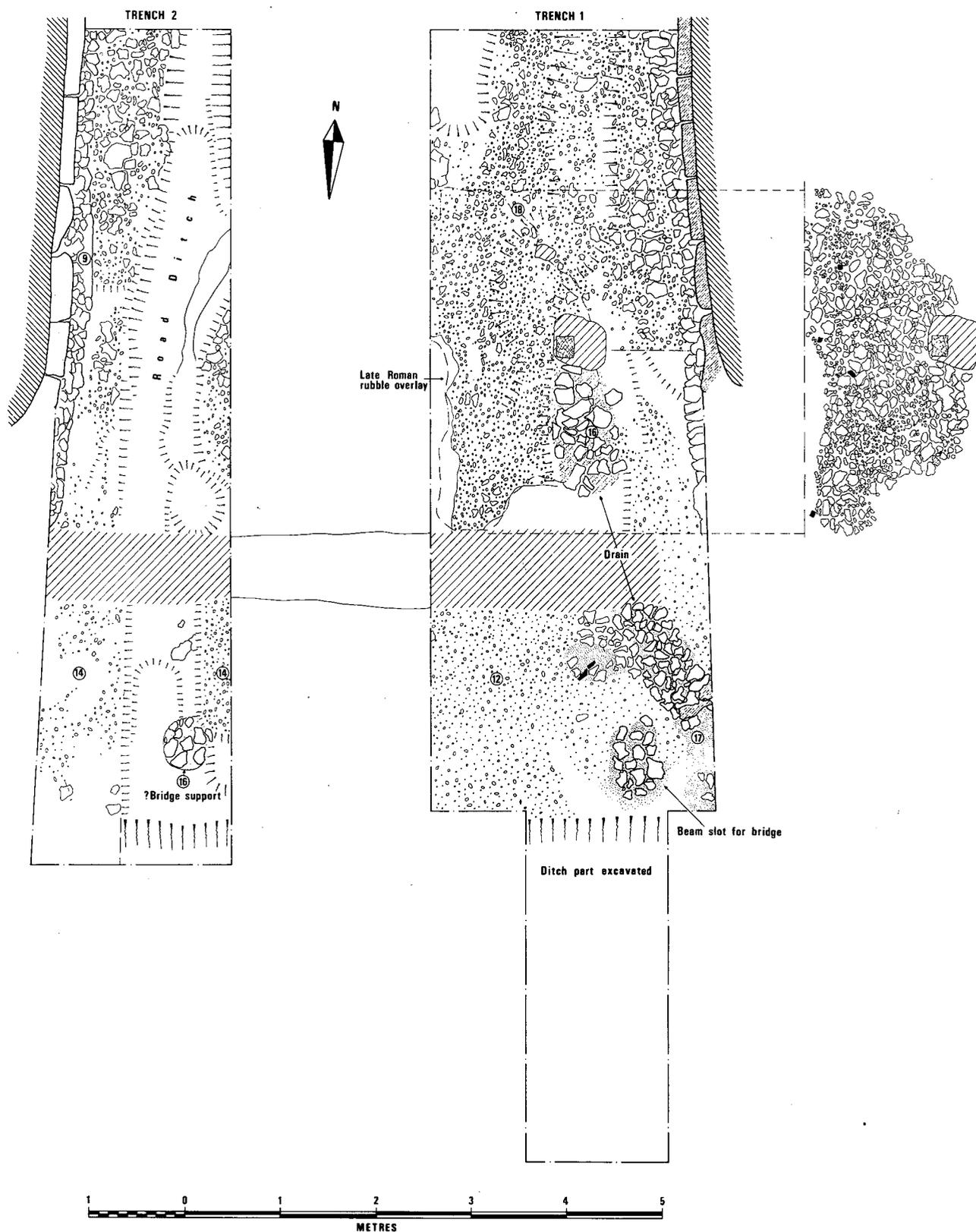


FIG. 13. South Gate (1975): North-South street: plan of early metalling and later features including possible bridge supports. Attachment (right) shows later third-century cobbled surface (Trench 1, layer 5). Scale 1:60.

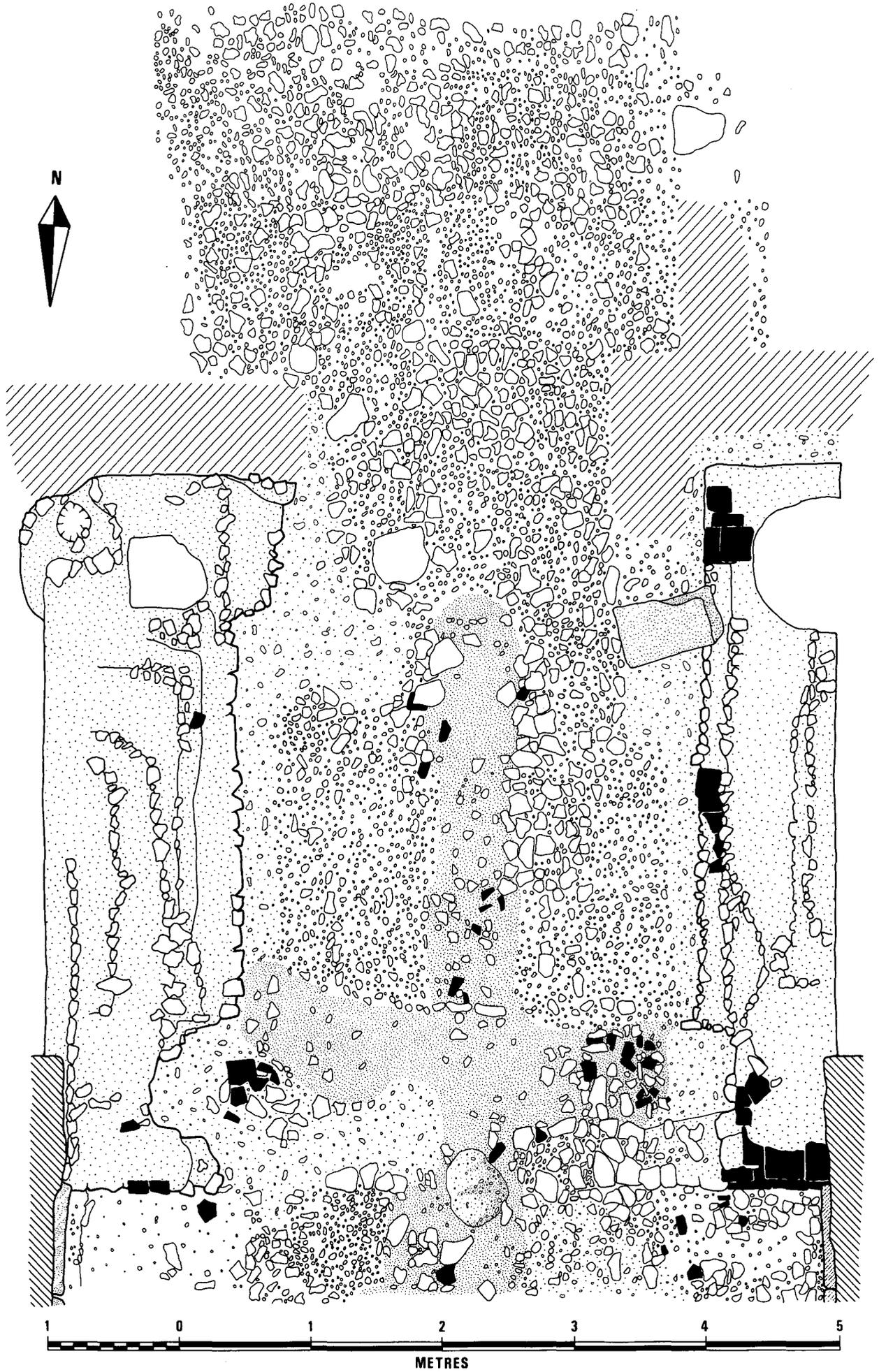


FIG. 14. South Gate (1975): The gate-footings and street-surface with later features unexcavated. Scale, 1:40.

and greensand were also used. Five courses of tile were also found at the northern end of the eastern footing (PL. XIVB). The western footing is very similar to its partner although no deep sondage was made to examine the foundations. Here, too, tiles were used to face the southern end (PL. XII B), although recent excavations to set up gate posts had destroyed the equivalent courses at the northern end. Materials also were the same as those used in the eastern footing and part of a course of ironstone and greensand blocks can be seen on the inner face (PL. XI). At ground level the footings each measured 5.2 m by 1.3 m wide and were 3.5 m apart, to allow for a single carriageway. On the western side, at ground level only, the footings are 1.5 m wide. The inner faces of the footings only survive unrobbed for two courses above the original ground

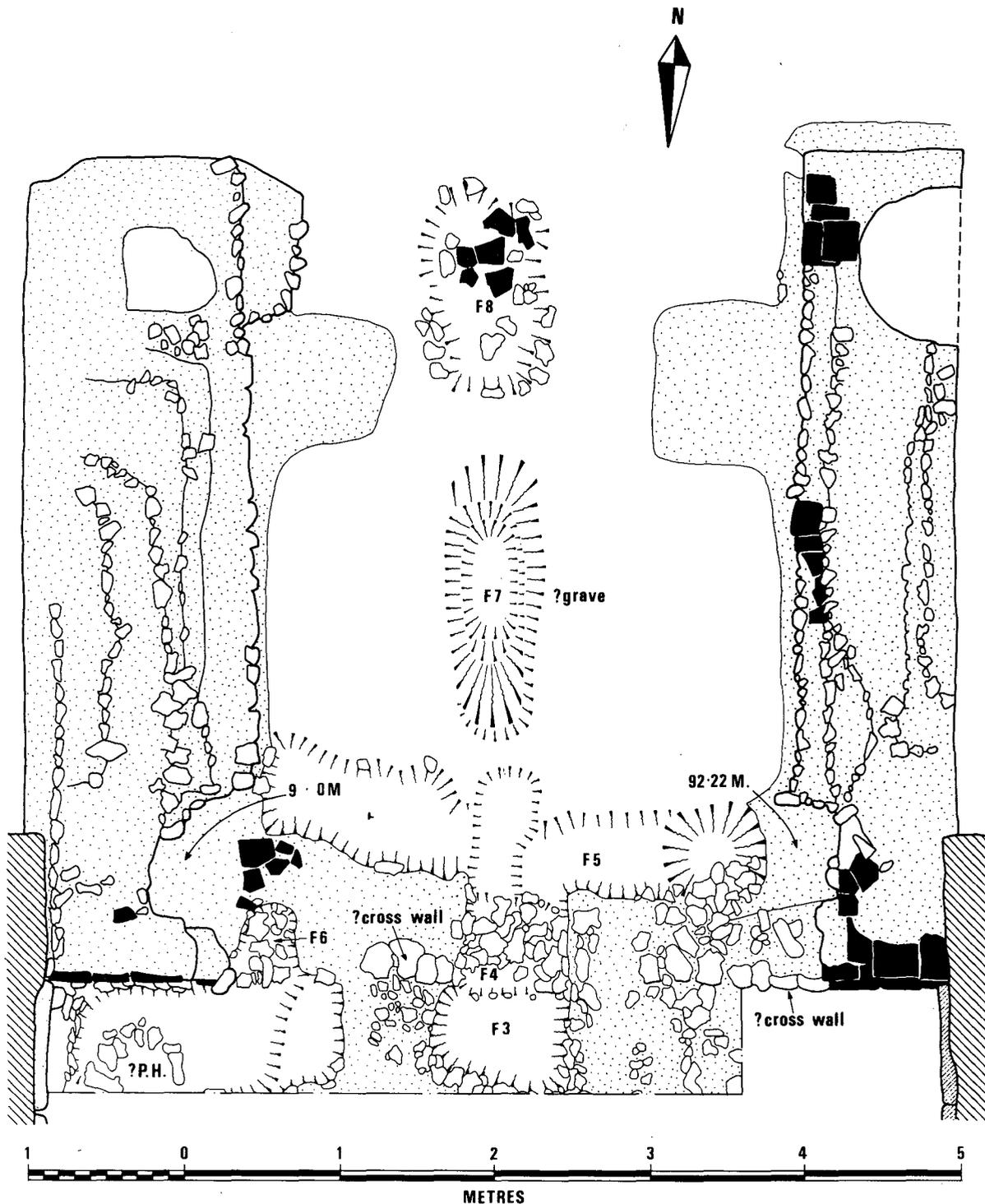


FIG. 15. South Gate (1975): Gate-footings and street-surface with later features excavated. Scale, 1:40.

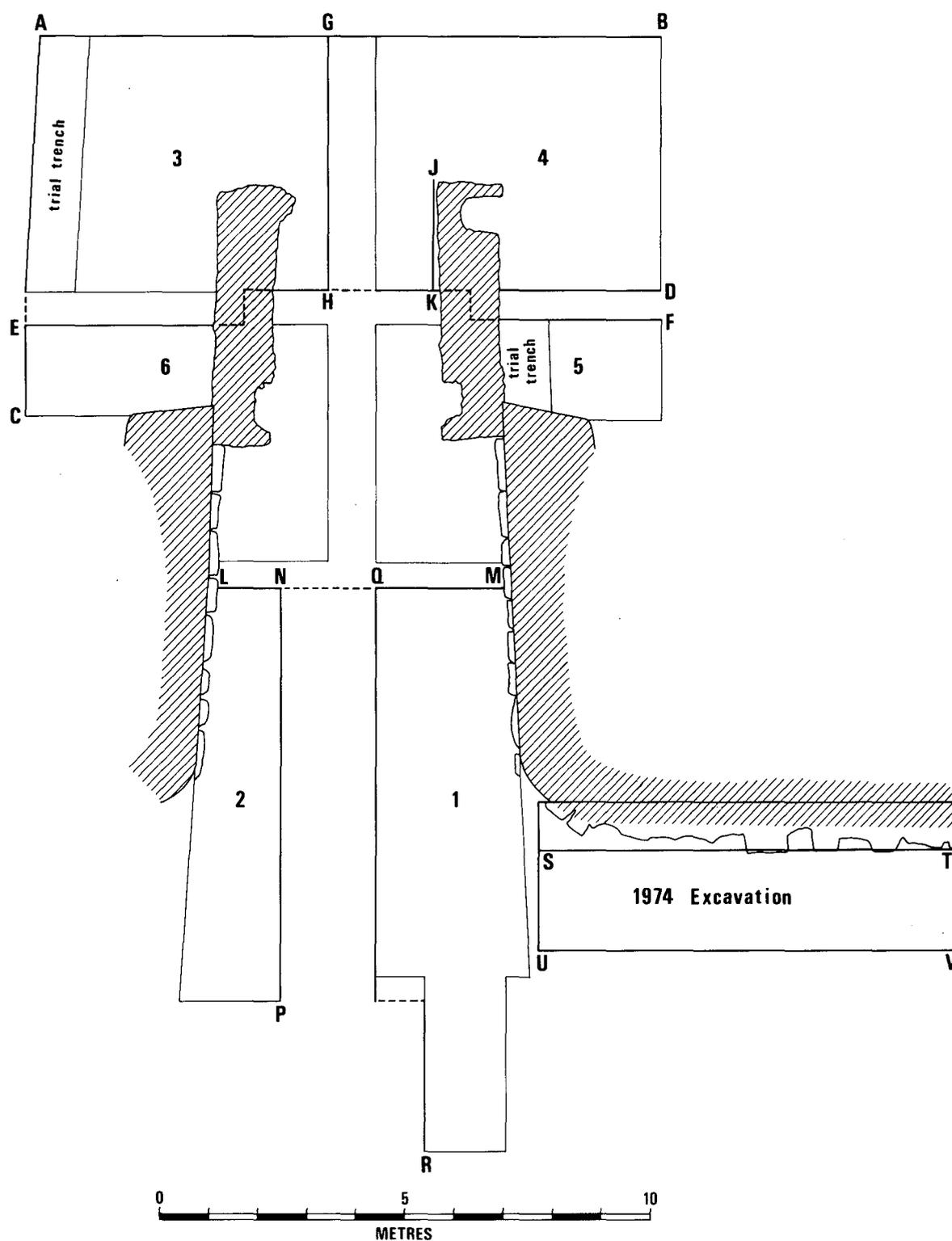


FIG. 16. South Gate (1974-5): Location of trenches and sections. Scale, 1:125.

surface, but where the town bank has afforded some protection at the back, the masonry still stands up to eight courses high.

Towards the southern end of the inner face of each footing, a semicircular recess (0.6 m wide) had been cut. It is reasonable to suppose that these were the sites of large ashlar blocks in which the pivots for the gate had been set. Such blocks, if this interpretation is correct, had been robbed out subsequently to Joyce's excavation of 1872 since the recesses do not appear on his illustration (1881, pl XV). An alternative suggestion is that the cuts provided seating for a threshold-beam; but this would imply that the contemporary road-surface was at least 0.3 m above the latest good surviving metallised surface, such as was found just outside the gate-structure to the north. But

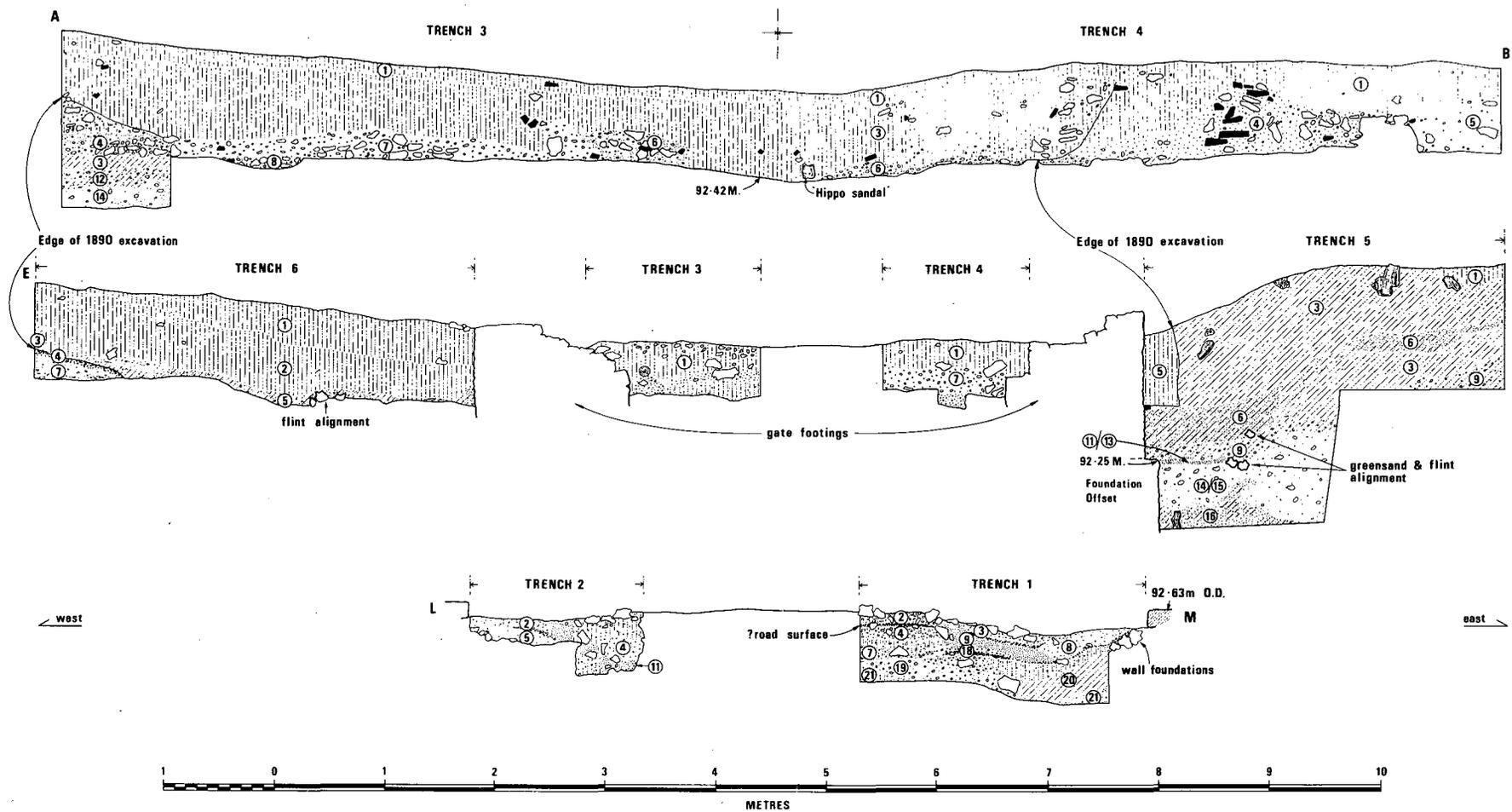


FIG. 17. South Gate (1975): Sections (for location of sections, see FIG. 16). Scale, 1:60.

there is no reason to suppose that that metallised surface had been lowered between the construction of the gate and the fourth century.

A photograph taken in 1890 during the second Victorian excavations shows the footings in much the same state as they were in 1975 (PL. XVII A). In addition, it offers a context for the narrow trenches identified around the northern end of each footing and for the excavation at the southern end of the gate, where the re-excavation of 1975 revealed the flint alignment described above. In addition the trench dug along the rampart-face of the eastern footing shows quite clearly. This effectively removed the relationship of the upper part of the earthen rampart with the gate-footing (Section E-F, FIG. 17).

Although the relationship with the earthen rampart will be described further (below, pp. 59–62), it seems clear that building started on the gate before the rampart had been begun or had reached the South Gate (Section E-F, FIG. 17). To suppose that the gate was secondary to the rampart one must envisage the bank being cut back only so far as was necessary to take the footings, for no construction trench was visible. Technically, this would have been very difficult and certainly dangerous if the bank had been standing to its full height. An alternative explanation must involve a timber gate in a position flush with the main line of the rampart to east and west (and thus sealed beneath the north-south street and/or town walls). If this were so (and there is no evidence for it), with the eventual construction of the masonry gate the earthen rampart was then extended northwards to provide a funnel-entrance to the new south gate. Such a sequence would also provide the stratigraphic relationship that our excavation revealed.

(ii) *The North-South Street*

The Street between the Gate-footings (FIGS. 14–15, PL. IX)

The Victorian excavations had reached as far as the flint-rubble and mortared surface between the gate-footings. Deeper trenching of this period can be identified around the northern end of each footing and between the northern footing and the earthen rampart on the eastern side (see above, and FIG. 17.). We can be reasonably confident that the loose black soil filling features at and between the northern end of the footings is recent. This much is clear from the photographs of 1890 (PL. XVIII A). However, there were other disturbances of the surface between the footings. Cleaning of the flint and mortared surface (the latest surviving Roman surface) produced coins of 270–4 and 260–80. A feature (F5) filled with dark soil was revealed running east-west between the southern ends of each footing just north of and adjacent to the Victorian disturbance (F3, 4, 6) identified from the photograph of 1890 (PL. XVII A). A narrow, linear feature (F7) was also identified running north-south in the middle of the gateway. Excavation of the southerly feature (F5) to the level of the flint rubble of the gate-foundations showed it to be shallow (maximum 10 cm depth) and irregular-sided, except at the eastern side, where there was a post-hole(?) *c.* 0.3 m deep. This feature was filled with black gritty soil and tile fragments, and contained a coin of *c.* A.D. 270–90. The central linear feature (F7) was considerably more substantial. It measured 1.8 m by 0.6 m by 1.4 m in depth and its upper fill consisted of loose dark soil, large flints and large tile fragments of which 51% proved to be *tegulae* (p. 196). The lower fill, of a sticky orange clay (6/16) was void of finds. To the north of the deep pit was a further shallow, sub-rectangular feature (F8), no more than 0.2 m in depth, with tiles laid flat on the bottom. It was filled with dark, gravelly soil. In the angle between the south face of the western gate-footing and the town wall was a feature filled with dark, gritty soil, fragments of *tegulae* and stone coursing-slabs. Since this was associated with the Victorian trench cut to expose the plinth of the town wall, it is not clear whether it too is a Victorian disturbance rather than a possible post-hole.

Little can be made of these features. Since all were sealed by Victorian backfill we cannot rule out the possibility that they are all modern. None, apart from those already mentioned, appears on the photograph of 1890, but this would not preclude them belonging to Joyce's excavation. The shallow linear feature and post-hole at the southern end of the gate (F5) may relate to the operation or repair of the Roman gate. The deep pit (F7) remains an enigma. Some of its characteristics suggest a grave-pit, but no traces of a burial were found, and phosphate analysis was inconclusive. A curious feature is the large amount of *tegulae*, as this sets the group apart from both the material deposited on the road outside the gate (below, p. 196) and that dumped on

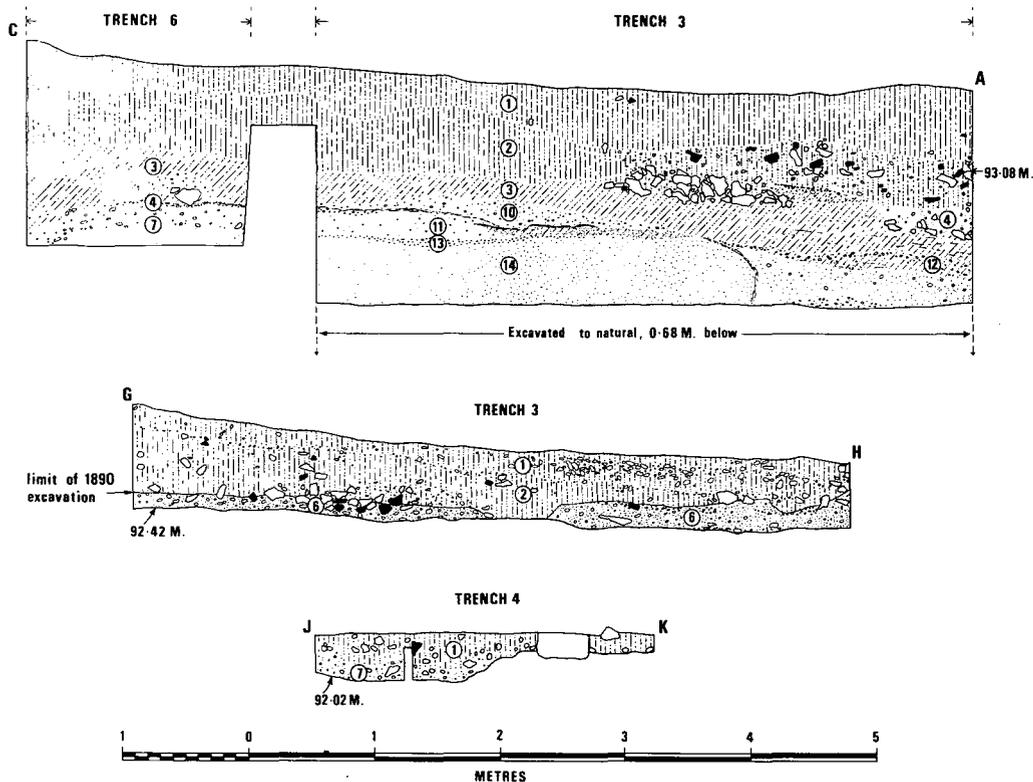


FIG. 18. South Gate (1975): Sections (for location of sections, see FIG. 16). Scale 1:60.

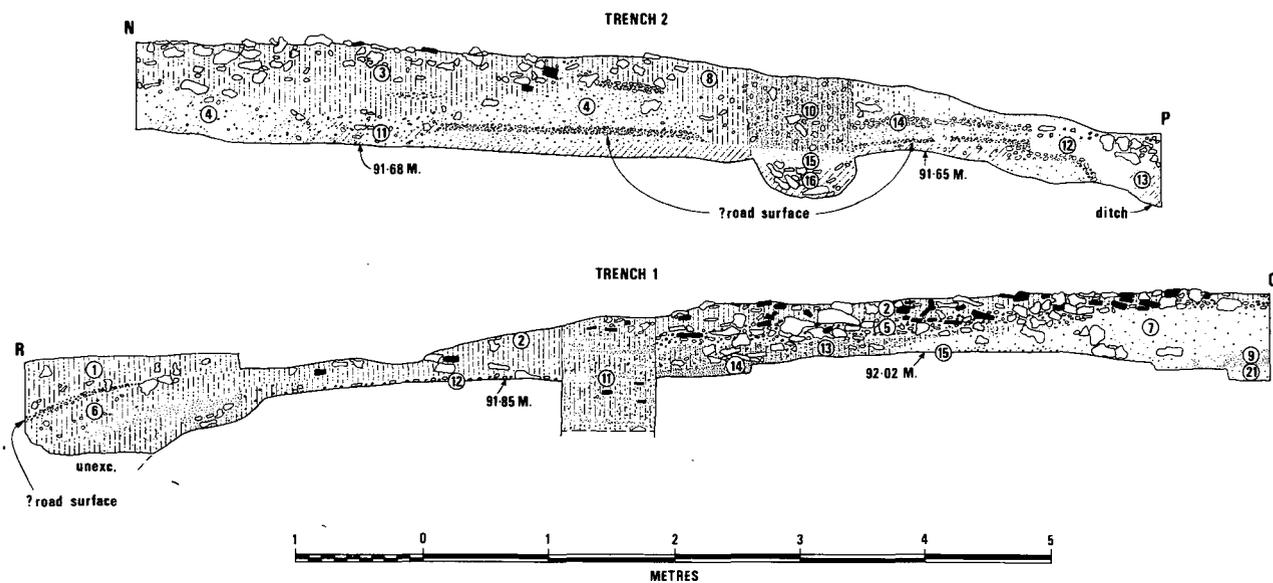


FIG. 19. South Gate (1975): Sections (for location of sections see FIG. 16). Scale, 1:60.

the tail of the rampart (below, p. 75). From this one might conclude that the material either derived from the demolition of a Roman building (and that the feature is of later Roman date) or that it contained tiles that had initially been set aside during excavation – perhaps by Joyce – and subsequently discarded. With the possible exception of this and the shallow cross-feature (F5), it is not appropriate to regard any of the features cut through the latest surviving Roman surface as Roman. All the features carry an hypothetical *terminus post quem* of the later second century (the date of the gate), including the deep pit, which need not necessarily post-date the use of the gateway for wheeled traffic. Until recently, the gate was used regularly by farm vehicles.

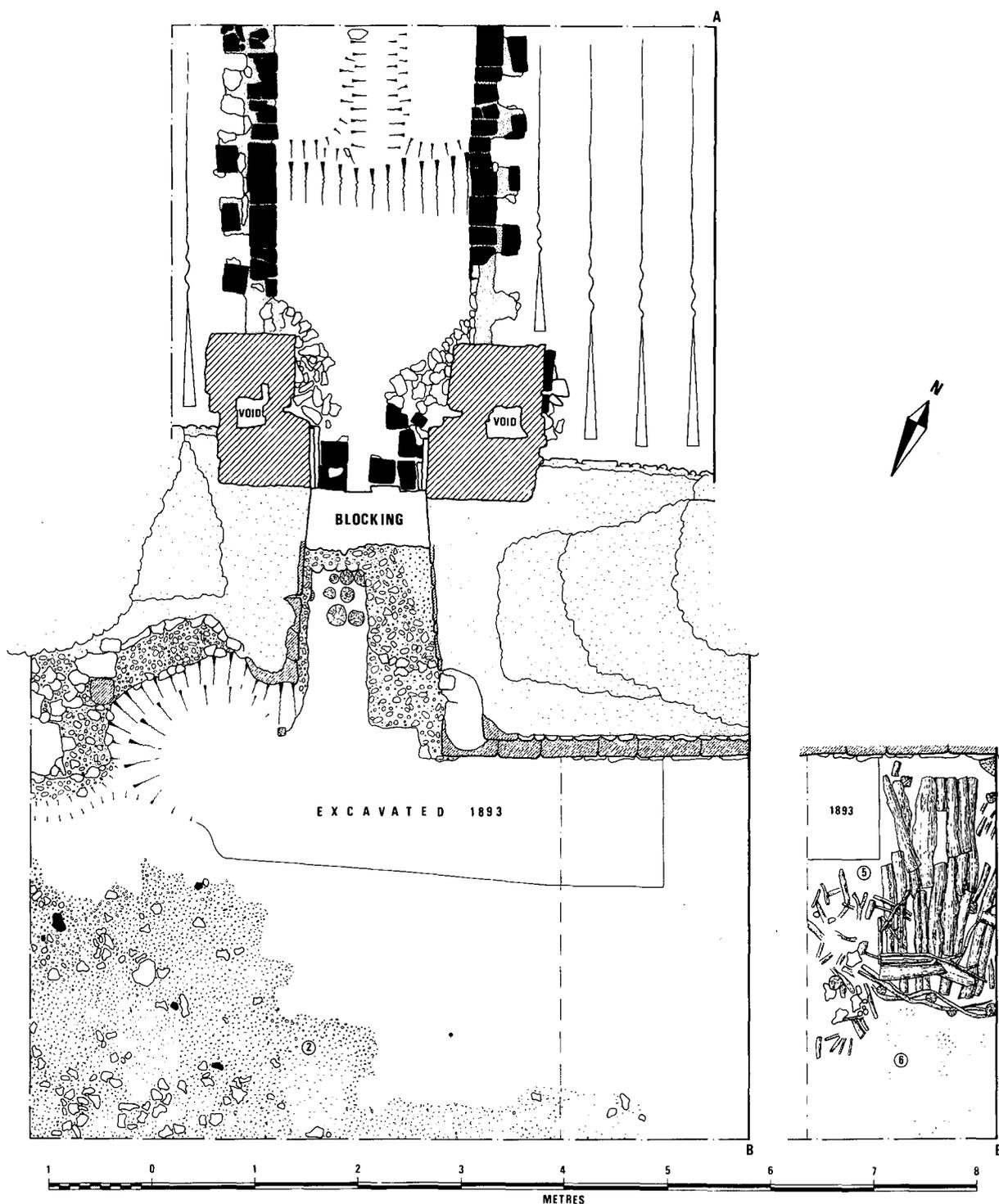


FIG. 20. South-East Gate (1976): Plan of trenches. Attachment (right) shows timber raft beneath the front of the rampart. Scale, 1:60.

The Street south of the Gate-footings: Rumble Drain and other early Features (FIGS. 13, 19, PL. VII-VIII A)

A trench, *c.* 0.6 m-1.0 m wide, had been cut through the earliest metallised surface and backfilled with large flint nodules to form a soakaway or rumble drain (1/16, 1/17). It was bisected by the Victorian cross-trench (1/11). The mouth of the drain was formed by large fragments of ironstone and quern (p. 119) and was located in the south-east corner of Trench 1, where presumably it debouched into the ditch fronting the rampart. Although there was no independent dating evidence, the position of the mouth and the alignment of the drain strongly suggest that it respected the late second-century rampart and thus post-dated its construction.

At the southern end of Trench 1 the earlier street-surfaces were cut away by the ditch (1/6), which may have been originally cut to accompany the earthen rampart. On its northern lip was a

flint-packed feature (0.7 m by 0.5 m) which might have provided the seating to support a wooden bridge (FIG. 13). Like the drain, this feature produced no dating evidence. It was matched by a second flint-packed posthole (*c.* 0.5 m in diameter) in Trench 2 (2/16).

Although gravel and flint had subsequently been dumped upon the earliest metallated surface, there was no evidence of date. No other metallated surfaces were encountered in Trenches 1–2 which might have been contemporary with the gate and rampart.

2. THE SOUTH-EAST GATE (FIGS. 20–23, 26, 29–31; PLS. XVII–XXV)

The position of the South-East Gate was identified at a point where there was a gap (4.5 m wide) in the upper courses of the town wall. Excavation outside the gate (Trench 1) was largely confined to reaching the latest undisturbed Roman levels, which consisted of a metallated surface contemporary with the construction of the gate. This surface had been penetrated in 1893 by a small trench dug immediately in front of the wall footings, which had revealed traces of wooden piling (Fox and St John Hope 1894, 231). In 1976 a small cutting was made extending 1.9 m west of the eastern section of this trench in order to examine the arrangement of timbers beneath the metallated surface as well as to recover dating evidence (FIG. 20).

To the north of the town wall, the trench (2) lay mostly within the area opened in 1893. Thus, to the west of the gate, excavation only succeeded in identifying undisturbed rampart-material at the bottom of the Victorian trench, whereas on the eastern side it was possible to excavate a small width of undisturbed rampart behind the town wall. Between the passage walls of the gate excavation penetrated only a little deeper than the level reached in 1893. Despite the long drought of 1976 which ended in the last days of the excavation in September, the water-table was reached at both the front and back of the wall. Nevertheless from the small sondage in Trench 1 it was possible to recover valuable environmental evidence as well as the arrangement of timbers which under-pinned both the earthen rampart and the town wall. Heavy rain at the end of the excavation prevented our reaching the natural subsoil beneath the rampart behind the wall.

The area before construction of rampart and gate

At the time of construction of rampart and gate in the late second century, the surrounding ground was soft and marshy. This wet area extended beyond the excavated area and probably stretched north-eastwards beyond the trench excavated in 1978. How far the wet area extended westwards is unclear but, to judge by the present topography, no further than the adjacent south-east angle in the town wall. On the Ordnance Survey geological map it appears that this is an area where the overlying plateau-gravels have been eroded by spring and stream water, thus exposing the underlying clay of the Bagshot beds. This probably explains the lack of evidence for any occupation pre-dating the defence.

Stabilisation of the ground

Before either rampart or gate could be built, the ground had to be stabilised. For the former, a raft of small timbers (FIG. 20, PL. XXA) was laid on the soft clay and held in position by a wattle fence which ran along the outer (southern) edge. The timbers were aligned north-south at right-angles to the course of the earthen rampart and they consisted of branches of oak, birch and alder (see below, p. 212). These averaged about 87 mm in diameter and 80–100 cm in length. Overlying them was a spread of brushwood, consisting of hazel, oak and willow or poplar. The raft projected 2.4 m south from the face of the later stone wall.

A layer of grey clay (2/11) similar to that in which the timbers were laid (1/4–5) was found to the north of the wall underlying the earthen rampart. Conditions made it impossible to determine whether or not the raft had originally extended as far north as this.

Environment

The grey clay in which the timbers were found (1/4–5) was sampled for pollen and other plant-remains. Mr. Murphy's report on the seeds suggests, as might have been predicted, that the

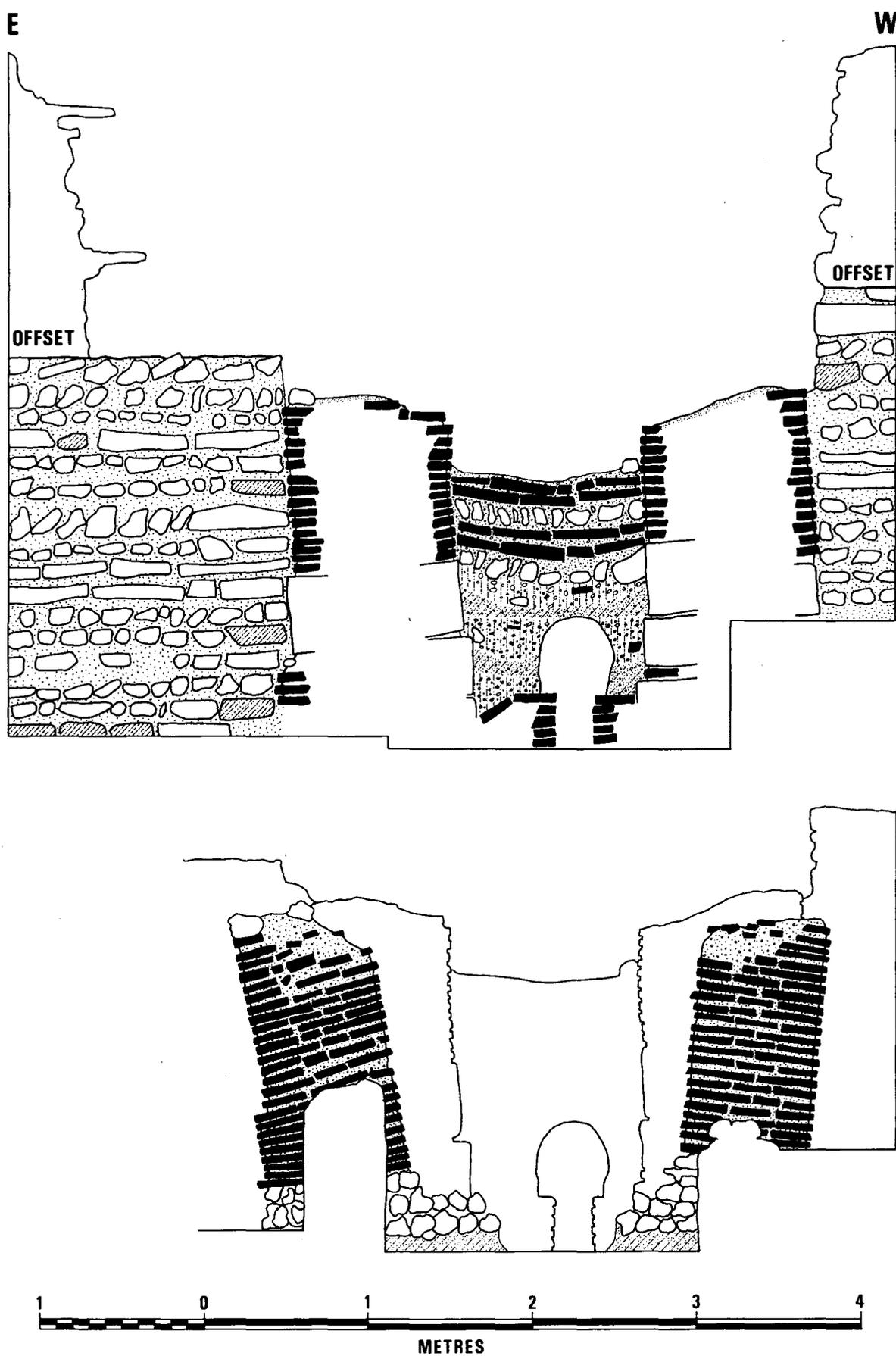


FIG. 21. South-East Gate (1976): Rear elevations of blocked brick gate and later stone wall. (Top) The profile of the outer (southern) part of the brick piers is shown; (bottom) the inner (collapsing) sections of the brick piers. Scale, 1:35.

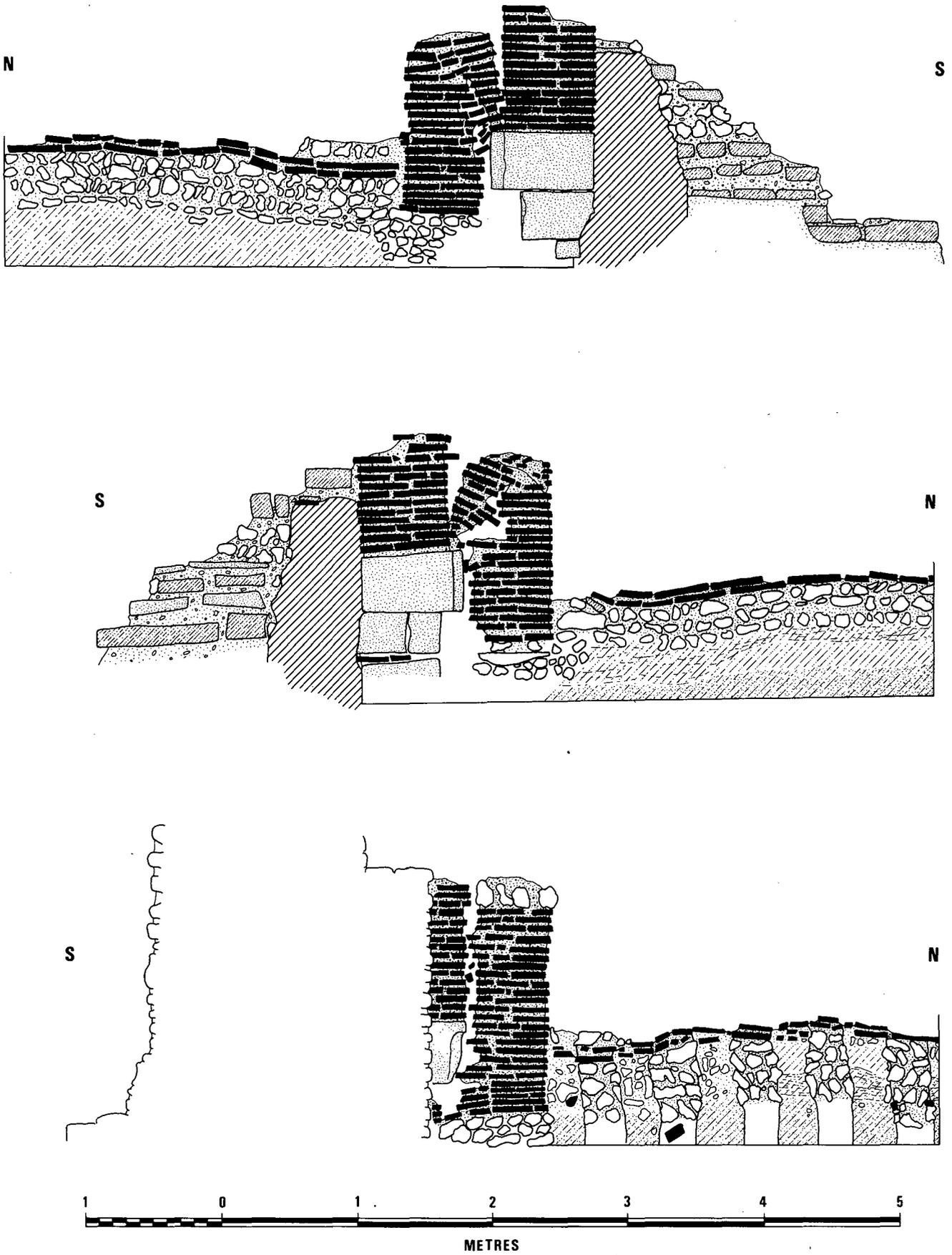


FIG. 22. South-East Gate (1976): Side elevation of the gate and passage-walls. Top, inner face of eastern side; Middle, inner face of western side; Bottom, rampart face of eastern side, showing the buttresses behind the passage wall. Scale, 1:40.

immediate environment of the gate was one of wet grassland in which rushes and redshank were common (pp. 222). No fruits of cultivated plants were identified. Dr. Keith-Lucas's analysis of the pollen confirms that the area immediately around the gate was a marsh and alder carr. The pollen has also provided important evidence for reconstructing the wider plant environment at the end of the second century (pp. 215–21).

The Gate (PLS. XX-XXIII; FIGS. 20–22)

In its final form the gate consisted of two brick piers, roughly L-shaped in plan, which flanked a narrow passageway, a little over 1 m wide at ground-level. The piers were founded partly on massive greensand blocks (on the outside) and partly on packed flint rubble (to the rear). An accurate assessment of the dimensions of the piers as they were when first built was hindered by the way the northern (inner) part of each had split away from the front. This had presumably resulted from the inadequacy of the foundations and the nature of the thrust of the superstructure of the gate (see below, p. 69). Nevertheless, at their widest on the outer side (excluding foundation offsets), the piers are respectively 1.2 m wide on the eastern side and 0.9 m wide on the west. On the inside they are respectively 0.9 m wide on the east and 0.8 m wide on the west. The total depth from the front to the back of the piers is approximately 1.45 m, and each stands to a maximum height of 1.7 m from the top of their foundations. In the middle of the north-south axis of each pier is a void which, allowing for subsidence, is about 26 cm square. Apparent narrowing of the void in the eastern pier, some 25 cm below the top as it survived when excavated, may have resulted from the settlement of the piers. In view of the latter's precarious condition, it was not thought prudent to excavate the voids entirely, but this was apparently done in 1893. While there were traces of mortar spills on the insides of the voids, nothing of the 'smooth white plaster' lining noted in 1893 was found (Fox and St John Hope 1894, 230). Presumably timbers originally filled the voids, and this assumption underlies the argument (below, p. 55) for the gate being entirely of wood in its original state. To the rear and at the base of each pier is an opening (also observed in 1893), caused partly by the subsidence of the rear part of each pier whose only foundations were packed flints, and partly by the projection of the uppermost of the stone foundation-blocks into the passageway. However, the original interpretation that a horizontal timber threshold linked the bottom of each vertical timber encased by the brick piers remains a possibility.

There was no question of the narrow, rear part of each brick pier having been bonded on to the rest as a later addition. This was suggested by Boon (1974, 105), but fractures of the tiles at the two points where the two parts had broken away demonstrate clearly that both front and back had been built as one from the beginning (PL. XX B). White mortar had been used in the piers with a facing of hard pink mortar on the inside (passage face) and on the northern faces up to a line corresponding with the joint with the narrow passage walls which revetted the earthen rampart. Repairs of the brick piers had taken place at least once. On the western side, broken pieces of tile had been used at the top of the pier, while part of a course of flints survived on the top of the eastern pier.

Revetment walls (FIG. 22, PLS. XXII-XXIV)

Running at right-angles to the course of the earthen rampart and forming a passage *c.* 2 m wide are the remains of two walls of flint masonry capped by two courses of flat tiles. These may only have been intended as dwarf walls to take a wooden superstructure. These walls butt on to the brick piers, partly overlying their flint foundations. The inner (northern) ends were discovered in 1893 (giving a total length to the passage of *c.* 3.9 m), but were outside the area available for excavation in 1976. Clearly, the purpose of these walls was to retain the earthen rampart, although they were not erected until at least some of the bank was in position, for they rest on rampart material (2/2, 4).

That the pink mortar noted on the inside faces of the brick piers respects the line of the passage walls suggests that the latter were, in some form, primary (below, p. 55). Possible traces of a cut through the bank for the eastern wall are visible on the northern section (PL. XXIV B).

The masonry walls may have replaced a completely wooden structure, for there are a regular

series of buttresses on each side, projecting into the rampart-face. There is no obvious structural explanation for these buttresses unless they occupied the gaps between a series of vertical timbers designed to retain horizontal shuttering against the face of the rampart. The buttresses would thus appear as 'negatives' of this presumed timber-work. Soft black soil, indistinguishable from the Victorian back-fill, gave on to bank material in the gaps between the buttresses, 5–10 cm beneath the top of each wall. If posts did exist they were either removed or had rotted to leave no trace. In all probability the gaps between the buttresses acted as sockets for timbers as described in the original excavation report (Fox and St. John Hope 1894, 230–1). The simplest interpretation, then, is that the walls either replaced or strengthened an existing timber revetment. Nigel Sunter has observed that the positioning of the voids within the brick piers in relation to those between the buttresses of the entrance-passage behind is such as to suggest a regular series of vertical timbers and that such an arrangement provided the basis for an original timber gate and entrance-passage (FIG. 23). The brick piers and the passage walls, whether dwarf or not, merely encased an already-existing wooden structure. This would make sense of an otherwise unusual design in which wooden uprights would have been clad with brick from the start. In support of this scheme of development it is only necessary to assume one post (on the western side), for which no other evidence is recorded. The construction of the brick piers with their pink mortar rendering would then probably have respected the line of a wooden revetment, although Mr. Sunter in his reconstruction (FIG. 23) has assumed – and the evidence allows this – that the masonry passage wall was in position before the brick cladding was added to the gate itself.

The Drain

In 1893 the excavators dug down to the soft clay over an area between the passage walls and brick piers up to 2 m from the later blocking of the gate (PL. XVII B; below, p. 75). Whether this was an arbitrary cut or not is unclear. North of this the clay-layer survived intact, cut only by a gully approximately 60 cm wide at the top and 20 cm wide at the bottom. This ran midway between and parallel to the passage walls. The fill was of black soil with small flints, which was in no way different from the general backfill of the Victorian excavation. There is no sign of this feature on the photograph taken in 1893 (PL. XVII B), but there is no reason to suppose that this was taken at the conclusion of all digging work. Despite uncertainty whether this feature is of antiquity, or whether it was recognised as a feature and dug in 1893, we may reasonably regard it as part of a drain running through the entrance-passage of the gate. It lines up with a short stretch of tile-lined drain (20 cm wide) located between the brick piers. Although the gully showed no trace of a lining, there is no reason to suppose that it was not part of the original drain designed to take surplus water through the gate. Either side of the gully, the upper surface of the clay between the walls had pink mortar trampled into it. Presumably this was detritus from the rendering of the brick piers. It is certainly not to be regarded as a laid surface, although no other evidence for a more durable surface to the passage was found inside the gate. Such evidence only emerged outside, where an area of metalling sealed the yellow clay (1/2). Although no dating evidence for the metalling was obtained, it is likely to be contemporary with the earthen rampart and its associated gate.

The Gate Sequence and Earthen Rampart

No material was recovered to date the various phases of gate structure and passageway, but it was possible to demonstrate a relative sequence in which the construction of the town wall (below, p. 69) came at the end:

- (i) All-timber gate and passage
- (ii) Timber gate and wooden passage walls with masonry infill
- (iii) Brick piers and masonry passage walls
- (iv) Town wall and gate (below, p. 69).

If the evidence for a first-phase timber gate and passage is accepted, it follows that the subsequent alterations probably followed after the rampart had been erected. A combination of Victorian excavation and the cut for the later town wall had removed all evidence of the relationship of the brick piers to the earthen rampart. However, yellow sandy clay was found to

TIMBER REVETMENT WITH MASONRY INFILL

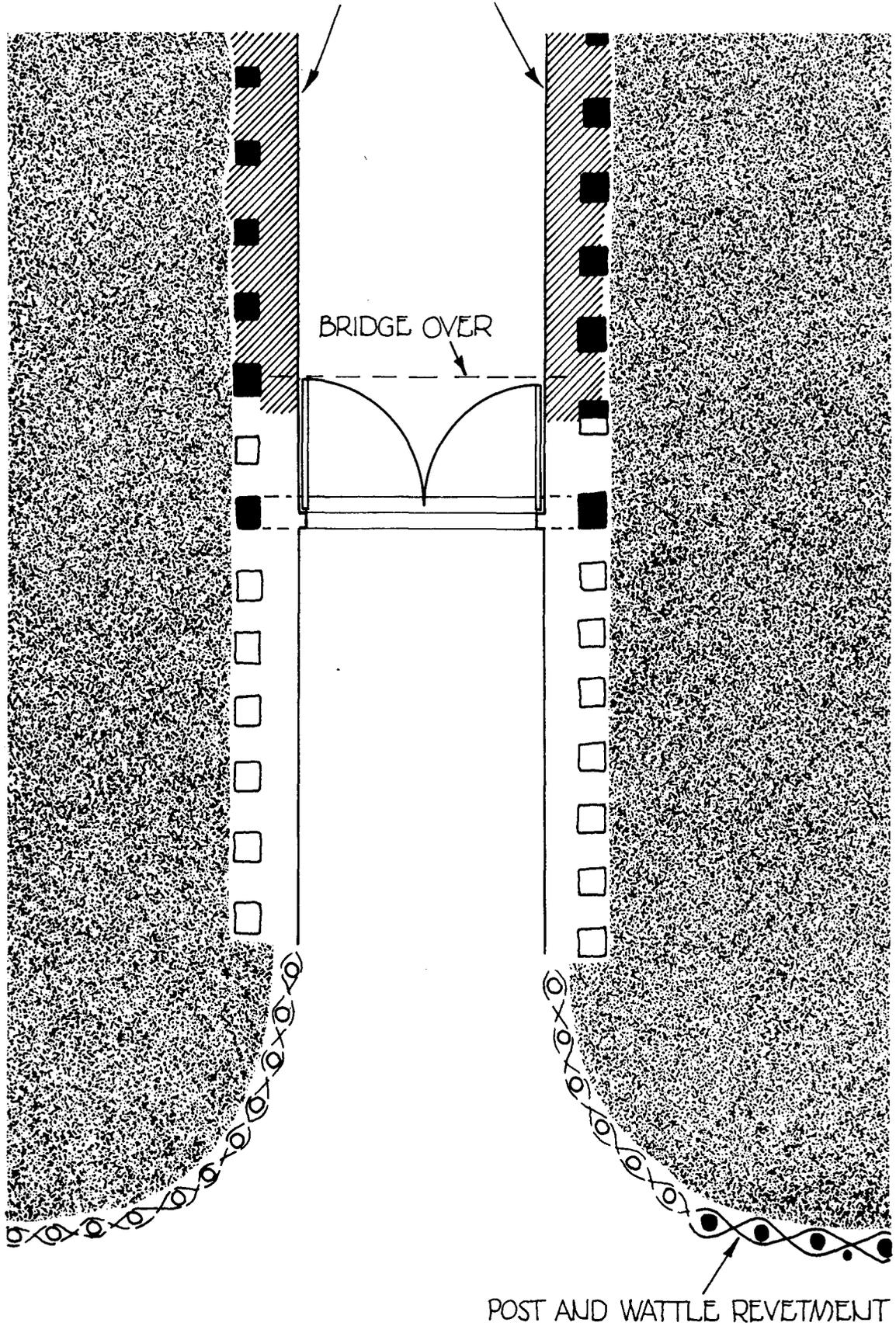
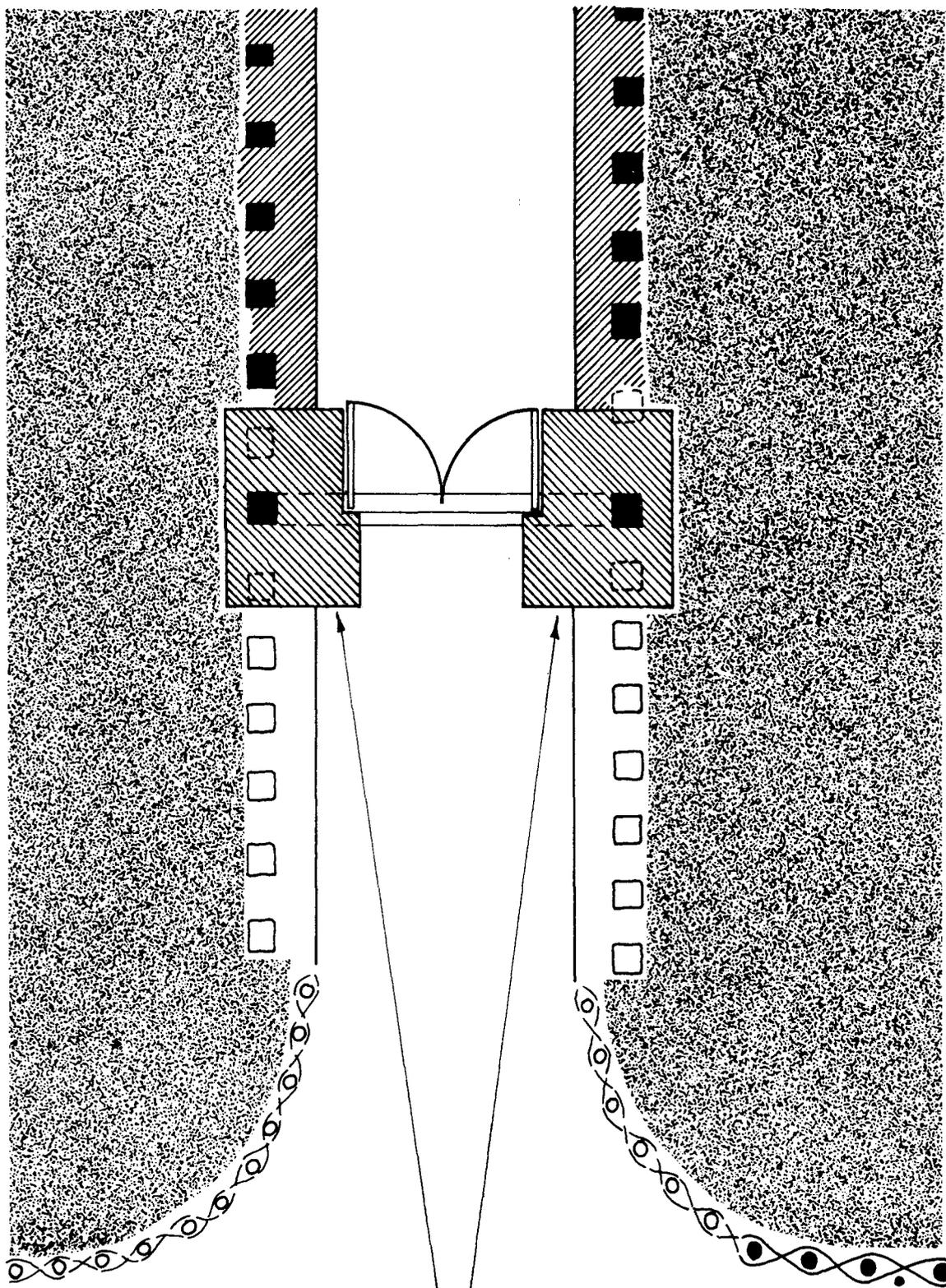


FIG. 23. Reconstructions of South-East Gate. Left, timber gate and revetment with masonry reinforcement of the revetment; Right, timber gate enclosed with masonry piers.
(Drawings by N.J. Sunter)



POSTS ENCASED WITH MASONRY PIERS

be covering the flint foundations of the rear part of the gate. On the assumption that these flints took the thrust of the *wooden gate* and were not inserted later, this evidence need not be taken to suggest that the *brick-clad piers* were primary to the rampart. Evidence that the passage walls were secondary to the rampart is convincing (above, p. 54). Thus, whereas a first-phase wooden South Gate is completely hypothetical (above, p. 48), at the South-East Gate there is considerable circumstantial evidence in support of an original timber gate. The question then arises whether the repair and strengthening of the wooden gate and passage with brick took place at the same time as the building of the masonry South Gate. Mr. Talbot Green's analysis of the brick involved in each gate shows that material of different sizes was used in each structure (p. 198). This certainly implies more than one batch of brick, but perhaps from alternative contemporary suppliers rather than from the same brick factory at different dates.

Discussion

In 1893 it was the opinion of the excavators that they had found a sluice-gate which controlled the flow of waste water from the baths of the *mansio* or *praetorium*, a little way to the north-west of the gate (Fox and St John Hope 1894, 230–31). In their view the brick piers were of the same period as the town wall. This is manifestly not the case. The Victorian interpretation therefore determined a function for the brick piers which had nothing to do with a single gate. The original excavators saw the piers as taking massive timber uprights to support a frame to hold a sluice-gate, which was supposed to slide down in the angle created by the L shape of the piers. This interpretation was questioned by Boon: 'we may well wonder whence was to come the enormous volume of water which would have justified the erection of a sluice-gate' (Boon 1974, 105). One also might be reasonably puzzled why the *ordo* of *Calleva* should have wanted to make possible the flooding of a substantial area within the defences, rather than allow the water to drain freely away.

The sequence and function are now clearer: the brick piers and the wall are of separate builds, although the former may be a secondary alteration of an original timber gate-structure. As far as drainage is concerned, the small box-drain through the gate provides eloquent testimony of the real volume of water expected to run through the gate. We can thus envisage a simple postern gate, initially through the earthen rampart, and later through the town wall. Why a gate at this point in the defences? Evidence for extra-mural buildings outside the southern circuit of the defences is scant, but directly opposite our gate in L.P.3000 is a scatter of building-rubble, which on some aerial photographs hints at the presence of a substantial building (below, p. 263, PL. XXXIV). It seems therefore reasonable to suppose that the postern provided access to this building.

As for the vertical voids within the brick piers, it does seem reasonable that they carried timbers, not to support a sluice-gate, but to carry a walkway to link the two sides of the rampart. In the later Roman period it is suggested by Mr. Sunter that the pressure of a masonry vault over the refurbished gateway, after the building of the town wall, contributed to the collapse of the gate-piers (FIGS.30–1).

Finally, it is important to stress the observation that both the South and the South-East Gates make considerable use of brick. Although the masonry phase may be secondary to an initial timber structure, it is clearly removed in time from the construction of the town-wall, which uses stone slabs rather than tile in its levelling courses. What the interval in time between the construction of the gates and the town-wall might have been is difficult to estimate.

3. THE RAMPART

(i) AT THE SOUTH-WEST ANGLE OF TOWN WALL (FIGS. 6–9, PLS. IV–V)

The cultivated soil described above (p. 34) was sealed by a layer of dark brown crumbly soil, intermingled with patches of charcoal (14). A large part of one pottery vessel was found in fragments in this layer. Since there is no indication of a turf-line between the cultivated soil and the bottom of the rampart, it seems reasonable to suppose that layer 14 represents the ground

surface at the time of the construction of the rampart.

The truncated remains of the rampart were represented by a layer of brown clay mixed with some small gravel (6). This layer was sealed by the foundations of the town wall. Away from the wall the clay layer followed the slope of the rampart ditch and partly filled it. This layer was cut by the remodelling of the ditch to accompany the town wall. Given that elsewhere along the circuit the construction of the town wall involved the excavation of the front of the rampart (in order to prevent the foundation of the wall overlying the softer fill of a back-filled rampart ditch), it might be argued that layer 6 represents displaced rampart, and that layer 14 accumulated in the period between the construction of the rampart and that of the town-wall. However, there was no indication within layer 6 to suggest that it had been disturbed. Neither does the character of layer 14, nor the date of the freshly-broken pottery within it (p. 152) appear compatible with the kind of surface that one might have expected to develop over about 50 years from the end of the second century on a berm between rampart and ditch. At this point of the defences it seems reasonable to assume a glacis type of construction for the outer face of the rampart and its accompanying ditch. That the outer face of the rampart was not revetted in any more imposing way is supported by the evidence of the wattle fence outside the South-East Gate, which appeared to be the only form of external support for the rampart there.

Dating evidence (Pottery group 3.1 pp. 175–7)

The latest pottery from the layer immediately beneath the rampart (14) included Central Gaulish samian of c. A.D. 150–80, an Oxfordshire mortarium of c. A.D. 180–240 and Blackburnish 1 pottery dated c. A.D. 160–200. Another Oxfordshire mortarium dating from c. A.D. 180 was found in the rampart base itself (6). A sherd from lower in the pre-rampart sequence could date from the very end of the second century (No. 208). For a summary of dating, see p. 235.

(ii) AT THE SOUTH GATE (FIGS. 17–18, 24; PL. XIII B)

As the plan (FIG. 24) shows, a large surface area of the town rampart was exposed either side of the gate-footings already described (p. 42). Excavation was mostly confined to revealing the latest surviving surface of the rampart, but sections to the natural subsoil were dug behind the eastern gate-footings and parallel with and behind the western footings along the western section of Trench 3. The removal of Victorian backfill above the bank in Trench 3 revealed the alignment of flint that had been described by Fox and St John Hope as running inside and parallel to the western gate-footing (1890, pl. XXXII). On the eastern side a small Victorian trench was found to cut the bank behind the footings, but to the north of this an undisturbed area produced rubble and occupation-debris dating up to the last quarter of the fourth century (4/3, 4, 5) (below, p. 75). This was excavated to the level of the rampart proper.

Rampart: West side of South Gate (FIGS. 18, 24)

In the westernmost section, the bank was shown to be formed of layers of fine sandy gravel (3/10, 11, 13, 14, 16, 18) with yellow clay (3/3; 6/3) above. To the rear the clay and gravel was hard and sticky, reminiscent of the rear of the 1974 section (below, p. 62). In this section it was difficult to isolate the lower layers of the bank from the preceding occupation. There was no clear horizon of cultivated soil as found at the south-west angle and east of the South Gate. Above the early black occupation-layer, described above, which contained pottery with a *terminus post quem* no later than the Neronian or early Flavian period, was a layer of yellow sand with some clay (3/17) which in turn was sealed by a greater accumulation of grey sand or silt and fine gravel. These layers (3/14, 16, 17) contained no samian later than that from the occupation-layer which they sealed, although the coarse wares were of later first- to mid second-century date. One sherd (No. 309) is likely to be later than c. A.D. 150. Above layer 14 were further tips of sand and gravel (3/10, 11, 13; 6/7) in which a distinct iron pan had formed (FIG. 18). These in their turn were sealed by a dump of yellow clay (3/3; 6/3). The iron pan did not extend the full length of the rampart section; to the south, and at the same level, was a lens of stone-free soil, identified as a possible turf-line (6/4). This and the iron pan itself point to a considerable lapse of time between the accumulation of the sand and gravel layers beneath and clay above them. It is possible that the

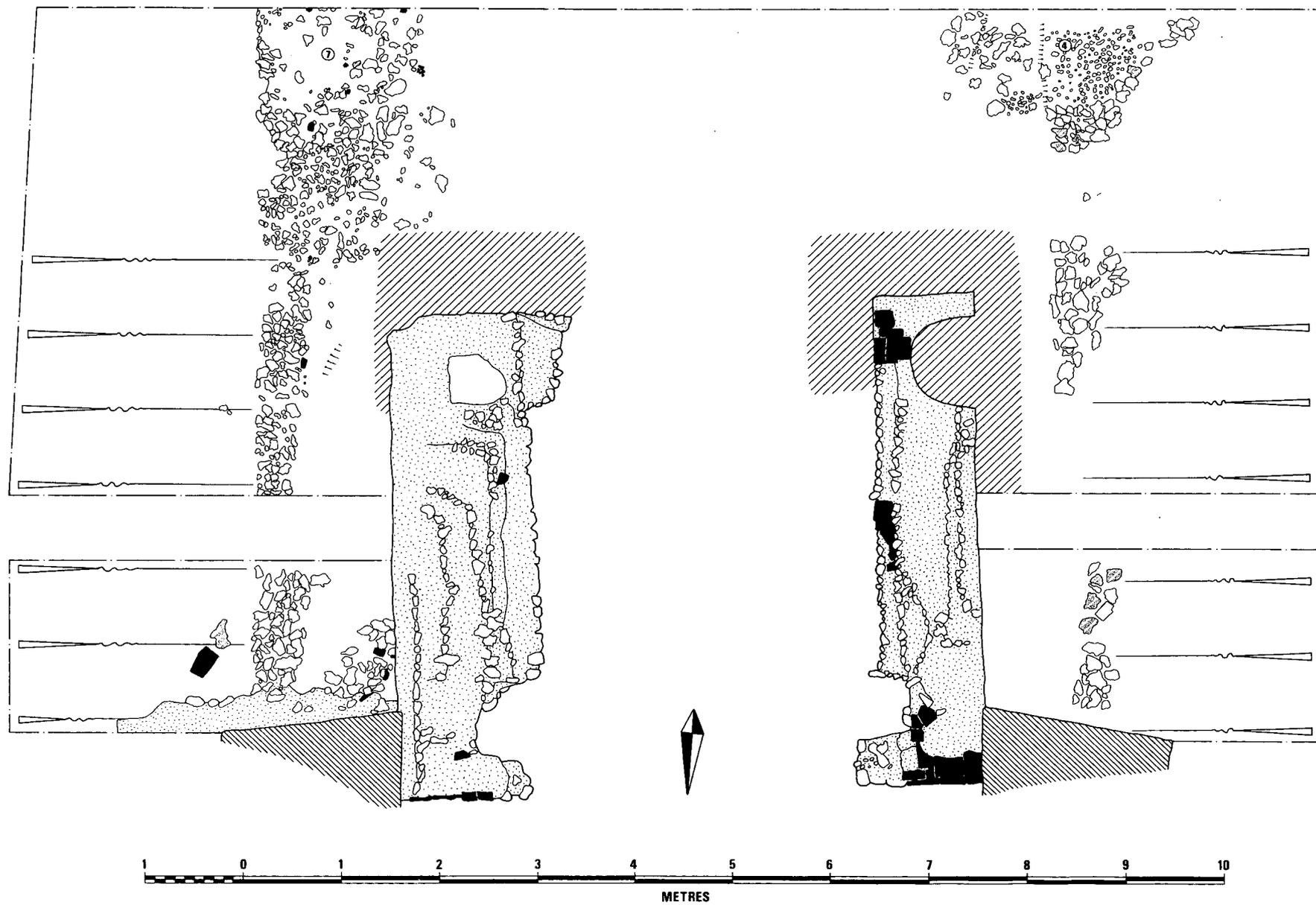


FIG. 24. South Gate (1975): The late second-century gate-footings with the unmortared flint and greensand alignments to the rear of each footing. Scale, 1:60.

lower layers also represent a general cultivated-soil(?) development, but of a sterile content, when compared with the soils found at the South-west angle and east of the South Gate (pp. 34, 37). Alternatively, they may have formed a low, first-phase bank, dating somewhat earlier in the second century than the earthen rampart as a whole. Conceivably this build-up could have been derived from the digging of the foundation for the South Gate. The yellow clay layer (3/3; 6/3) was similar in composition to the main core of the rampart excavated to the east of the South Gate in 1974. It was presumably derived from the Bagshot Beds which outcrop below the plateau-gravel to the south of the gate. The clay merged with a more loamy layer (3/2) which lay beneath the turf and modern soil. The profile of the tips in the bank, particularly where they are steeper towards the southern end of the section, suggest that the bank is in fact turning in towards the gate. Thus the inturns of the later town-wall simply respect their predecessors.

Lying at the top of the undisturbed rampart close to the northern end of the western gate-footing was a square setting made up of fragments of limestone and Old Red Sandstone slabs and pieces of quern stone. Associated with these was a fragment of an Oxfordshire *mortarium* dated *c.* A.D. 100–70 (No. 912). Given the position of these pieces it is not clear whether they were laid in antiquity or put to one side during the Victorian excavation. The facts that the setting included stone of types not otherwise known at Silchester before the construction of the town wall and that there was no build-up of soil between them and the material of the rampart does point to them being just a Victorian collection of interesting pieces. This observation invites comparison with the central pit (F7) between the gate-footings and its fill of large fragments of *tegulae* (p. 48).

Immediately to the rear of the western gate-footings was found the alignment of unmortared flints which was first discovered by Fox and St John Hope (1890, pl. XXXII) (FIG. 24). This feature is parallel with the footings and about 1.2 m distant from them. It is about 0.75 m below the top of the footings as they survive today, lies on rampart material and, to judge by the evidence from the eastern side (below), was also originally covered by the top of the earthen rampart before excavation in the 1890 season. To the north of the footings the alignment widened and the flints extended down the slope of the tail of the rampart to the street.

Rampart: East side of South Gate (FIGS. 17, 24).

As has already been observed above, on the eastern side (where an undisturbed section of rampart was excavated to natural behind the gate-footing) it was clear that the completion of the bank was secondary to the construction of the gate-structure itself. Here, the composition of the bank was more comparable with the section excavated to the east of the South Gate (below, p. 62), consisting of yellow clay (5/2, 3, 12) on a gravel and sand base (5/6, 9). This is the reverse of the sequence in the natural subsoil along the southern section of the defences, where gravel overlies the Bagshot Beds. Immediately to the rear of the footings was a narrow trench of 1890 which had been dug as far as the sand and gravel layer (5/6). The fact that this trench went no deeper made it clear that it could not be interpreted as a Roman construction-trench which had coincidentally been followed by the Victorian excavators.

Matching the position of the flint alignment to the rear of the western footings were two settings of flint and greensand blocks, separated vertically by a dump of rampart-material (Section E-F, FIG. 17). They too ran parallel with the footings and *c.* 0.75 m to the rear. The higher of the two, with large flints of *c.* 0.2–0.3 m in size, was discovered in the sandy gravel layer (5/6); the lower, with flint and greensand, in the clay and gravel (5/11), just above the contemporary ground surface. As on the western side, the alignments spread out into a general scatter of rubble to the north of the gate-footing and extended down the tail of the rampart to the street.

As to the function of these unmortared stone settings to the rear of both gate-footings, it is clear that none could have served a structural function. They could have been neither the remains of an earlier gate (Boon 1974, 102), nor the foundations for a stairway as Fox and St John Hope had suggested (1890, 752–3). All were integral with the earthen rampart and the latter could not be regarded as complete at the level at which they occurred. However, the stones might be regarded as material which had been brought in for use in the gate-structure (which employed

both flint and greensand) but was found surplus to requirements. The sequence to the rear of the eastern footing suggests the possibility of at least two dumps of stone with a deposit of bank-material in between. This would suggest that the rampart and the gate-structure were being built together. The straightness of the settings, parallel with the actual gate-footings, remain a puzzle. It is possible that the loose flints and greensand were contained by temporary shuttering and that this was removed as gate and rampart gained in height. That gate-structure and rampart should be contemporary in this instance does not remove the possibility that both were built to replace a wooden gate, placed further forward (to the south) in line with the main body of the rampart.

Dating Evidence (Pottery group 3.2)

The pottery from the gravel beneath the bank (and cut by the gate foundations) gives a *terminus post quem* of c. A.D. 120 (samian) or A.D. 150 (coarse ware) (p. 177). The latest pottery from the well to the south of the rampart and partly underneath the later wall gives a *terminus post quem* of c. A.D. 130 or 140. The samian from the bank itself to the rear of both footings contained plain and decorated sherds with a *terminus post quem* of c. A.D. 150 (p. 178). This material is of a similar date to that recovered elsewhere from beneath or in the body of the rampart and cannot therefore, on its own, support a date for the South Gate later than the rest of the circuit. Although the sample is small (so that not too much should be made of absences), sherds from beneath the rampart at the south-west angle are later than c. A.D. 180, giving support to the hypothesis that the gate is a primary feature.

(iii) THE RAMPART IN TRENCH EAST OF SOUTH GATE (1974) (FIG. 25, PL. III)

A dump of compact orange gravel (layers 15, 16) was laid over the whole extent of the trench, thus sealing the black earth (18). The upper surface of the gravel provided a stable horizontal platform for the rampart above. The gravel is interpreted as a foundation for the rampart rather than a yard or street-surface, because its upper surface produced no signs of wear or of occupation-material. There is also no apparent relation with the street grid, and it is paralleled in the rampart section at the South-East Gate.

Overlying the gravel in the northern end of the trench was a small dump of dark earth and gravel (14) which contained two samian sherds of Hadrianic-Antonine date. This in turn was covered by a dump of yellow clay and orange gravel (13). The main body of the rampart was

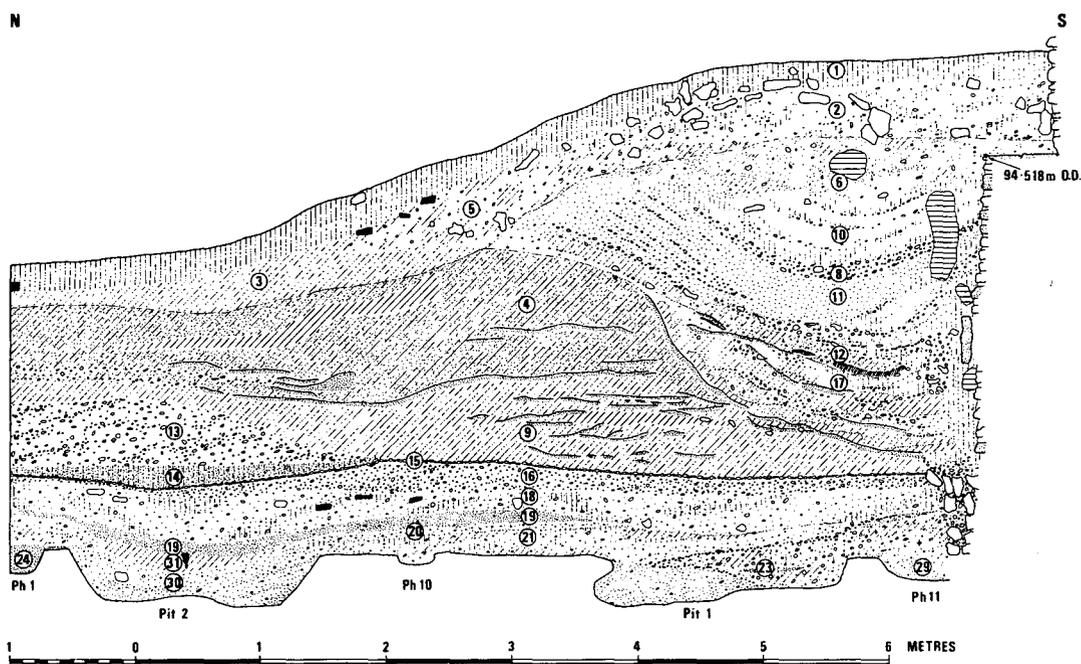


FIG. 25. Rampart Section (1974): Trench section (west side). Scale, 1:60.

formed by dumps of clean sandy yellow clay, occasionally interspersed by thin gravel lenses. More conspicuous were the thin brown stains or lines which ran horizontally through the rampart (PL. III). One of these bands extends two-thirds of the full width of the rampart, although most are much shorter. These discolourations may relate to a process of leaching out of iron within the rampart. It is tempting to see them as turf-lines and this possibility cannot be ruled out, but the evidence is equivocal. If the latter interpretation is correct it signifies that not all the rampart material derived from clay excavated from the ditches.

Dating evidence (Pottery group 3.3)

The latest sherd for dating the rampart here remains the Antonine Dr. 38 discovered at the top of the black earth beneath it (p. 178).

Discussion

The composition of this almost complete cross-section of the rampart invites comparison with the sections dug by Mrs. Cotton in 1937–39 and Dr. Collis in 1968 (Cotton 1947; Collis 1983). In particular the clay and gravel (13) at the northern end of the trench can be well paralleled in her sections (*ibid*, figs. 1–2). Mrs. Cotton regarded this as a setting-out bank. We should also observe that the natural sequence of the subsoil is generally of a gravel capping (of varying depth) over yellow sandy clay. Thus the gravel and clay dump also represents the uppermost layers of spoil removed during the excavation of the rampart ditch or ditches. This observation in no way prejudices the argument that the first stage of the defensive sequences was to lay out a low bank in advance of the main body of the rampart.

(iv) AT THE SOUTH-EAST GATE (FIGS. 20, 26; PLS. XX, XXI)

Mention has already been made of the raft of brushwood and branches that was laid over the marshy ground before the construction of gate and rampart. The lowest layer that could be securely identified as belonging to the rampart rather than to the underlying mud was a layer of orange gravel, about 20 cm thick (2/10), similar to that found in the section east of the South Gate. Above this was piled the body of the rampart, initially of clay and gravel (2/9) but predominantly of yellow to grey sandy clay (2/2, 6). A subtle horizontal division in texture of the clay was observed between layers 2 and 6 (see FIG. 26) which compares with the horizontal brown line recorded in the 1974 excavation east of the South Gate. Here no such staining was found. The

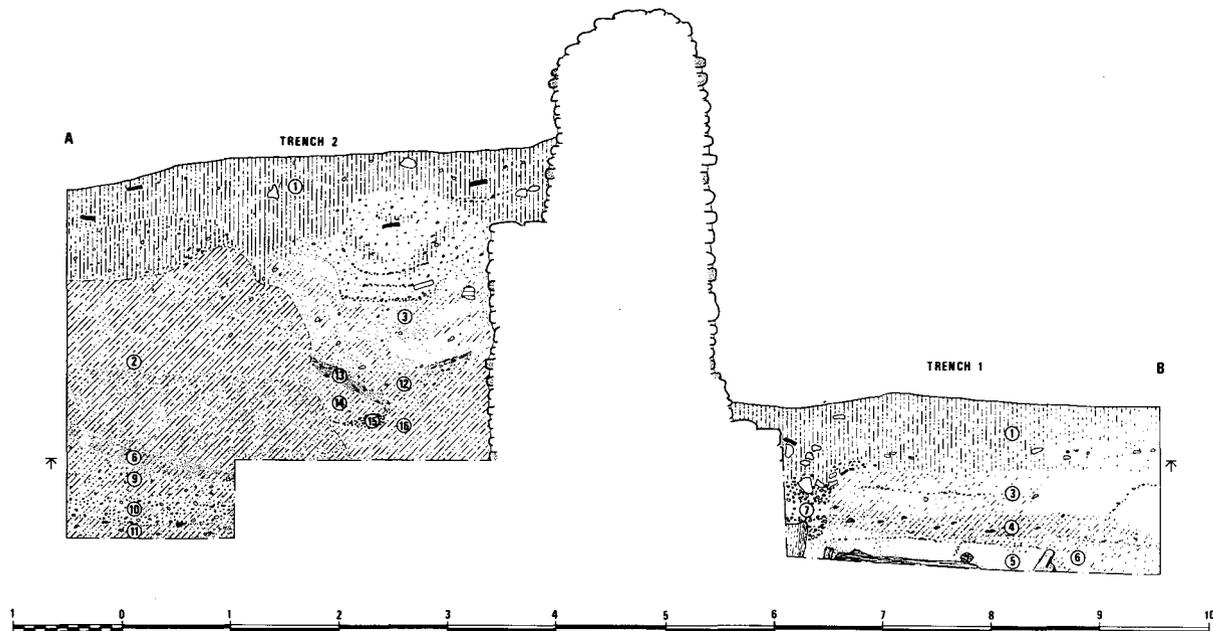


FIG. 26. South-East Gate (1976): Section of Town Wall and Trenches 1 and 2 (east face). Scale, 1:70. For location of sections see FIG. 20. Scale, 1:70.

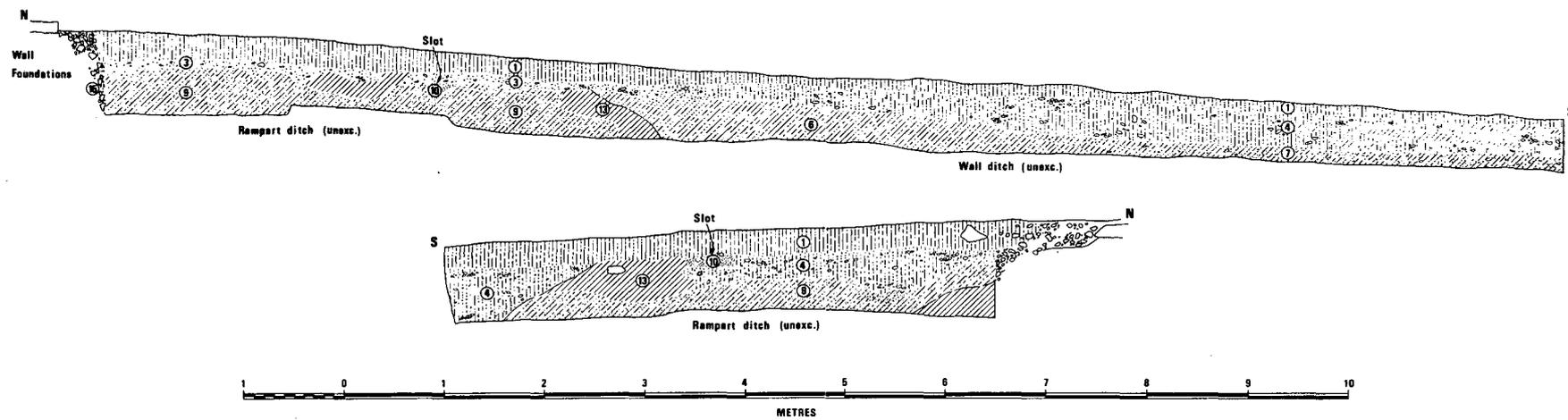


FIG. 27. Ditch Section (1978(ii)): Sections (east and part of west face). Scale, 1:70.

undisturbed clay found between the revetment walls and so probably pre-dating them also belongs to the rampart (2/4, 5, 6).

Outside the gate a layer of yellow clay was found to overlie the grey clay and timber raft, and this is presumably the same as the clay of the rampart proper. This layer may originally have been retained on the outside by the wattle fence whose remains were found at the level of the timber raft on the eastern side of the trench. Elsewhere, outside the gate, the clay was sealed by metalling which is regarded as probably contemporary with the rampart and gate. No trace was found of the rampart ditch outside the gate, as this probably lay beyond the limits of the excavation.

Dating evidence (Pottery group 3.4, p. 181)

Samian of Antonine and late second-century date was found in the yellow clay outside the gate (1/3). A Black-burnished 1 dish (Gilliam 309), later than *c.* A.D. 160 was found in the underlying grey clay (1/4). From the clay (2/4) between the revetment walls inside the gate, and therefore probably later than the rampart, was a mortarium flange probably later than *c.* A.D. 140. For a summary of dating, see p. 235.

Discussion

The small section of rampart investigated at the South-East Gate compares well with that east of the South Gate and the sections cut by Mrs. Cotton (1947). A notable feature is the possibility of a wattle revetment of the front of the rampart. This compares with the evidence of the south-west angle, which produced no evidence of any substantial revetment of the rampart. In addition, a similar break in the clay body of the rampart invites comparison with the 1974 section. One interpretation could be that this represents the division between the material derived from the two ditches, which (as Mr. Startin has argued below) would have been necessary to provide sufficient material for the rampart. Rather than excavate the ditches in parallel, it is likely that one would have been completed before excavation of the second began.

(v) RAMPART DITCH: NORTH-EAST OF SOUTH-EAST GATE (FIGS. 1, 27)

This trench was opened with a view to defining the course of the rampart ditches and later wall ditches of which no clear surface traces remained. From the town wall the ground slopes very gradually towards the modern lane.

Beneath a black medieval occupation-layer was one of yellow to yellow-brown clay (2/9) which contained a fair amount of second-century pottery and animal bones. This layer extended as far as the town wall to the north, but was cut by the late Roman ditch to the south (FIG. 27). This layer was disturbed by the medieval occupation. Complete excavation was prevented by the high water-table.

The yellow clay compares well with the material used in the rampart. The fact that it contains occupation-material suggests that it is a redeposited layer. A reasonable interpretation would be that it represents the inner of the two (?) rampart ditches filled by the material cut away from the front of the rampart immediately before the construction of the town wall.

Discussion

Although Boon argued for there having been only one rampart ditch, there is considerable evidence to the contrary. From Mr. Startin's calculations of the amount of material used in the construction of the rampart and from the known cross-section of rampart ditches obtained from earlier excavation there seems little doubt that two ditches were required. Since 1909, evidence of rampart ditches has been obtained from Mrs. Cotton's excavation of 1938-9 and Mr. Boon's of 1955-8. In the latter's excavation by the South Gate (Site J), evidence emerged of a back-filled rampart ditch, some twenty metres out from the wall (Boon 1969, pl. VIII). This can surely be interpreted as the outer of a pair of ditches, the inner one of which was close to the line of the wall (and whose inner edge was clipped during the South Gate excavations (FIG. 13)). Similar evidence is forthcoming from the north-east sector of the defences (Cotton 1947, pl. XXX). Likewise (albeit published only as small sketch-sections) the 1909 excavation of the defences also supports the idea of double ditches (Hope and Stephenson 1910, figs. 1-4).

THE TOWN WALL (MID TO LATE THIRD CENTURY)

By the time the excavations on the defences had been completed, a very impressive stretch of the Roman town wall had been cleared of trees, roots and other vegetation from the South Gate eastwards and northwards to the Church car park. In places the wall is preserved to a height of 4.0–5.0 m, but its outer face has long been lost, so that only the rubble core survives. The original appearance of the outer face of the wall with the flint and levelling stones cut to a square finish can be glimpsed in two or three patches where the outer face survives.

The intention of this part of the Report is to record those sections of the excavation which contributed to our knowledge of the Wall. It does not aim to be a detailed analysis of the fabric throughout its course where it has been exposed, although Dr. Sellwood has carried out a study of the lithology to supplement the work of Melville (1947). An important conclusion of this new work is that the stone employed in the levelling-courses derives from a greater variety of sources than was once thought.

The dating evidence for the Wall is listed on pp. 183, 187, 189, and summarised on pp. 68 and 236.

AT THE SOUTH-WEST ANGLE (FIGS. 6–9, PLS. IV–V)

The unmortared flint foundation of the wall was laid directly on the truncated remains of the rampart (1/6). Above the foundations, the wall rose with a projecting plinth of greensand and ironstone blocks at the base of its outer face. Between the wall and the ditch was a metalled surface (1/10, 12), 2.5–3.5 m wide, over which some tile and other rubble had been spread. Only the inner lip of the accompanying ditch was defined and its upper fill excavated (1/7, 8, 22).

Dating evidence

Among the tile and rubble which overlay the metalled berm was a sherd of a New Forest indented beaker with a *terminus post quem* of c. A.D. 270.

Discussion

The reason for the excavation at the south-west angle was to determine whether or not there had been an external tower. No evidence for one was found. No traces of external towers have been found elsewhere along the circuit of the wall, although systematic excavation with this point in mind has been carried out only twice. Given the lack of surface evidence and the absence at the south-west angle, a most suitable point to locate one, it is reasonable to deduce that no external towers were added to the Silchester town wall.

AT THE SOUTH GATE (FIG. 33, PLS. V–VI, IX–X)

At the South Gate the town wall turns inwards to meet the footings of the gate which was already standing at the time of construction. Thus the position of the gate was determined by the course of the existing town rampart and the design does not illustrate any new ideas in defensive architecture.

Since the gate itself is respected by the town wall it certainly continued to serve it. Although some restoration had been carried out by the Department of the Environment before the excavation (this can be seen in PL. IX and compared with PL. VI, the gate after it had been cleaned but before further consolidation in 1974–5), it is interesting to note that the stone courses of the wall are interrupted at the point where they meet the gate-footings, which suggests that the two structures, though of different date, may have been partly bonded together. This conclusion is supported by the ragged appearance of the corner of the western wall as shown on the photograph of c. 1890 (PL. XVII A). Thus the present appearance of the two inner corners of the two inturns probably represents an attempt to provide a 'tidy' finish by the Department before the possibility of an original bond between the wall and gate-footings was appreciated.

As elsewhere, the wall rests upon a plinth made of squared blocks of stone: ironstone at the base of the eastern inturn and greensand with some limestone on the western side.

Contemporary Road Surfaces

A possible contemporary road surface will be discussed below.

Dating Evidence

No dating evidence was recovered for the wall at the South Gate. Nevertheless it is important to emphasise the differences in building-techniques between the existing gate-structure and the wall itself. As observed above, with the exception of a very few isolated fragments tile is absent from the town wall. This difference in materials used must surely indicate an appreciable interval between the two structures.

EAST OF THE SOUTH GATE (1974) (FIG. 25)

In the section cut through the town rampart, it appeared that the front part of the latter had been cut away to provide for the town wall. At the base of the rampart a trench, just sufficiently wide to accommodate the foundations, was dug through the pre-rampart occupation-layers. This was then filled with unmortared large flint and clean orange gravel. The foundations did not penetrate the natural subsoil. Above the foundations, the wall rose in a series of four or five courses of flint alternating with one or two courses of stone (FIG. 28, PL. XVI B).

In the wide trench created by cutting back the front of the rampart, several lenses and layers of sandy clay and dark soil accumulated (17). At the lowest point, these were predominantly of grey and yellow sandy clay, similar to that employed in the rampart proper, and presumably resulting from falls from the freshly-exposed face of the rampart. Above these were lenses of dark soil and gravel with occupation-material, of which the highest was the darkest and richest in finds (12).

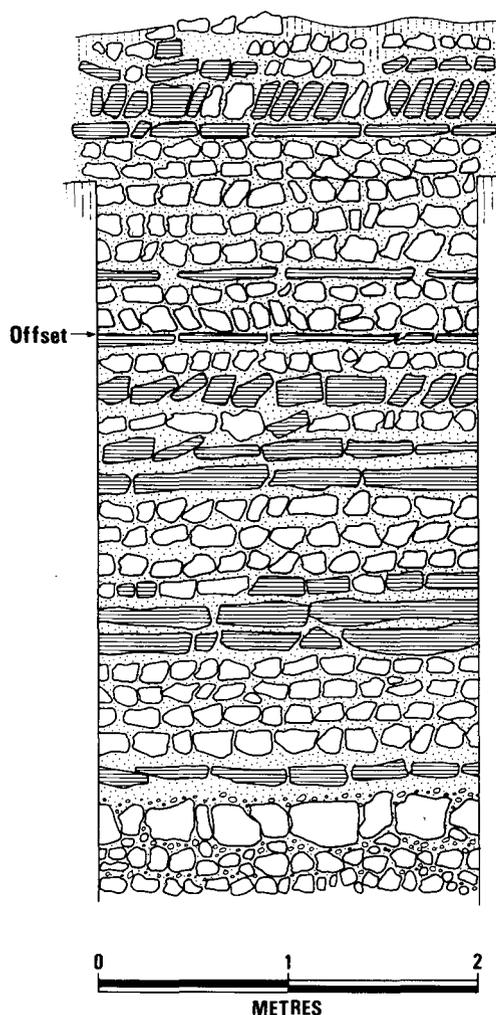


FIG. 28. Town Wall: Elevation of rear face of wall (rampart section, 1974). Scale, 1:40.

Above this was about one metre of soft dark loam, mixed with some gravel and grey sand (10, 11). No mortar spills were observed at the base or in the primary fill of the wall-trench, but resting against the back of the wall were stone slabs of the sort used in the bonding courses. These were laid on edge, one on top of the other (see PL. XVI B, FIG. 25), their purpose being perhaps to provide shuttering for the wall during construction. These slabs could only be supported *in situ* if the wall-trench was filled at the same speed as the wall rose in height. The varied nature of the lower fill of the wall-trench would give support to the idea of casual back-filling as the wall was built up. Slabs pressed against the face of the wall were recorded as high as layer 12. Whether this interpretation is correct or not, the character of the fill from (and including) layer 12 downwards argues for a rapid rate of fill. These layers can therefore be regarded as contemporary with the construction of the wall.

The uppermost fills (5–8) consisted of dirty clays and gravel mixed with occupation-material, flints and Roman brick.

Dating Evidence (Pottery groups 4.1–2)

The foregoing account makes it clear that the only material useful for gauging the construction-date of the town wall is that from layer 12 and below in the wall-trench. Although some of the pottery is clearly residual from the pre-rampart occupation, the primary fill of the wall-trench does contain pottery that has more affinity with the coarse wares of southern England that are dated at their broadest *c.* 250–400. These findings agree with those of the 1968 excavations (Collis 1983, 63).

Dating pottery in the third century is confounded by the problem of the lack of associated material to date it, particularly in the period from *c.* 225 to the appearance of radiate coinage in quantity after *c.* 259. Thus we do not have any secure *termini post quos* for the coarse wares that are characteristic of the later third and fourth centuries. With this proviso on dating in mind, the latest pottery from the primary fill of the wall-trench included an Oxfordshire Dr 45 (Young 1977, type C97) dating from *c.* 240/50 (12), together with Black-burnished 1, Alice Holt and other coarse ware dating from *c.* 270/90. An upper limit to the date of the defences is likely to be a stylistic one. Professor Frere has observed that the third-century town walls of Britain generally lack external towers of the kind associated with the Saxon shore forts (1967, 252–4). Although the dating of these forts is by no means unambiguous, it is likely that those sites with towers incorporated as part of the fort walls rather than added on, as at Burgh Castle, probably date within a decade or so of 276 (Johnson 1976). Portchester, with a coin of Carausius in a primary context, is likely to be the latest of the third-century forts (Cunliffe 1975). Thus a town wall such as Silchester's is likely to be earlier than *c.* A.D. 276–85) unless its architect was deliberately discouraged from using the latest design available. Given that the walls would have cost an enormous amount of money (and Boon's calculations give us an idea of the gigantic scale of the effort (1974, 101–2)) and would have employed labour not only on site but at the quarries as well as for the business of transportation, it is difficult to see how such work could have been managed without resorting to cash as a means of payment to the labourers and suppliers. This circumstantial argument would suggest a date after *c.* A.D. 259, when low-value currency began to proliferate and (given the arguments advanced above) probably before 276–85 when Britain was once more part of the Central Empire.

Although no coin was found in the 1974 excavation it is relevant to note that in 1968 two barbarous radiates (*c.* A.D. 270–90) were found in the material (Phase D) which filled the hollow after the settlement of the loose infill at the base of the cut made for the town wall (Collis 1983). This fill closely corresponds with our layer 12 (1974) in which were found unmortared slabs of the stone used in the bonding courses of the town wall. Although Collis argues that his Phase D is later than the construction of the wall, on the evidence of the 1974 trench the upper stages of the wall were still under construction when this hollow was filling up. This argument would refine the date of building to the years around A.D. 270.

AT THE SOUTH-EAST GATE (FIGS. 26, 29, PLS XVIII-XIX)

The evidence from Trench 1 behind the gate showed a sequence comparable to that described

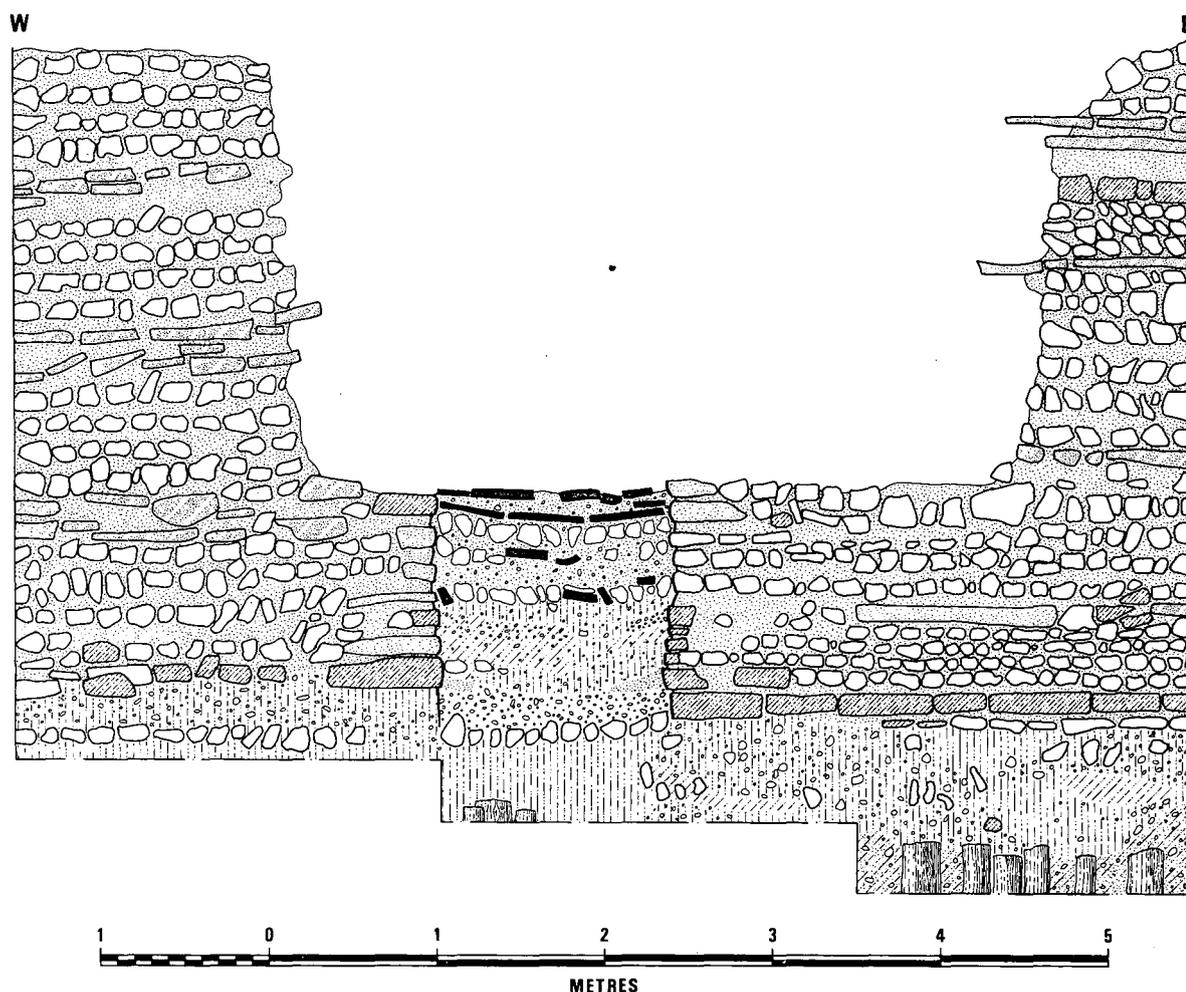


FIG. 29. South-East Gate (1976): Elevation of outer (Southern) face of Town Wall and late Roman blocking of the gate, with piling beneath the foundation of the wall. Scale 1:45.

above. The front of the rampart was cut back to enable the wall to pass on relatively undisturbed ground inside the course of the rampart ditches. Before the unmortared flint and gravel foundations were laid, oak piles *c.* 120–122 mm in diameter were driven vertically into the mud, cutting through the raft of horizontal branches laid down for the earlier rampart (FIG. 20, PLS. XIX B, XX A). Above this rested the foundation of flint and gravel, similar to the foundations described above, and on this the wall was built up in regular mortared courses.

The back of the wall butted on the front and on part of the eastern and western faces of the brick piers, forming a passageway *c.* 2.54 m long. This passage narrows from a maximum width of *c.* 1.5 m at the outer end to *c.* 1.2 m at the site of the existing brick gate-structure. The eastern side of this new passageway was lined with blocks of ironstone which was also used for the plinth of the wall on the same side. On the western side a mixture of ironstone, greensand and limestone was used. The section of wall to the east of the passage was built before that to the west, because mortar from the latter spilled over the lowest ironstone course lining the eastern side of the passage.

With the construction of the town wall it is likely that the full length of the gate was vaulted. Nigel Sunter has assumed this in his reconstruction drawings (FIG. 30). One of the effects of providing a greater thrust on the brick piers was to cause the rear parts to collapse outwards in the way that has been described above (p. 54). The probable manner of the disintegration of the old gate is also illustrated by Mr. Sunter (FIG. 31).

Dating Evidence (Pottery group 4.3)

A sherd of a Black-burnished 1 jar (No. 487) from the fill of the construction-trench gives a

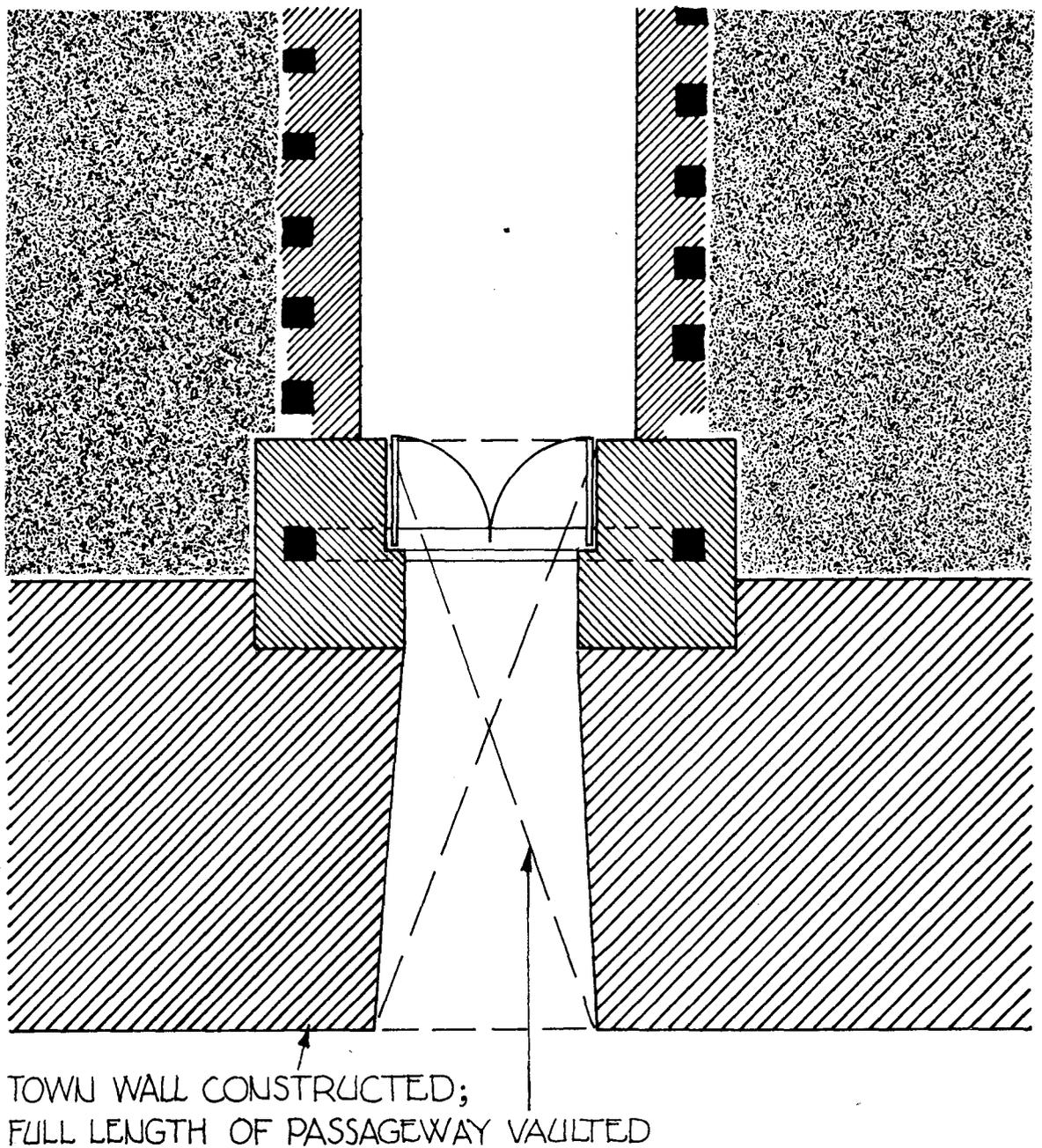


FIG. 30. Reconstruction of South-East Gate: Left, Town Wall constructed, full length of the passageway vaulted; Right, Late Roman blocking against closed doors.
(Drawings by N.J. Sunter).

terminus post quem of c. A.D. 280/90 on current evidence. This compares well with the date of the material from the primary fill of the wall-trench in the section east of the South Gate (above, p. 68). But it should be stressed that the starting date of this form is not secure.

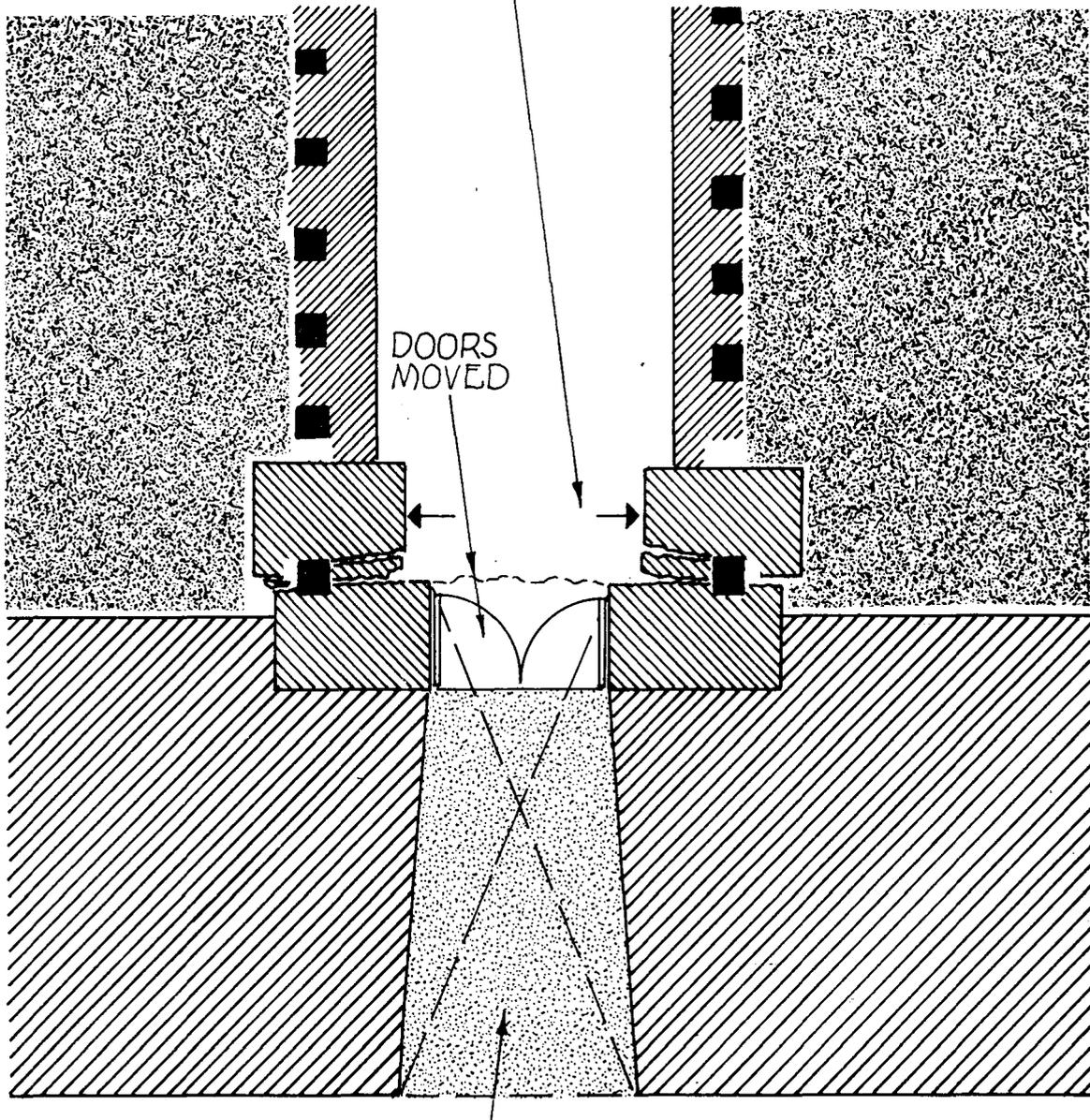
TRENCH NORTH-EAST OF SOUTH-EAST GATE (FIGS. 27, 34)

The trench dug in front of the town wall north-east of the South-East Gate revealed the latest silts of the wide ditch that accompanied the wall (FIG. 27, layers 4, 6, 7). The inner edge of the ditch was 4.0–4.5 m out from the town wall, appearing to cut the northern edge of the inner rampart ditch (FIG. 27, layer 9). Owing to the high water-table, excavation only reached a depth of c. 0.6 m below the present ground surface. This ditch probably represents a recut of the outer of the two rampart ditches (cf Cotton 1947, pl. XXX).

Dating Evidence

The latest ditch-silts contained medieval pottery.

REAR OF PASSAGE VAULT COLLAPSES



LATER BLOCKING AGAINST CLOSED DOORS

NORTH-EAST (AMPHITHEATRE) GATE (FIG. 32)

In April 1981 a water-pipe trench was dug across the Roman town and a detailed record was made where it passed through the North-East (Amphitheatre) Gate. This gate had already been excavated by Mrs. Cotton (1947, 130–31) and earlier still by Joyce (*Journal*, 18 May 1865). The southern face of the pipe-trench revealed an undisturbed section of the lower stratigraphy associated with the gate.

A simple sequence was revealed: the natural gravel was sealed by orange and grey clay flecked with charcoal and containing fragments of tile (6, 7). Between this and a layer (5) of light brown silty loam with fine grit, charcoal and some sherds, was a single layer of packed gravel. Above layer 5 was a further lens of gravel which was sealed by a thick deposit of orange and grey clay (2, 3). This layer was cut by a trench filled with flint and orange gravel (4). Above a disturbed layer and set back from the edge of the trench were the remains of the side-wall of the gate with its rear quoins intact.

Discussion

It seems reasonable to interpret layer 2 as the base of the earthen rampart sealing earlier occupations or cultivated soils (5). The trench filled with loose orange gravel and large flints can

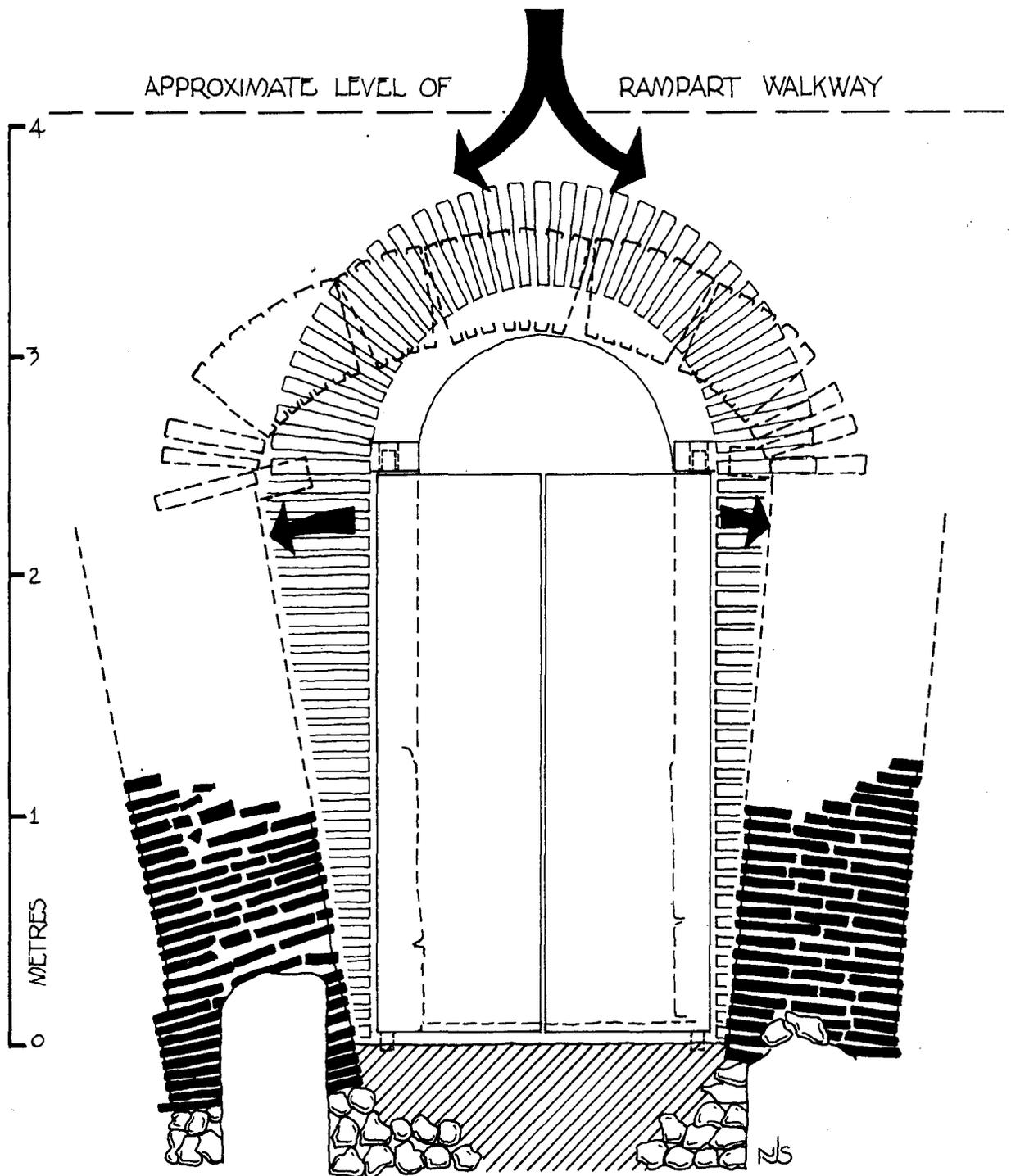


FIG. 31 A. South-East Gate: reconstruction of the stresses leading to the collapse of the gate-structure.

(Drawings by N.J. Sunter).

be identified as the foundation-trench of the town wall. From this section, and taking account of earlier findings, it seems reasonable to deduce that there was no gate here before the construction of the town wall, since the older rampart continues across the opening. The wall-foundations (4) were carried right across the site of the proposed entrance; this suggests that the decision to make a gate was secondary, as Boon suggested (1974, 105). It is interesting to speculate that the decision to provide a gate at this point followed shortly after the refurbishment of the amphitheatre in the third century (excavations in progress). The lower street reported by Mrs Cotton proved to be natural gravel.

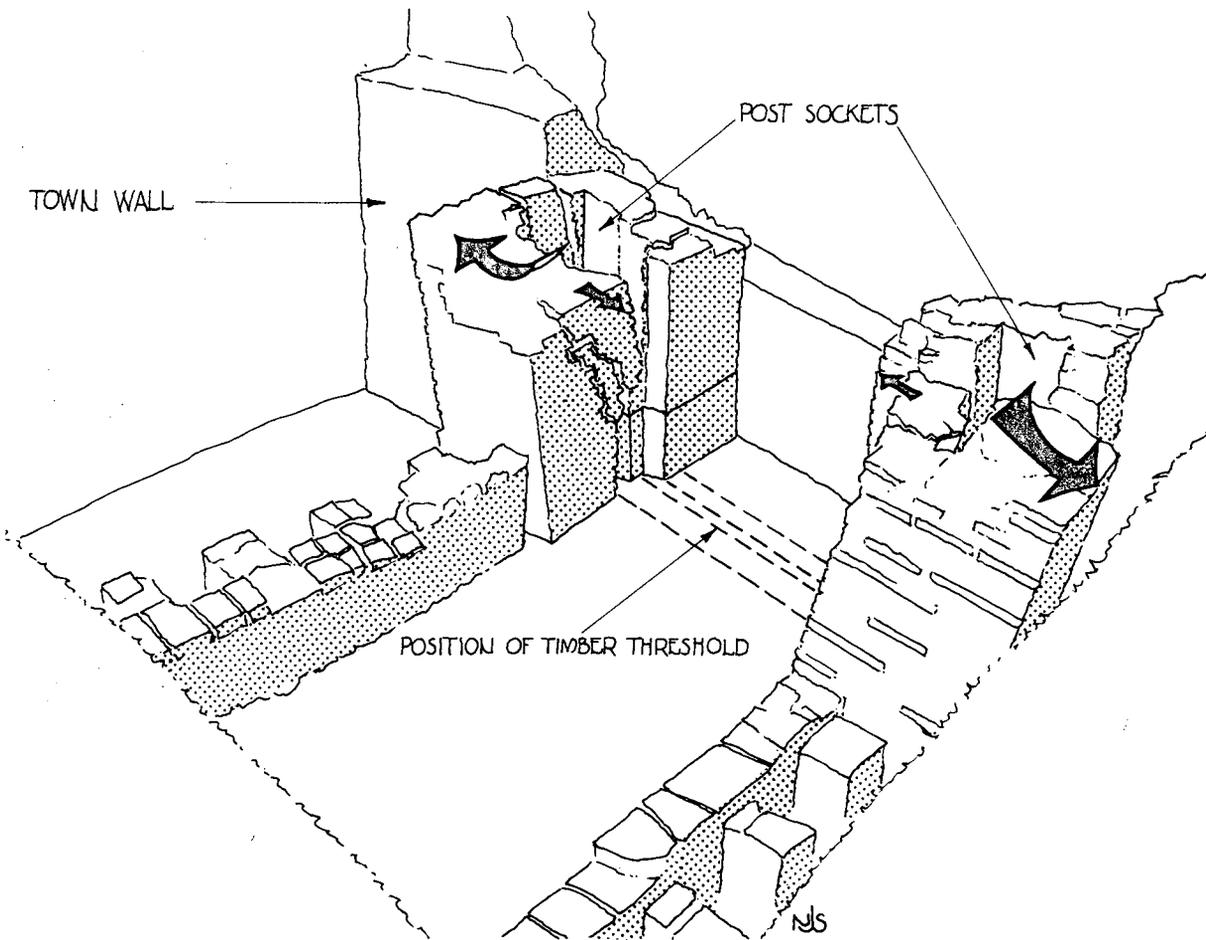


FIG. 31 B. South-East Gate: see caption of FIG. 31 A.

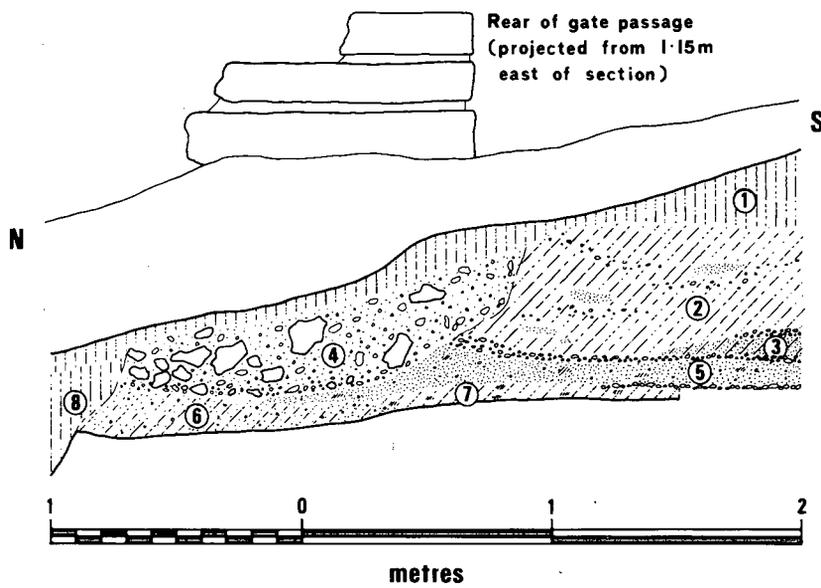


FIG. 32. North-East (amphitheatre) Gate (1981): Section (southern face). Scale, 1:30.

LATER ROMAN OCCUPATION

Occupation later than the construction of the town wall was recorded at the South Gate, in the section to the east of the South Gate and at the South-East Gate.

AT THE SOUTH GATE

(i) NORTH-SOUTH STREET (FIGS. 13, 34; PLS. VII, XV-XVI)

Repairs to the surface (Trench 1)

Above the primary metallated surface (p. 37) was an accumulation of gravel (1/7, 10, 13–15), with some clay and large flints (FIG. 19). Above this, in a limited area of the trench, was a layer of cobbles, made up of tightly packed nodular flint (10–15 cm in size), with traces of wear on the surface (1/5) (FIG. 13). The relationship of this cobbling with the town wall had been destroyed by Victorian trenching. This metallating contained a sherd of a New Forest indented beaker, dating from *c.* 260–70 (Fulford 1975, type 27). The characteristics of this surface were very compatible with those of the latest metallating revealed immediately to the north of the gate-footings (FIG. 14). At the same time the nodular flint invites comparison with the material employed in the construction of the town wall. Although the dating evidence is meagre, it is sufficient to suggest the possibility that the street was re-metallated about the time of the building of the town wall.

From among the cobbles to the north of the gate-footings were coins of *c.* A.D. 260–80 and *c.* A.D. 335–45.

Road Ditch (Trench 2)

Trench 2 was almost entirely taken up with the fill of a gully, which ran parallel to the western inturn of the town wall (FIG. 13). Towards the northern end of the Trench the gully appeared to run towards the centre of the street. Both the upper (2/4) and lower fills (2/5–6, 11) (FIG. 17, Section L-M), consisting of a soft sandy silt, contained late third- to fourth-century pottery (Pottery groups 5.1–2). The lower fill produced a coin of Carausius (286–93); the upper, one of Magnentius of A.D. 350–3. To the south the gully was cut by the east-west Victorian excavation-trench of 1890. Although the relationship of the gully with the town wall could not be securely ascertained, it would seem to cut the foundations of the wall. After the excavation of the gully the side of the trench was cut back a few centimetres to provide a cross-section of the street surfaces and make-up (FIG. 19, Section N-P).

The gully can reasonably be regarded as a road-ditch, perhaps originally conceived as a rumble-drain to match that on the eastern side in Trench 1 (described above, p. 50), but subsequently robbed of its rubble fill. The pottery from the lower fills gives a *terminus post quem* of *c.* A.D. 260–80, while the coin from the upper fill provides one of *c.* 351–3.

Latest Roman(?) surface (Trenches 1–2), FIGS. 19, 34, PL. XVI B)

Immediately beneath the turf was a layer, *c.* 30 cm deep, consisting of large fragments of floor tile, nodular flint (commonly up to 20 cm size), some fragments of stone of the kind used in the town wall and a little mortar (1/2; 2/3) (Pottery group 5.3). A *terminus post quem* for the deposition of this layer of rubble is provided by a coin of Magnentius from the road ditch, described above. The latest coin from within the rubble is of *c.* A.D. 350–60.

This layer was cut by the east-west Victorian trench (1/11; 2/7, 8, 10) to the south, by the Victorian excavation of the gateway to the north, and also by the shallow, irregular-shaped trenches which exposed the plinth of the wall-inturns on either side of the roadway.

The character of this layer suggests that it was not a random dump of mixed rubble. From a study of their dimensions, Mr. Green suggests that the tile derives from a coherent parent population. There are no roofing tiles, and the absence of adhering mortar indicates that the tile was probably used for flooring. The rubble clearly does not derive from the gate-structure itself,

but presumably from some building within the walls. Apart from the *terminus post quem*, there is little to indicate when this layer was deposited. Examinations of the photographs, presumably taken about 1890 when the Society of Antiquaries reinvestigated the South Gate, shows that the rubble was present then, sealed by the dumps of the 1890 excavations (PL. XVII A). The shallow trenches cut to expose the plinth of the wall-inturn were probably made by Joyce during his excavations of 1872. These clearly cut the layer of rubble and therefore provide a *terminus ante quem* for its deposition. Theoretically, then, the layer could belong anywhere between *c.* A.D. 350 and 1872.

If the rubble belongs within the late fourth or early fifth century, it clearly indicates that the road had ceased to be used by wheeled traffic. This is borne out by the size of the tile fragments and flints, which would have been much more fragmented if they had withstood the regular passage of wheeled vehicles. The process of disintegration which would have followed the use of the surface by wheeled vehicles was vividly illustrated during the excavation by the fragmentation caused by hard-tyred wheelbarrows, even when carried over planks laid on the rubble. Although it is tempting to regard this surface as evidence of the South Gate falling into disuse at the end of the Roman period, we must be open to the possibility that it was dumped during the robbing or excavation of an intra-mural building at some time before 1872.

(ii) POSSIBLE LATE ROMAN BLOCKING

Although we cannot be certain when the rubble found between the inturns of the gate was deposited, it does raise the question whether the South Gate was deliberately blocked in the late or sub-Roman period. No evidence was found from between the gate-footings themselves (above, pp. 48–51), unless one argues that the large pit (F7) was intended as a grave. However, large fragments of architectural stone were found by the Victorian excavators, as Joyce's plan (1881, pl. XV) and the photograph of 1893 show (PL. XVII B). These fragments originated from the Basilica, which appears from current excavation to have stood intact until after the beginning of the fifth century. Similar fragments of stonework were found by the West Gate, where there does seem to be stronger evidence for the blocking of one of the carriageways (Fox and St John Hope 1890, 756–7). However, none of the architectural stonework from the West Gate was actually found in the rubble of the supposed blocking, but nearby. Given the lack of other evidence for a blocking at the South Gate, it is wiser to regard the presence of this stonework as the result of casual dumping during the robbing of the Basilica, or of general clearance during the post-Roman cultivation of the walled area. It is possible, but by no means proven, that the dumping of the stonework took place at the same time as the dumping of rubble on the street surface.

(iii) OTHER LATE ROMAN OCCUPATION (FIG. 34)

Later Roman occupation-debris and rubble was excavated on the tail of the earthen rampart to the north and on either side of the gate-footings (4/3, 4, 5). It consisted mainly of flints, mortar fragments, roofing-tile, animal bone, pottery and nails. In addition there was some waste from the working of copper alloys and lead. Both the pottery and the coins suggest that this debris could have accumulated gradually from the beginning of the third century (the construction of the rampart provides a *terminus post quem*). The coins range from A.D. 268–70 to the House of Valentinian (364–78). The pottery (Pottery group 5.4) includes Oxfordshire ware dating from *c.* A.D. 350. A piece of late Roman military belt-fitting (FIG. 36, No. 6) was found among the rubble on the western tail of the rampart on the western side of the road. Intrusive in this group is one sherd which is tentatively dated to the 10th–11th century (No. 537).

TRENCH EAST OF THE SOUTH GATE (FIG. 25)

A layer of loam with large flints and tile fragments accumulated over the top of the bank and in the depression caused by the settlement of the fill of the wall-trench. The pottery from this layer is of late third- or early fourth-century date. Nothing could be attributed to the second half of the

fourth century. This deposit can scarcely be regarded as a deliberate heightening of the rampart behind the wall (cf Cotton 1947, 130). Rather it should be seen as the result of the casual dumping of rubbish and thus comparable with the material found on the tail of the rampart by the South Gate (p. 75).

THE BLOCKING OF THE SOUTH-EAST GATE (FIGS. 21, 29; PLS. XXIII A, XXV A)

At an unknown date after the building of the town wall, the South-East Gate was blocked. As associated levels either side of the blocking had been excavated in 1893, no dating evidence was obtained. Although the southern (outer) face had been destroyed, so that it is no longer possible to ascertain the original width of the blocking, the rear face has survived in good condition. At the bottom, the present depth (north-south) of the blocking is 0.6 m. The lowest mortared course is a little more than 0.6 m above the top of the box-drain, and it is sealed by two courses of tiles (*tegulae*, not the flat tiles used in the brick piers). Above this is a single course of flints which in turn is sealed by two more courses of *tegulae*.

MEDIEVAL OCCUPATION

With the exception of one tenth- to eleventh-century sherd from the South Gate, all the evidence of medieval activity came from outside the town wall at the South-East Gate and from the 1978 excavation to the north-east of the gate.

South-East Gate

Medieval pottery, mostly of 13th- to 14th-century date, but with some sherds of 12th-century date, was recovered from the ploughsoil overlying the metalled surface outside the gate (p. 51). There was no structural evidence for this period.

Trench North-east of South-East Gate (1978(ii)) (FIG. 33)

Pottery of a similar date-range and including some 12th-century sherds was recovered from all the excavated layers of the Trench. No conclusive evidence of medieval structure was found, although a shallow slot (10), *c.* 7 cm wide by *c.* 5 cm deep was found to cut the uppermost (disturbed) layer of the Roman rampart ditch. It ran parallel with the Roman town wall and at a distance of 3 m from it. This may have served as a foundation-trench for a fence or lean-to structure against the wall. Two parallel and insubstantial grooves were recorded south of this feature and running part-way across the trench. These are tentatively interpreted as plough-marks.

At the outermost point of the Trench and in the late Roman ditch, at a depth of 0.3 m, a spread of fragmentary Roman tile mixed with some slabs of limestone and sandstone was found. The stone probably originated from the town wall. The latest pottery from the black silts of the ditch was medieval (pp. 231–2). The rubble probably represents an attempt to consolidate the fill of the ditch in the medieval period.

Discussion

Although no convincing structural evidence was recovered, the number of medieval sherds, particularly of 13th- to 14th-century date, suggests that occupation spread south-west from the Church towards the South-East Gate. The evidence from the 1978 trench in particular is more indicative of occupation nearby.

This information can now be seen in the context of discoveries at the amphitheatre, which appears to have been turned into a defended residence in the twelfth century. Pottery of this date is particularly abundant there.

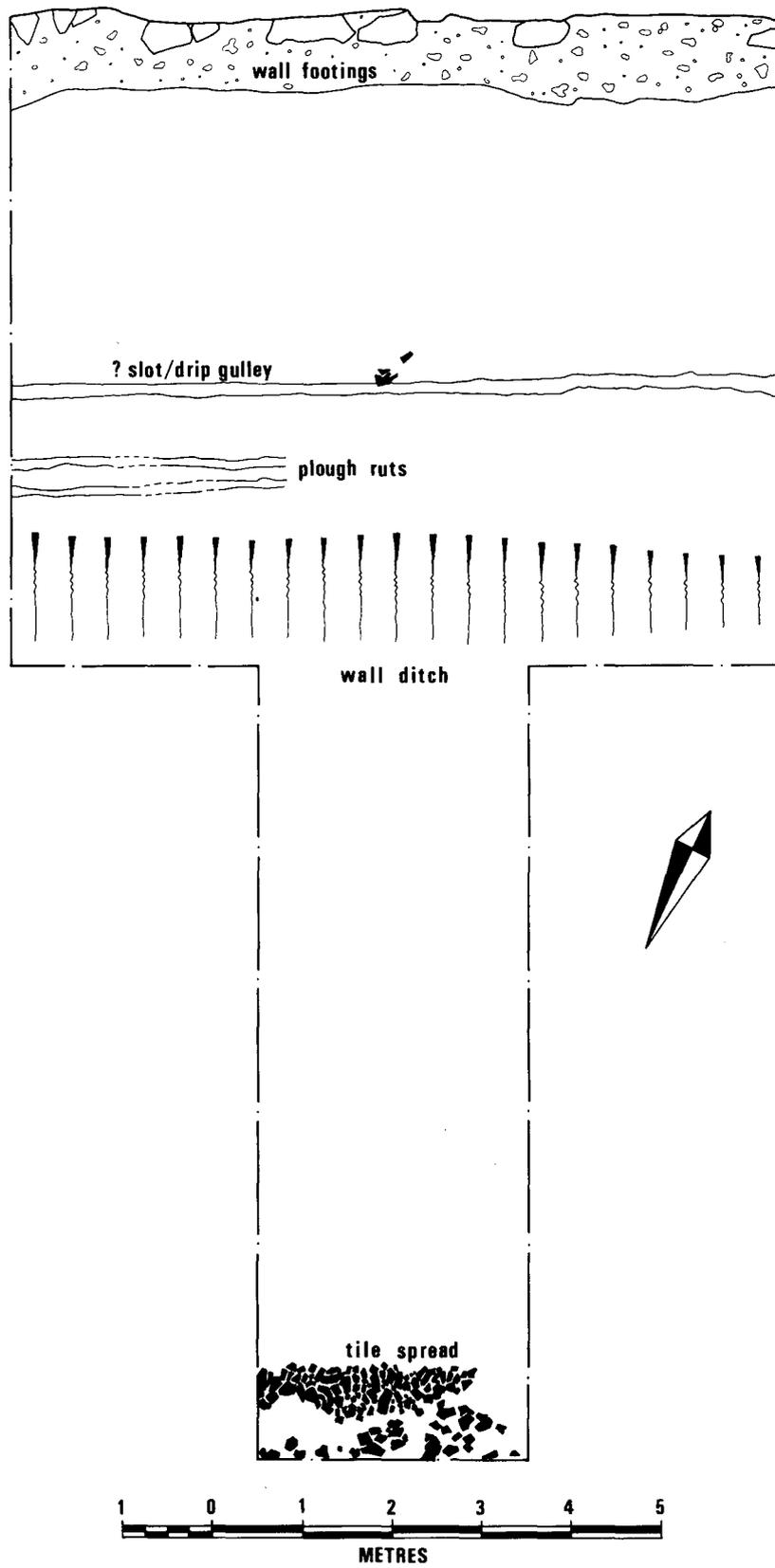


FIG. 33. Ditch Section (1978(ii)): Plan showing medieval features. Scale, 1:80.

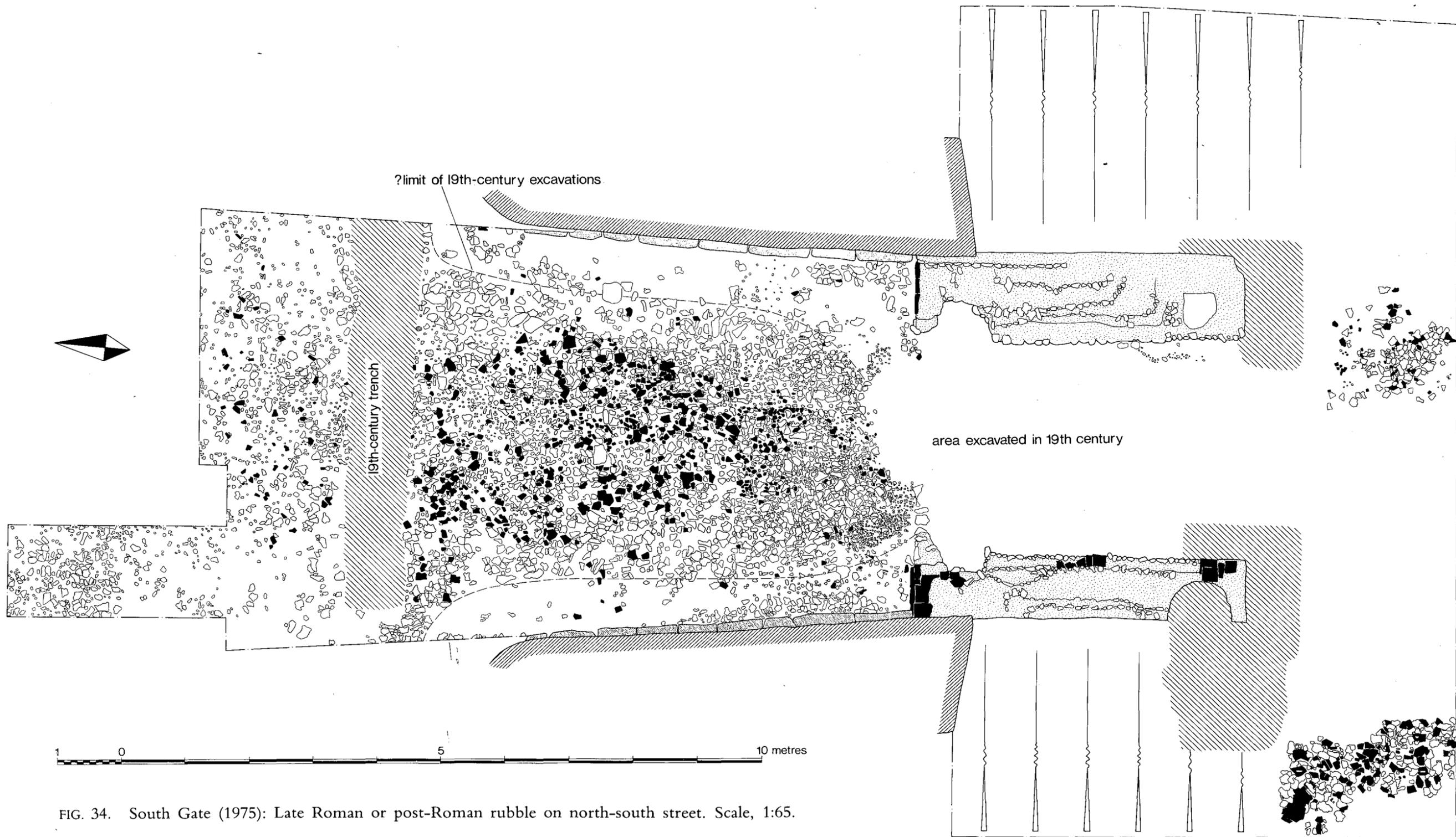


FIG. 34. South Gate (1975): Late Roman or post-Roman rubble on north-south street. Scale, 1:65.

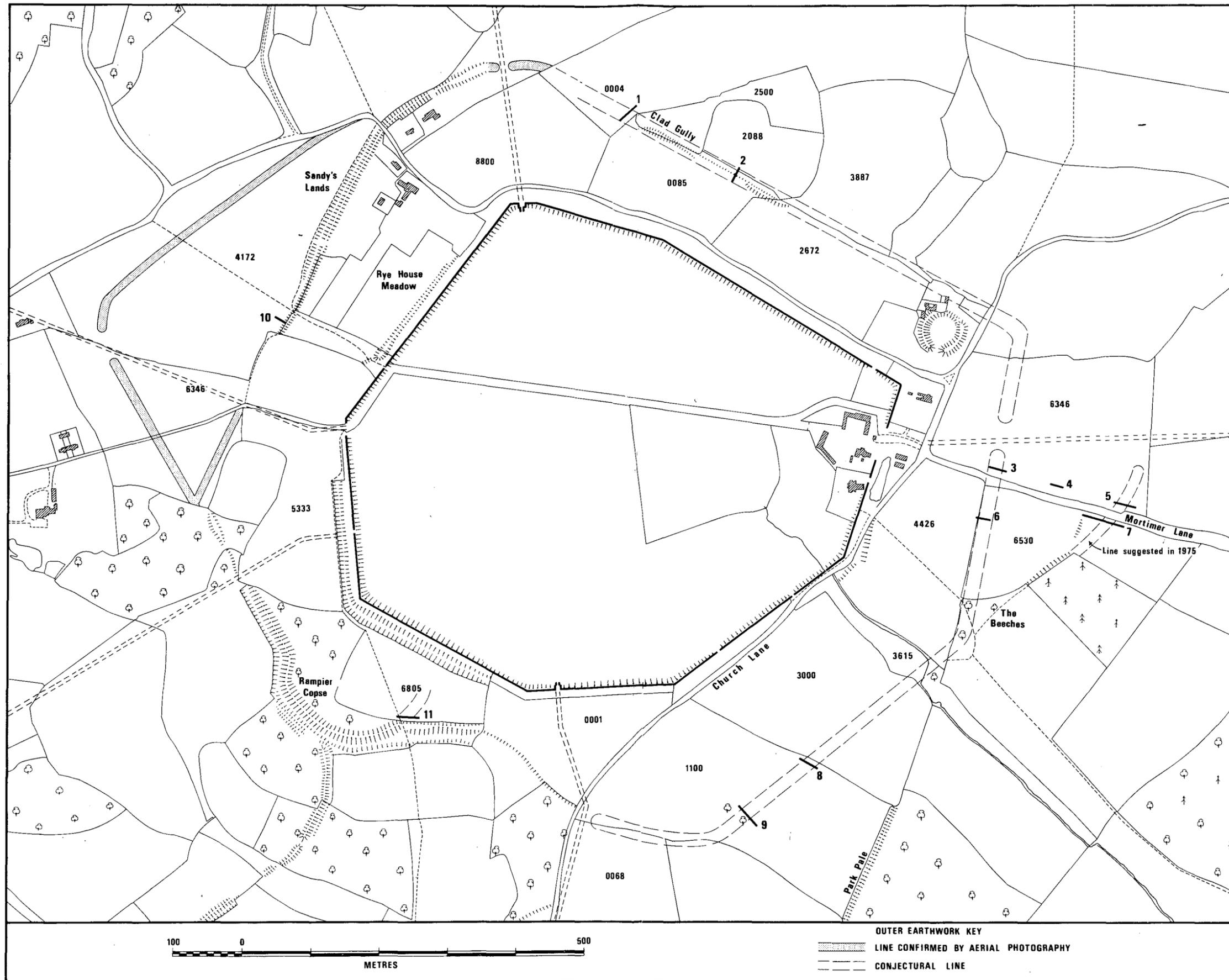


FIG. 35. The Outer Earthwork: Location of trenches.

THE OUTER EARTHWORK (FIG. 35)

The idea that there was a continuous bank and ditch beyond the town wall and at a fairly regular distance from it was first mooted by Williams-Freeman (1915, 318–9). His survey of the Silchester earthworks suggested an enclosure of some 200 acres (81 ha), more than twice the area enclosed by the town walls. However, Williams-Freeman's work was preceded by two other important investigations of the earthworks.

The first, and still the most comprehensive, study of the earthworks around Silchester was prepared by Henry Maclauchlan for the annual meeting of the Archaeological Institute held in Oxford in 1850 (1851). Virtually all that he recorded then can still be seen above ground today. Those earthworks that concern us particularly include the great rampart and ditch in Rampier Copse to the south-west of the town walls, and the somewhat slighter bank and ditch that runs outside of but parallel with the town wall on its north-western side (henceforward referred to as the Sandy's Lands earthwork). This earthwork ends at about the point where the Roman road to Dorchester passes, and the terminal is visible as a cropmark (FIG. 77). A yet slighter bank, discontinuous with the Sandy's Lands earthwork is marked by Maclauchlan as running parallel with and beyond the north-eastern side of the town wall and extending as far as the lane running beside the amphitheatre, meeting it just to the north of the latter. When the first overall plan of the excavations of the Society of Antiquaries was published in 1892 the course of the north-eastern earthwork had been extrapolated beyond its visible northern limit to meet the course of the Sandy's Lands earthwork. No reason was offered why the two should have been linked (Fox 1892, pl. XXV). No earthworks are recorded on the south and south-eastern sides between the amphitheatre and where the course of the Roman road from the South Gate coincides with Church Lane. Maclauchlan concluded 'there is no reason to suppose it to have been carried round on the south-east side' (1851, 230). An important aspect of Maclauchlan's survey is that he also recorded the general surface topography of Silchester in some detail, so that it is possible to see the earthworks in their natural context. Further references will be made below to the natural topography and its relationship with the earthworks.

In 1909, towards the end of the great research project of the Society of Antiquaries on Silchester, St John Hope and Stephenson devoted the last season of excavation to an investigation of the defences of the city. They too recorded that 'on the east there are no definite remains [of an outer entrenchment], possibly through their coinciding with the Roman line of defence' (St John Hope and Stephenson 1910, 317). During the course of this last season's work, the first recorded excavations were made of the Rampier Copse and Sandy's Lands earthworks. Whereas the trenches across the latter were unproductive, pottery was recovered from a possibly primary context in the Rampier Copse earthwork. This 'was examined by Mr. Reginald Smith who was of the opinion that it showed British influence from the cordons and profiles and was probably of the first century, except one red base which may be imitation Gaulish (?) of the third century' (*ibid*, 326). More indicative of date was the discovery that the rampart had been used as a burial-place for cremations (*ibid*, 318, 327; Karlslake 1910, 330). Although Karlslake published no drawings of his finds, the description of pottery and glass suggests a date for the burials in the later first and second centuries A.D., thus giving an approximate *terminus ante quem* for the construction. The excavators thus concluded 'It may therefore be taken for granted that the outer earthworks are in all probability pre-Roman. . .' (St John Hope and Stephenson 1910, 319).

The third consideration of the outer earthworks of Silchester to which reference has already been made was published shortly after the conclusion of the Society of Antiquaries' research project (Williams-Freeman, 1915). Despite the absence of an earthwork between Church Lane (by the South Gate) and the amphitheatre, Williams-Freeman was prepared to assert that 'a strong bank and ditch . . . encircle the Roman city on all sides . . . embracing an area of about 200 acres' (1915, 318–9). Interestingly, a slightly different course to that suggested by Maclauchlan was offered by Williams-Freeman on the north-eastern side, where he saw the earthwork running from about the middle of the western seating bank of the amphitheatre (1915, 319). From there he claimed that the entrenchment ran 'as a fold of high ground' and 'is clearly traceable right round to the western side'.

Although of little help, mention has to be made of Karslake's investigations in the area of 'The Beeches', to the south-east of the town wall (1914). There, in 1911, he believed he had found an earthwork, one hundred and fifty yards (137 m) in length, which included an entrance with an inturn of some fifty feet (15 m). The earthwork was apparently accompanied by a ditch fifteen feet wide (4.5 m) and six feet (1.8 m) deep. Infuriatingly, no plan nor section of his work was published and it is impossible to make sense of his findings. The area, which is still wooded today, has probably not changed since the beginning of the century. We can only surmise that he might have confused either the medieval park pale, which skirts the area close by, or the gully which carried stream water from the spring by the town baths inside the walls, for a more ancient earthwork. Had there been anything of greater significance here, we can be reasonably certain that both Maclauchlan and Williams-Freeman would have remarked it.

The next investigation of the outer earthworks was conducted by Mrs. Cotton in 1938-9 (1947). She cut sections across both the Sandy's Lands and the Rampier Copse earthworks and assumed in her introduction that the outer earthwork was continuous, 'enclosing about 230 acres [93 ha]', but 'Its line is somewhat obliterated on the east' (*ibid*, 137). The trenches which were cut across the Sandy's Lands earthwork (her Sites J, H) produced no pottery from a primary context. Thus there is no direct evidence of date for this stretch of bank and ditch. However, the trench that was dug to the rear of the Rampier Copse earthwork (Site L) did produce a small group of pottery (*ibid*, pl. XXXVIII). This was derived from a feature which cut the old ground surface and was apparently sealed by the tail of the rampart (layer 3). From this pottery, Mrs Cotton concluded that the earthwork was post-conquest, arguing for a date of c. A.D. 61-5 (*ibid*, 140). To her discussion of the pottery, to which she gave a *terminus post quem* of c. A.D. 45 (*ibid*, 167), we can now add that at least one sherd (her fig. 16, no. 1) must date after c. A.D. 60. It can be safely identified as a jar of Alice Holt type (Lyne and Jefferies 1979, Class 1, c. A.D. 60-150). In view of the drawn sections of the 1909 excavations (illustrated by Boon: 1969, pl. IX), which show the presence of quarry-scoops behind the rampart, we cannot dismiss the possibility that the pottery discovered in 1939 in fact derived from the fill of a quarry-scoop which was sealed by material eroded from the back of the bank. Without a section which unequivocally cuts into the core of the rampart, we cannot safely assume that this group does in fact provide a date for Rampier Copse. Mrs. Cotton also excavated trial trenches in Rye House Meadow which demonstrated the existence of two streets on the same alignment as the main street-grid of the town. These appeared to run up to the Sandy's Lands bank (Cotton 1947, fig. 5, 138).

No further excavation has been carried out on the sections of standing earthwork in Rampier Copse and Sandy's Lands since 1939. However, between 1954 and 1958, in the course of his investigations of the 'Inner Earthwork', Boon succeeded in defining the course of a ditch which forms an angular projection (FIG. 35) enclosing about 22 acres (8.9 ha) to the west of the standing earthworks (1969, pl. I). The ditch varied in width between twenty-two (6.7 m) and twenty-four feet (7.3 m) at the surface, and between five feet nine inches (1.75 m) and six feet six inches (1.98 m) in depth (Trenches C1 and D; *ibid*, 18-21, pl. X). With the natural gravel subsoil only fifteen (0.38 m) to eighteen inches (0.46 m) below the present ground surface, very little evidence was found of a bank. In Trench F, Claudio-Neronian pottery was found in what appeared to be the old ground surface beneath the denuded bank (*ibid*, 70, fig. 14, Nos. 144-5). Although it was not possible to determine the relationship of the standing earthworks of Rampier Copse and Sandy's Lands with the 'Primary Outer Earthwork', Boon argued that the twenty-two acres (8.9 ha) defined by the angular projection originally formed part of a huge outer earthwork of some 235 acres (95 ha). Subsequently (probably about the time of the construction of the street-grid in the late first century A.D.), this area was reduced by the exclusion of the twenty-two acre projection (*ibid*, 39). In its secondary phase, Boon argued that the 'Outer Earthwork' incorporates the Rampier Copse and Sandy's Lands elements. In his accompanying plan of Silchester and the earthworks, Boon marks on a presumed course for the 'Outer Earthwork' which encircles the whole town (*ibid*, pl. I). In the absence of excavation to verify the course on the eastern and southern sides, reliance was placed upon the interpretation of aerial photographs. However, a photo taken of the field to the south of the walled area (L.P. 1100) shows a series of field-drains and the line of a hedge which originally bisected the field earlier this century. Nothing

resembling an ancient earthwork is visible and the absence of ancient features was confirmed by trial trenching in 1978 (below).

The idea that from the later first century the limits of Roman Silchester were marked by an earthwork enclosing some 213 acres (86 ha) has been universally accepted. Boon himself, in his second magisterial study of Roman Silchester, has built further on the assumption that the Outer Earthwork existed on all sides by projecting the lines of the street-grid beyond the third-century town wall on all sides except the south-east (1974, fold-out plan). In his survey of the extra-mural region, in Part III of this Monograph, Mark Corney provides an up-to-date map of Roman streets and lanes outside the town wall (FIGS. 75, 77). Boon's plan of Silchester (usually his 1969, pl. 1, rather than 1974, folding) is widely reproduced in the literature of Roman Britain (e.g. Frere 1967, fig. 13; Wachter 1975, fig. 60; 1978, fig. 19). Implicit in the acceptance of the existence of the Outer Earthwork as projected on these plans has been the corollary that the construction of the late second-century earthen rampart reduced the defended area of *Calleva* by more than fifty per cent (to c. 100 acres: 40 ha) (cf Frere 1967, 249). In this respect the reduction of the urban area at Silchester has been compared with that at Caistor-by-Norwich, although there the scale of reduction is much less (cf Frere 1971, fig. 1). Otherwise, the nearest reduction of an urban area on a scale comparable to that at Silchester can be found only in Gaul in the third century.

In the course of a review by the Inspectorate of Ancient Monuments of scheduling arrangements for Silchester in 1977-8, the author was asked to report on what was known of extra-mural settlement between the town walls and the 'Outer Earthwork', paying particular attention to the eastern and southern areas. Given the almost complete absence of excavation in this area, the archaeological potential could only be assessed on the basis of the standing earthworks, aerial photographs and the plotting of surface finds. Since so much rested on the assumption that the Outer Earthwork existed as a complete circuit and that it was of first-century date, the reinvestigation of the course of this earthwork became a priority. The results of the field survey are presented by Mark Corney in Part III of this volume.

The projected course of the Outer Earthwork was investigated by a series of machine-cut trenches dug at right angles to the presumed course in those areas where surface indications were absent. These trenches were dug and back-filled on the same day, the whole assessment being carried out over three days in 1978. The survey begins on the north-east side near the north angle, progressing in a clock-wise direction to the South Gate.

In field 0004 (FIG. 35) the projected course of the earthwork passes in a south-easterly direction across an area where the ground slopes fairly steeply to the east and south towards Clad Gully (cf Maclauchlan 1851, map). A trench (No. 1) 15.5 m long was cut 9.7 m west of the south-eastern boundary of the field which also skirts the edge of Clad Gully. At a depth varying between 1.0 m and 1.6 m, clean brown clay was encountered. This was sealed by gravel and gravel-with-clay which was at its deepest at those points where the clay was deepest. This was the kind of soil-profile to be expected where the plateau-gravel has been eroded to expose the underlying clay.

To the south-east of this point and forming the boundary between the copse in Clad Gully (L.P. 2500, L.P. 2088 and L.P. 0085) is a bank which is marked on the O.S. 1:2500 map. As Maclauchlan's map shows so clearly, this bank runs from the bottom of a very wet gully (between L.P. 2500 and L.P. 0085) before rising to higher ground (between L.P. 0085 and L.P. 2088). At a point 62 m east of the last point where the bank is clearly visible at the edge of the copse in L.P. 2500 the second trench was dug (No. 2). It was placed at right-angles to the projected line, with one end against the present fence dividing L.P. 0085 from L.P. 2088. This trench revealed a ditch 6 m wide at the top and with a maximum depth of 1.7 m, inside the presumed course of the bank. The fill was of a loamy clay except at the bottom which contained a deposit of charcoal 10 cm deep. This charcoal was sampled and submitted for identification and C14 assay. Mrs. C.A. Keepax of the Ancient Monuments Laboratory identified the charcoal as of mature oak and hazel or alder. The date given is 930 ± 80 b.p. (A.D. 1020) (HAR 3422). The ditch can thus be regarded as of early medieval date. Further sections on the line between the second trench and the amphitheatre were not possible. From the relatively high point where the second trench was cut the terrain over which the earthwork is believed to have run falls again quite

markedly between L.P. 0085 and L.P. 2672. Where the line continues along the north-eastern boundary between L.P. 2672 and L.P. 4167, it appears as a slight lynchet. This is presumably the earthwork recorded by Maclauchlan; the suggested line of Williams-Freeman, which runs slightly to the south, cannot be seen today. To conclude: on the north-eastern side there is a small earthwork which can be identified as running from the northern end of L.P. 0085 into L.P. 2672. The charcoal from the primary silts of the ditch (on the town side of the bank) is dated to the eleventh century A.D. Except for that stretch where the ground rises slightly in L.P. 0085, the bank runs *below* the north-eastern scarp of the gravel plateau.

In the field east of the east gate (L.P. 6346) where there are neither cropmarks nor surface indications of an earthwork, three sections were cut. The first trench (FIG. 35, No. 3) was located on the line as projected by Boon (1969, pl. 1). Sited 12 m north of the hedge along the Mortimer lane, the cut was 12 m long and reached the gravel subsoil at a depth of 0.75 m. The second section (No. 5) was cut to check a more recent suggestion that the course of the Outer Earthwork lay further to the east (Goodburn 1976, 370). Located 20 m inside the hedge backing the Mortimer lane, the trench was 15 m long, encountering the natural subsoil of clay and gravel at a depth of 0.3 to 0.4 m. The suggestion that the Outer Earthwork might be found here was based on the soil-marks showing on aerial photographs. The marks are very blurred and are best interpreted as indications of the change in the subsoil, where the plateau-gravels have been eroded to expose the underlying clay. The third cut (No. 4) was made across the lynchet and old hedge-line which once divided the field *c.* 187 m east of the western edge of the field. This also proved negative.

In the fields immediately to the south of the Mortimer lane two sections were cut. The first trench (FIG. 35, No. 6) was on the boundary between L.P. 4426 and L.P. 6530, *c.* 65 m south of the lane, and tested the presumed (1969) line. Gravel subsoil was encountered immediately below the topsoil in this trench which was 7 m long and cut across the fence-line. A much longer trench (56 m) was cut just within the northern boundary of L.P. 6530 (FIG. 35, No. 7) to test the line proposed in 1976 as well as to examine the change in slope (indicated on the O.S. 1: 2500 map) a little to the west. At the eastern end the subsoil of yellow clay lay immediately beneath the ploughsoil; but to the west, where the gravel rises, the clay reverts to gravel. The change of slope can thus be seen as reflecting the change in the subsoil from the plateau-gravel to the underlying clay. The results from this second trench matched those from the section (No. 5) cut in a similar position in L.P. 6346.

In the southern sector where no traces of an earthwork had been found by Maclauchlan or Williams-Freeman, two sections were cut in L.P. 1100 across the presumed (1969) line of the Outer Earthwork. The first trench (No. 9) ran for 37 m across the line, starting from a point opposite the middle of the clump of trees in the middle of the field. The field-drain, to be seen running north-east to south-west on an aerial photograph (Boon 1969, pl. IIIB), was bisected. A second trench (No. 8) was cut parallel with the northern hedge-line and produced results identical to those of the first cut, including the field-drain.

One other cut was made across the line of the Outer Earthwork at SU 63496261 on the north-western side where the Sandy's Lands sector can no longer be seen above ground (FIG. 35, No. 10). The trench here showed a wide, flat-bottomed ditch no more than 1.0 m deep below the present ground-surface. The outer edge of this feature was some 12 m west of the fence-line dividing L.P. 4172 and L.P. 5859. Thus the lack of a standing earthwork between Sandy's Lands and Rampier Copse can be more easily explained. It was not completed.

It had been suggested (Boon 1969, 16–17) that the Rampier Copse earthwork partly incorporated an earlier enclosure, perhaps comparable to that at Pond Farm (FIG. 64). A slight ridge in L.P. 6805 hinted at the possibility of discovering the south-eastern line of this enclosure. A trench (No. 11) 27 m long and 4 m from the southern edge of the field was cut across the line of this slight ridge. Initially, natural orange gravel and sand were observed beneath a very thin ploughsoil (10–15 cm). At about 15 m east of the crest the soil changed to a grey sandy loam(?) flecked with charcoal which continued for a further 12 m to a depth of 1.5 m (bottom of trench). The position and extent of this soil-change does not seem to be consistent with the fill of a ditch. Thus this exploratory trench did not provide confirmatory evidence of an earlier enclosure partly

incorporated within Rampier Copse. However, infra-red photos in the National Monuments Record show a discolouration more or less on the line of the ridge across the field. Whether this marks a natural or man-made feature not recognised in the 1978 section remains unclear.

Discussion

It has been shown that beyond the town walls on the north-eastern, eastern, south-eastern and southern sides there is no evidence to support the notion that *Calleva* was at any time surrounded by a continuous 'Outer Earthwork'. What survives from this investigation are the standing earthworks to the north-west (Sandy's Lands) and the south-west (Rampier Copse), neither of which is satisfactorily dated. The former is almost certainly of pre-Roman date and was definitely in existence before the later first century when the street grid was laid out. Also at about this time we have evidence of the presence of cremation burials in the adjacent field to the west (L.P. 4172) (Appendix 2, p. 293). Although negative evidence must be used cautiously, the absence of finds from both the 1909 and 1939 excavations of this earthwork is remarkable. Given the ubiquity of Roman material, particularly pottery and tiles, in the fields immediately outside the walled area, the absence of material from Sandy's Lands is surely indicative of an early date. Field survey has shown that even pre-Flavian pottery is reasonably common in L.P. 6805 and L.P. 0001 outside the West and South Gates. From within and beneath the bank of the amphitheatre, situated right on the edge of the gravel terrace (and thus of the settlement), considerable quantities of pre-Flavian pottery have been recovered during the current excavations. So if the Sandy's Lands earthwork dated after about the middle of the first century A.D. there is a great possibility that some material would have been buried within and beneath it. These arguments also hold for the Rampier Copse sections, although one trench cut in 1909 did produce early(?) pottery (no longer traceable) from what was regarded as a primary context. Doubt has been cast here on the Neronian date for Rampier Copse suggested by Mrs. Cotton, on the grounds that we cannot be sure that the pottery in question was really sealed by the bank proper rather than by material that had been eroded into a quarry-scoop. Although there can be no certainty in this matter, it seems extremely likely that both the Sandy's Lands and Rampier Copse earthworks belong to the pre-Roman Iron Age (probably the later first century B.C.) In the past they have been regarded as part of a scheme which encircled the entire early Roman settlement of *Calleva*. An alternative view is to regard them as part of a design (unfinished?), whose purpose was to cut off the gravel spur on which the town lies from the broad sweep of gravel terrace to the west (Fulford 1983, 85). Thus the earthworks could be compared with the more complex linear systems that help define the triangle of land between the rivers Colne and Roman, where *Camulodunum* was sited (cf Crummy 1977, fig. 14).

Since, according to the hypothesis offered here, both earthworks were in existence long before the later first-century A.D. street-grid was laid out, it is not perhaps surprising to find that the streets run up to and respect the Sandy's Lands rampart. Beyond this bank and ditch lies the twenty-two acre (8.9 ha) annexe, limited to the west by the 'primary outer earthwork', in which there is evidence of later first- to second-century A.D. cremation burials and no trace of any streets or lanes. The original function of this earthwork, whose first-century A.D. date is by no means secure, is unclear. We cannot overlook the possibility that it served to define one of the cemeteries of the town from the start.

Amidst this sea of uncertainty we can offer one new element of probably defensive function which belongs to the later first century A.D. This is the Manor Farm ditch (FIG. 10) excavated in 1980, which produced early Flavian pottery from its primary silts. It is inappropriate to infer much from so small an area examined, but we should recognise the possibility that the ditch served as an eastern limit to the town, after it had outgrown the mid first-century 'Inner Earthwork', and until a new earthen rampart was constructed some 20–30 m to the east at the end of the second century. The Manor Farm ditch and the standing earthwork to the west of the city, which are respected by the street-grid, begin to give us some basis for assessing the extent of the later first- and second-century town. The area concerned would seem to be only marginally in excess of that defended at the end of the second century.



(Photo: M. Jarvis)

PL. I A South Gate (1974): the Flavian(?) Hearth; foundations of town wall in background (p. 35). Scales of 0.3 and 0.5 m.



(Photo: author)

PL. I B Manor Farm: east section of trench showing pre-Flavian pit and early Flavian ditch (pp. 32, 37).



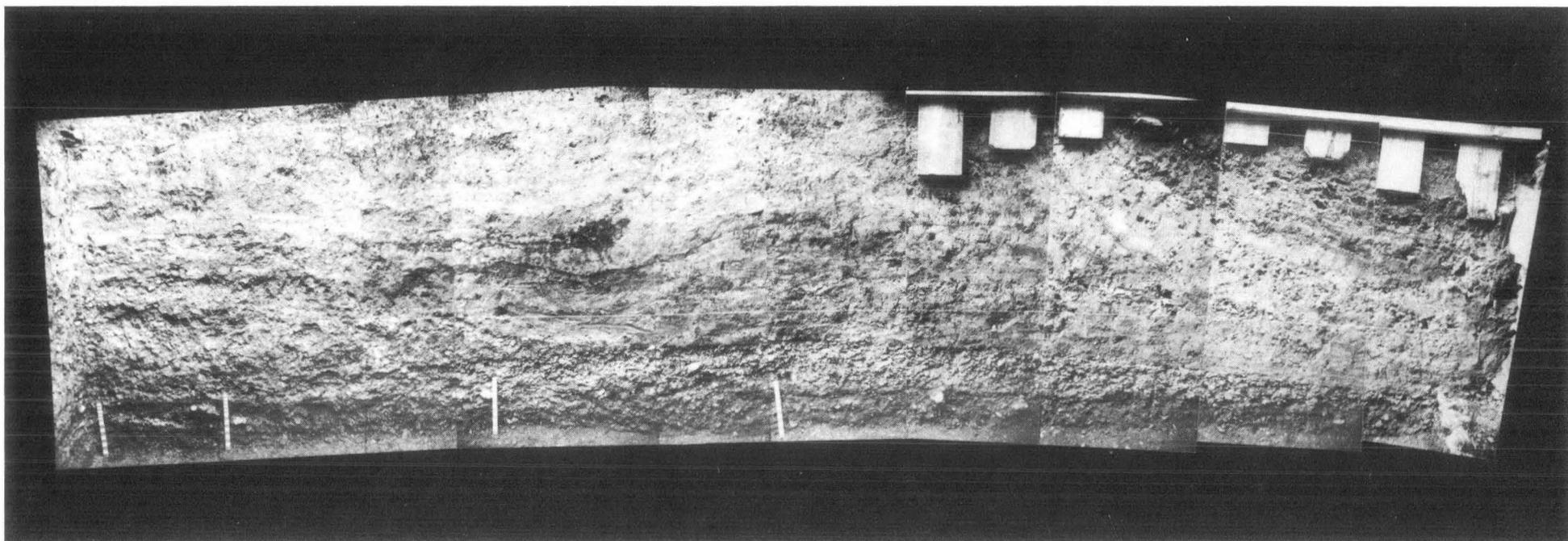
(Photo: author)

PL. II A Manor Farm: view eastwards along early Flavian ditch with early second-century palisade-trench on the right (pp. 37–40).



(Photo: author)

PL. II B Manor Farm: view westwards along early Flavian ditch with early second-century palisade-trench on the left.



(Photo: M. Jarvis)

PL. III Rampart section (1974): eastern side of trench showing rampart with gravel foundations; town wall to the right (p. 62). The scales are 0.3 m.



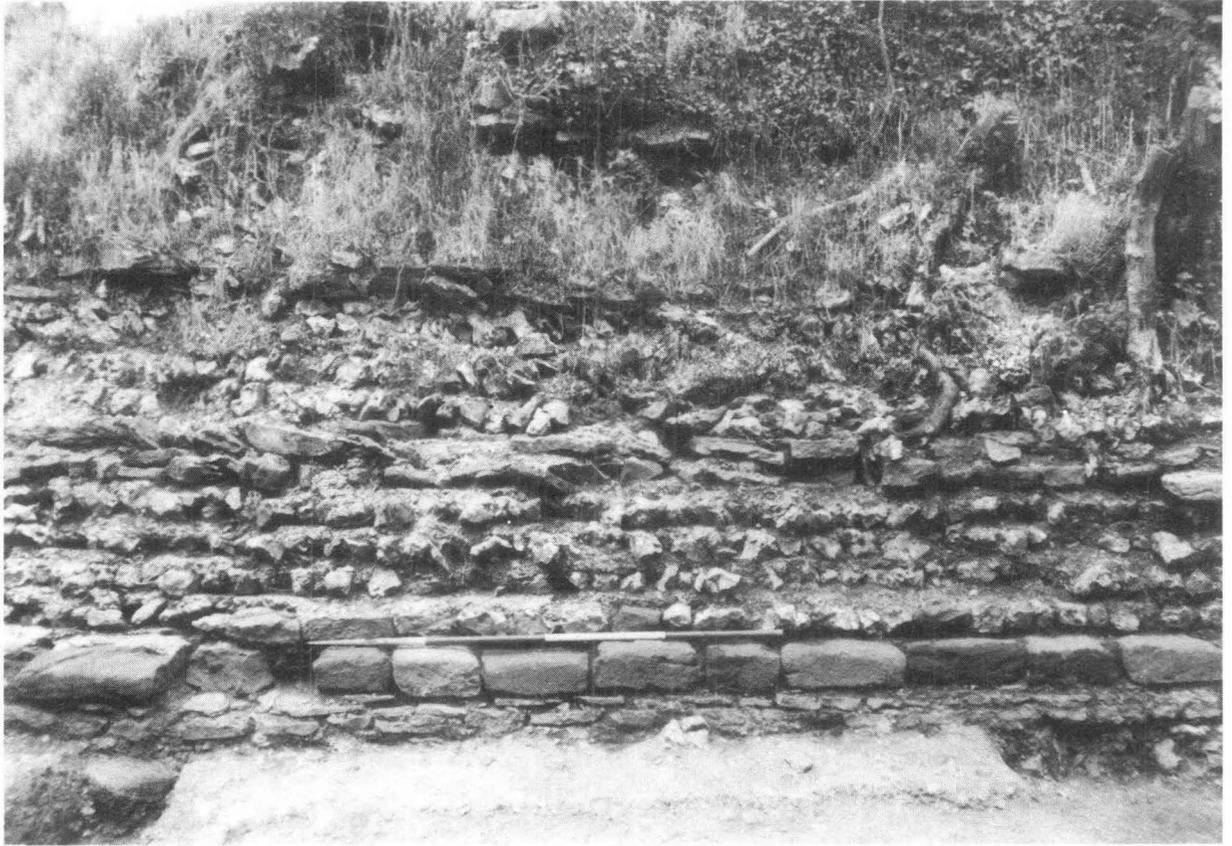
(Photo: author)

PL. IV A South-West Angle: general view of the south-west corner with base of rampart and early occupation showing to left (pp. 58, 66).



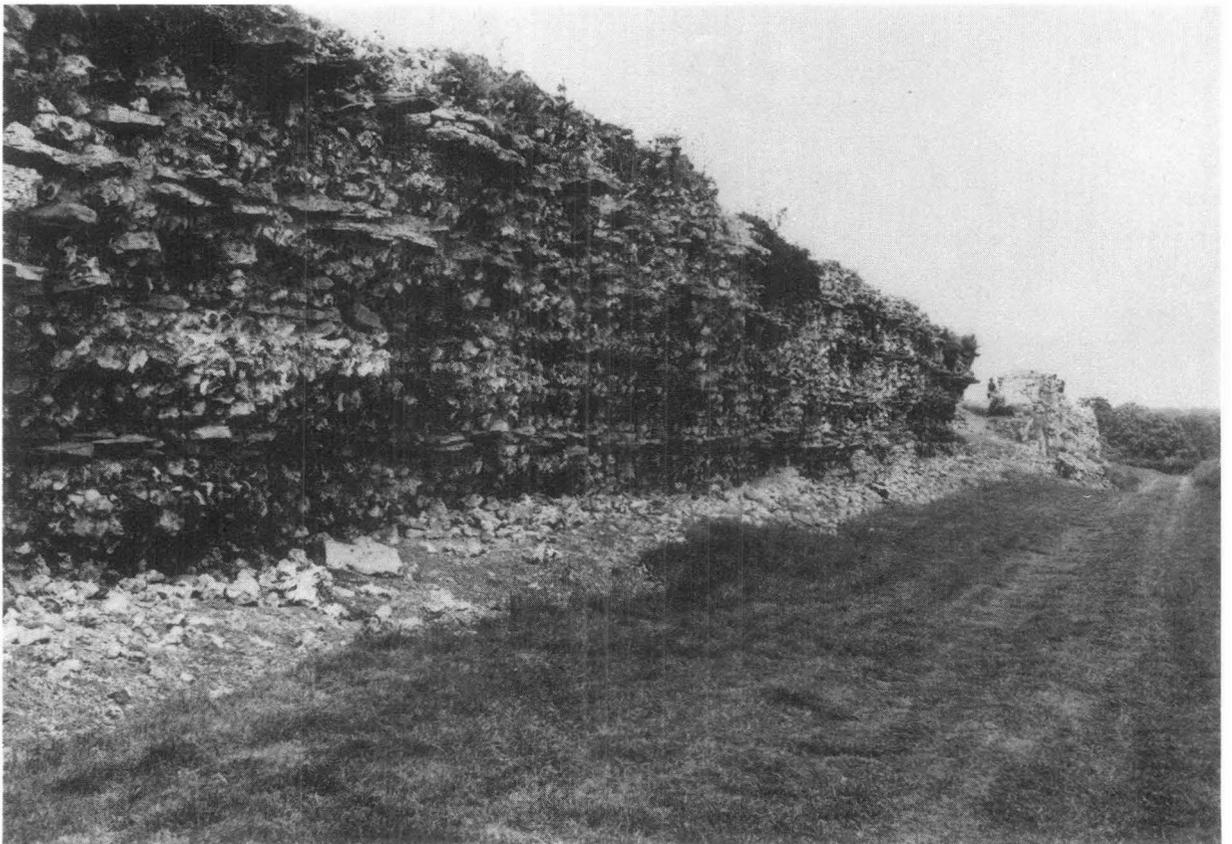
(Photo: author)

PL. IV B South-West Angle: detail of town wall to the north of south-west corner, with plinth blocks and truncated rampart beneath (pp. 58, 66).



(Photo: author)

PL. V A South-West Angle: detail of town wall to the east of the south-west corner (p. 66).



(Photo: author)

PL. V B Town Wall (1975): a length of the wall east of the South Gate looking eastwards, before consolidation; fallen section in background.



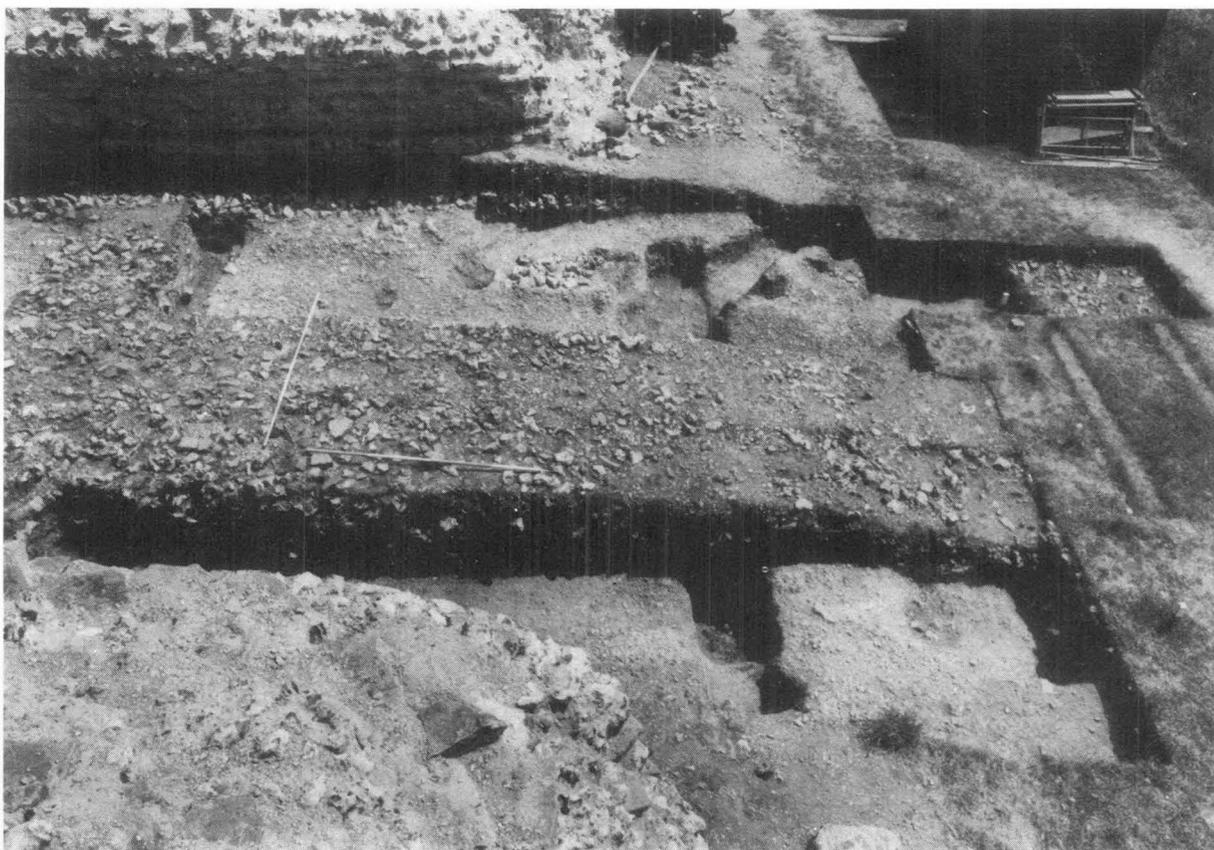
(Photo: M. Jarvis)

PL. VI A South Gate (1974): view westwards across the inturn of the town wall to the late second-century gate, during cleaning of the wall before consolidation by the Department of the Environment (p. 66).



(Photo: M. Jarvis)

PL. VI B South Gate (1974): view eastwards across the inturn of the town wall to the late second-century gate, during cleaning of the wall before consolidation by the Department of the Environment (p. 66).



(Photo: M. Jarvis)

PL. VII A South Gate: north-south street outside the gate looking east during excavation (pp. 37, 50, 74). Ranging-poles lying on the latest surface on the street. Victorian trench across entrance in middle ground.



(Photo: M. Jarvis)

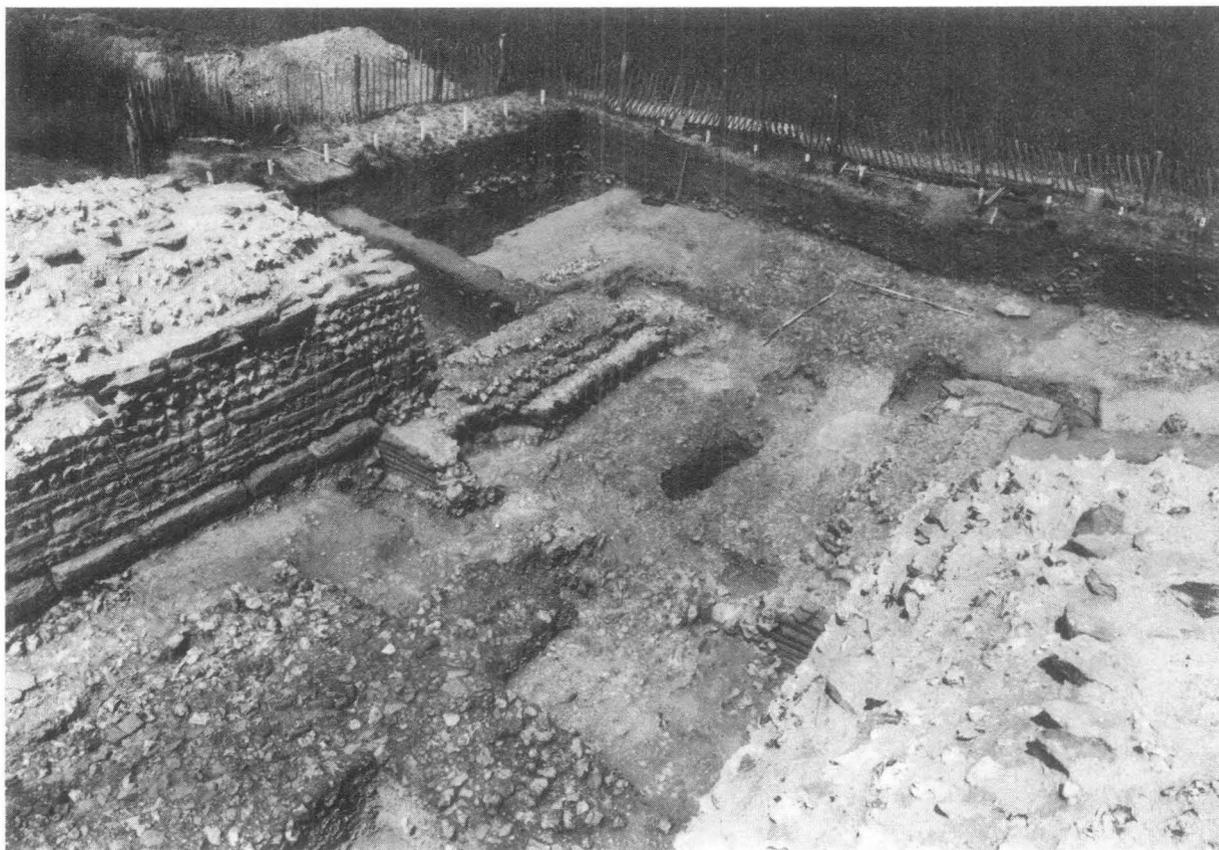
PL. VII B South Gate: north-south street outside the gate; looking west during excavation (pp. 37, 50, 74). Ranging-poles lying on the latest surface on the street. Excavated rumble drain in foreground, cut by Victorian trench; earliest metallised surface in foreground (Trench 1).



PL. VIII A South Gate: rubble drain in North-South street
(Trench 1 looking north) (p. 50): scale 0.5 m.
(Photo: M. Jarvis)

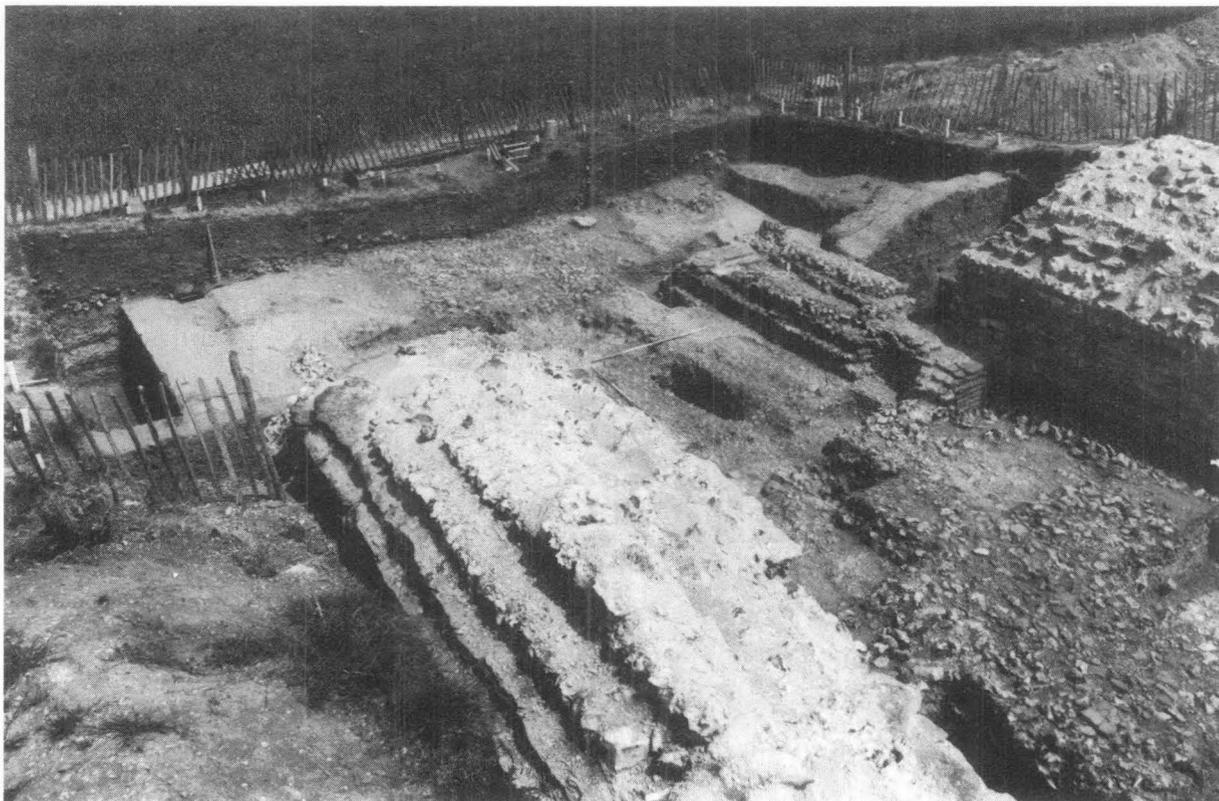


PL. VIII B South Gate: late second-century gate, eastern footings,
looking east (pp. 42-51).
(Photo: M. Jarvis)



(Photo: M. Jarvis)

PL. IX A South Gate: view to north-west with western inturn of the town wall and western footing of the late second-century gate (pp. 42–51, 66).



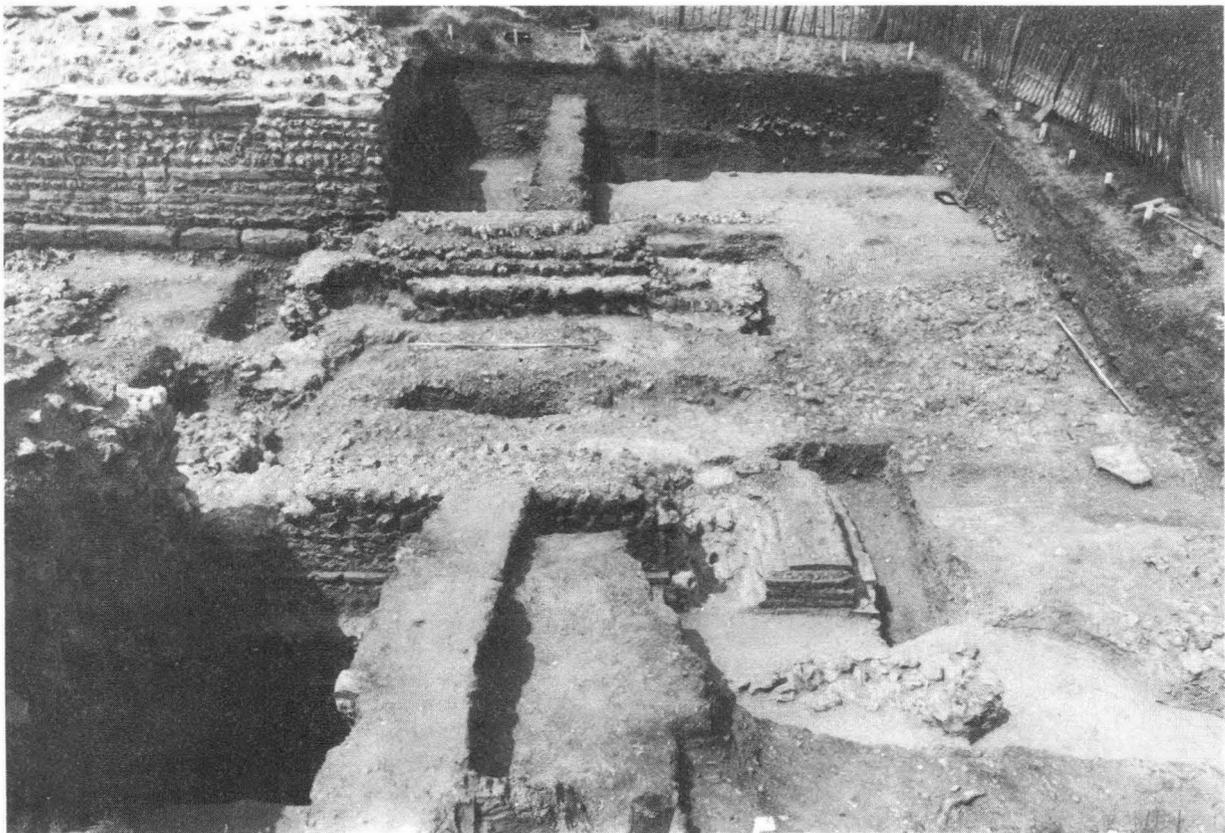
(Photo: M. Jarvis)

PL. IX B South Gate: view to north-east with eastern inturn of the town wall and eastern footing of the late second-century gate; western inturn of the town wall in foreground (pp. 42–51, 66).



(Photo: M. Jarvis)

PL. X A South Gate: view to south; late second-century gate in foreground, inturn of the town wall in the background (pp. 42–51, 66).



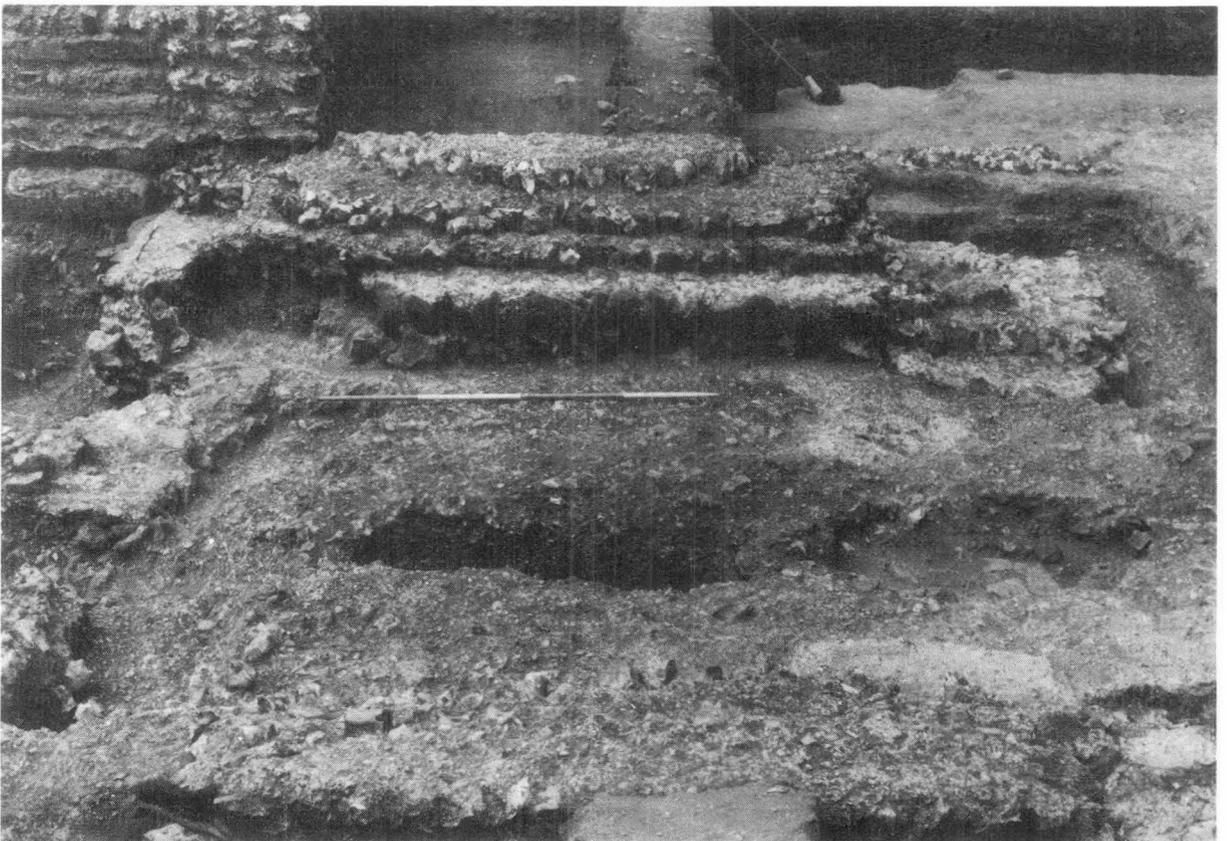
(Photo: M. Jarvis)

PL. X B South Gate: view eastwards across the footings of the late second-century gate. Victorian trenches around northern end of both footings (pp. 42–51, 66).



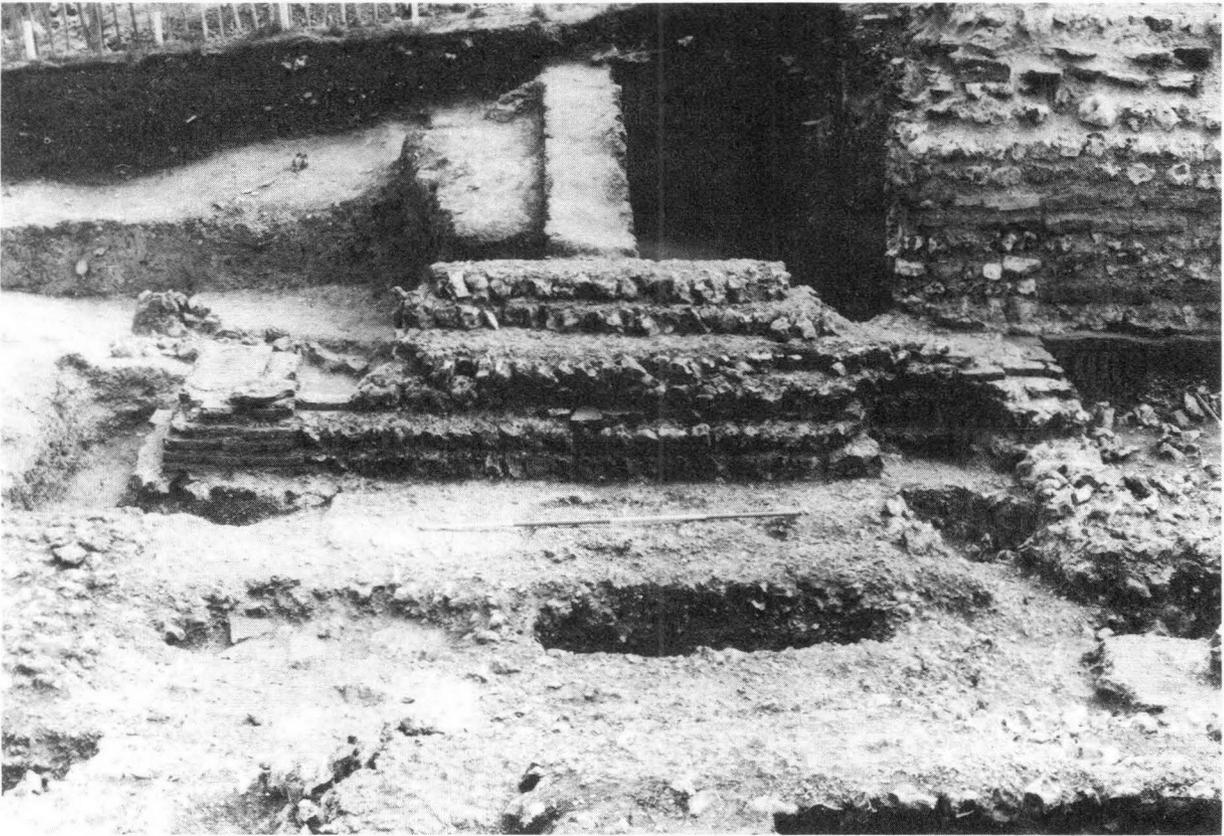
(Photo: M. Jarvis)

PL. XI A South Gate: view westwards across the footings of the late second-century gate; flint alignment at the base of the rampart in the foreground (pp. 42–51).



(Photo: M. Jarvis)

PL. XI B South Gate: western footing of the late second-century gate from the east; pit (F7) in middle ground (pp. 42–51).



(Photo: M. Jarvis)

PL. XII A South Gate: eastern footing of late second-century gate from the west; pit (F7) in middle ground (pp. 42–51).



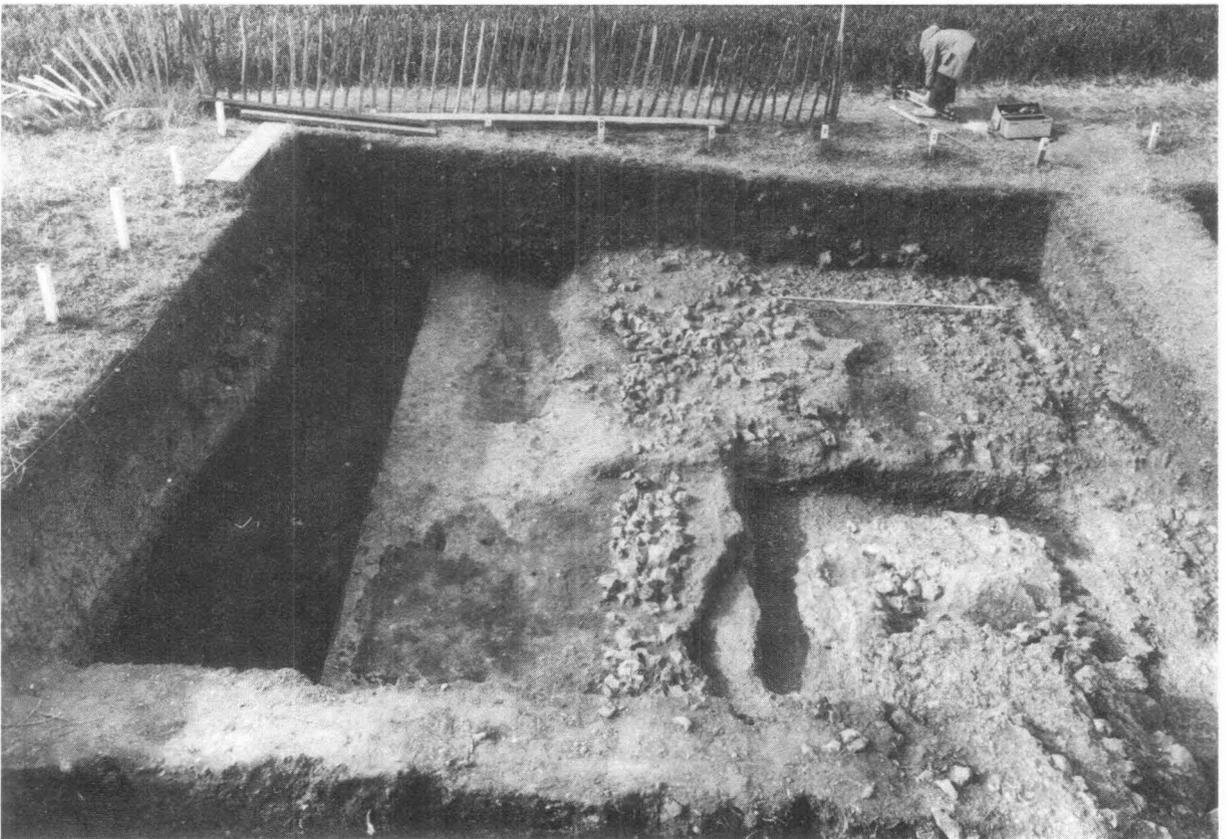
(Photo: M. Jarvis)

PL. XII B South Gate: southern end of western footing of late second-century gate with tile-coursing (p. 45). Scale 0.5 m.



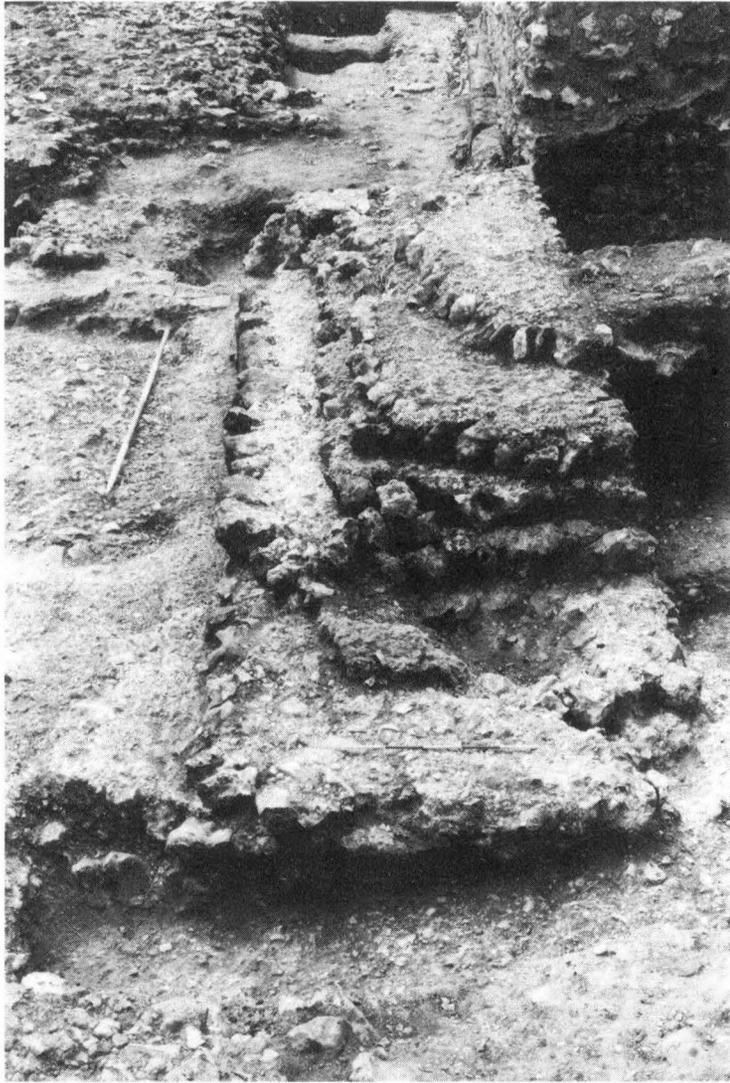
(Photo: M. Jarvis)

PL. XIII A South Gate: southern end of eastern footing of late second-century gate with tile-coursing (p. 42). Scale: 0.5 m.



(Photo: M. Jarvis)

PL. XIII B South Gate: view northwards over unmortared flint alignment contained within the late second-century rampart behind the western footing of the late second-century gate (p. 59).



(Photo: M. Jarvis)

PL. XIV A South Gate: northern end of the western footing of the late second-century gate (p. 45).



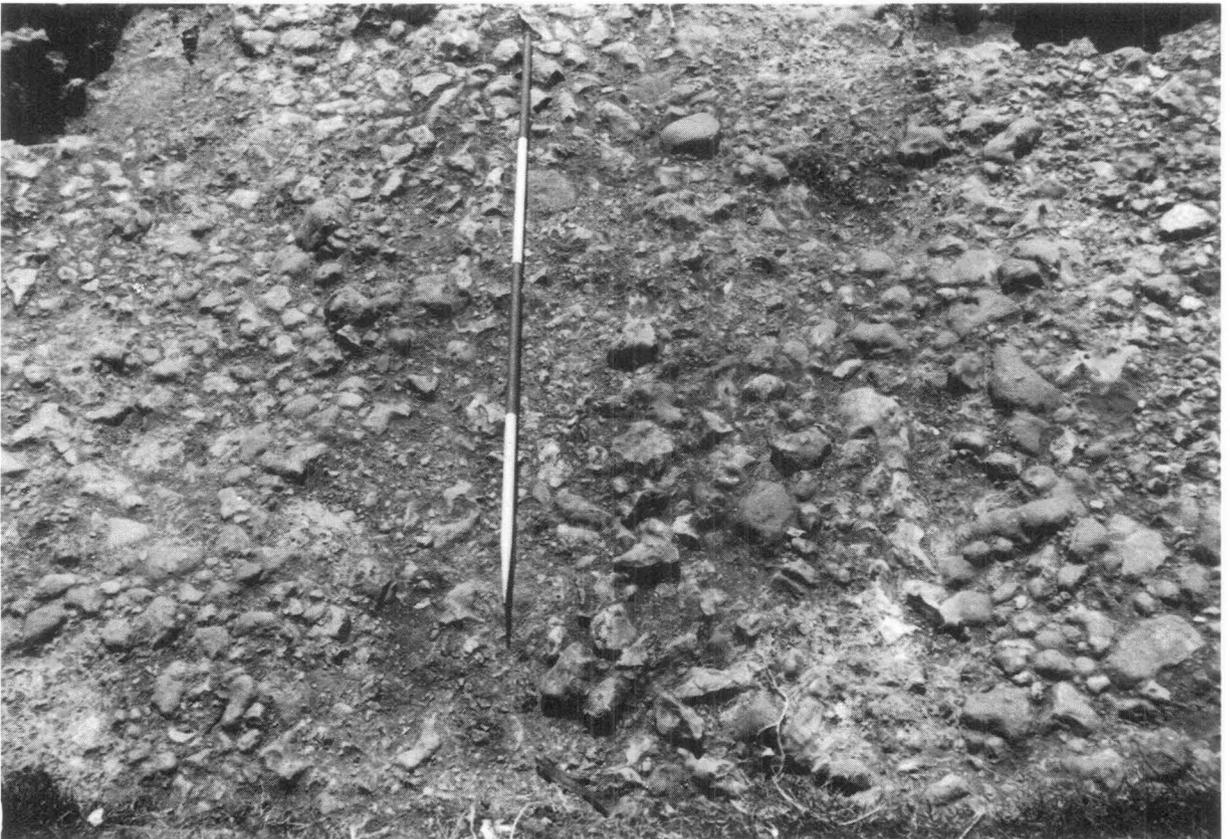
(Photo: M. Jarvis)

PL. XIV B South Gate: northern end of the eastern footing of the late second-century gate (p. 45).



(Photo: M. Jarvis)

PL. XV A South Gate: north-south street: late third-century metallation from the eastern inturn of the town wall (p. 74).



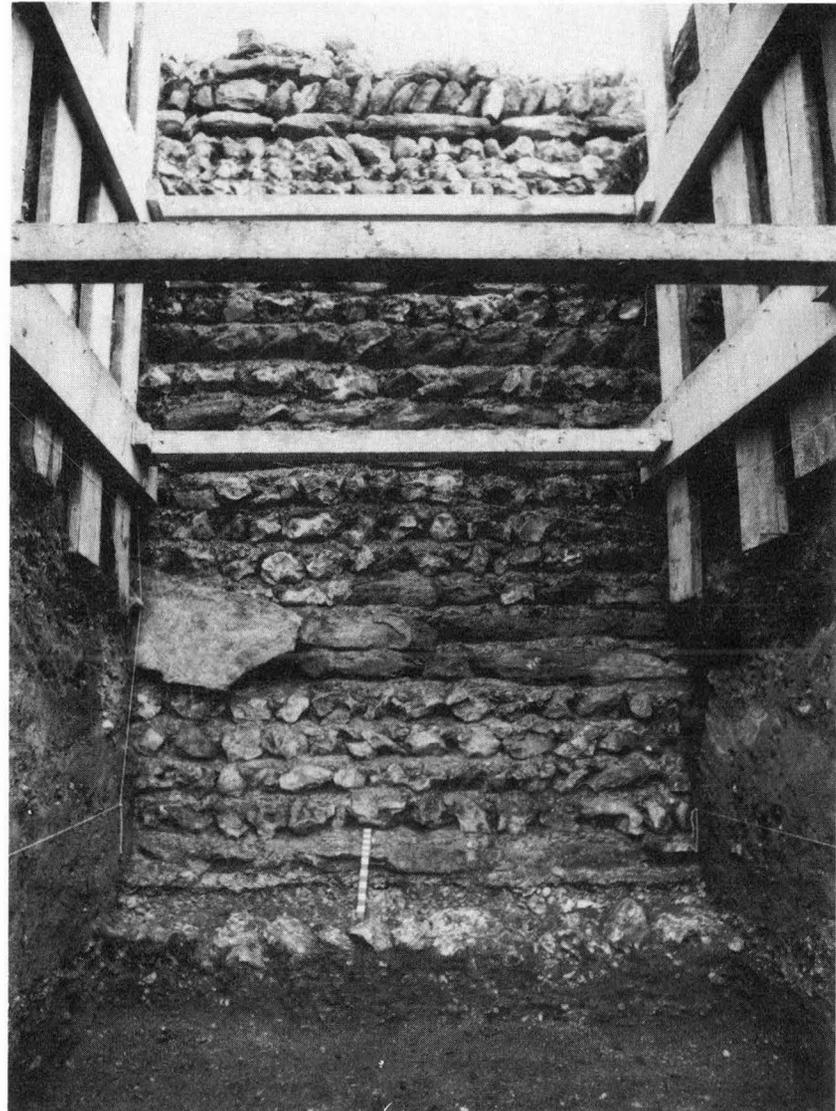
(Photo: M. Jarvis)

PL. XV B South Gate: latest street-surface north of the gate (northern end of footings visible in background) (pp. 44, 74).



(Photo: author)

PL. XVI A South Gate: view northwards over late or post-Roman rubble spread over the street outside the gate (p. 51).



(Photo: M. Jarvis)

PL. XVI B Rampart Section (1974): inner face of town wall with un-mortared piece of bonding stone projecting from the section (pp. 67-8, 74).



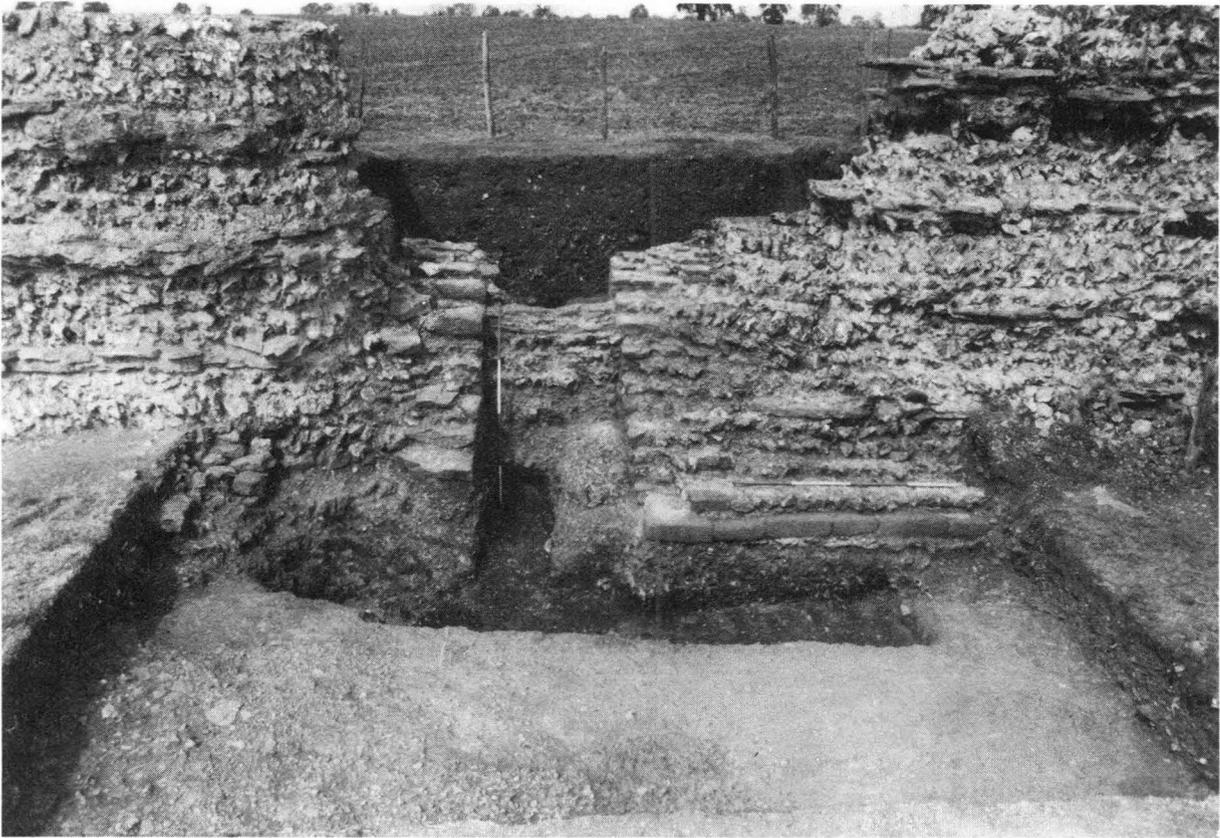
(Photo: courtesy of Reading Museum)

PL. XVII A South Gate: the excavation of 1890: view south-eastwards (p. 48).



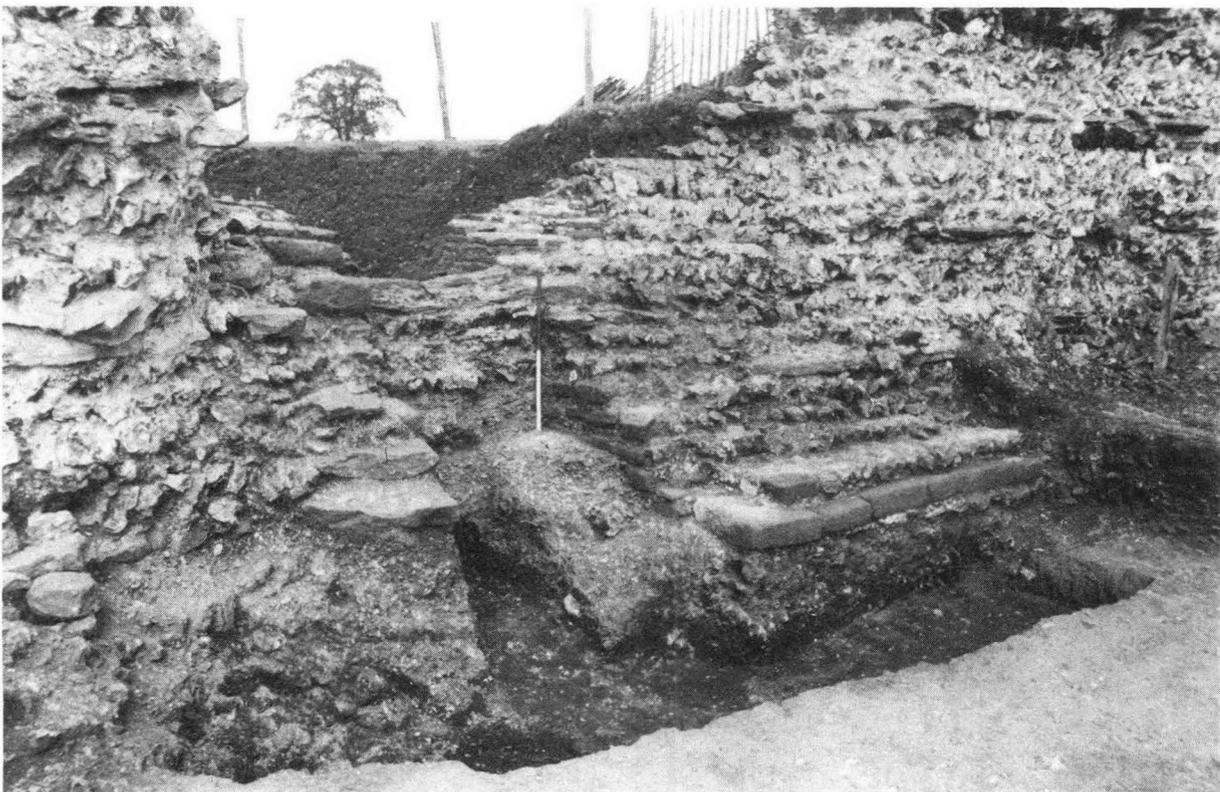
(Photo: courtesy of Reading Museum)

PL. XVII B South-East Gate: the excavation of 1893: view to south (pp. 51, 55).



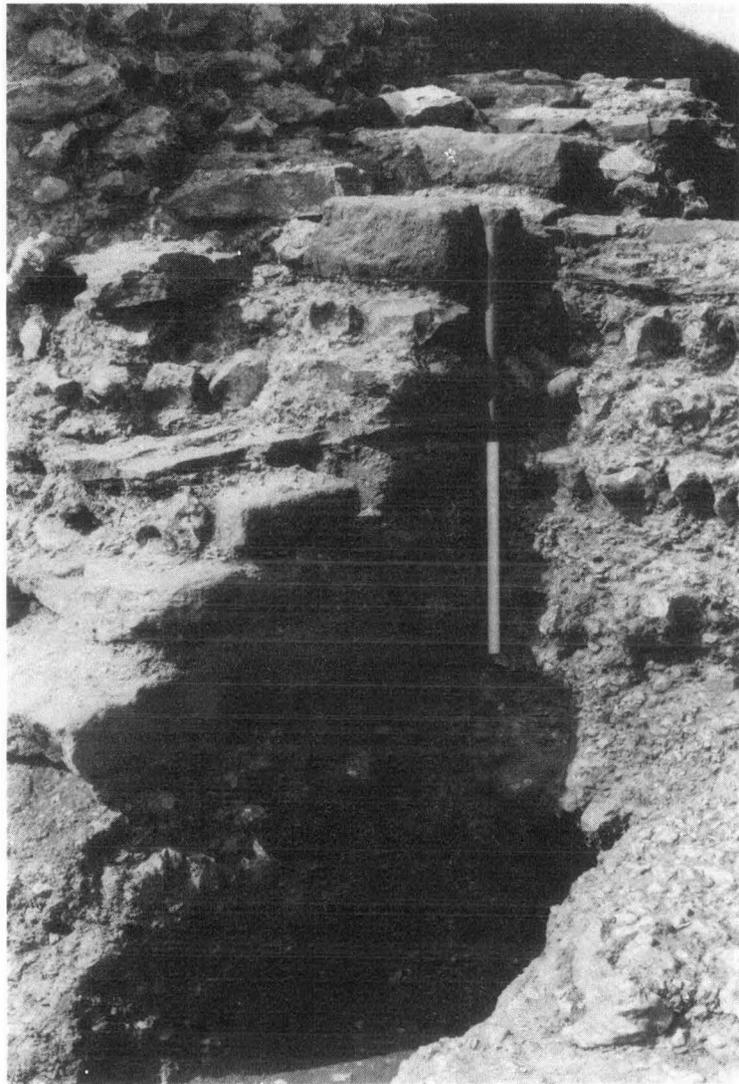
(Photo: author)

PL. XVIII A South-East Gate: general view of exterior from the south (pp. 68-71).



(Photo: author)

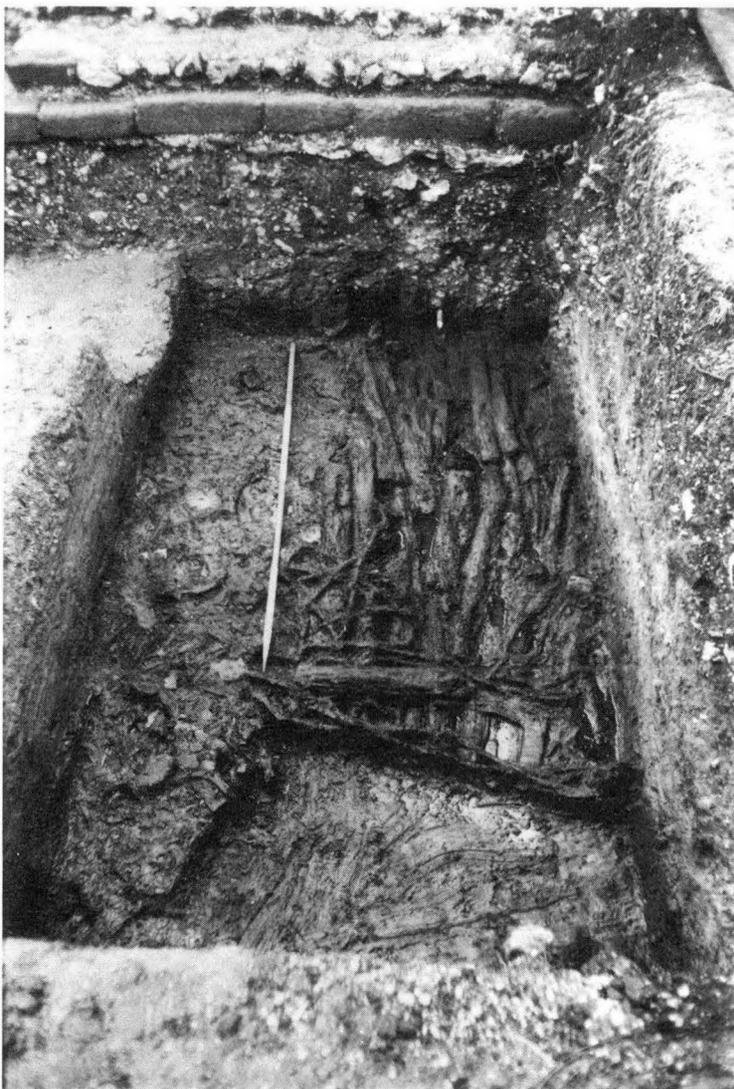
PL. XVIII B South-East Gate: general view of exterior looking north-eastwards (pp. 68-71).



PL. XIX A South-East Gate: detail of western side of the third-century passageway outside the late Roman blocking (p. 69). Scale: 1 m. *(Photo: author)*



PL. XIX B South-East Gate: piling beneath the foundation of the town wall (p. 69). *(Photo: author)*



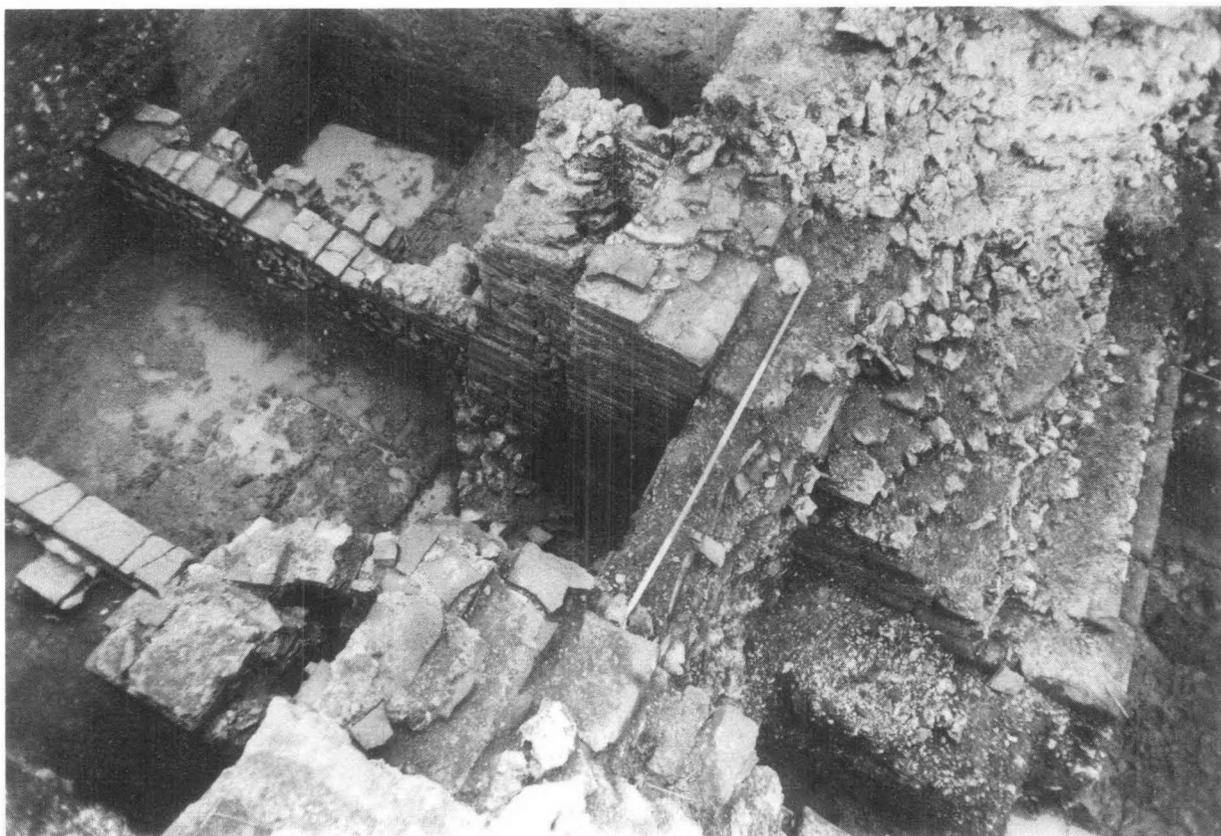
(Photo: author)

PL. XX A South-East Gate: timber raft beneath late second-century rampart exposed outside the gate; wall foundation in the background (pp. 51, 54, 69).



(Photo: author)

PL. XX B South-East Gate: detail of inner face of eastern brick pier of the late second-century gate (pp. 54, 63). Scale: 0.25 m.



(Photo: author)

PL. XXI A South-East Gate: general view to north-east across gate and passage-way (pp. 54, 63-5, 69).



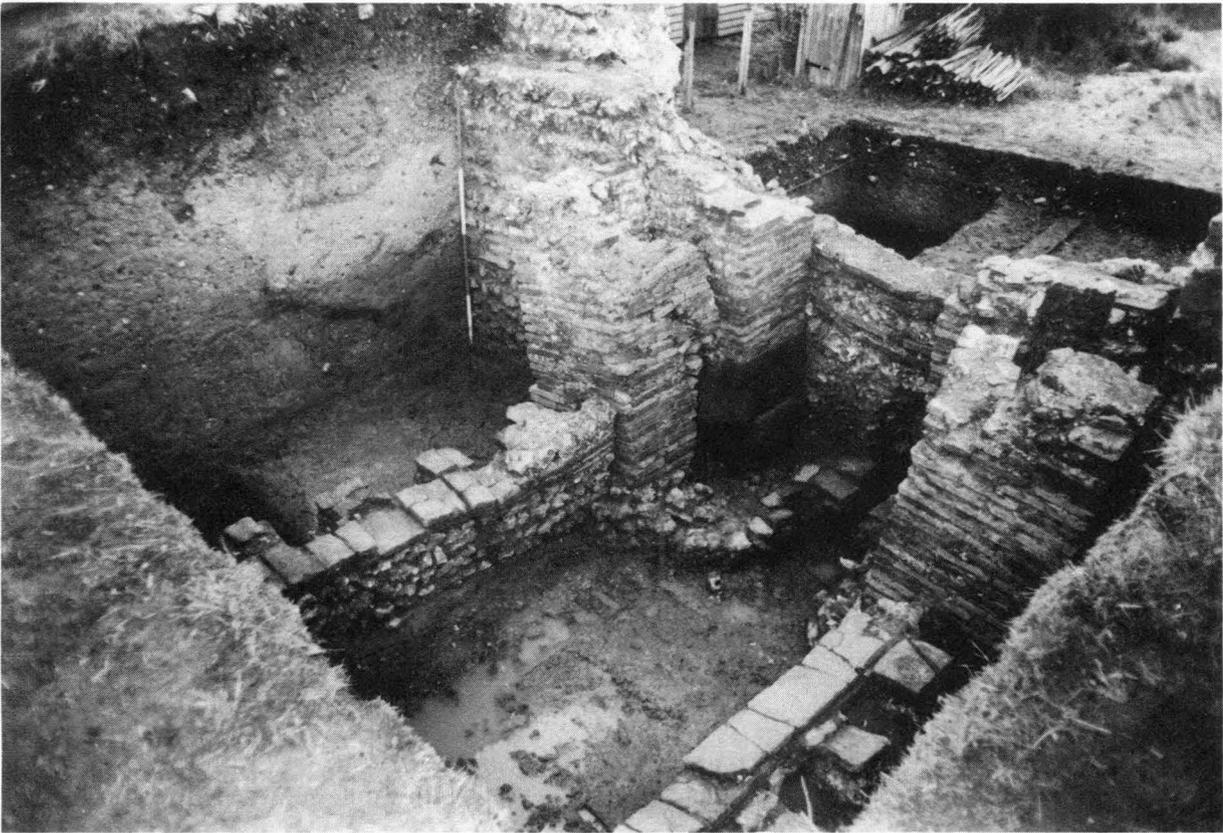
(Photo: author)

PL. XXI B South-East Gate: general view to north-west across gate and passage-way (pp. 54, 63-5, 69).



(Photo: author)

PL. XXII A South-East Gate: general view to south-west across passageway through the rampart and the gate (pp. 54-5).



(Photo: author)

PL. XXII B South-East Gate: general view to south-east across passageway through the rampart and the gate (pp. 54-5).



(Photo: author)

PL. XXIII A South-East Gate: general view looking south (pp. 54-5, 76).



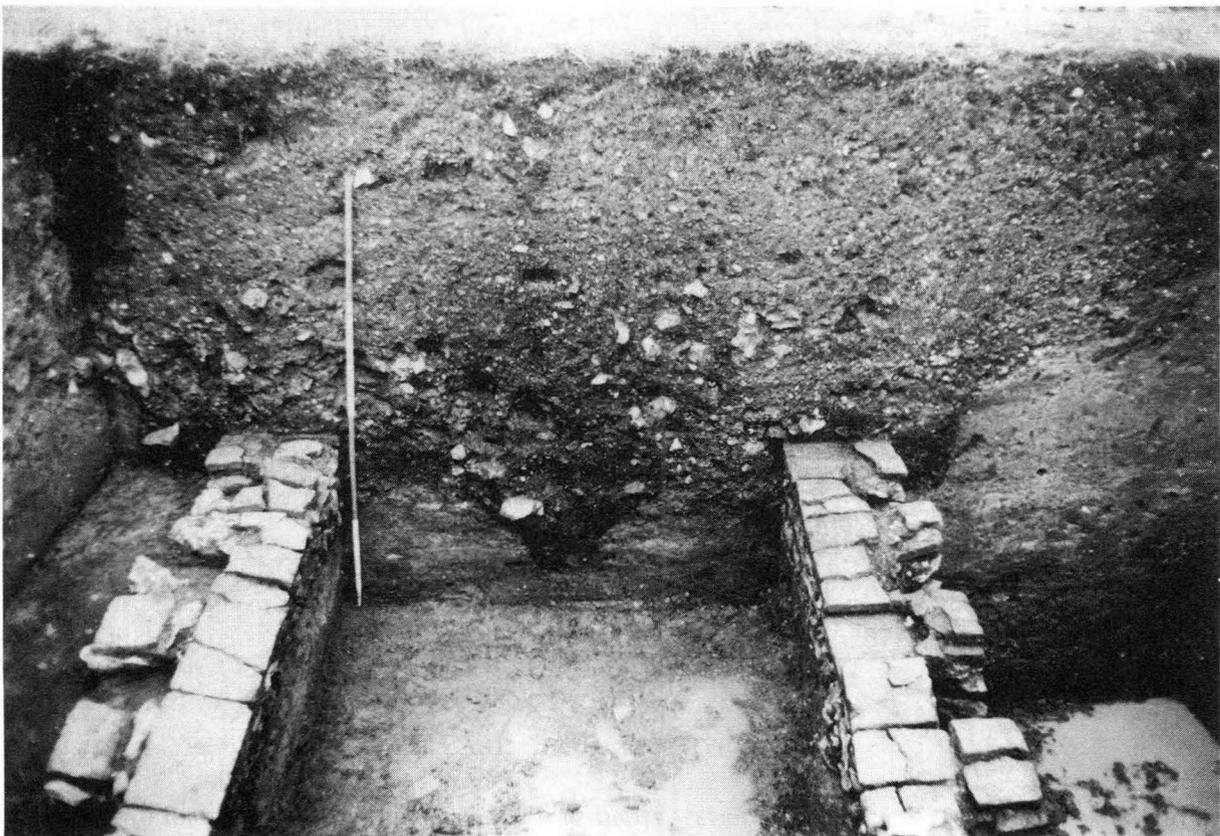
(Photo: author)

PL. XXIII B South-East gate: inner (western) face of eastern passage wall, looking north-east (pp. 54-5).



(Photo: author)

PL. XXIV A South-East Gate looking SW: inner (eastern) face of western passage wall; top of eastern passage wall in foreground (pp. 54-5).



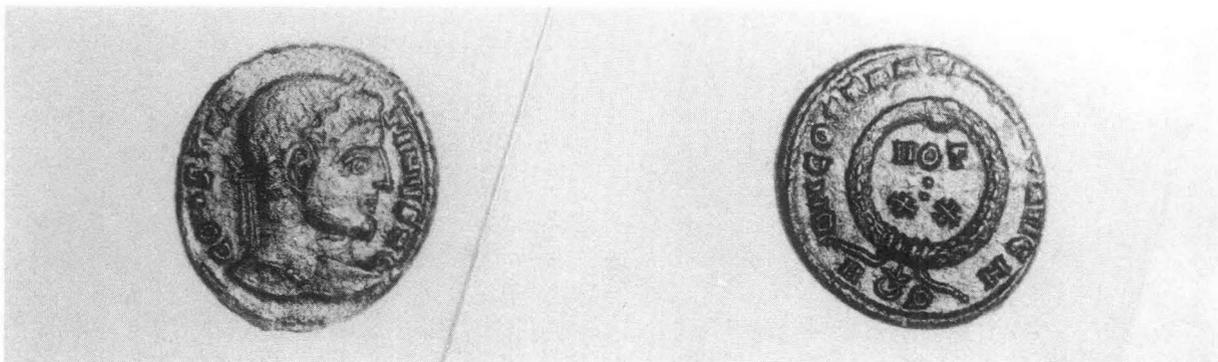
(Photo: author)

PL. XXIV B South-East Gate: northern section across entrance (Trench 2) (pp. 54-5).



(Photo: author)

PL. XXV A South-East Gate: late Roman blocking-wall, looking south (p. 76).



(Photo: Reading University)

PL. XXV B Constantinian coin (p. 109): obverse and reverse (Scale: 2:1).

PART II: THE FINDS

I. THE BRITISH COIN. By ROGER GOODBURN

British LY10: Mack 316c Var.

Obv.: Has head with S-shaped curl, unlike previously known variants. Rather Gaulish-looking.

Rev.: Has prancing animal left (possibly a leopard or a wolf); ring-and-pellet and pellet above animal; ring-and-pellet behind. Again a variant of reverses already known (Canterbury, Puckeridge).

Rampart Section (1974); pre-Conquest (Pit 1).

II. THE ROMAN COINS

A. From the South Gate. By A. S. Esmonde Cleary

Thirty-seven coins were recovered during the 1975 excavations. They are listed below by reign or period, with reference to *Roman Imperial Coinage (RIC)* or *Late Roman Bronze Coinage Part I or II (LRBC i, ii)*.

Numismatically the coins are unexceptional. The general run of issues and the proportions in which they occur are in no way remarkable for a small sample from a Romano-British urban context. Only the Constantinian copy, unstratified (PL. XXV B) is individually of any note. Its module, weight, lettering and the execution of obverse and reverse designs are well up to the standard of official coinage of the period. It could easily have passed as an imperial issue, especially among the illiterate.

Archaeologically the coins are of little value, for they do not occur in deposits where they would contribute to our understanding of the dates of the defensive sequence. The only group of coins derives from 4/3-6, interpreted as a rubbish build-up over the earthen rampart. This material accumulated over a long period of time, and was presumably derived from elsewhere in the town.

The context, with trench- and layer-number is given in the right-hand column.

| | | | | |
|---|-------------|--------|-----------------------|--|
| 1 | Faustina I | 138-41 | As reverse illegible | Unstrat. (6/9) |
| 1 | Gallienus | 260-8 | RIC 207 | Unstrat. (6/6) |
| 3 | Claudius II | 268-70 | RIC as 25, as 88, 261 | Fourth-century deposit on rampart (4/4); unstrat. (4/1; 4/2) |
| 1 | Victorinus | 268-70 | RIC as 112 | Fourth-century deposit on rampart (4/4) |
| 2 | Tetricus I | 270-4 | RIC 77, 100 | Street-surface between gate-footings (6/13); unstrat. (1/1) |

| | | | | |
|---|----------------------|--------------|---|---|
| 4 | Carausius | 286–93 | RIC 880, as 893, as 895 (two) | Gully beside street (2/11); fourth-century deposit on rampart (4/5); unstrat. (2/1; 5/8) |
| 3 | Radiate | 260–80 | rev.: <i>Hilaritas</i> , illeg. (two) | Street-surface between gate-footings (6/17); street-surface north of gate (3/6); fourth-century deposit on rampart (4/4) |
| 4 | Barbarous radiate | 270–90 | rev.: <i>Pietas</i> , <i>Spes</i> (copy as Tetricus I, RIC 130), illeg. (two) | F5; fourth-century rubbish on rampart (4/4; 4/6); unstrat. (6/14) |
| 2 | Constantine I | 321 322–3 | RIC vii Trier 305 RIC vii Trier 368 | Late rubble-deposit on street (1/3); unstrat. (1/1) |
| 1 | Constantine II | 322–3 | RIC vii London 254 | Unstrat. (4/1) |
| 1 | Constantinopolis | 330–5 | LRBC i as 52 | Gully beside street (2/4) |
| 7 | House of Constantine | 330–40 | obv.: bust laureate r., CONSTANTINVSNC. rev.: DNCOSTANTI . . . AVGN, in wreath VOT/XX, mint R↓∅ (PL. XXV B) | Street-surface north of gate (3/6); fourth-century rubbish on rampart (4/3; 4/4); late rubble on street (1/2); unstrat. (1/1(2); 5/2) |
| | | 335–45 | LRBC i copy as 48 | |
| | | 350–60 | LRBC ii copy as 25 (five) | |
| 2 | Magnentius | 350–3 | LRBC ii as 211, as 238 | Gully beside street (2/4); unstrat. (6/9) |
| 1 | Valentinian I | 364–75 | LRBC ii 477 | Fourth-century rubbish on rampart (4/4) |
| 2 | Valens | 364–78 | LRBC ii as 279, 502 | Fourth-century rubbish on rampart (4/4); unstrat. (4/1) |
| 1 | Gratian | 367–75 | LRBC ii as 523a | Fourth-century rubbish on rampart (4/4) |

B. From Other Sites. By George C. Boon

| Emperor | Date | Denomination | Reverse | RIC | Condition | Context |
|--------------|------------------------------|--------------|-------------------|-------|---|---------------------------------------|
| 1. Vespasian | 69–79 | Dup. | illegible | | much worn, defaced | S.E. gate (2, 2) Body of town rampart |
| 2. Domitian | 81–96 | Dup. | uncertain | | very much worn | S.W. angle (1909 trench) (1, 4) |
| 3. Antonine | for Faustina I, about 141 | As | <i>Aeternitas</i> | 1156 | Much worn | S.E. gate, Victorian back-fill (1, 1) |
| 4. Antonine | for Faustina II, about 145–6 | Dup. | Diana type | 1405a | A beautiful coin, very slightly worn, 14.24 g | S.W. angle, 1909 trench (1, 4) |

III: OBJECTS OF COPPER ALLOY (FIG. 36). By MARK CORNEY

South-West Angle (1978(i))

1. Coil spring and pin from 'one-piece' fibula; almost certainly a Nauheim derivative (Camulodunum Type VII (Hawkes and Hull 1947, 312, pl. XCII, Nos. 55–64)). Date: first century with a Claudio-Neronian *floruit*. Claudio-Neronian context (1/26).
2. Piece of chain link or possibly ferrule, with deep incised cut close to one edge of break. Pre-Flavian context (1/26).
3. Strip, 40 mm in length. The angle of the bend at one end suggests that this may be part of a broken pair of tweezers. Late second-century context (1/14).

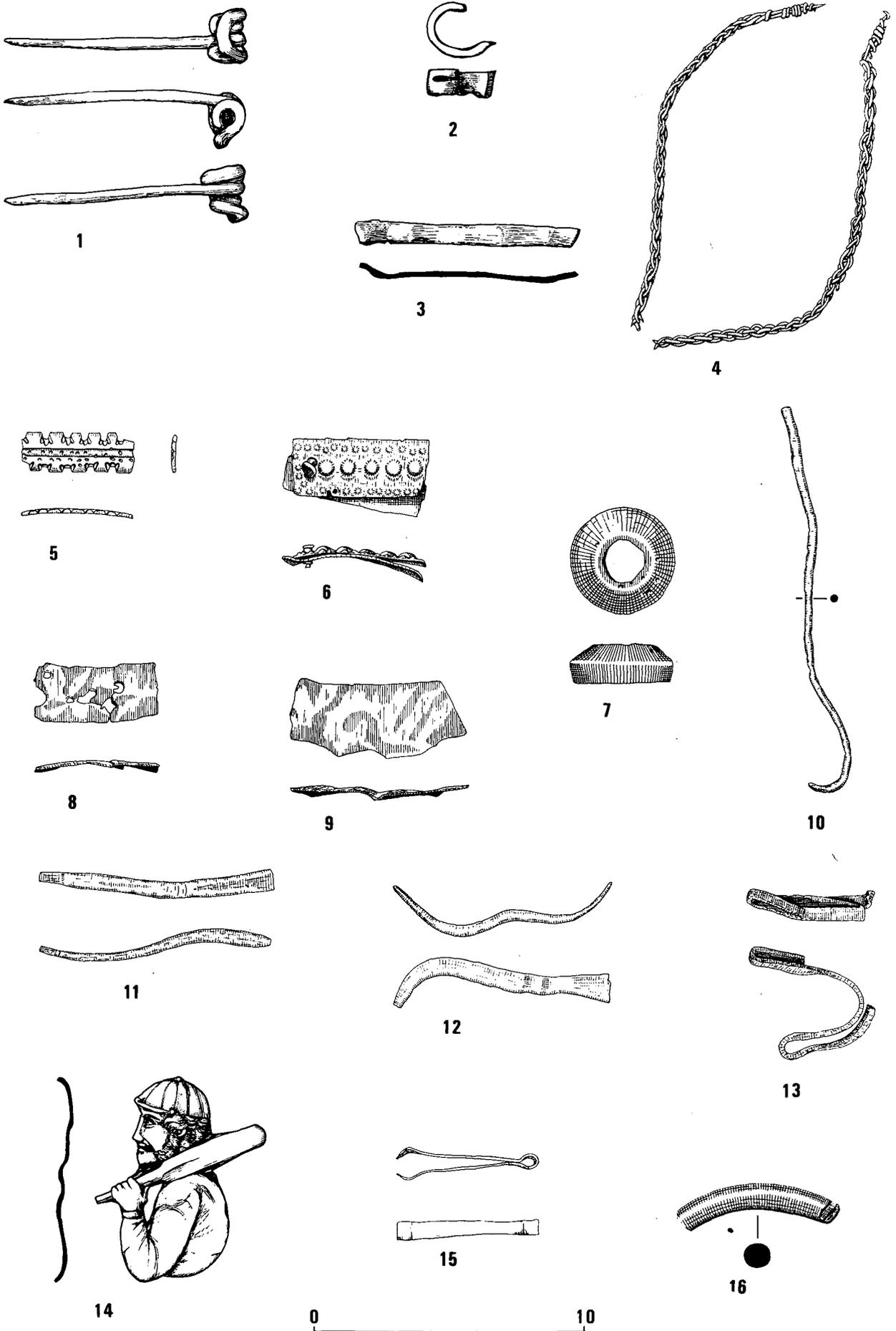


FIG. 36. Objects of Copper Alloy and Shale (p. 116) (Scale: $\frac{1}{2}$).

South Gate (1975)

4. Fine chain bracelet with twisted wire terminals (probably incomplete as surviving); originally *c.* 60 mm in diameter; a similar type (with wire loop terminal) from Chichester (Down 1974, fig. 8.16, No. 28). Fourth-century rubble on rampart (4/4).
5. Segment of richly carved bracelet of a general type which predominantly dates to the later third and fourth centuries. Fourth-century or later pit in gateway (6/15 (F7)).
6. Two sheets of copper alloy joined by copper-alloy rivet, one end incomplete. The upper sheet is decorated with repoussé ornament consisting of a border of small raised bosses, flanking a central row of larger bosses. Although the object is incomplete, it was perhaps a belt fitting, possibly of Hawkes and Dunning's Type 1 (1961). A similar example (with buckle surviving) was found in Grave 234 at Lankhills, Winchester (Clarke 1979). The object is likely to belong to the second half of the fourth century. Street surface, with coin of 335–45 (3/6).
7. Possibly a weight, but the bottom of the object suggests that it was once attached to a larger unit. Street-surface, with a coin of 335–45 (3/6).
8. Sheet, 23 mm by 10 mm, pierced by at least six rivet-holes. Perhaps the rear plate of a belt-fitting similar to No. 6. Fourth-century deposit on rampart (4/4).
9. Fragment of sheet, 32 mm by 12 mm. Fourth-century or later pit in gateway (6/14 (F7)).
10. Shaft with rough but deliberate hook at one end; 69 mm in length. Possibly from a steelyard. Unstratified (2/12).
11. Part of pin, probably from a fibula. Street-surface with coin of 335–45 (3/6).
12. Probably the bow from a Nauheim derivative fibula. Coil, pin and catchplate missing; first century A.D. Unstratified (6/9).
13. U-shaped strip, with either end bent back over the bow. Probably a form of link or other fastening device. Unstratified (6/9).

Rampart Section (1974)

Not illustrated. Stud with large bulbous head. Shaft and head are of copper alloy with an iron sheathing over the head. Very badly fragmented and corroded. Claudio-Neronian context (21).

Ditch Section (1978(ii))

14. Silvered or tinned cap(?) badge, bearing the bust of a cricketer with bat over left shoulder. The treatment of the hair and the cap-style leave little doubt of the object's late nineteenth- or early twentieth-century date. Unstratified (2/3).

Manor Farm (1980)

15. Pair of toilet tweezers, 51 mm in length. Flavian context (75).

Not illustrated. Fragment of spring and uppermost part of bow from a Nauheim derivative fibula; first century A.D. Unstratified, surface of subsoil (58).

Badly fragmented pieces of sheeting, one piece having a square (2 mm) nail-hole. Flavian context (69).

IV: OBJECTS OF IRON (FIG. 37) By MARK CORNEY

South-West Angle (1978(i))

1. Iron ring, 20 mm diameter. Late second-century context (1/14).

*South Gate (1975)***Hipposandals:**

2. Aubert Type II, where the wings project forward from the sandal and join in a loop. The heel tapers up and is hooked. This and Nos. 3–4 from street-surface with coin of 335–45 (3/6).
3. Wings and loop, probably of same form as No. 2. Context as No. 2.

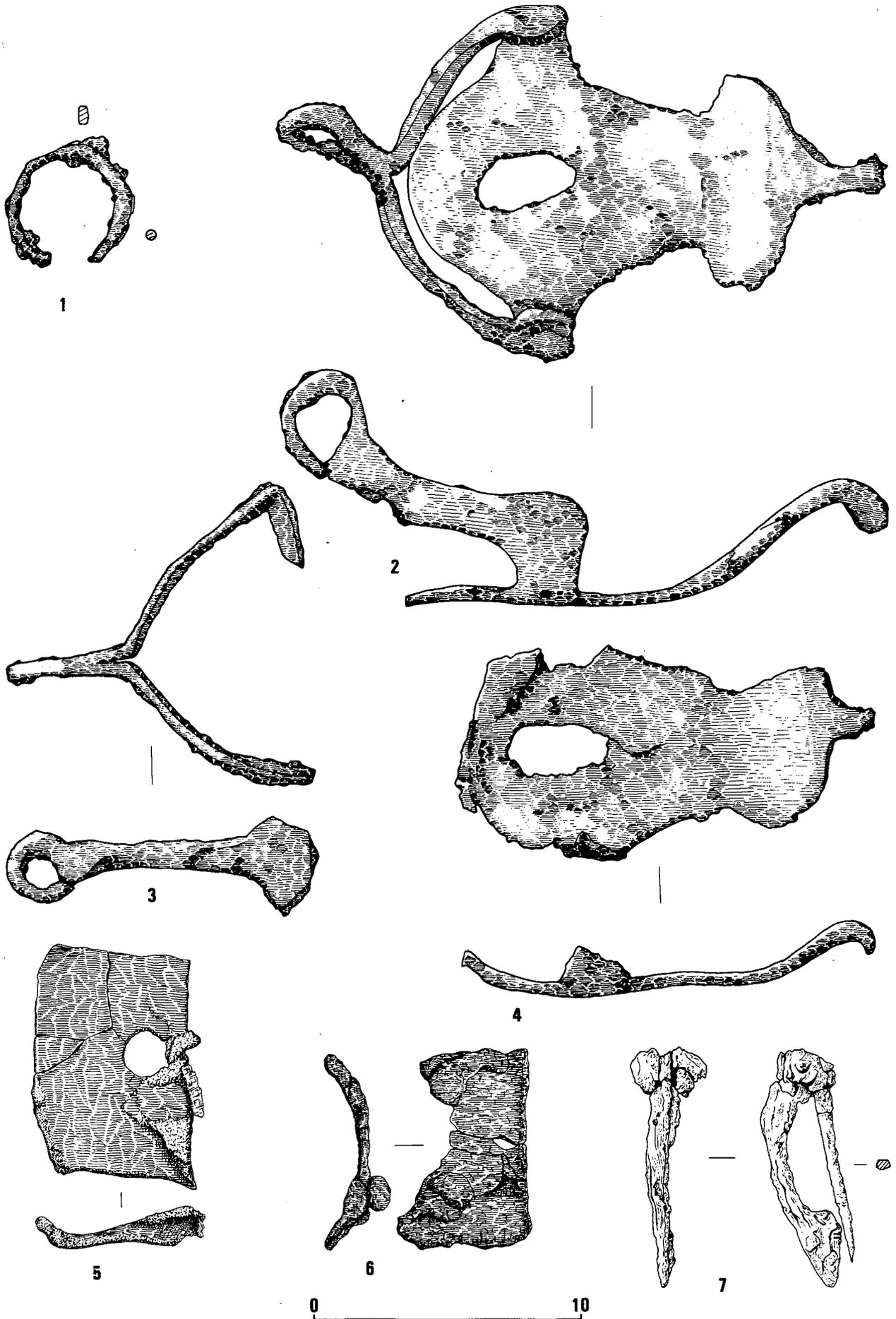


FIG. 37. Objects of Iron (Scale: $\frac{1}{2}$).

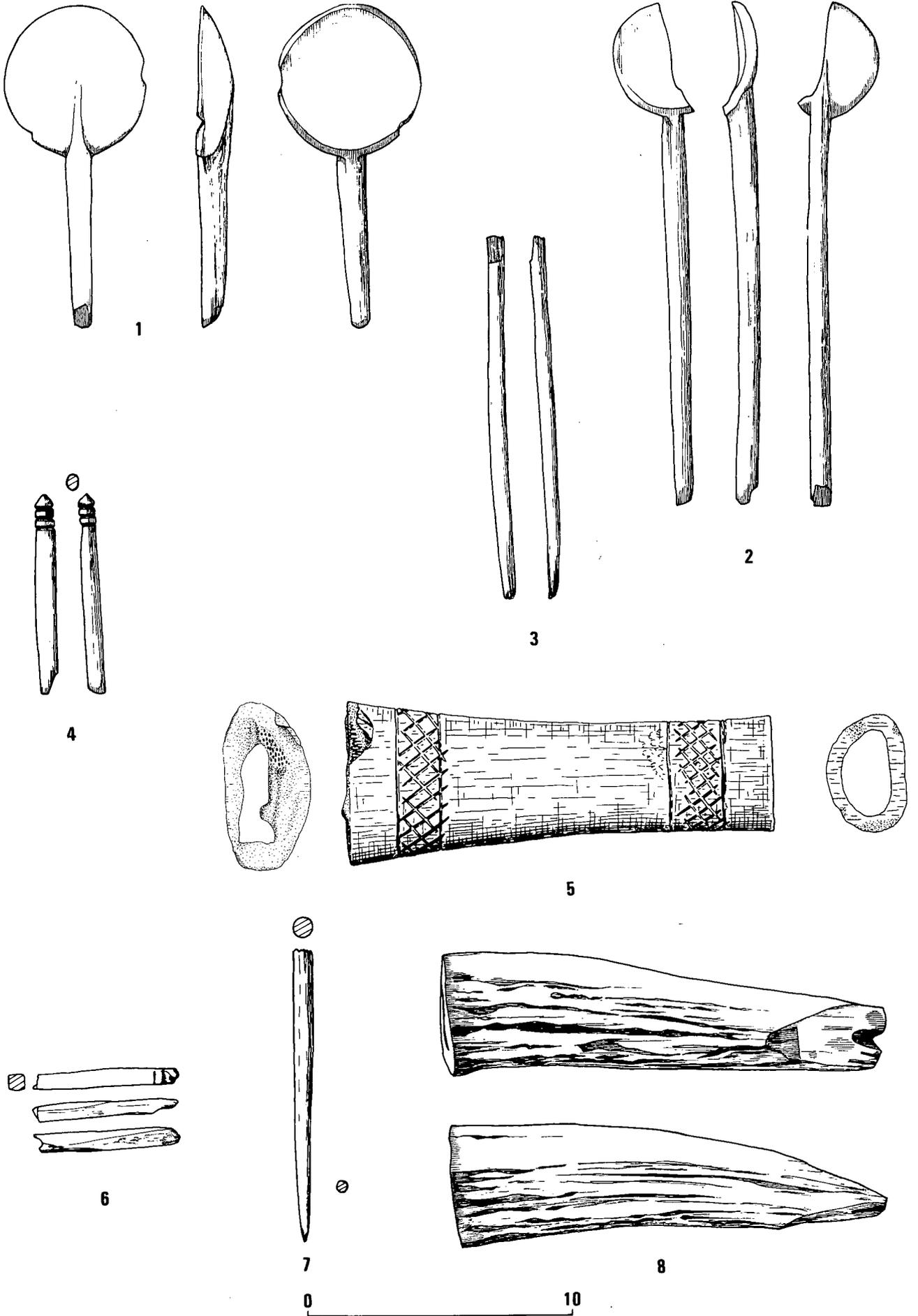


FIG. 38. Objects of Bone (Scale: $\frac{1}{2}$).

4. Sole and heel-hook. Too little of the wings and front of the sandal survive to allow conclusive attribution to the Aubert classification-series. Context as No. 2.

David Richards has kindly supplied this information on the nails and tacks.

Nails (not illustrated): One complete and fragments of 90 other Type 1B nails (Manning 1972) were recovered from the fourth-century deposit on the rampart (4/4). The better specimens of incomplete nails and stems indicate that the majority were in the range of 4–7 cm long. Only five fragments suggest a length greater than 7 cm and one fragment seems to be from a large (> 12 cm) nail. Very few were less than 4 cm long.

Tacks (not illustrated): Four complete and eight incomplete tacks (c. 2.5 cm long) from the same context as the nails.

Rampart Section (1974)

- 5–6. Fragments of iron rings, the larger having diameter of c. 14 cm. One fragment has a rivet-hole(?) with traces of copper alloy adhering; the other retains a possible iron rivet; identification uncertain because of corrosion. The lack of a central ridge and the external diameter argue against these being iron links for a wooden water pipe-line (cf Cunliffe 1971, fig. 55, Nos. 4–5). It is possible that the objects came from the outer element of a hub-lining, similar to those from Verulamium (Manning 1972, fig. 64, Nos. 31–2; fig. 69, No. 125). Claudio-Neronian context (20).

Manor Farm (1980)

7. Fibula. Although heavily corroded an X-ray of the object shows an ornate head with the top of the bow being looped back on itself to enclose the spring coil. Such fibulae are unlikely to have survived into the Flavian period, and are more typical of a pre-Conquest context, as at Camulodunum and Skeleton Green (Hawkes and Hull 1947, Type II, No. 4, pl. LXXXIX; Partridge 1981). Pre-Flavian pit (86).

V. OBJECTS OF BONE (FIG. 38) BY MARK CORNEY

South-West Angle (1978(i))

1. Bone spoon; bowl 26 mm diameter, 31 mm of handle surviving. Dated parallels may be found at Winchester (Cunliffe 1964, fig. 24, No. 16, dated c. A.D. 43–140; Collis 1978, fig. 62, No. 14, from a burial group dated Flavian-Hadrianic), and at Chichester (Down and Rule 1971, fig. 5.16, No. 171, i, from a burial group of the late first century). At least nine other similar spoons are recorded from the early excavations at Silchester (Bacon 1978, 57–9). Late second-century context (1/14).
2. Bone spoon; bowl 20 mm diameter, 70 mm of handle surviving; for parallels see above. Late second-century context (1/14).
3. Bone shaft, 65 mm long; either a pin or spoon-handle. Hadrianic-Antonine context (1/21).
4. Decorated bone terminal from either a pin or spoon-handle. Hadrianic-Antonine context (1/21).

South Gate (1975)

5. Knife-handle; 81 mm in length, tapering from a maximum diameter of 31 mm to 20 mm. Each end decorated with incised 'trellis work', banded by single grooves encircling the whole shaft. At the widest end is a rectangular slot, 17 mm by 6 mm, with a thin iron rod running into the handle still surviving. This presumably acted as a wedge to hold the blade tang firmly in place. Very similar examples are recorded from the early excavations at Silchester (Bacon 1978, 64–5, Nos. 17–19). Difficult to date stylistically. Late rubble-deposit on street (1/2).

Rampart Section (1974)

6. Fragment, 54 mm in length, trimmed to a rough square in cross-section. Possibly waste from bone-working or an unfinished object (cf Crummy 1981, fig. 2, No. 15, for broadly similar object identified as a 'crude peg'). Claudio-Neronian context (21).

South-East Gate (1976)

7. Shaft, 53 mm in length; either pin or spoon-handle. Unstratified (2/1).
8. Deer antler, 82 mm in length. Two facets cut at the narrower end, with a V shaped notch, which appears to be a deliberate cut rather than the weathering of the exposed core. An almost identical object is published from Portchester (Webster 1975, fig. 120, No. 125), interpreted as possibly a pendant related to horse-trappings associated with late 'Romano-barbarian cavalry'. The Silchester example however bears no trace of having been mounted and this interpretation is thought unlikely. It is more probably a more mundane object. Given the lack of wear, the piece may have been an unfinished handle. Unstratified (2/1).

VI. OBJECTS OF SHALE AND OF RE-USED POTTERY

By MARK CORNEY

A. SHALE

South Gate (1975)

- FIG. 36, No. 16. Part of bracelet in Kimmeridge shale (cf Lawson 1975, 250-2, fig. 4.). Unstratified (2/1).

B. RE-USED POTTERY

1. BB1; body-sherd of bowl or dish shaped as a disc (diameter 40 mm, thickness 7 mm). Lower fill of wall construction-trench, east of South Gate. Rampart section (1974); late third-century context (12).
2. Alice Holt; body-sherd from jar with everted rim, shaped as a disc (diameter 35 mm, thickness 4 mm). South Gate; fourth-century deposit on rampart (4/4).

VII. THE OBJECTS OF GLASS (FIG. 39) By JENNIFER PRICE

The excavations produced a total of forty-five fragments of vessel glass and four fragments of window glass, together with two pieces from a melted lump of glass and a distorted piece of Egyptian Blue (for a recent description and discussion of Egyptian Blue in Roman Britain, see Atkins (1971)). The Egyptian Blue was found in an Antonine context at the South-west Angle (1978(i) 14/21).

Three of the vessel-glass fragments came from post-medieval and modern bottles, but the rest of the assemblage represents vessels of the first to fourth centuries. The window glass is of approximately the same date, though one small piece of blown window glass found near the South-East Gate in an area disturbed by excavation in 1893 is a bluish grey colour with a streak of red in it; this strongly resembles some of the glass from the early monastic sites at Monkwearmouth and Jarrow and may perhaps have come from a post-Roman building. Eighteen of the vessel-glass fragments come from household containers made in the first or second centuries, most of which were probably square, though there are some pieces from a cylindrical bottle. None of the tableware is of great luxury, and most of the surviving pieces are very small; the most important pieces are considered in further detail below.

Catalogue

- (a) Not illustrated. Fragment, body of Pillar-moulded bowl. Bluish green. Part of side with one prominent broken rib. Cast and fire- and wheel-polished. Broken edges gressed, usage scratches on rib.
Dimensions (max) 45 x 17 mm; thickness (max) 12 mm. Ditch section (1978(ii)), upper silts, 13th-14th century (2/4).
- (b) Not illustrated. Small fragment, body of Pillar-moulded bowl(?). Pale yellow-brown. Dimensions (max) 20 x 5 mm; thickness 2.5 mm. South-west angle (1978(i)), Hadrianic-Antonine (18/21).

These fragments come from a form of early Imperial cast bowl which is very frequently found at sites throughout the Roman world in the early first century A.D. (Isings 1957, Form 3). Polychrome and strongly coloured monochrome specimens apparently go out of production soon after A.D. 50-60, but bluish-green bowls were probably made until about 70-80, and occur until towards the end of the first century in Britain as elsewhere in the western provinces (Harden and Price 1971, 320-21, 328-30; Price 1978, 71-2.) The presence of a fragment of one of these bowls in a medieval context is quite unusual, but in this instance may be explained as a re-use of a broken fragment for some secondary purpose. The edges have been carefully shaped by grossing, and the piece may have been set in some kind of surround.

1. Fragment, rim and body of cylindrical bowl. Bluish green. Tubular rim, edge bent out and down, straight-sided upper body.
Present height 3 mm; rim diameter 180 mm. Rampart section (1974), Flavian to Antonine (18).

Tubular rims occur on bowls in the Roman world at many periods, from the later first century B.C. until the late fourth or fifth century A.D., but are most commonly found on deep cylindrical vessels in later first- and early second-century contexts. Similar bowls are known from Richborough, in pits 40, 194, 195, dated *c.* A.D. 60-100 (Bushe-Fox 1932, 85, pl. XV, 63; Bushe-Fox 1949, 158, pl. LXVIII, 369, 372), Cirencester, from a Flavian pit (Charlesworth 1982, 106, fig. 34, 85), and from many other Romano-British sites in the later first and early second century.

2. Fragment, rim of jar. Pale yellow-brown. Part of vertical 'collar' rim, formed by rolling edge inwards and then bending a larger portion out and down, lower edge expanding out towards globular body (missing). Present height 15 mm, rim diameter 90 mm. Manor Farm (1980), unstratified.

Globular jars with folded-collar rims are found in later first- and early second-century contexts in the Rhineland, central and northern Gaul and Britain, but do not occur elsewhere in the Roman empire; so it seems likely that the form was produced at one or more centres in the north-west provinces (Isings 1957, Form 67c; Price 1978, 74). A jar similar to this fragment is already known from Silchester (Boon 1974, 232, fig. 36, 5), and many other specimens have been found in later first- to mid second-century contexts, both in burials and from occupation-levels, as at Thornborough, Bucks (Price 1975, 21-2 with fig. 10, 3), Verulamium (Charlesworth 1972, 204-5 with fig. 76, Nos. 25-26) and Richborough (Bushe-Fox 1932, 84 with pl. XV, 57).

- (c) Not illustrated. Fragment, rim and handle of jug. Pale bluish green. Small part of folded rim, formed by rolling the edge inwards, and scar from cylindrical neck, with part of upper attachment of handle with rounded ribs at edges. Thickness (rim) 1.5 mm. South-East Gate (1976), rampart, before *c.* A.D. 180-200 (2/2).

This very small fragment from a first- or second-century jug is rather difficult to identify

precisely, but it may belong to a vessel similar to ones represented by fragments from Verulamium (Charlesworth 1972, 204 with fig. 76, 23), or come from a rim and neck like the amphorisk, which is a two-handled vessel, from Exeter (Charlesworth 1979, 228 with fig. 71, 30).

3. Fragment, rim and body of cylindrical or hemispherical cup. Greenish, very bubbly. Part of curved rim, edge cracked off and left uneven with inward bevel, and straight-sided upper body. Present height 20 mm; rim diameter 78 mm. South-East Gate (1976), unstratified (1/1).
4. Three joining fragments, lower body and base of tall drinking cup. Pale greenish colourless; very bubbly with heavy flaking weathering-deposits. Part of straight-sided lower body tapering in to tubular horizontal band of abraded lines on lower body. Present height 35 mm; base diameter 38 mm. South Gate (1975), late Roman gully (Disturbed) (2/5)

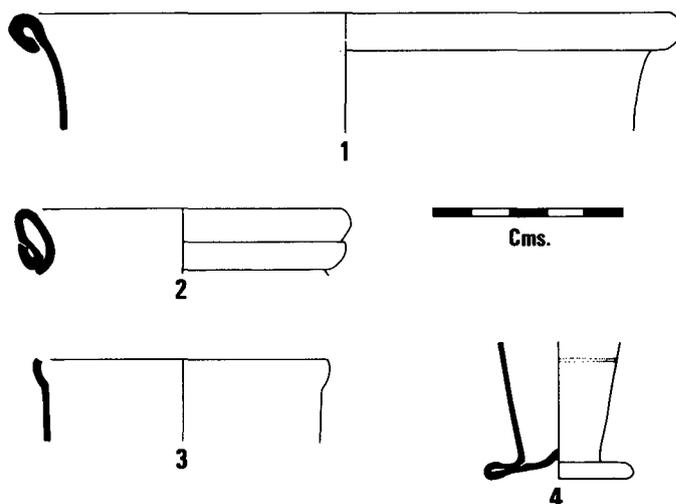


FIG. 39. Objects of Glass (Scale: $\frac{1}{2}$).

These fragments come from late Roman drinking cups of types found in fourth-century contexts in Britain, as elsewhere in the north-west provinces, and which were certainly produced at glasshouses in the region. Rim fragments similar to No. 3 are known on many sites in Britain, as this curving rim-edge with cracked-off and unsmoothed edge was used on a wide variety of cups and bowls with convex curved or cylindrical bodies – for instance, a good range of examples occurs at Portchester (Harden 1975, figs. 197–8). Truncated conical beakers usually have a simple concave base, though pushed-in tubular base-rings similar to No. 4 occur on fragments from Clausentum (Harden 1958, fig. 13, 30), Portchester (Harden 1975, fig. 198, Nos. 17–18) and on a vessel found in a stone coffin on the Mount, York (Harden 1962, pl. 66, HG 144).

VIII. THE OBJECTS OF STONE (FIG. 40)

I am very grateful to Dr. B. W. Sellwood, Department of Geology, University of Reading, and Dr. D. P. S. Peacock, Department of Archaeology, University of Southampton for their identifications of the stones.

Querns

1. Fragment of lower stone, *c.* 29 cm in diameter and *c.* 6 cm (max.) in thickness. Glauconitic

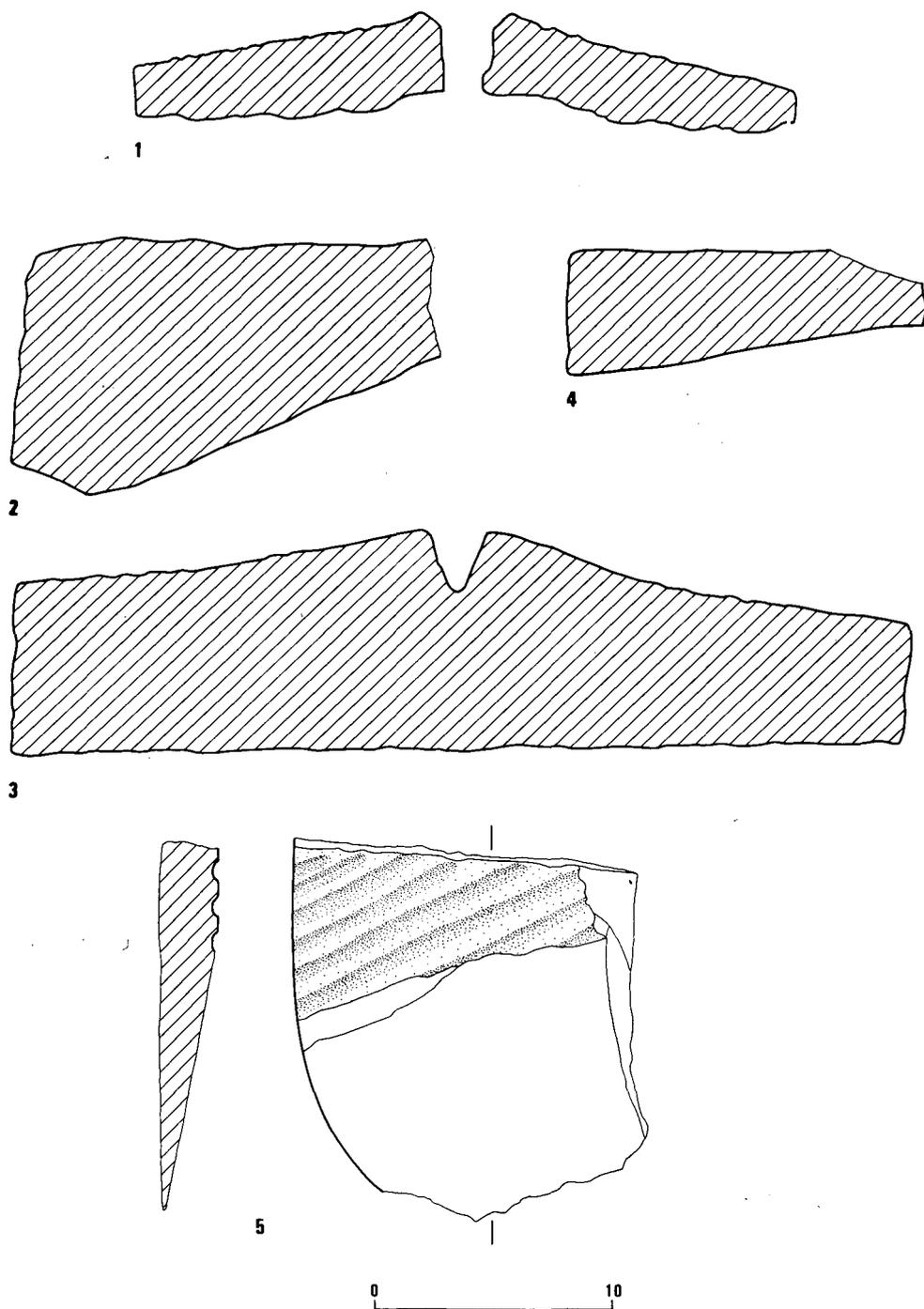


FIG. 40. Objects of Stone (Scale: $\frac{1}{3}$).

sandstone with burrows, carbonate cement. Cretaceous Lower Greensand, Lodsworth, near Chichester, West Sussex (D.P.S.P.). South Gate, mouth of road-drain, late second or third century (1/17).

2. Fragment of upper stone, *c.* 36 cm in diameter and *c.* 9 cm (max.) in thickness. Lower Greensand (as No. 1). South Gate, context as No. 1.
3. Fragment of lower stone, *c.* 38 cm in diameter and *c.* 7 cm (max.) in thickness. Lower Greensand (as No. 1). South Gate, lying on the surface of the earthen rampart and probably in a disturbed context (p. 61) (3/15).
4. Fragment of upper stone, *c.* 32 cm in diameter and *c.* 5 cm (max.) in thickness. Coarse-grained sandstone, cross-bedded with mudstone clasts, pink to red in colour; Old Red Sandstone (probably Forest of Dean or Mendips). South Gate, context as No. 3.
5. Fragment of lower(?) stone with deep parallel oblique grooves on the upper side, *c.* 32 cm in

diameter and *c.* 3.5 cm in thickness. Sandstone, probably greensand. South Gate, context as Nos. 3–4.

Not illustrated: Other fragments of Lower Greensand querns from south-west angle (1978(i)): Claudio-Neronian (26), five fragments; Flavian to early Hadrianic (23, 24), two fragments.

Other objects (not illustrated)

Whetstone fragment (*c.* 10 cm by *c.* 3 cm); haematite-stained quartzose wackestone; Old Red Sandstone (Forest of Dean?). South Gate, late rubble on street (1/2).

Tessera (*c.* 2 cm by 1.5 cm by 0.5 cm); cementstone; a carbonate (dolomite or siderite) cemented mudstone (Kimmeridge(?)). Manor Farm (1980), Flavian context (75).

IX. METALWORKING RESIDUES By JUSTINE BAYLEY

A. NON-FERROUS RESIDUES

South Gate (1975)

The metalworking residues described below may originally have been derived from the house *c.* 25 m north of the South Gate (Insula VIII, 4), in which it is thought that silver was refined from argentiferous copper and lead (Fox and St John Hope 1894, 221).

(a) Copper Alloy

1. Part of a metal lump (14.37 g). It could be from a spilt pool of molten metal or possibly from a large casting, for instance a statue. X-ray fluorescence (XRF) analysis detected copper, tin, lead and zinc in proportions suggesting that the alloy was basically a leaded bronze which was the sort of alloy used for large castings in the Roman period. Street-surface with coin of 335–45 (3/6).
2. Part of a metal lump (36.33 g). XRF detected only copper and a little lead, suggesting that the metal was fairly pure copper. This was not generally used for castings. The lump is more likely to be an accidental spillage. Fourth-century deposit on rampart (4/4).
3. Small irregular block (3.48 g). XRF detected only lead with a little copper. Origin or use unknown, but it might perhaps have something to do with the cupelling hearths. Fourth-century deposit on rampart (4/4).

(b) Lead

4. Piece of lead (20.75 g), 56 mm in length and roughly triangular in section. Fourth-century deposit on rampart (4/4).
5. Lump of lead (57.22 g), apparently melted-down scrap. Fourth-century deposit on rampart (4/4).

B. SLAGS

South-west Angle (1978(i))

Fuel ash slag: siliceous material (sand, clay, etc.) that has been fluxed by the ash in a fire at high temperatures. Not necessarily associated with metalworking. Fragments from a Flavian to early Hadrianic (20/24) and from a Hadrianic-Antonine context (18/21).

Hearth Lining: part of the hearth-structure that has been fluxed by contact with ash in a sufficiently hot fire. In this instance the fragment appears to have been detached from near a tuyère (where a bellows was inserted into the hearth); from the late Antonine rampart (6).

South Gate (1975)

Smithing slag: fayalitic slag with typical vesicular structure. In two cases the examples consist of 'buns' of slag that collected in the bottom of the hearth. Their diameters (6 cm and 8 cm) are smaller than the 10 cm usually found. From disturbed contexts and the late Antonine rampart, west of the gate (3/8, 14; 6/2, 7).

Iron-rich fuel-ash slag: a cross between smithing and fuel-ash slags. Usually associated with iron-working. From the same contexts as the smithing slag, above (3/14; 6/7), together with 492 gm from the fourth-century deposit on the rampart (4/4).

Hearth-bottom: three fragments of very heavy hearth-bottom (238 g), apparently non-ferrous, so perhaps of lead or copper-alloy working (see section on residues, above). Fourth-century deposit on rampart (4/4).

Manor Farm (1980)

Fuel-ash slag: fragments (270g) from the primary (early Flavian) silt of the Roman ditch (73, 74, 75).

Hearth lining: black glassy lining material and baked clay (380g) from the primary (early Flavian) silt of the Roman ditch (75).

X. THE ROMAN POTTERY

This report on the Roman pottery from Silchester is designed to fulfil three main objectives. First it presents the basic dating evidence for the phases of activity represented on each site; secondly it considerably enlarges the repertoire of wares and types recorded from stratified contexts. Thirdly, by means of a simple system of quantification a start has been made on the study of the sources of pottery supplied to Silchester and of their changing relative importance through time, with special reference to the relationship between local and non-local, whether of British or of overseas origin.

The pottery groups are presented in broad chronological order rather than under each site and all its constituent groups. Given the time span and relatively small quantities involved, a type series seemed an inappropriate scheme of presentation. Likewise, since there is little overlap in the fabrics from group to group, it seemed less cumbersome to describe new fabrics when they occurred than to list all fabrics at the start of the report. Cross-references are made between different groups to highlight particular wares and/or types.

The pottery has been divided into five main chronological groups:

| | | |
|--|---|------------------------------|
| pre-Rampart | { | Pre-Flavian (1.1-2) |
| | | Flavian to Antonine (2.1-10) |
| Rampart (late Antonine) (3.1-4) | | |
| Construction of town wall (later third century) (4.1-3) | | |
| South Gate rubbish (later third to later fourth century) (5.1-4) | | |

Among these are some important groups. In particular, attention should be paid to:

1.1, which contains a very significant group of pre-conquest as well as Claudio-Neronian material.

2.1-3, respectively Flavian-Trajanic, Trajanic-Hadrianic, and Antonine to end of second century, which represent the build-up of material from the Flavian to the late Antonine period beneath the town rampart at the South-west angle.

2.8, a Flavian group from the primary silts of the ditch at Manor Farm. This contains very little residual pottery and is an important assemblage for the dating of early Alice Holt products and for defining the end of those wares popular in the Claudio-Neronian period.

4.1-2, from the fill of the construction-trench of the town wall. This group contains an interesting variety of wares in a context that should, so it is argued, date between *c.* 260 and 280.

5.4, the largest collection of pottery dating to the fourth century and the first of its kind to be published from Silchester. It provides an interesting insight into the relationships between the major sources of pottery in southern Britain in the late Roman period.

For ease of reference all the pottery, including the samian, is considered altogether in each group. This means that there is a quantified record of the samian which is integrated with the rest of the pottery assemblage. So often in the past the samian has tended to be completely isolated as a specialist report. Initially the pottery was quantified by weight according to fabric, but this information has only been used in the published report where it concerns the amphorae. Since the latter are generally represented only as body-sherds on Romano-British sites, weighing is the most appropriate method for recording the different amounts of each type. The rest of the pottery was quantified by measuring the surviving rim circumference of each (rim) sherd, a method more commonly known as estimating vessel-equivalents (henceforth abbreviated as V.E.) The changing proportions of different wares and of different functional classes (bowls, dishes, jars etc.) has been calculated by expressing the total relevant vessel-equivalent as a percentage of the whole for the group in question. Unless a functional class is represented only by one type, the amounts represented by individual types within classes has not been recorded here. Only the larger groups, including the significant groups cited above, have been quantified in this report. A separate section has been devoted to the amphorae, which were separated into their various types

and then weighed. This information has been tabulated and set alongside the total weight of all pottery from each group, so that it has been possible to follow the changing proportion of amphorae in relation to each assemblage as a whole.

DISCUSSION OF THE MAJOR WARES

Fine Wares

1. IMPORTS

Pre-Flavian Groups (1.1–2)

By far the highest proportion of imports in any of the assemblages described in this report occurs in the earliest assemblages such as Pit 1, sealed by the rampart (1974) east of the South Gate (1.1). In this group *samian* and *Gallo-Belgic wares* account for 29% of the assemblage. Although mostly of pre-conquest date, the pit was probably not fully filled until after A.D. 43. A collectively high percentage of imports (18%) is also recorded from the other pre-Flavian contexts found in this Trench (1.1). Such a figure compares with that recorded for all the imports (17%) from the pre-Flavian deposit at the South-west angle of the city wall (1.2). In both Trenches *samian* (*Italian* or *early South Gaulish*) at 12% and 9% of the assemblage was considerably less important than *Gallo-Belgic ware* (20% in 1.1). Pit 1 from the 1974 rampart section also contained a high proportion of amphorae (20%), but this was considerably in excess of the figure for the rest of the pre-Flavian contexts (9%) here and at the South-west angle (8%). To what extent these figures of high percentages of imports will emerge more widely at Silchester remains to be seen. It is possible that the evidence reflects a high social standing among those depositing rubbish at what later became the edge of the Roman settlement. In this respect it is worth noting that a qualitative assessment of the assemblages from negative features at Skeleton Green shows that these, too, are dominated by imported pottery in the pre-conquest period (Partridge 1981). A less common variety of imported pottery present was *Central Gaulish Terra Nigra* (1.1). *Briquetage*, presumably from the south coast, was present in small quantities in both Trenches (1.1–2).

Flavian to Antonine (2.1–10)

Imported pottery is considerably less common after the Flavian period in the groups published here. It has to be remembered that all the present groups come from the edge of the Roman settlement. Lack of imports may be a reflection of comparative poverty and/or the non-domestic nature of activities carried out in these areas. Such an interpretation would suggest some shift in the location of different types of activities and residence between the pre-conquest and Claudio-Neronian period and the Flavian and later periods. The highest figures for imports occurred in the cultivated-soil build-up (2.7) beneath the 1974 rampart section (17%), in the Well (2.5) by the South Gate (13%) and in the primary silts (2.8) of the Manor Farm ditch (11%). In the first and last of these Trenches the high percentage is largely a result of the behaviour of *South Gaulish samian* (15% and 11% respectively). In second-century groups *Central Gaulish samian* accounts for more than 2% of any assemblage only in one group, the Well (2.5) by the South Gate, where it registers 6%. The total of imports is made up by *Rhineland* and *Northern Gaulish* colour-coated beakers. The former account for up to 5% in one assemblage (2.3), while the maximum recorded for the latter is 6% (2.5). Usually the figure for both types ranges between 1% and 2%. These wares are dated to the later Flavian to Hadrianic period and are succeeded by the *Rhenish* and *Central Gaulish* black-slipped beakers from the Antonine period. None of these ancillary table-wares was recorded from second-century contexts. This serves to emphasise the suggestion made above that the assemblages described here are comparatively poor. Other

imports to be noted are a sherd of *Pompeian Red* (Campanian fabric) from 2.1 and one of *micaceous Lezoux*(?) from Group 2.9. Although imported pottery may be under-represented in our groups, the general pattern recalls that produced for the importation of samian (Marsh 1981). Using samian evidence alone, without reference to its representation within the pottery assemblage as a whole, Marsh has shown that second-century samian, whether of *Central* or *East Gaulish* origin, is conspicuously less abundant than first-century *South Gaulish samian*. This conclusion gains further support from the figures indicating a low proportion of samian to the rest of the assemblage in the second century. This demonstrates that the decline of samian is not simply related to an overall decline in the use of pottery in the second century, which would have been a reasonable interpretation based on the evidence of samian alone. In the second century the amphorae are, typically, from southern Spain (*Dressel 20*) or the south of Gaul (*Pélichet 47*). They represent 5–10% of the pottery-assemblage by weight except in the case of the Well (2.5) where *Dressel 20* sherds account for 42% of the group. Although there are too few pre-Flavian groups to draw firm conclusions, it would seem that, like the table-wares, amphoras are less common in the later first and second centuries.

Third and Fourth Centuries

With the *possible* exception of amphorae in third-century contexts (4.1–3), no imported pottery was recorded that was contemporary with the date of deposition of the later groups.

2. BRITISH FINE WARES

Pre-Flavian

Although it is not easy always to distinguish *British copies of Gallo-Belgic wares* from their continental counterparts, a few examples have been recorded from the pre-Flavian groups, notably 1.2. It is interesting to observe that with the addition of the probable British table-wares, the overall proportion of fine wares in 1.2 is 28%, a figure comparable with that from Group 1.1 where table-ware of British origin was exceptional.

Flavian to Antonine

In an important review of Trajanic-Hadrianic fine wares from London, Marsh drew attention to a significant group of local (in the sense that they were not imported from the continent, but their precise source is unknown) fine wares including *mica-dusted* and *black-surfaced* ('*London ware*') pottery (1978). These seemed to fill that gap created by the decline of Southern Gaulish samian imports before the 'take-off' of their Central Gaulish successors. Interestingly the evidence from Silchester is similar, with the consistent appearance of *mica-dusted wares* from the end of the first century. These can be closely paralleled with the vessels from London and may share a common source. Whereas *mica-dusted ware* regularly accounts for 2–4% of the assemblage (2.1–3, 2.5, 2.7), *black-surfaced 'London ware'* is comparatively scarce and not consistently represented (e.g. 2% of Group 2.7). It may also be appropriate to regard the fine sandy grey ware, often with a whitish-grey slip, as another of the fine wares of the Flavian-Hadrianic period. The best-known form is the 'poppy-head' beaker, but small jars or bowls also occur in this fine ware. This ware is best represented in Groups 2.1–2 (Flavian-Hadrianic) as *Sandy Ware (a)*, where it accounts for 9–10% of the assemblage. If it is classed among the fine ware, then the percentage of *all* fine wares (18–24%) corresponds with that registered in the pre-Flavian Groups 1.1–2). A sherd of *southern(?) British glazed ware* was recorded from 2.9.

Later Roman groups (4–5)

Contemporary fine wares are virtually absent from the groups associated with the construction of the town wall. However, in the assemblage deposited on the tail of the rampart (5.4), the total population of fine wares (19%) again approximates closely with the figures recorded in first- and second-century groups. *Oxfordshire ware* (13%) is considerably more important than *New Forest* (2%). *Nene Valley* colour-coated sherds are present in the group. Samian, probably deposited in

this context in the third rather than in the fourth century, accounts for the rest of the fine wares (4%).

Thus, although the character and origin of the fine wares alters quite considerably, at about one-fifth of the pottery assemblage fine wares form a fairly even component of all pottery groups. On the criteria presented here only the Flavian group (2.8) from Manor Farm (11%) and the third-century assemblages (4.1–2) deviate markedly.

Coarse Wares

The purpose of this section is to comment on some of the more important coarse wares which characterize each period of occupation.

Pre-Conquest to Flavian

The earliest sherd from the excavation is from a bowl in the 'saucepan' pot tradition (1.3, No. 107). One of the major fabrics represented in the group sealed beneath the inner earthwork (Boon 1969, 73–9, figs. 15–16) is *grog-tempered ware*. This proved to be the single most important fabric in Pit 1 (1.1) sealed beneath the 1974 rampart section (40%). Unlike the earlier group excavated by Boon which had practically no *Silchester ware*,¹ the latter is the second most important ware (31%) in Pit 1(1.1). Probably related to *Silchester ware* is a fabric which is tempered sparsely with fine crushed flint as well as grog, and is used for smaller, thinner-walled vessels. Although present in Pit 1 and Group 1.1, it is a more conspicuous element of Group 1.2 (16%), which is slightly later in character than Group 1.1. This is also made clear by the representation of sand-tempered fabrics in Group 1.2; these are virtually absent in Pit 1 (Group 1.1) and are not recorded from the group beneath the Inner Earthwork (Boon 1969, 73–9, figs. 15–16). The earliest sand-tempered ware is quite coarsely textured, black in fracture and on the surface, which is often partly (and roughly) burnished. Sand-tempered wares do, on present evidence, appear to be a post-conquest phenomenon. Thus the coarse wares from Pit 1 are intermediate in date between the group found beneath the inner earthwork and the pottery that typifies the Claudio-Neronian period, here represented by Groups 1.1–4 and, from the 1954–8 excavation, by the main fill of the Inner Earthwork ditch (Boon 1969, 62–5, figs. 12–13). It is possible that the black sandy wares are of *Alice Holt* origin, because they have in common a distinctive form (the 'Surrey' bowl, e.g. Nos. 126–7). Grey sandy wares that are usually regarded as typical of the *Alice Holt* industry are present in small quantities in Groups 1.1–2, thus indicating the likelihood of a Neronian (? later than c. A.D. 60) rather than a Claudian beginning.

Flavian to Antonine

One of the most important groups for the Flavian period is that (2.8) from the primary silts of the ditch at Manor Farm. This demonstrates quite clearly how radically the pottery assemblage had changed from the Claudio-Neronian period. *Black sandy wares* (9%) and *Silchester wares*¹ (9%) are of marginal importance. Instead the most important ware (56%) is the *grey medium sandy fabric* that is typical of the *Alice Holt* industry. The importance of this industry in the supply of pottery to *Silchester* remained constant until the end of the fourth century. A different type of *grog-tempered fabric*, represented by a storage-jar form (No. 374) occurred here for the first time in the sequence. A similar picture is provided by the largely Flavian-Trajanic group at the South-west angle (2.1). *Dorset Black-burnished ware* (1.2%) was recorded in this assemblage. Since it was not a closed group, these sherds could be regarded as intrusive from the later Group 2.2 rather than as certain evidence of a pre-Hadrianic presence of *BB1* at *Silchester*. In all the Flavian to Antonine groups *Alice Holt* accounts for more pottery than any other source except in Group 2.3 (Antonine to end of second century) where *Dorset Black-burnished* registered 28% of the assemblage. Apart from this and Group 2.7, which contained a high proportion of first-century

1. For *Silchester ware* see p. 135.

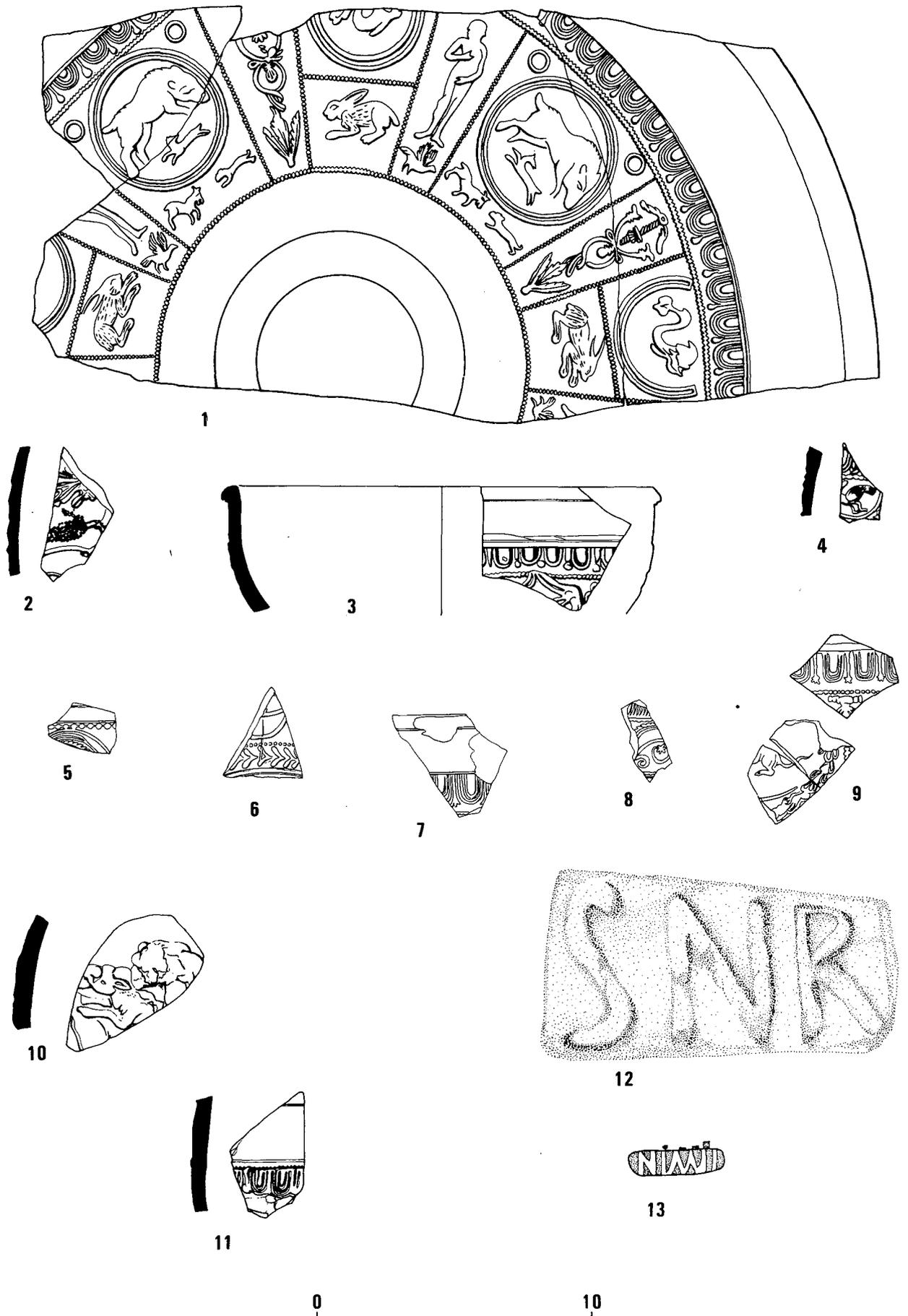


FIG. 41. The samian, amphora and coarse-ware stamps (Scale: $\frac{1}{2}$). No. 1, p. 157; No. 2, p. 163; Nos. 3-4, p. 165; Nos. 5-7, p. 169; No. 8, p. 173; No. 9, p. 174; Nos. 10-11, p. 178; No. 12, p. 128; No. 13, p. 179.

pottery in which *BB1* only registered as 1% of the assemblage, the Dorset fabric averaged 8% of the assemblage in the second century.

Third- and Fourth-Century Groups

In the fourth- and third-century groups where the pottery was quantified (4.1, 5.4), *Alice Holt* products account for over 60% of the assemblage. *BB1(Dorset)* in these same groups again accounts for about 8% of the pottery. Although it was not thought worth publishing the whole table of figures in 4.2, *BB1* accounted for more than 25% of the assemblage. *Grog-tempered ware*, distinct from the earlier varieties and similar to that from the late Roman fort at Portchester, Hampshire, also occurred in late third- and fourth-century contexts, but only in much smaller quantities, amounting to 6% in the latest group (5.4).

The Amphorae

Amphora body-sherds, predominantly from *Spanish Dressel 20* amphorae, were found in most contexts. Rim sherds and bases were extremely rare. There was one example of a stamp. Given the scarcity of typologically distinctive sherds that could be quantified in the same way as the rest of the pottery, it was decided to weigh the amphorae and express the weight of sherds as a percentage of the total weight of pottery from the assemblage concerned. I am grateful to Dr. D.P.S. Peacock for his help with identification.

TABLE 1

Pre-Flavian Groups (1.1-1.2)

For an explanation of the pottery groups, see the main catalogue of pottery, below. All weights given in kilograms.

| | Dr 2-4 (Italian.) | Dr 20 (Spanish.) | Pélichet 47(S.French.) | Uncertain | Total wt. amphorae | Total wt. pottery | Amph. as % of total pottery |
|---------------------------------|------------------------------------|---------------------|---------------------------|-----------|-----------------------|----------------------|--------------------------------|
| 1.1 (layer 23) | 2.0 (Koan type) | | | | 2.0 | 9.835 | 20.3 |
| (layers 19-35, excluding 23) | 0.675 (same vessel as in 23) | | | | 0.675 | 7.875 | 8.6 |
| (all layers 19-35) | 2.675 | | | | 2.675 | 17.710 | 15.1 |
| 1.2 | 0.040 (Koan type) | 0.2 | | 0.07 | 0.31 | 3.921 | 7.9 |

TABLE 2

Flavian to Antonine Groups (2.2-2.9)

| | Dr 1 (sp.) | Dr 2-4 | Dr 20 | Pélichet 47 | Uncertain | Total wt. amphorae | Total wt. pottery | Amph. as % of total pottery |
|-----|---------------|--------|-------|----------------|-----------|-----------------------|----------------------|--------------------------------|
| 2.1 | 0.06(?) | 0.025 | 0.46 | | 0.015 | 0.56 | 8.741 | 6.4 |
| 2.2 | | | 0.585 | | | 0.585 | 7.336 | 8.0 |
| 2.3 | | | 0.255 | 0.05(?) | | 0.305 | 5.152 | 5.9 |
| 2.5 | | | 2.68 | | | 2.68 | 6.325 | 42.4 |
| 2.7 | | | 1.0 | | | 1.0 | 9.325 | 10.7 |
| 2.8 | | | | | | 0.0 | 7.775 | 0 |
| 2.9 | | | 0.065 | | | 0.065 | 1.737 | 3.7 |

TABLE 3

4-5 *Third- and Fourth-Century Groups*

| | Dr 1 (sp.) | Dr 2-4 | Dr 20 | Pélichet 47 | Uncertain | Total wt. amphorae | Total wt. pottery | Amph. as % of total pottery |
|-----|---------------|--------|-------|----------------|-----------|-----------------------|----------------------|--------------------------------|
| 4.1 | | | 0.25 | | 0.015 | 0.265 | 4.615 | 5.7 |
| 5.4 | | | | 0.61 | | 0.61 | 8.345 | 7.3 |

Discussion

Although it has to be remembered that the total weight of all sherds from all contexts is less than the weight when empty of a Dressel 20, there does seem to be some consistency in the figures. In the majority of the contexts amphorae account for between 5 and 10 per cent of the whole assemblage by weight. An exception to this is the rich pre-Flavian group under the rampart east of the South Gate (1.1). Here the figures are undoubtedly influenced by the presence of a large number of sherds of one vessel; but at the same time it should be remembered that this group is also notably rich in other imports, which account for a high proportion of the whole assemblage. As for the high percentage from the second-century Well group (2.5), this probably reflects the dumping of a complete or near complete vessel down the well. Large fragments of vessels were also found among the coarse wares. These figures show how the chance occurrence of a complete or near complete vessel will distort the figures for small assemblages. Deposits of rubbish ('secondary refuse'), in which the pottery has become well broken and where joining sherds are difficult to find, produce a more even pattern of representation.

Stamped Amphora Handle

Dressel 20; stamped SNR (Callender 1965, 250-1, No. 1641, cf fig. 17, Nos. 21-3, c. AD 140-80) (FIG. 41, No. 12). South-west Angle, unstratified.

1. PRE-FLAVIAN GROUPS (FIGS. 42-44)

Two important pre-Flavian groups were recorded, the first from the 1974 excavation beneath the earthen rampart (Group 1.1), east of the South Gate (p. 30), which also included important pre-conquest material. The second was found at the South-west angle of the city wall (1978) (Group 1.2). Other pre-Flavian material was recorded from the South Gate excavations (1974-5) (Group 1.3) and from a pit in the Manor Farm excavation (1980) (Group 1.4).

1.1: RAMPART SECTION (1974) (Layers 19-35, pp. 30-32) (FIGS. 42-3)

The largest amount of pottery was found in Pit 1 (23) at the southern end of the Trench. This contained a high proportion of imports (29%) including Italian or early South Gaulish sigillata, Gallo-Belgic ware, Central Gaulish micaceous ware and Dr 2-4 amphora. The coarse wares are characterised by a high proportion of grog-tempered (40%) and flint-tempered (Silchester ware) pottery (31%), but also include briquetage. Sand-tempered wares are represented by a few body-sherds only. The fine but sparse flint-gritted wares which are a notable component of Pottery Group 1.2 are also present here. Although a small proportion of the group may not have been discarded until after the conquest, the majority of the pottery is of Tiberio-Claudian date. Despite the high proportion of imports, this group is otherwise comparable with the pottery found beneath or within the bank of the Inner Earthwork, or in the first fill of its ditch (Sites B, J and L of the 1954-8 excavations) (Boon 1969, 62-5, 73-9, figs. 12-13, 15-16).

The rest of the pre-Flavian material derives from other negative features and from the general occupation layer which sealed them. It differs from the pit-group most notably in the higher proportion of sandy wares (48%) (a black, medium sandy fabric) and in relatively smaller amounts of imports (18%) and grog-tempered wares (22%). The best comparative material is the group from the first infill of the Inner Earthwork ditch (1954-8 excavation, Site B) (Boon 1969, 62-5, figs. 12-13). The latest sherds are of South Gaulish sigillata of Neronian date, indicating a *terminus ante quem* of c. A.D. 60-65.

All sherds, unless otherwise noted, are from Pit 1 (23)

The Samian By Joanna Bird

- Dr 11: probably Italian; Tiberio-Claudian (23).
 Dr 11(two): South Gaul; Tiberio-Claudian; burnt (20, 21).
 Dr 15: Italian or very early South Gaulish; probably Tiberio-Claudian (20).
 Dr 15/17: South Gaul; Claudio-Neronian (19)
 Dr 15/17: South Gaul; Neronian (20).
 Dr 15/17 or
 18: South Gaul; Neronian (27).
 Dr 18: probably Italian; Tiberio-Claudian (23).
 Dr 18
 (three): South Gaul; Claudio-Neronian (19, 20 (two)).
 Dr 27: South Gaul; Claudian (21).
 Dr 29: South Gaul; Gadroons in the lower frieze, badly smudged on removal from the mould; probably Neronian, c. A.D. 45-65 (20).
 Dr ?: South Gaul; fragment with bird motif; mid first century (21).
 Dr ?: South Gaul; body-sherds of indeterminate date also occurred (19, 21, 23).

Amphora (see p. 127)

Dressel 2-4: Koan type (23).

Gallo-Belgic Wares (FIG. 42)

Terra Nigra

All vessels are in a hard, fine sandy light-grey or off-white fabric with a good, all-over black polished slip.

Cup

1. Form as *Camulodunum* (henceforward abbreviated to *Cam*) 56A or 56C (23).

Platters

2. Form as *Cam* 12 (23).
- 3-4. Form as *Cam* 12/13 (21, 23).
- 5-6. Form as *Cam* 14 (20, 23).
7. Concentric rings around the inside of the base; probably as *Cam* 12 (23).
8. Fine rouletting on inside of base; possibly as *Cam* 2 (23).

Central Gaulish 'Terra Nigra'

Platters

9. Hard, fine sandy micaceous grey fabric with traces of an all-over black slip; possibly as *Cam* 52 (23).

10. Hard, fine sandy red-brown fabric with grey margins and an all-over highly micaceous black slip. Both the inside and outside surfaces have finely burnished closely-set concentric rings; cf. *Cam* 1 (23).

*Terra Rubra*²

Beakers

11. TR3; polished red-brown surface inside and out; form as *Cam* 112A (21).
 12. TR3; reduced outer surface with scored decoration of double incised lines; form as *Cam* 112A (?) (23).
 13. TR3; with dark, red-brown outer surface and incised wavy decoration; form as *Cam* 112B(?) (23).
 14. TR3; with brown outer surface; rouletted decoration as on *Cam* 112A (23).
 15. TR1A; hard, fine sandy reddish-yellow fabric with a fine polished reddish-yellow surface; form as *Cam* 73/74 or 79 (23).
 16. TR3(?); hard reddish-yellow fabric with a brown to reddish-yellow surface; form possibly as *Cam* 73 or 76 (23).

Platters

17. Hard, fine sandy reddish-yellow fabric with an orange-red slip on the upper surface and over the rim; elsewhere the exterior is a plain yellow-orange colour (TR1); form as *Cam* 5A (23).
 18. Hard, fine sandy brick-red fabric with an all-over red slip (TR2); form as *Cam* 8 (23).

Other Fine Wares (of probable British origin) (FIG. 42)

Beakers

19. Hard, fine sandy white fabric; probably as *Cam* 113 (23).
 20. Hard, fine sandy white fabric with traces of a barbotine-decorated or otherwise roughened surface, above a zone of rouletting; a yellow-brown surface; as *Cam* 114 (23).
 21. Hard, fine sandy yellow-to-brown fabric with yellow or light-brown surface with incised wavy decoration; form as *Cam* 112(?) (23).
 22. Hard, fine sandy dark grey fabric with a smooth black surface and impressed-cord decoration (23).
 23. Fine sandy light-brown fabric with sparse red (haematite?) inclusions (c. 2 mm); a smooth light-brown surface with coarse rouletting (23).

Coarse Wares (FIGS. 42–43)

Grog-Tempered Ware

The fabric is best characterised by its superficial soapy 'feel', although in fracture it is quite hackly. Tempering is ill-sorted, consisting mainly of grog (usually about 0.05 mm, but ranging up to 1 mm) and fine sand, but finely crushed flint (as in No. 24) (usually about 0.05 mm, but also ranging up to 1 mm) also occurs. Vessels with fine but sparse flint tempering were clearly recognised as belonging to a distinct fabric-group in 1.2. Here, partly because of their scarcity and partly as a function of the sherd-size, such a distinction could not be consistently made. The core is generally reduced black, as are external surfaces. However, reddish-brown to dark brown surfaces are not uncommon. The vessels have an uneven surface finish, which burnishing does not eradicate. They were probably made on a slow wheel.

2. For the various types of *Terra Rubra* (TR 1A, 3 etc) see C. Partridge (1981), p. 159.

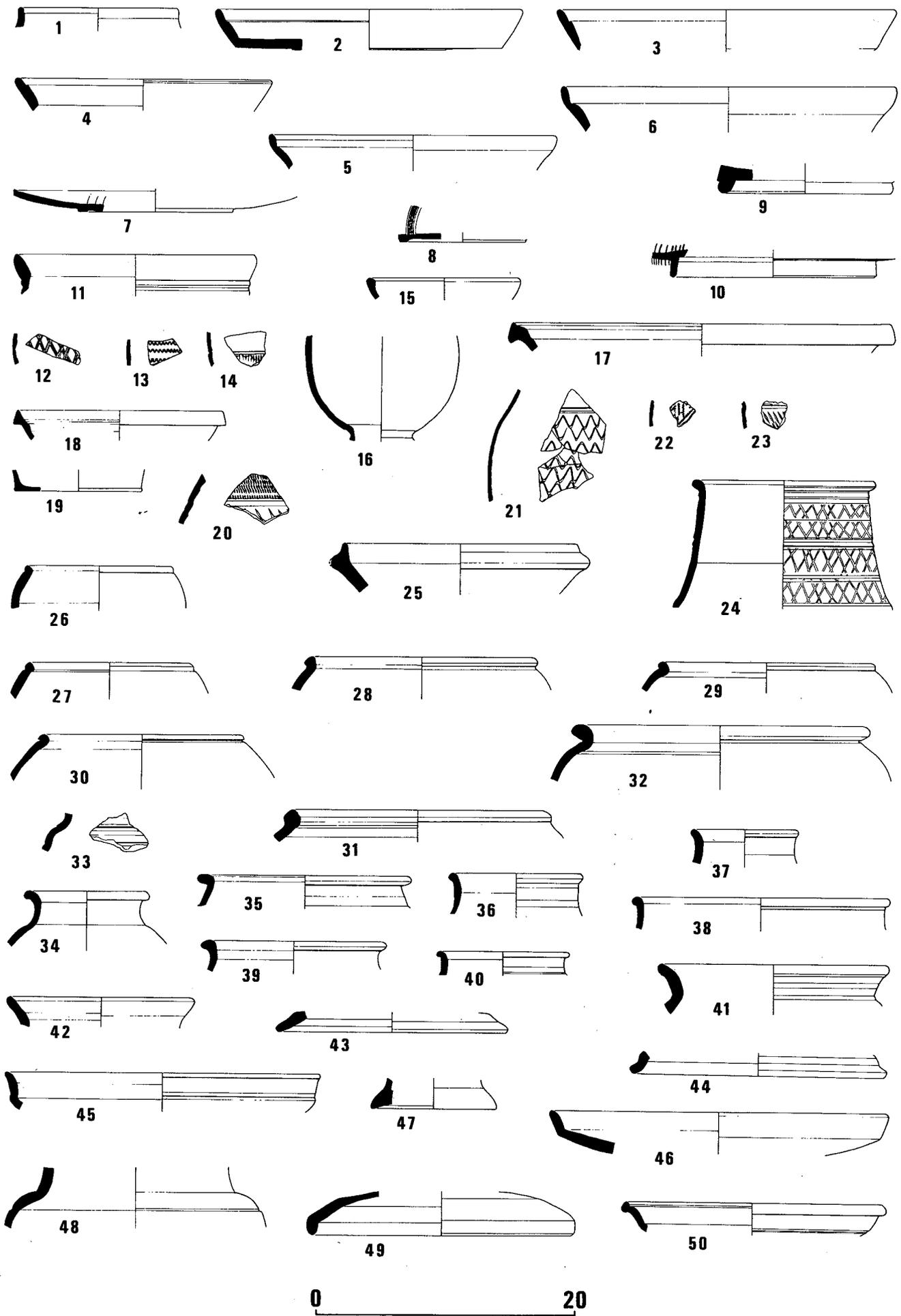


FIG. 42. The Pottery, Nos. 1-50 (Scale: $\frac{1}{4}$).

TABLE 4

POTTERY GROUP 1.1

Imported Wares

| | Layer 23 | | Layers 19-35, excluding 23 | | Layers 19-35 inclusive | |
|--|-------------|-------------|-------------------------------|-------------|---------------------------|-------------|
| | V.E. | % | V.E. | % | V.E. | % |
| <i>Samian</i> : Italian and S. Gaulish (all forms) | † | | 0.29 | 12.0 | 0.29 | † 4.5 |
| <i>Terra Nigra</i> : | | | | | | |
| Cups | 0.08 | 1.9 | | | 0.08 | 1.2 |
| Platters | 0.20 | 5.0 | 0.10 | 4.1 | 0.30 | 4.7 |
| <i>Micaceous 'T.N.'</i> | † | | | | † | |
| <i>Terra Rubra</i> : | | | | | | |
| Beakers | 0.13 | 3.2 | | | 0.13 | 2.0 |
| Platters | 0.75 | 18.6 | 0.05 | 2.1 | 0.80 | 12.4 |
| Total | 1.16 | 28.7 | 0.44 | 18.2 | 1.60 | 24.8 |

Coarse wares***Grog-tempered ware:**

| | | | | | | |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Beakers/Bowls | 0.14 | 3.5 | 0.09 | 3.7 | 0.23 | 3.6 |
| Jar (bead rim) | 0.34 | 8.4 | 0.20 | 8.5 | 0.54 | 8.4 |
| Jar (upright neck) | 0.99 | 24.5 | 0.15 | 6.2 | 1.14 | 17.6 |
| Lid | 0.05 | 1.2 | 0.03 | 1.2 | 0.08 | 1.2 |
| Platter | 0.09 | 2.2 | 0.05 | 2.1 | 0.14 | 2.2 |
| Total | 1.61 | 39.9 | 0.52 | 21.5 | 2.13 | 33.0 |

Flint-tempered ware:

| | | | | | | |
|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Bowl | | | 0.05 | 2.1 | 0.05 | 0.8 |
| Jar (bead rim) | 0.90 | 22.3 | 0.25 | 10.3 | 1.15 | 17.8 |
| Jar (everted rim) | 0.37 | 9.1 | | | 0.37 | 5.7 |
| Total | 1.27 | 31.4 | 0.30 | 12.4 | 1.57 | 24.3 |

Sandy wares (a & b):

| | | | | | | |
|--------------------------|-------------|--|-------------|-------------|-------------|-------------|
| Jar (bead rim) | | | 0.24 | 9.9 | 0.24 | 3.7 |
| Jar (upright neck) | | | 0.56 | 23.1 | 0.56 | 8.7 |
| Lid | | | 0.11 | 4.5 | 0.11 | 1.7 |
| Platter | | | 0.13 | 5.4 | 0.13 | 2.0 |
| Misc. | | | 0.12 | 5.0 | 0.12 | 1.9 |
| Total | † | | 1.16 | 47.9 | 1.16 | 18.0 |
| Total (all wares) | 4.04 | | 2.42 | | 6.46 | |

* This includes a small proportion of the fine but sparse flint-tempered ware.

† Body-sherds present, but no rim-sherds.

V.E. = Vessel-Equivalent

Beaker

24. Roughly smoothed outer surface before application of lattice-burnished decoration. The sparse flint temper shows on the surface; the fabric is grey with dark-brown margins (cf Cotton 1947, fig. 11, 11) (23).

Bowl

25. Black fabric and surface; the flange is damaged (20).

Jars with bead rims

- 26-7. All-over grey surfaces with smoothed, but not burnished external surfaces (23).
 28. Similar to nos. 26-7 (21).
 29-30. Grey core, with a smoothed, red-brown outer surface. Parallels to Nos. 26-30, with similar slight bead rims, can be found in a group sealed beneath the Inner Earthwork (Boon 1969, fig. 16, Nos. 209-14) (23).
 31. Black surface, burnished externally (21).
 32. Grey core with a black outer surface; fine horizontal burnishing on the body. The surface has a fine, micaceous appearance. Probably turned on a faster wheel than Nos. 26-31 (23).

Jars with upright necks and out-bent rims

- 33-40. Roughly burnished on the neck and body; body-sherds indicate the presence of cordons at the junctions of neck and body. Nos. 33 and 40 from layer 21; others from layer 23.

Jars with everted rims

41. Grey core with black, smoothed surface (21).
 42. Grey core with a grey-to-black burnished surface (23).

Lids

43. With a smooth, red-brown to black surface (21).
 44. Similar to 43 (23).

Platters

45. With black fabric and burnished dark brown-to-black surface (20).
 46. Similar to 45 (23).

Miscellaneous

47. Pedestal base; sparse flint grit evident (cf Boon 1969, fig. 15, Nos. 186-88, from beneath the bank of the Inner Earthwork) (23).

Decorated body-sherds (not illustrated); brown-to-black fabric and surface; the latter smoothed, but not burnished before being decorated with impressed cord in a zig-zag design (cf Boon 1969, fig. 15, 170, from bank of Inner Earthwork) (23).

Sandy Wares

- a) *Hard, medium sandy dark grey-to-black fabric with a black partly burnished surface.*

Jar with upright neck and outbent rim

48. Burnished above the groove around the upper part of the body (23).

Lid

49. Burnished over the exterior (21).

Platter

50. Burnished on the rim and the inside surface of the platter (20).

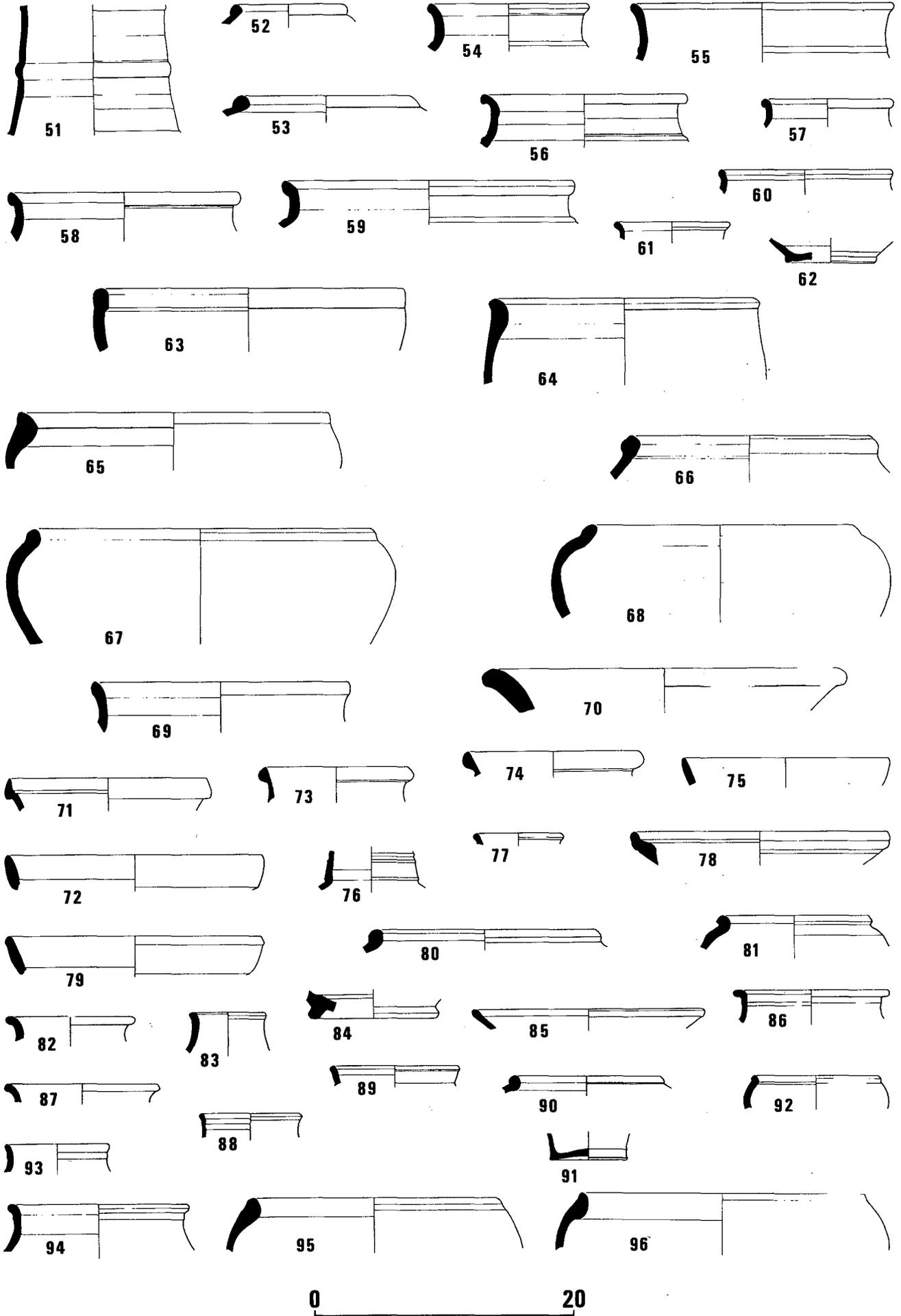


FIG. 43. The Pottery, Nos. 51-96 (Scale: 1/4).

b) *Hard medium sandy grey ware (Alice Holt)*

Beaker

51. Fabric with light brown margins and a grey surface with traces of panels of burnishing above and below the cordon (19, 20).

Jars with bead rims

- 52-3. Burnished exterior (20, 21).

Jars with upright necks and outbent rims

- 54-6. Burnished on the upper surface of the rim and over the exterior (19, 21).
 57. Burnished on the neck (20).
 58-9. Burnished on the upper surface of the rim and the neck; note the chamfered rim (19, 21).

Miscellaneous Wares

60. Fine sandy, light orange-brown fabric with a plain, reddish-brown surface (20).
 61. Ware and finish as No. 60 (23).
 62. Flagon(?); Hard, fine sandy, yellow-red fabric with a white-to-grey surface (23).

Flint-Tempered Ware

(henceforward referred to as Silchester Ware) (May 1916; Boon 1969, 79-80).

This is the most distinctive of the early fabrics at Silchester. The fabric is densely tempered with crushed angular flint, ranging in size up to 6-8 mm. The tempering is irregularly sorted. External surfaces are well burnished. This fabric is rare in the group sealed beneath the bank of the Inner Earthwork (Boon's Site J), but common in the first infilling of the inner earthwork ditch (Site B) (Boon 1969, 64-5, 80, fig. 12). This fabric is probably related to the fine but sparsely flint-tempered group recognised as a distinct ware in Pottery Group 1.2, but also present here (No. 24).

Bowl(?)

63. Burnished outside and inside of the rim (23).

Jars with bead rims

- 64-8. Burnished over the exterior. All from Pit 1 (layer 23) except No. 65 (20).

Jars with everted rim

- 69-70. Burnished over the upper surface of the rim.
 All from Pit 1 (layer 23).

Briquettage

Body sherds only (23), weighing 0.03 kg.

Building Material

Fragment of an *imbrex* (21).

1.2: SOUTH-WEST ANGLE (1978(i)) (Layer 26, p. 27) (FIGS. 43-4)

Although this group contains some sherds which could well be of pre-conquest date, it is primarily of Claudio-Neronian date and is comparable with the pottery from the 1974 trench (except that from Pit 1 (23)). The main difference lies in the relative abundance of a finely-gritted (flint-tempered) fabric which accounts for 16% of the assemblage. This is probably related to Silchester ware (34% here), and seems to relate to the proportion of sand-tempered ware (17%), which is less than in the 1974 assemblage. Grog-tempered pottery is likewise considerably less abundant (6%), but imports are comparable (17%). Whether the differences between the groups have chronological or functional significance is difficult to ascertain. The latest samian is of pre- or early Flavian date.

The Samian By Joanna Bird*South Gaulish*

| | |
|-----------------|--|
| Ritt. 9: | pre-Flavian. |
| Dr 15/17 (two): | pre-Flavian. |
| Dr 15/17R (two) | |
| (large): | pre-Flavian. |
| Dr 15/17 or 18: | first century. |
| Dr 18: | pre-Flavian and probably Claudian. |
| Dr 18(?): | first century. |
| Dr 24/25: | pre-Flavian. |
| Dr 27 (two): | pre- or early Flavian. |
| Dr 29 (three): | including one fragment of foliage decoration; pre-Flavian. |

Amphorae (see p. 127)

Dressel 2-4; Dressel 20.

Gallo-Belgic Wares (FIG. 43)*Terra Nigra*

Platters

71. Hard, fine sandy, white or light grey fabric with a silvery grey to black slip; form as *Cam* 7.
72. Fabric as 70, but white to black slip (burnt); form as *Cam* 2C.

Other Fine Wares (FIG. 43)

Beakers

73. Hard, fine sandy fabric with a light grey core and a highly burnished yellow surface; form as *Cam* 113.
74. Fabric and form as No. 73, a paler yellow finish.

Platter

75. Hard, fine sandy light grey fabric with a thin grey-to-black slip; quality not as good as imported *Terra Nigra*.

TABLE 5

POTTERY GROUP 1.2

Fine wares

| | Samian (South Gaul) | | Terra Nigra | | Mica-dusted | | Other fine wares | |
|--------------|------------------------|------------|-------------|------------|-------------|------------|------------------|-------------|
| | V.E. | % | V.E. | % | V.E. | % | V.E. | % |
| | 0.27 | 9.1 | | | | | | |
| | (all forms) | | | | | | | |
| Beakers | | | | | | | 0.29 | 9.8 |
| Platters | | | 0.12 | 4.0 | | | 0.04 | 1.3 |
| Uncertain | | | | | 0.12 | 4.0 | | |
| Total | 0.27 | 9.1 | 0.12 | 4.0 | 0.12 | 4.0 | 0.33 | 11.1 |

Total (imports): 0.51 (17.1%)
 (British): 0.33 (11.1%)

Coarse wares

| | Sandy wares | | Fine grit-tempered wares | | Grog-tempered wares | | Silchester ware | | Total | |
|---------------------------|-------------|-------------|--------------------------|-------------|---------------------|------------|-----------------|-------------|-------------|-------------|
| | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % |
| Dishes | 0.14 | 4.7 | 0.3 | 1.0 | | | | | 0.17 | 5.7 |
| Jars (bead rim) | 0.18 | 6.1 | 0.08 | 2.7 | 0.05 | 1.7 | 0.81 | 27.3 | 1.12 | 37.8 |
| Jars (necked and everted) | 0.17 | 5.7 | 0.35 | 11.8 | 0.12 | 4.1 | 0.20 | 6.7 | 0.84 | 28.3 |
| Total | 0.49 | 16.5 | 0.46 | 15.5 | 0.17 | 5.8 | 1.01 | 34.0 | 2.13 | 71.8 |

Total (all wares): 2.97

V.E. = Vessel-Equivalent.

Flagon

76. Hard, fine sandy white fabric with burnished outer surface; form compares with *Cam* 161.

Miscellaneous (mica-dusted)

77. Rim or foot-ring(?); fine sandy light brown fabric with a mica-dusted surface; possibly an import.

Coarse Wares (FIGS. 43-44)

Sandy Ware: Hard, medium sandy, grey fabric (Alice Holt).

Dishes

78. Black surface, smoothed but not burnished inside and out.

79. Grey-yellow to black surface smoothed outside and possibly burnished inside.

Jars with bead rim

80-81. Grey-to-black (partly sooted) smoothed external surface.

Jar with upright neck and out-bent rim

82. Grey surface with white quartz visible, burnished outside and over the rim.

Miscellaneous

83. Jar(?); fabric grey to light yellow with a yellow-brown smoothed exterior.
84. Base; hard, medium sandy reddish-yellow fabric with a red-brown to black unburnished surface.

Decorated body sherd (not illustrated) with a burnished lattice decoration on a yellow-brown to grey surface.

Gritted Wares: (a) Hard, fine sandy matrix tempered with moderately abundant fine angular grit (crushed flint?), ranging in size up to 1 mm. The surface is slightly pimply, particularly where unburnished. External surfaces are burnished.

Dish

85. Brown, partly burnished surface all over.

Jar with upright neck and out-bent rim

86. Dark brown surfaces, burnished outside and on the upper surface of the rim.
87-8. Similar to 86, but only partly burnished.
89. Possibly a foot-ring; horizontal burnishing of the exterior.

Gritted Wares: (b) Hard, fine to medium sandy fabric with moderately abundant angular grit (crushed flint?), ranging in size up to 2 mm. All surfaces smoothed, but not burnished.

Jar with bead rim

90. Grey surface.
91. Jar(?) base; grey core with yellow-brown surface.

Grog-Tempered Wares (a) and (b)

Grog-tempered wares are comparatively rare in this group. The fabric-range is comparable with that in Pottery group 1.1, including a gritted ware comparable to that of Nos. 85-89.

(a) Fine to medium sandy black matrix with grog inclusions up to 2 mm in size, and crushed flint (moderately abundant) ranging up to 3 mm.

Jar with bead rim

92. Roughly smoothed brown to black exterior.

Jar with upright rim

93. Black burnished exterior

(b) Fine to medium black sandy fabric tempered with grog, up to 3 mm in size.

Jar with upright neck and out-bent rim

94. Brown to black, burnished exterior.

Flint-Tempered Ware (Silchester Ware (p. 135))

As in Pottery Group 1.1.

Jars with bead rim

- 95-99. Brown to black burnished exteriors.

Jar with everted rim

100. Rough burnishing on the upper surface of the rim.

Bases

101–103. Brown to black burnished exterior surfaces.

Briquetage

Body sherd (2 g).

1.3: SOUTH GATE (pp. 27–30) (FIG. 44)

This is a heterogenous group including pottery from negative features and general occupation-layers from the trench outside the South Gate, excavated in 1974 (p. 27). The latest pottery is of Neronian to early Flavian date (Pits 1–2, Gully 6). The other negative features contained sherds which could date as late as the Claudio-Neronian period. Pre-conquest sherds such as Nos. 104, 107, 109–110 should best be regarded as residual, although indicative of pre-conquest activity nearby. No quantification was made of this pottery.

The Samian By Joanna Bird

South Gaulish

Dr 18: Neronian (pits 1–2).

Dr 18: Neronian to early Flavian (Pits 1–2).

Dr 29: Tiberio-Claudian; slightly burnt (7).

Terra Nigra

Platter

104. Hard, fine white-grey sandy fabric with good all-over black slip; form as *Cam* 2B (Gully 6).

Other Fine Wares (probably British)

Beaker

105. Fine sandy grey fabric with reddish-brown margins; rare grog inclusions (up to 2 mm); a burnished reddish-brown surface with fine rouletted decoration (7).

Platter

106. Fine sandy reddish-brown fabric with burnished yellow-brown surface all over; form as *Cam* 12 (7).

Coarse Wares (FIG. 44)

Bowls

107. Hard, fine black matrix with abundant fine crushed flint temper. The surface is black and burnished smooth over the lower part of the sherd. The upper part is burnished with irregular, horizontal strokes (7). The form and decoration may be compared with pottery of later Iron Age date such as form part of Cunliffe's Southcote-Blewburton Hill style (Cunliffe 1974, fig. A: 17). The temper is finer than that used in 'Silchester ware' (p. 135) and the form is not paralleled in that fabric.

108. Fine, sandy dark grey-black fabric with grog inclusions. The outer surface is well-burnished all over, grey to black in colour (Pits 1–2) (cf Boon 1969, fig. 11, Nos. 19, 25, 27, from Site B, bank and first infill of the Inner Earthwork).

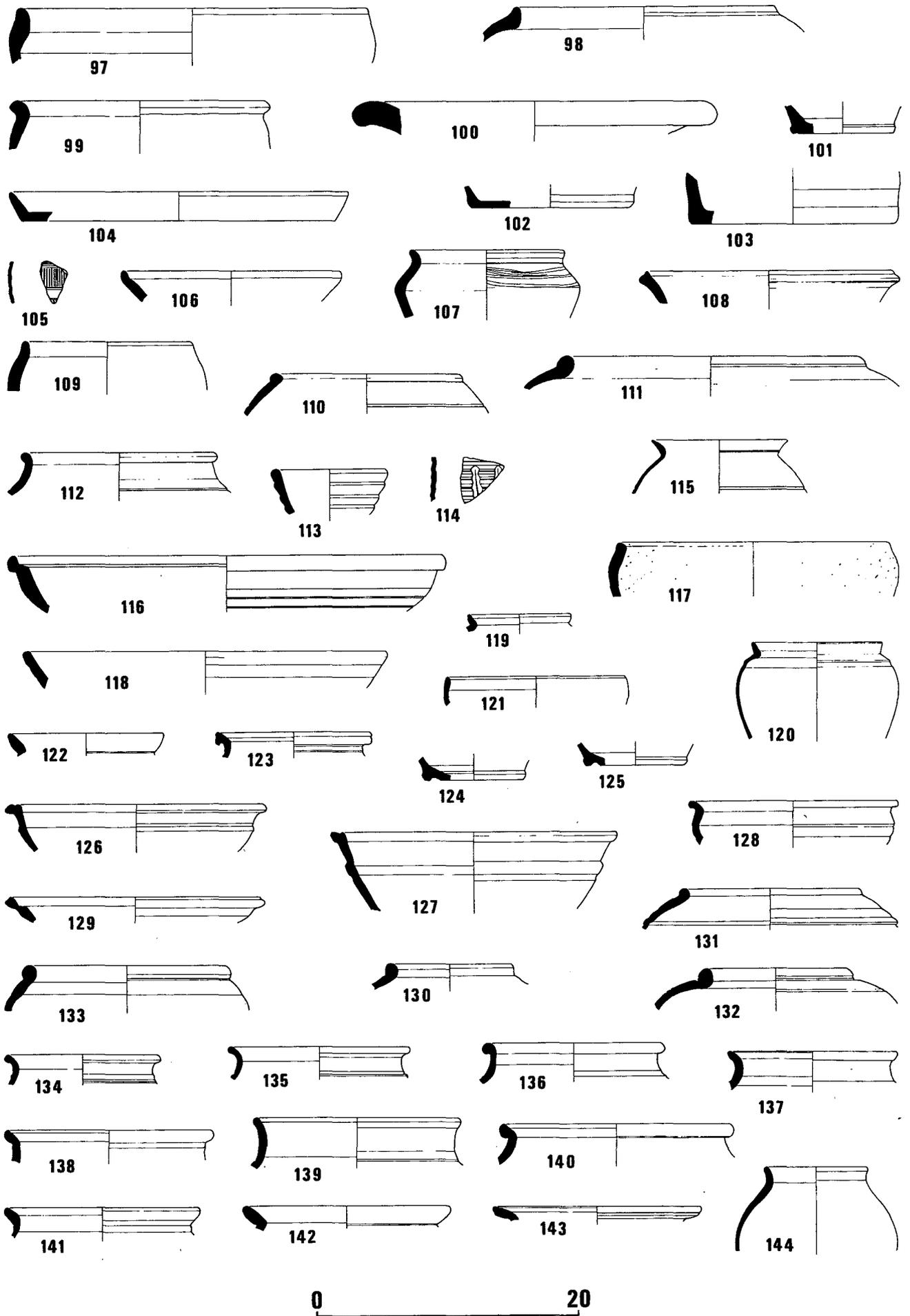


FIG. 44. The Pottery, Nos. 97-144 (Scale: $\frac{1}{4}$).

Jars with bead rim

109. Medium sandy grey fabric with grog tempering (1–2 mm); roughly burnished exterior (Pit 1) (cf Boon 1969, fig. 16, 224; from Site J, beneath the bank of the Inner Earthwork).
110. Medium to coarse sandy brown fabric with a black exterior, burnished over the rim (Pits 1–2) (cf Boon 1969, fig. 16, 211, in a slightly different ware; from Site J, beneath the bank of the Inner Earthwork).
111. Medium to coarse sandy grey fabric with a roughly-burnished grey to light-brown upper surface (Pits 1–2).

Jar with upright neck and beaded rim

112. Medium to coarse sandy light grey fabric with rare larger grits (up to 2 mm); grey surface with horizontal burnishing on the neck and rim (Gully 6). This fabric and form begin to appear in the Claudio-Neronian period (cf Boon 1969, fig. 12, 54, from Site B, first infilling of Inner Earthwork ditch).

Flint-Tempered Ware (Silchester Ware)

Jar with bead rim

(not illustrated) an example as No. 65 (Post-hole 3).

Miscellaneous

113. Flagon neck; medium sandy yellow-brown fabric with plain yellow-brown surfaces (Pits 1–2). The earliest parallels for this form are from deposits dated A.D. 60–75 at Verulamium (Wilson 1972, fig. 102, Nos. 102–109).
114. Medium to coarse sandy grey fabric with a reddish-yellow untreated surface; decorated with vertical grooves cutting across horizontal rilling.

1.4: MANOR FARM (1980) (Pit Group (86), p. 32) (FIG. 44)

This feature, which also contained an iron fibula (p. 115) was cut by the Flavian ditch at the northern end of the trench. Although a small group, there were no sherds comparable to the wheel-thrown grey sandy ware characteristic of the lower silts of the later ditch. Difficult to date; a Claudio-Neronian date is preferred. The size of this group did not justify quantification.

Beaker

115. Hard, fine sandy reddish-yellow fabric with a smooth reddish-yellow surface.

Dish

116. Hard, medium sandy grey fabric with brown margins and a dark grey-to-black burnished surface all over.

Jar with bead rim

117. Silchester ware.

2. FLAVIAN TO ANTONINE GROUPS (FIGS. 44–51)

Except for the South-East Gate and the nearby 1978 excavation across the defensive ditches (Trench 2), all sites produced pottery deposited between the Flavian and the late Antonine period, when the earthen rampart was built. In three cases it was possible to subdivide that sequence into two or more phases, albeit without close upper and lower limits for each group. For this reason it has been decided to take each site separately, with all its phases.

2.1: SOUTH-WEST ANGLE (1978(i)) (Layers 20, 23, 24, 27, p. 34) (FIGS. 44–45)

Apart from residual sherds, this group mostly contains pottery, including samian, of Flavian-Trajanic date with a few possibly later pieces. These include two fragments of early second-century Central Gaulish samian and possible Dorset BB1 sherds (Nos. 147, 149), usually dated *c.* A.D. 120–150/60, on the basis of evidence from the Northern Frontier. However, some of these forms could have circulated in southern England from after *c.* A.D. 80/100 (see below and Bidwell 1979).

The Samian By Joanna Bird

(a) *South Gaulish*

- Dr 15/17R: pre- or early Flavian. (23).
- Dr. 18 (six): pre- or early Flavian (20, 23, 24, 27).
- Dr 18 (two): Flavian (20, 27).
- Dr 18: Flavian-Trajanic (24).
- Dr 18R: later first century (27).
- Dr 24/25: probably pre-Flavian (27).
- Dr 27 (six): pre- or early Flavian (20, 27).
- Dr 27: Flavian (20).
- Dr 27: Flavian(?); burnt, large streaks of white clay in core (20).
- Dr 29: pre-Flavian (20).
- Dr 29: lion (probably) in upper frieze; pre- or early Flavian; rivet-hole (27).
- Dr 36: Flavian (20).
- Dr 37: Flavian (27).
- Dr 37: panels with hare and vertical rows of leaves; Flavian (20).

(b) *Central Gaulish*

- Dr 18/31R: early second century (20).
- Dr 33: early second century (27).

Amphorae (see p. 127)

Dressel 2–4 (23, 27); Dressel 20 (20, 24, 27).

Other Fine Wares (FIG. 44)

(a) **Imported**

Dish

- 118. Pompeian Red; Campanian fabric (Peacock 1977, fabric 1) (23).

(b) **British**

Mica-Dusted Wares

Beakers

- 119–20. Fine, hard red-brown fabric with a grey core; yellow-brown mica-dusted surfaces (cf Marsh 1978, type 22, *c.* A.D. 90–130) (20, 27).

Bowl

121. Fabric as 119-20; mica-dusting on the inside only (cf Marsh 1978, type 24, c. A.D. 90-130) (20).

Miscellaneous

Beaker

122. Fine, hard red-brown fabric (TR 3?) with a burnished light to dark brown surface; form as *Cam* 112 (27).

TABLE 6
POTTERY GROUP 2.1

Fine wares

| | Samian | | Samian | | Pompeian Red | | Other | | Mica-dusted | |
|--------|--------|-----|--------|-----|--------------|-----|-------|-----|-------------|-----|
| | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % |
| Beaker | | | | | | | 0.08 | 0.8 | 0.16 | 1.7 |
| Bowl | | | | | | | | | 0.03 | 0.3 |
| Dish | | | | | 0.04 | 0.4 | | | | |
| Total | 0.50 | 5.4 | 0.08 | 0.9 | 0.04 | 0.4 | 0.08 | 0.9 | 0.19 | 2.0 |

Total (imports): 0.70 (7.6%)
(British): 0.19 (2.0%)

Coarse wares

| | Sandy ware (a) | | Sandy ware (b) | | Sandy ware (c) | | Sandy ware (d) | | Sandy ware (e) | | Sandy ware (f) | | Total | |
|-----------------|----------------|-----|----------------|------|----------------|-----|----------------|-----|----------------|------|----------------|-----|-------|------|
| | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % |
| Beakers | † | | | | | | | | | | | | | |
| Bowls | | | 0.27 | 2.9 | | | | | | | | | 0.27 | 2.9 |
| Dishes | | | 0.05 | 0.5 | 0.08 | 0.8 | | | | | | | 0.13 | 1.3 |
| Jars (bead rim) | | | 0.77 | 8.3 | | | | | | | | | 0.77 | 8.3 |
| Jars (necked) | 0.82 | 8.9 | 2.25 | 24.4 | 0.04 | 0.4 | 0.83 | 9.0 | | | 0.11 | 1.2 | 4.05 | 43.9 |
| Lids | | | 0.23 | 2.5 | | | | | 0.16 | 1.7 | | | 0.39 | 4.2 |
| Flagons/jugs | | | | | | | | | 0.96 | 10.4 | | | 0.96 | 10.4 |
| Total | 0.82 | 8.9 | 3.57 | 38.6 | 0.12 | 1.2 | 0.83 | 9.0 | 1.12 | 12.1 | 0.11 | 1.2 | 6.57 | 71.0 |

| | Grog-tempered | | Flint-tempered (a) | | Flint-tempered (b) | | Flint-tempered (c) | | Total | |
|--------------------------|---------------|-----|--------------------|-----|--------------------|-----|--------------------|-----|-------|------|
| | V.E. | % | V.E. | % | Silchester ware | | V.E. | % | V.E. | % |
| | | | | | V.E. | % | | | | |
| Bowl | | | | | | | 0.17 | 1.8 | 0.17 | 1.8 |
| Dish | | | 0.02 | 0.2 | | | | | 0.02 | 0.2 |
| Jar (bead rim) | | | 0.08 | 0.8 | 0.43 | 4.6 | | | 0.51 | 5.4 |
| Jar (necked and everted) | 0.38 | 4.1 | 0.42 | 4.5 | | | 0.20 | 2.2 | 1.0 | 10.8 |
| Lid | | | | | 0.07 | 0.8 | | | 0.07 | 0.8 |
| Flagon/jug | | | | | | | | | | |
| Total | 0.38 | 4.1 | 0.52 | 5.5 | 0.50 | 5.4 | 0.37 | 4.0 | 1.77 | 19.0 |

Total (all wares): 9.23

† Body-sherds present, but no rim-sherds
V.E. = Vessel-Equivalent

Coarse Wares (FIGS. 44–45)

Sandy Wares: (a) Hard, fine sandy even-textured grey fabric.

Beaker

Body-shoulder of poppy-head type (?); smooth grey surface decorated with barbotine dots (not illustrated) (20).

Jars with everted rim

Grey well-burnished surface outside and over the rim, as Nos. 183–4 in Group 2.2 (not illustrated) (27).

123. Grey unburnished surface all over (20).

Bases

124–5. Traces of burnishing on the exterior (20, 27).

Sandy Wares: (b) Medium sandy even-textured grey fabric (Alice Holt).

Bowls

126–7. Grey-to-black surface, burnished on the rim and outer surface. (cf Lyne and Jefferies 1979, Class 5, from *c.* A.D. 60) (20, 27).

128. Dark grey-to-black smoothed exterior (27).

Dish

129. Burnished black exterior (cf Lyne and Jefferies 1979, Class 6.7, from *c.* A.D. 60) (27).

Jars with bead rim

130. Smoothed black exterior (27).

131. Grey-brown surface, burnished outside and on the rim (20).

132. Grey to yellow-brown surface, burnished on the upper part of the body and on the rim (cf Lyne and Jefferies 1979, Class 4, from *c.* A.D. 60) (20).

133. Grey surface burnished on the rim and above a reserved band around the upper part of the body (cf Lyne and Jefferies 1979, Class 4.31, from *c.* A.D. 60) (24).

Jars with upright neck and everted rim

134–5. Grey to black surface, smoothed but not highly burnished on the rim and outer surfaces (cf Lyne and Jefferies 1979, Class 1, from *c.* A.D. 60) (24).

136. Grey to black surface, burnished on the upper part of the rim and the exterior (20).

137. Fabric has a lighter grey core; burnished outside and on the inner surfaces of the rim (27).

138. Burnished outside and on the inner surface of the rim (27).

139. Grey-brown surface, burnished on the outside and upper surface of the rim (cf Lyne and Jefferies 1979, Class 1.13, from *c.* A.D. 60) (23).

140. Dark grey surface, possibly lightly burnished on the upper surface of the rim and the exterior (20).

141. Smooth black exterior and inner face of the rim (27).

142. Grey surface all over, lightly burnished on the inside and outside of the rim (20).

143. Light to dark grey exterior, smoothed but not burnished (27).

144. Dark grey surface, smoothed but not burnished (23).

Not illustrated: three body-shoulders with wavy combed decoration (20, 24, 27).

Lids

145. Yellow-brown to grey surface; smoothed but not burnished (23).

146. Grey surface, roughly smoothed but not burnished (23).

Not illustrated: As No. 199 in Group 2.2 (cf Lyne and Jefferies 1979, Class 7.9, *c.* A.D. 100–150) (23).

Sandy Wares: (c) BB1 (Dorset Black-burnished Ware)

Bowl

147. BB1 (?); burnished dark grey surface on the rim and interior (cf Gillam 219, dated *c.* A.D. 120–150, but also at Exeter from *c.* A.D. 80/100 (Bidwell 1979, fig. 64, No. 115)) (27).

Dish

148. BB1(?); medium sandy black fabric with all-over burnishing (20).

Jar

149. BB1(?); the fabric is similar to but slightly coarser-grained than *Sandy Ware* (b) above. A light grey to black surface is burnished over the interior and exterior of the rim (cf Gillam 122, dated *c.* A.D. 120–160, but similar from Exeter from contexts of *c.* A.D. 80/100 (Bidwell 1979, fig. 62, No. 77; fig. 63, Nos. 79–81)) (20).

Sandy Wares: (d) Miscellaneous Reduced Medium Sandy Wares

Jars with upright neck and outbent rim

- 150–1 Medium sandy dark grey to black fabric; a black surface, burnished outside and over the inside of the rim (27).
152. Fine to medium sandy reddish-brown fabric with a well-burnished black slip on the exterior (20).

Sandy Wares (e) Miscellaneous Oxidised Sandy Wares

Lid

153. Fine to medium sandy orange or reddish-brown fabric with a burnished and blackened rim; outer surfaces otherwise an orange or reddish-brown colour. Treatment of the rim is reminiscent of Tunisian 'black rim' wares (cf Hayes 1972, 205) (20).

Jugs/Flagons

154. Medium sandy light red or pink fabric with a plain, light red to cream exterior; similar examples at Verulamium from *c.* A.D. 60–75 (Wilson 1972, fig. 102, Nos. 102–109) (27).
155. Hard, fine sandy light reddish-yellow fabric; a smoothed yellow or cream surface (27).
156. Base; fine to medium sandy reddish-yellow fabric with a pink to cream surface, possibly an applied 'wash' (20).
157. Base; hard, fine sandy buff fabric with a yellow to yellow-red surface (possibly a slip or 'wash') (20).

As No. 219 in Group 2.2 (not illustrated) (20).

*Sandy Wares: (f) Coarse sandy grey fabric (tempered with sub-rounded quartz *c.* 1 mm in diameter and sparse larger quartz inclusions).*

Jars with everted rim

158. Grey surface burnished on the inside of the rim (20).
159. Possibly with a grey slip; burnished inside, but rough on the exterior (27).

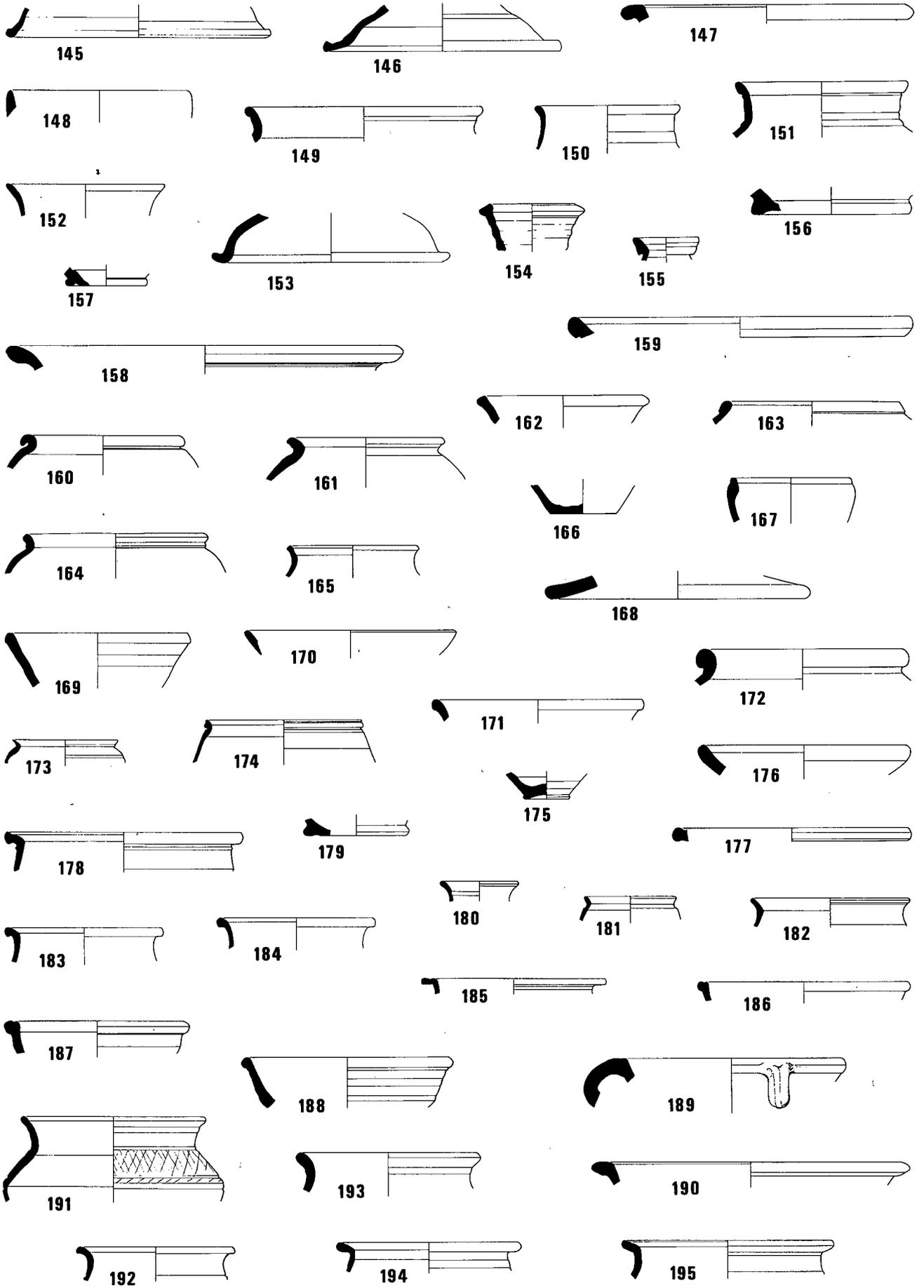
Grog-Tempered Fabrics

Bowl/Jar with rolled rim

160. Fine, hard, reddish-brown matrix, tempered with rounded grog (up to 3 mm) and scarce sub-rounded quartz or flint inclusions (up to 4 mm) (27).

Jar with everted rim

161. Sooted yellow-brown exterior, yellow-brown interior, some flint grits visible on the external surface (23).



0 20

FIG. 45. The Pottery, Nos. 145-195 (Scale: 1/4).

Flint-Tempered Fabrics: (a) Hard, fine yellow-brown to grey fabric, moderately tempered with small angular and sub-angular flint (1–2 mm; rarely up to 3 mm).

Dish(?)

162. Yellow-brown surface with some flint grits visible on the exterior; partly burnished exterior and on the rim (23).

Jar with bead rim

163. Grey surface; smoothed but not burnished (23).

Jars with everted rim

164. Dark brown surface outside; light brown interior; grit visible on the inside surface (23).
 165. Yellow-brown exterior; some horizontal stroke-burnishing outside and on the rim (23).
 166. Base; smoothed yellow-brown surface (23).

Flint-tempered Fabrics: (b) Silchester Ware (p. 135)

Jar with bead rim

167. Burnished black or dark brown exterior (27).

Lid

168. Brown-black smoothed or partly burnished exterior (20).

(c) *Other Flint-gritted Wares*

Bowl

169. Hard, fine but flaky black matrix with abundant angular and sub-angular flint inclusions; buff to black surfaces with burnished exterior (27).
 170. Bowl(?) similar to No. 169, but a fine brown fabric with a grey core; darker brown smoothed but unburnished external surface (27).

Jars with everted rim

171. Fine grey matrix tempered with moderately abundant fine flint gritting (up to 2 mm) and a finer quartz sand; brown surface, darker where burnished (20).
 172. Fine grey sandy fabric with moderately abundant angular and sub-angular flint inclusions (up to 4 mm); smoothed, but unburnished surface (27).

2.2: SOUTH-WEST ANGLE (1978(i)) (Layers 18, 21, p. 34) (FIGS. 45–46)

The majority of pottery from this group dates to the first half of the second century. The latest pottery is represented by two sherds of Antonine samian and some coarse wares, notably a BB1 bowl (No. 208) which could date from the very end of the second century and another bowl-fragment (No. 197), dating *c.* A.D. 160–200.

The Samian By Joanna Bird

(a) *South Gaul*

- | | |
|--------------|---------------------|
| Dr 18 (two): | Flavian (21). |
| Dr 18 R: | Flavian (18). |
| Dr 24/25: | pre-Flavian (21). |
| Dr 27: | pre-Flavian (18). |
| Dr 36: | first century (18). |

(b) *Central Gaul*

- Dr 18/31: early second century (21).
 Dr 31 R: later second century; slightly burnt (21).
 Dr 33 (two): early second century (18, 21).
 Dr 33 (probably): stamped IC[OC]ATVS F in a circle. Igocatus of Les Martres de Veyre (Terrisse 1968, pl. 53), *c.* A.D. 100–125 (18).
 Dr 35: early second century.
 Dr 37: style of Ioenalis—Donnaucus group at Les Martres-de-Veyre; vine-scroll with bird (Terrisse 1968, pl. 31, No. 244), 'fan' leaves (here rather smudged sideways) (Stanfield and Simpson, pl. 37, No. 432); *c.* A.D. 100–125 (18).
 Déch. 68 or 72: Antonine (18).

Amphora (see p. 127)

Dressel 20 (18, 21).

Other Fine Wares (FIG. 45)(a) *Imported*

Beakers

173. Fine, hard white fabric with a black or blue-black slip; possibly Rhenish (cf Marsh 1978, Type 20–22, *c.* A.D. 90–130) (21).
 174. Fine, hard reddish-brown fabric with a dark brown to black slip over fine grog(?) dusting; N. Gaul (cf Anderson 1980, Fabric 1, fig. 11; late first to early second century) (18).
 175. Base; fine, hard white fabric with an all-over black to blue-black slip; very worn; Cologne(?) (18).

(b) *British*

Dishes (mica-dusted)

176. Hard, fine to medium sandy brown to grey fabric with a mica-dusted surface all-over (cf Marsh 1978, Type 24, *c.* A.D. 90–130) (18).
 177. Dish(?), as above, but mica-dusted surface over upper part of vessel only (cf Marsh 1978, Type 26, *c.* A.D. 90–130) (18).

Jars(?) (mica-dusted)

178. Hard, fine to medium sandy brown fabric with mica-dusting outside and over the upper surface of the rim (possibly inside also); (possibly to be compared with Marsh 1978, Type 46, *c.* A.D. 90–130) (18).
 179. Base of jar(?); fabric as others with mica-dusting externally only (18).

Coarse Wares (FIGS. 45–6)

Sandy Wares: (a) *Hard, fine sandy even-textured grey fabric.*

Beakers

180. Burnished grey surface all over (18).
 181. Black surface slip(?), burnished all over outside and on the rim.
 Not illustrated: Body-sherds of poppy-head beaker with barbotine dot decoration (21).

TABLE 7
POTTERY GROUP 2.2

Fine wares

| | Samian (South Gaul) | | Samian (Central Gaul) | | Rhineland | | N. Gaul | | Mica-dusted | |
|--------|------------------------|-----|--------------------------|-----|-----------|-----|---------|-----|-------------|-----|
| | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % |
| Beaker | | | | | 0.08 | 1.2 | 0.06 | 0.9 | | |
| Dish | | | | | | | | | 0.14 | 2.1 |
| Jar(?) | | | | | | | | | 0.02 | 0.3 |
| Total | 0.09 | 1.4 | 0.15 | 2.3 | 0.08 | 1.2 | 0.06 | 0.9 | 0.16 | 2.4 |

Total (imports): 0.38 (5.8%)

(British): 0.16 (2.4%)

Coarse wares

| | Sandy ware (a) | | Sandy ware (b) (A-H) | | Sandy ware (c) (BB1) | | Sandy ware (d) | | Sandy ware (e) | | Sandy ware (f) | | Grog- tempered | | Total | |
|--------------------|-------------------|-----|-------------------------|------|-------------------------|-----|-------------------|-----|-------------------|-----|-------------------|-----|-------------------|-----|-------|------|
| | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % |
| Beaker | 0.24 | 3.7 | | | | | | | | | | | | | 0.24 | 3.7 |
| Bowl | | | 0.47 | 7.2 | 0.26 | 4.0 | 0.24 | 3.7 | | | | | | | 0.97 | 14.9 |
| Dishes | | | | | 0.10 | 1.5 | | | | | | | | | 0.10 | 1.5 |
| Jars (everted rim) | 0.41 | 6.2 | 2.81 | 42.9 | 0.26 | 4.0 | 0.41 | 6.2 | | | 0.06 | 0.9 | 0.05 | 0.8 | 4.0 | 61.0 |
| Storage jars | | | | | | | | | | | | | 0.08 | 1.2 | 0.08 | 1.2 |
| Lids | | | 0.24 | 3.7 | | | | | 0.05 | 0.8 | | | | | 0.29 | 4.5 |
| Flagons | | | | | | | | | 0.33 | 5.0 | | | | | 0.33 | 5.0 |
| Mortarium | | | | | | | | | † | † | | | | | | |
| Total | 0.65 | 9.9 | 3.52 | 53.8 | 0.62 | 9.5 | 0.65 | 9.9 | 0.38 | 5.8 | 0.06 | 0.9 | 0.13 | 2.0 | 6.01 | 91.8 |

Total (all wares): 6.55

† Body-sherds present, but no rim-sherds.

V.E. = Vessel-Equivalent

Jars with everted rim

182. Dark grey surface slip (?), burnished all over outside and on the upper surface of the rim (21).

183-4. Grey well-burnished surface outside and over the rim (18).

185. Jar or small bowl; grey surface, burnished over the upper part of the rim (18).

Not illustrated: Form as No. 192, below.

Sandy Wares: (b) Medium sandy even-textured grey fabric (Alice Holt)

Bowls

186. Grey slip all over(?), burnished externally and over the rim (18).

187. Dark grey to black surface, burnished externally and over the rim (18).

188-9. Probably sherds of same vessel, with handle, in grey to brown fabric; grey-black surface, burnished inside but only smoothed outside (21).

190. Black surface, well-burnished inside but only smoothed outside; traces of lattice-burnishing below the rim outside; very similar to BB1 (21).

Jars with everted rim

191. Grey surface, burnished on the outside and tip of the rim; burnished lattice-decoration on the upper part of the body (cf Lyne and Jefferies 1979, Class 1.13) (18).

192. Grey to brown fabric with a grey surface, burnished on the outside and upper surface of the rim (18).
 193-5. Grey surface, burnished outside and on the upper surface of the rim (18, 21).
 196. Light to dark grey surfaces, smoothed but not burnished (18).
 197. Jar or bowl(?) with black surface, smoothed but not burnished (for the form, cf Gillam Type 309, dated *c.* A.D. 160-200). (18).
 198. With grey surface, smoothed but not burnished (18).

Lids

199. Grey to black surface, smoothed inside and partly burnished outside (cf Lyne and Jefferies 1979, Class 7.9, *c.* A.D. 100-50) (21).
 200. Grey to black plain surfaces (21).
 201. Ware as Nos. 188-9, grey to brown fabric with black burnished surface all over (21).

Bases

- 202-3. Smoothed grey surface outside (18).
 204. Black, burnished surface outside and under base; smoothed inside (18).

Sandy Wares: (c) BB1 (Dorset Black-burnished Ware)

Bowls

- 205-6. Black surface, burnished all over with superimposed lattice-burnish outside (cf Gillam Types 219-20, dated *c.* A.D. 120-150/60) (18).
 207. As Nos. 205-6, with handle attached (18).
 208. As Nos. 205-6, but grey to reddish surface (cf Gillam Types 226-7 (A.D. 200/210-240/300), Gillam 1976, 70, Nos. 42-44, 'towards the very end of the second century'; cf also the remarks in Bidwell 1979, 209-11) (18).

Dishes

209. Black to grey and red-brown surface decorated as Nos. 205-6 (cf Gillam Type 327, dated *c.* A.D. 130-180) (18).
 210. Black surface, burnished all over with traces of lattice-burnishing (18).

Jars with everted rim

211. Burnt orange-yellow to grey-black matt surface; traces of burnishing on body and over the rim and stroke-burnished decoration on the neck (cf Gillam Type 125, *c.* A.D. 120-180) (21).
 212. As Nos. 205-6, but with burnished 'arcading' on the neck (cf Gillam Type 120, *c.* A.D. 120-160) (18).

Sandy Wares: (d) Miscellaneous reduced medium sandy wares

Bowls

213. Fine to medium reddish-brown to grey sandy fabric with a grey or blackened surface on the upper part of the rim (18).
 214. Medium to coarse grey sandy fabric with a yellow-brown to light red to grey surface, burnished on the rim and over the outside of the body (21).

Jars with everted rim

215. Medium to coarse grey fabric with a reddish-brown surface, burnished on the inside of the rim and smoothed over the rest of the exterior (21).
 216. Brown or grey-brown medium sandy fabric with a grey to black surface with clear horizontal burnishing on the inside of the rim (21).
 Not illustrated: Form as No. 193, fabric similar to No. 216, but with some large calcareous inclusions (up to 4 mm) appearing on the surface (21).

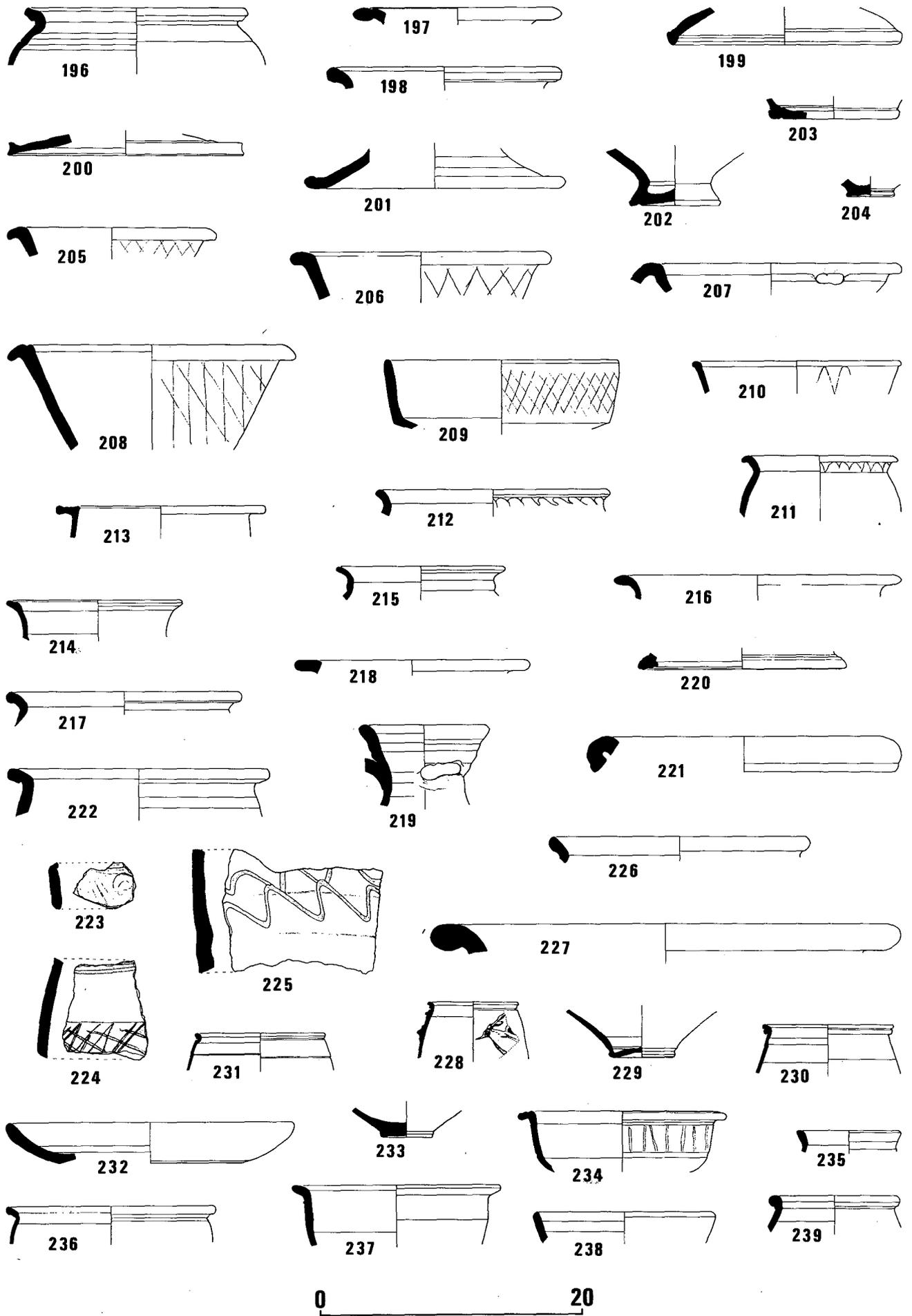


FIG. 46. The Pottery, Nos. 196-239 (Scale: $\frac{1}{4}$).

217. Similar form to No. 216 with a grey surface, smoothed but not burnished (21).
 218. Medium grey to black sandy, with scarce added limestone(?) temper (up to 5 mm), smoothed black surface (21).

Sandy Wares: (e) Miscellaneous oxidised wares

Jug/flagon

219. Hard, fine creamy-yellow fabric with smooth yellow-cream surfaces all over (21).

Lid(?)

220. Medium sandy reddish-yellow fabric, exterior partially blackened, otherwise a cream surface (18).

Mortarium

221. Medium sandy cream to yellow fabric with smooth white surfaces. Oxfordshire(?) (cf Young 1977, M 2-3; from *c.* A.D. 100) (21).

Sandy Wares: (f) Coarse sandy grey fabric (abundant quartz up to 2 mm)

Jars with everted rim

222. Grey surface, burnished externally and on the upper surface of the rim (21).
 223. Body-herd with burnished decoration on a plain grey surface (21).
 224. Body-herd of storage jar; brown surface, upper part burnished, lattice-burnished decoration on a smooth surface below (21).
 225. As No. 224, but wavy-burnished decoration on a smooth, brown outer surface (21).

Grog-Tempered Fabrics

Jar with everted rim

226. Grey, densely-grogged fabric (grog up to 2 mm) with a grey to black smooth exterior (21).

Storage Jar

227. Coarse grey fabric with some sub-angular flint and some sub-rounded quartz, but essentially tempered with abundant grog (tempering up to 4 mm); grey-brown surface, burnished on the upper surface on the rim; the underside of the rim is smooth (cf Nos. 344 (in 2.7) and 374 (in 2.8)) (18).

2.3: SOUTH-WEST ANGLE (1978(i)) (Layer 14, p. 58) (FIGS. 46-47)

This layer includes a high proportion of later second-century sherds. There is decorated samian dated *c.* A.D. 150-80, a probable Oxfordshire mortarium dated *c.* 180-240 (No. 267), and a large number of BB1 sherds of Antonine date (Nos. 246-55), the latest dated *c.* A.D. 160-200.

The Samian By Joanna Bird

(a) *South Gaul*

- Dr 18: Flavian-Trajanic; worn inside.
 Dr 35: Flavian.

(b) *Central Gaul*

- Dr 18/31 (two): early to mid second-century.
 Dr 31: Antonine.
 Dr 31 (?): burnt.
 Dr 33 (two): second century.
 Dr 37: style of Cettus/Satus of Les Martres. The ovolo and square beads are shown on Stanfield and Simpson (1958), pl. 141, No. 16; *c.* A.D. 135–65.
 Dr 37: Les Martres; broken ovolo; Trajanic-Hadrianic
 Dr 37: Cinnamus group ovolo 3(a); *c.* A.D. 150–70
 Dr 37: Cinnamus group ovolo 5; *c.* A.D. 150–80.

Amphorae (see p. 127)

- Dressel 20.
 Pélichet 47.

Other Fine Wares (FIG. 46).(a) *Imported*

Beakers

228. Hard, fine white fabric with all-over black slip on barbotine decoration (a deer is represented); Cologne or Lower Rhineland (Anderson 1980, Lower Rhineland Fabric 1; *c.* A.D. 120–50).
 229. Fabric as No. 228; dusting on the body and base (Anderson 1980, Lower Rhineland Fabric 1; *c.* A.D. 70–150).
 230–1. Fine, hard reddish-brown fabric with grey core; a blue-black (?burnt) slip with metallic lustre all over; the surface is finely 'dusted' below the slip; North French (Anderson 1980, North Gaul Fabric 1, *c.* A.D. 80–130).

Not illustrated: Body sherd; hard, fine white fabric with an apple-green glaze; decorated beneath the glaze with raised dots; Central Gaulish; *c.* A.D. 40–70.

(b) *British*

Dish (mica-dusted)

232. Fine sandy micaceous light brown fabric with specks of red haematite and a grey core; a micaceous golden-brown surface all over (cf Marsh 1978, Type 24, *c.* A.D. 90–130).

Miscellaneous

233. Base; hard fine cream-to-buff fabric with a light cream core; a burnished yellow-cream exterior.

Coarse Wares (FIGS. 46–7)

Sandy Wares: (a) *Hard, fine sandy, even-textured grey fabric*

Bowl

234. Smoothed grey surfaces; burnishing outside with traces of a lattice-burnished decoration.

TABLE 8
POTTERY GROUP 2.3

Fine wares

| | Samian (South Gaul) | | Samian (Central Gaul) | | Rhineland | | N. Gaul | | Mica-dusted | |
|---------|------------------------|-----|--------------------------|-----|-----------|-----|---------|-----|-------------|-----|
| | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % |
| Beakers | | | | | 0.28 | 5.1 | 0.13 | 2.3 | | |
| Dish | | | | | | | | | 0.10 | 1.8 |
| Total | 0.15 | 2.7 | 0.12 | 2.2 | 0.28 | 5.1 | 0.13 | 2.3 | 0.10 | 1.8 |

Total (imports): 0.68 (12.3%)
(British): 0.10 (1.8%)

Coarse wares

| | Sandy ware (a) | | Sandy ware (b) (A-H) | | Sandy ware (c) (BB1) | | Sandy ware (d) | | Sandy wares (e) | | Other misc. fine sandy | | Silchester ware | | Total | |
|--------------------|-------------------|-----|-------------------------|------|-------------------------|-------------------|-------------------|-------------------|--------------------|-----|---------------------------|-----|--------------------|-----|-------|------|
| | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % |
| Beakers | | | | | 0.23 | 4.2 | 0.14 | 2.6 | | | | | | | 0.37 | 6.8 |
| Bowls | 0.08 | 1.4 | 0.30 | 5.4 | 0.54 | 9.8 | | | | | | | | | 0.92 | 16.6 |
| Dishes | | | 0.12 | 2.2 | 0.09 | 1.6 | | | | | | | | | 0.21 | 3.8 |
| Jars (bead rim) | | | 0.12 | 2.2 | | | | | | | | | | | 0.12 | 2.2 |
| Jars (everted rim) | 0.12 | 2.2 | 0.80 | 14.5 | 0.84 | 15.2 | 0.51 | 9.5 | 0.17 | 3.1 | | | 0.08 | 1.4 | 2.52 | 45.9 |
| Jars (storage) | | | | | | | | | 0.31 | 5.6 | | | | | 0.31 | 5.6 |
| Lids | | | 0.05 | 0.9 | | | 0.06 | 1.1 | | | | | | | 0.11 | 2.0 |
| Flagon | | | | | | | | | | | 0.15 | 2.7 | | | 0.15 | 2.7 |
| Mortarium | | | | | | | | | | | 0.03 | 0.5 | | | 0.03 | 0.5 |
| Total | 0.20 | 3.6 | 1.39 | 25.2 | 1.70 | 30.8 ¹ | 0.71 | 12.9 ² | 0.48 | 8.7 | 0.18 | 3.2 | 0.08 | 1.4 | 4.74 | 86.1 |

Total (all wares): 5.52

V.E. = Vessel-Equivalent

1. If BB1(?) types are excluded, V.E. = 1.52 (27.5%)

2. If BB1(?) types are included, V.E. = 0.89 (16.2%)

Jars with everted rim

235. Grey surface, burnished outside and over the inside of the rim.

236. Grey surface, burnished outside.

Not illustrated: Body-shoulder of poppy-head beaker with a silvery grey slip over barbotine dot decoration in diamond pattern.

Sandy Wares: (b) Medium sandy, even-textured grey fabric (Alice Holt)

Bowls

237. Grey granular surface, smoothed but not burnished.

Not illustrated: As Nos. 188-9.

Dish

238. Plain grey exterior; silvery-grey slip inside.

Jar with bead rim

239. Grey surface, burnished inside and over the rim.

Jars with everted rim

240. Grey surface with traces of burnishing on the inside of the rim.
 241. Brown to grey surface, burnished on the upper surface of the rim.
 242. Grey to black surface, burnished outside and over the inside of the rim.
 243. Plain grey surfaces all over.

Not illustrated: Examples of Nos. 191, 196.

Lid

244. In a slightly coarser sandy grey fabric with a black slip(?) outside; smoothed exterior; plain inner surface.

Miscellaneous

245. Base; plain grey surface.

Sandy Wares: (c) BB1 (Dorset Black-burnished Ware)

Beaker/Mug

246. Burnished externally and over the rim (cf Gillam Type 65, dated c. A.D. 140–300).

Bowls

- 247–8. Black to yellow-brown surface; burnished all over; superimposed lattice-burnishing outside (cf Gillam Type 220, dated c. A.D. 120–160; Bidwell 1979, fig. 64, No. 115, from c. A.D. 80/100).
 249. BB1 (?); fabric slightly finer than usual; rare shell inclusions; black fabric with brown margins; lattice-burnishing on a smoothed outer surface.

Dishes

- 250–1. Burnished inside; lattice-burnishing on a smoothed outer surface (cf Gillam Type 318, dated c. A.D. 160–200).

Jars with everted rim

252. Black surface; smooth-burnished on the rim and upper part of the body; burnished lattice-decoration below against a reserved background (cf Gillam Types 121–4, c. A.D. 120–160; Bidwell 1979, fig. 62, No. 77, from c. A.D. 80/100).
 253–4. Black surface, burnished over the inside of the rim; lattice-burnishing under the rim against a reserved background; smoothed burnishing below (cf Gillam Types 127 or 129, c. A.D. 130/40–170/80).
 255. BB1(?); fabric more friable than usual, black to brown in colour with a black surface burnished on the upper surface of the rim (cf Gillam Type 129, c. A.D. 140–180).

Sandy Wares: (d) Miscellaneous medium sandy even-textured fabrics

Beaker/Mug

256. Medium to coarse sandy (white quartz sand) dark brown to black fabric with a black surface (?slipped); burnished outside; very reminiscent of BB1.

Jars with everted rim

257. Grey to brown medium sandy fabric with light brown surface, burnished on the inside of the rim.
 258. Granular yellow-brown fabric (burnt); reminiscent in appearance and texture of Portchester Fabric D (Fulford 1975 (b)).
 259. Grey medium sandy fabric with a light yellow-brown surface.

Not illustrated: As No. 217

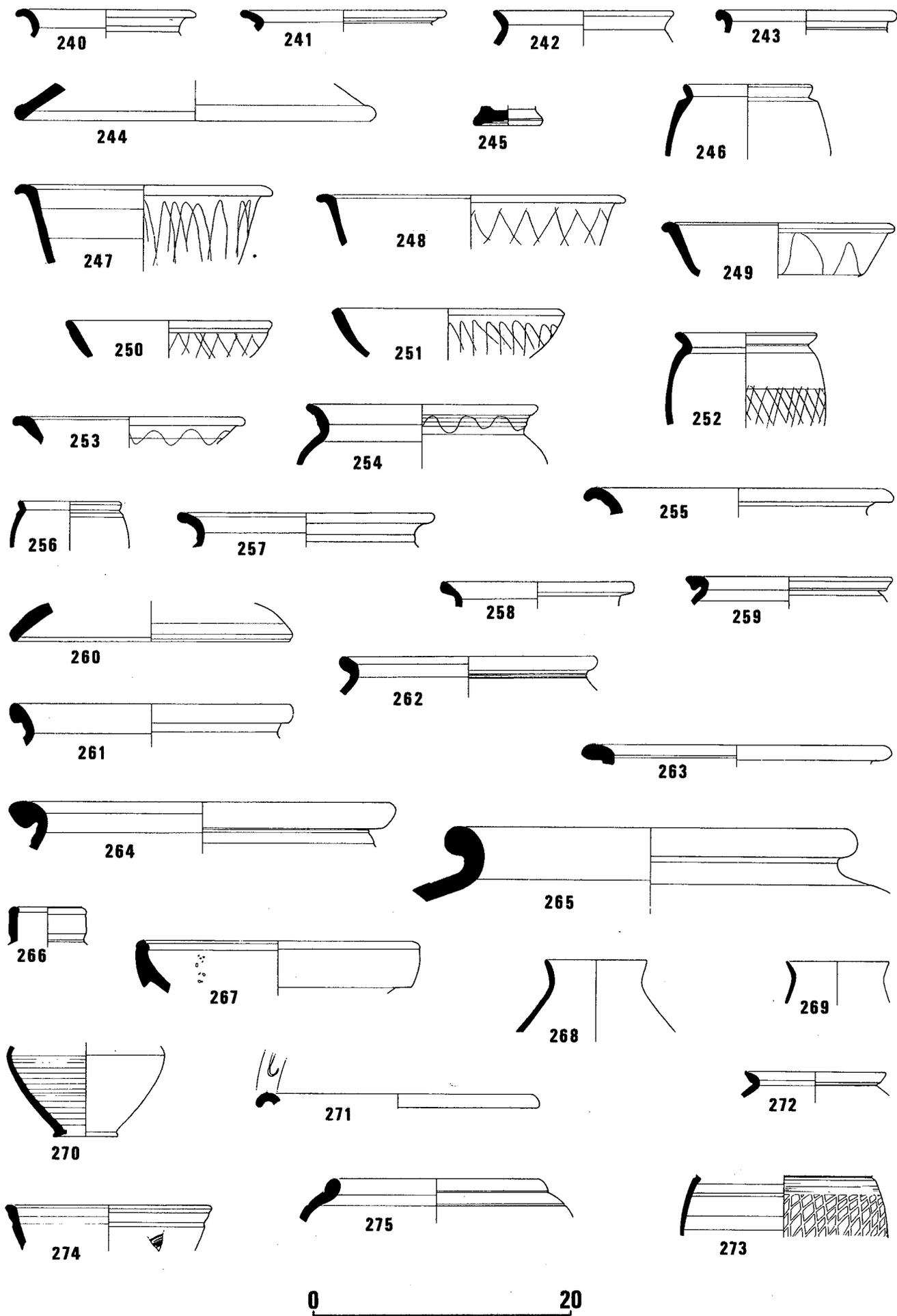


FIG. 47. The Pottery, Nos. 240-275 (Scale: $\frac{1}{4}$).

Lid

260. Black surface, slipped(?) outside; well-burnished exterior; plain inside.

Sandy Wares: (e) Coarse sandy (sand inclusions up to 1–2 mm) grey fabric, fairly even-textured.

Jars with everted rim

261–3. Plain grey surfaces.

Storage jars

264. Plain grey surface.

265. Fabric has large inclusions (up to 3/5 mm, but mostly 2 mm); light brown to grey surface, smoothed but not burnished.

(f) *Other miscellaneous fine sandy wares*

Jug or flagon

266. Hard, fine white fabric with a pale yellow-to-cream core and a white surface; the latter is smoothed.

Mortarium

267. Very hard fine pinky-cream fabric with rare black sub-rounded inclusions (iron ore(?)); translucent rounded quartz trituration grits; Oxfordshire (Young 1977, M 14.12; c. A.D. 180–240).

2.4: AT THE SOUTH GATE (1974) (pp. 35–6) (FIGS. 47–8).

This includes all the pottery from the 1974 trench cut outside the gate, except for that from the well. Although the stratigraphy was far from clear, the pottery is annotated with its layer-numbers, so that pre-hearth material (Layers 2/5, 7, 8–10) can be distinguished from that associated with the hearth (Layer 2/4, 11), or later (Layer 2/6(?) and 2/2). Owing to its small size, the collection has not been quantified. Pottery earlier than the hearth is mostly no later than Neronian to early Flavian (Group 1.3). Pottery associated with the hearth is of Trajanic-Hadrianic date; that from stratigraphically later contexts appears to be of a similar date-range. The latest sherd is probably No. 273.

The Samian By Joanna Bird(a) *South Gaul*

Dr 15/17 or, more probably, Dr 15/17 R, burnt: Neronian-early Flavian (2/11).

Dr 27 (two): Neronian-Flavian (2/11).

(b) *Central Gaul*

Dr 31: Trajanic-Hadrianic (2/4).

(?): second century (2/11).

Dr 37: (**Fig. 41, 1**) Lezoux, in the style of Cinnamus. The ovolo, candelabrum (Déch. 113A) and bead rows were used by him on a bowl from Brentford (Bird 1978, fig 82, No. 5). Most of the other motifs can be found in his work: the small deer O.1814A; the goat O.1836 and hare to left O.2115 (Stanfield and Simpson 1958, pl. 157, 6); the boar (Stanfield and Simpson 1958, pl. 163, 66); the bird O.2318 and circles (Stanfield and Simpson 1958, pl. 161, 53); the dolphin (Stanfield and

Simpson 1958, pl. 160, 38). The Venus, O.286, was used by Cinnamus's associate Cerealis (Stanfield and Simpson 1958, pl. 164, 5). The small lion is O.1474; the hare to right O.2056A; *c.* A.D. 150–80 (unstratified).

Amphora

Dressel 20 (2/11).

Coarse Wares (FIGS. 47–8)

Sandy Wares: (a) Hard, fine sandy even-textured, light grey fabric

Beakers

268. Burnished darker grey exterior (cf Marsh 1978, Form 17–18, *c.* A.D. 90–130) (2/4).
 269. Fabric is reddish-brown, slightly micaceous with a black, slipped(?) highly-burnished exterior; date range as No. 268 (2/11).
 270. Base of 268(?) otherwise as No. 268 (2/4).

Bowl

271. Imitation Dr 35/36; traces of barbotine decoration on rim; plain exterior (cf Marsh 1978, Form 33, *c.* A.D. 90–130) (2/6).

Jars with everted rim

272. Jar or beaker (?); the fabric is reddish-yellow with light grey margins; light grey surface burnished on the rim and outside (2/2).
 273. Dark grey slipped(?) surface; horizontal burnishing above the body which has a burnished lattice-decoration (2/11). At Verulamium such decoration is present from the beginning of the second century, but rare until *c.* A.D. 130 (Wilson 1972, figs. 111–112, Nos. 381–2, 429–30).

Sandy Wares: (b) Medium sandy, even-textured grey fabric (Alice Holt)

Bowl

274. Dark grey fabric and surface, burnished on the upper part of rim and exterior; traces of wavy-combed decoration on the body (2/6).

Jars with bead rim

- 275–6. Burnishing on the upper surface of the rim, but reserved below lower groove (No. 275); grey surfaces (cf Lyne and Jefferies 1979, fig. 15, Class 4.31, from *c.* A.D. 60–150) (2/4, 2).
 277. Grey to light brown, roughly-burnished upper surface (2/11).

Sandy Wares: (c) BB1 (Dorset Black-burnished Ware)

Bowl

278. Burnished over the rim; lattice-burnishing on the body (2/4); similar at Exeter from late first century (Bidwell 1979, 203).

Flint-Tempered Fabric (Silchester Ware)

Jar with bead rim

As No. 65 (2/11).

Jar with everted rim
As No. 70 (two examples) (2/11).

2.5: AT THE SOUTH GATE (1974): WELL (pp. 35–6) (FIG. 48)

The well was not completely excavated and the latest sherds (Nos. 284, 289) come from the lower part of the excavated fill (2/27), giving a *terminus post quem* for the upper fill of *c.* A.D. 130/40. It is possible, however, that all the material is residual, since the construction of the rampart later in the second century is the most likely context for the filling of the well. The upper fill contains a notable proportion of residual pre-Flavian pottery.

A. Lower Fill (2/27)

The Samian By Joanna Bird

Central Gaul

- Dr 18/31: Les Martres; Trajanic-Hadrianic.
 Dr 18/31: *c.* A.D. 100–150.
 Dr 37: the ovolo is probably one shared by Quintilianus and Docilis (Stanfield and Simpson 1958, pl. 68, 8; pl. 91, 5), a slightly larger version of which was later used by Censorinus, Laxtucissa, Paternus, Acurio and Mercator I. Quintilianus commonly used a wavy-line border, Docilis only rarely, so this piece is likely to belong to the former; *c.* A.D. 125–50.

Amphora (see p. 127)

Dressel 20.

Other Fine Ware (mica-dusted) (FIG. 48)

Beaker

279. Fine sandy grey fabric with mica-dusted golden-brown outer surface (cf Marsh 1978, Type 46, *c.* A.D. 90–130).

Coarse Wares (FIG. 48)

Sandy Wares: (a) *Fine to medium sandy even-textured hard grey fabric*

Bowl

280. Black surface, slipped(?) all over and burnished on the upper surface of the rim.

Jar with upright neck and everted rim

281. Dark grey surface, burnished on the upper surface of the body and the rim; lattice-burnished decoration on the lower part of the body.

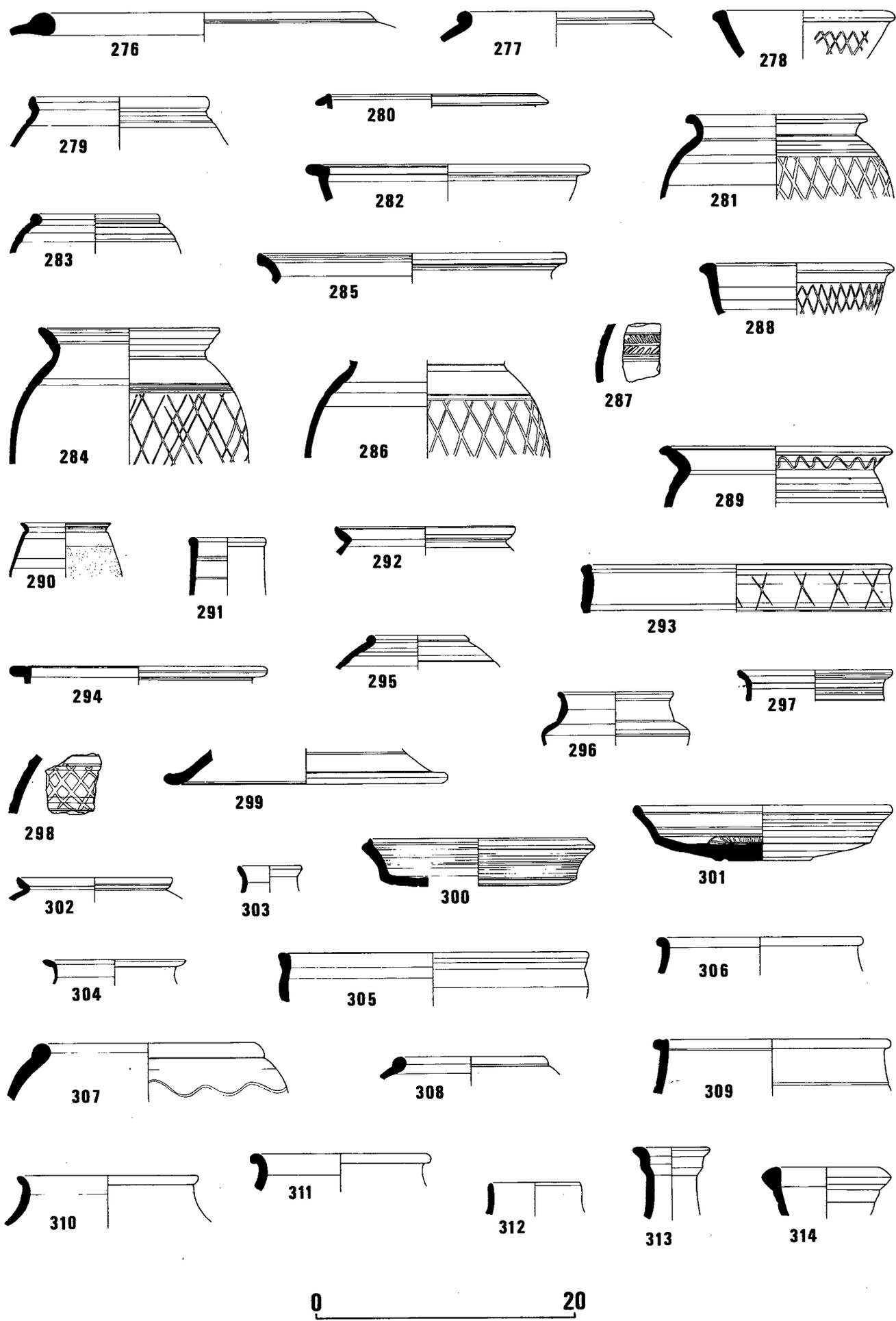


FIG. 48. The Pottery, Nos. 276-314 (Scale: $\frac{1}{4}$).

Sandy Wares: (b) Medium sandy even-textured grey fabric (Alice Holt)

Bowl

282. Black surface all over; burnished on the upper surface of the rim.

Jar with bead rim

283. Red-brown fabric with grey margins; grey surface all over; burnished outside over the upper part of the body.

Jar with everted rim

284. Brown fabric, slightly coarser than others, with grey margins; a grey plain and slightly rough surface, except over the upper part of the rim and the body which is burnished. Burnished lattice-decoration over the main body; similar form in similar fabric at Verulamium (Wilson 1972, fig. 117, No. 615, *c.* A.D. 125–60).

285–6. Black surface all over; plain except for burnished lattice-decoration on the body.

287. Body-shoulder; brown, medium to coarse sandy fabric with a black surface outside and impressed decoration in chevron pattern; burnished above and below the decoration.

Sandy Wares: (c) BB1 (Dorset Black-burnished Ware)

Bowl

288. Form comparable to Gillam Type 219, dated *c.* A.D. 120–150; but similar form from Exeter from *c.* A.D. 80/100 (Bidwell 1979, 203).

TABLE 9

POTTERY GROUP 2.5 (upper and lower fills combined)

Fine wares

| | Samian (Central Gaul) | | North Gaul | | Mica-dusted | | Other | | Total | |
|---------|--------------------------|-----|------------|-----|-------------|-----|-------|-----|-------|------|
| | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % |
| Beakers | | | 0.25 | 6.3 | 0.08 | 2.0 | 0.20 | 5.1 | 0.53 | 13.4 |
| Total | 0.25 | 6.3 | 0.25 | 6.3 | 0.08 | 2.0 | 0.20 | 5.1 | 0.78 | 19.7 |

Total (imports): 0.50 (12.6%)

(British): 0.28 (7.1%)

Coarse wares

| | Sandy wares (a–b) | | Sandy ware (c) (BB1) | | Gritted ware | | Silchester ware | | Total | |
|--------------------------|----------------------|------|-------------------------|-----|--------------|------|--------------------|-----|-------|------|
| | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % |
| Beakers | 0.12 | 3.0 | | | | | | | 0.12 | 3.0 |
| Bowls | 0.35 | 8.9 | 0.10 | 2.5 | | | | | 0.45 | 11.4 |
| Dishes | | | | | 0.94 | 23.8 | | | 0.94 | 23.8 |
| Jars (bead rim) | 0.24 | 6.0 | | | | | 0.17 | 4.3 | 0.41 | 10.3 |
| Jars (necked and Lid) | 0.93 | 23.5 | 0.13 | 3.3 | | | 0.08 | 2.0 | 1.14 | 28.8 |
| Total | 1.75 | 44.2 | 0.23 | 5.8 | 0.94 | 23.8 | 0.25 | 6.3 | 3.17 | 80.1 |

Total (all wares): 3.95

V.E. = Vessel-Equivalent

Jar with everted rim

289. Form comparable to Gillam Type 125 dated *c.* A.D. 120–180 or Type 129 dated *c.* A.D. 140–180; similar at Verulamium from *c.* A.D. 130–40 (Wilson 1972, fig. 177, No. 618).

B. *Upper Fill* (2/17)**The Samian** By Joanna Bird*South Gaul*

Dr 27: Flavian-Trajanic, slightly burnt

Amphora (see p. 127)

Dressel 20

Other Fine Wares (FIG. 48)(a) *Imported*

Beaker

290. Hard, fine reddish-brown fabric with a reddish-brown surface; finely roughcast (Anderson 1980, North French Fabric 1, *c.* A.D. 80–130/5).

(b) *British*

Beakers

291. Hard, fine grey fabric with reddish-yellow margins and a reddish-yellow slip outside.
292. Hard, fine to medium sandy grey fabric with a light grey-to-brown plain surface.

Coarse Wares (FIG. 48)*Sandy Wares: (a) Medium sandy, even-textured grey fabric*

Bowl

293. Grey or yellow-brown burnished surface all over; decorated with broad lattice-burnishing.
294. Dark grey surface; burnished on the upper surface of the rim.

Jar with bead rim

295. Grey surface, burnished exterior.

Jars with upright neck and out-bent rim

296. Highly-burnished black surface outside.
297. Red-brown fabric with black surface, burnished outside.
298. Dark grey to brown surface, burnished outside.

Lid

299. Dark grey to brown surface with traces of a silvery grey slip and burnishing on the rim.

Sandy Wares: (b) As Gritted Ware (a) in Group 1.2 (p. 138)

Dishes

300–301. Light brown to black surface, well burnished all over; traces of a radial design around the inside of the base (pre-Flavian).

Flint-Tempered Ware (Silchester Ware) (not illustrated)

Jar with bead rim

As No. 65

Jar with everted rim

As No. 70.

2.6: AT THE SOUTH GATE (1975) (FIGS. 48–49, pp. 36, 59–62)

A. *Western side* (Layers 3/11–19)

This is a curious group of material from beneath the bank to the west of the South Gate. The samian, with one exception, is Claudio-Neronian, while the coarse wares span the period from the mid first to the mid second century A.D. One sherd (No. 309) is probably later than *c.* A.D. 150. Because of its size and disparate character, the results of quantification are not presented here.

The Samian by Joanna Bird

South Gaul

Dr 15/17 (three): mid first century (3/16, 17, 19).

Dr 15/17

or 15/17 R: Neronian (3/11).

Dr 18: *c.* A.D. 50–100, slightly burnt (3/16).

Dr 24/5: probably Neronian (3/16).

Dr 27: mid first century (3/17).

Dr 29 (two): mid first century (3/11, 16).

Dr 29: (**Fig. 41, 2**) The grape-cluster motif was used by several potters, but this is closest to one used, apparently with a similar leaf, by Carus (Knorr 1919, 20E). The delicate modelling, curved profile and fabric all indicate an early date, *c.* A.D. 35–50 (3/16).

Other Fine Wares (FIG. 48)

British

Beakers

302. Fine sandy reddish-yellow fabric with a yellow-brown surface, burnished on the upper part of the body; probably Flavian or later (3/14).

303. Fine to medium sandy yellow-red fabric with a black slip all over (3/19).

304. Fine, hard red fabric with a black surface all over, burnished externally.

Coarse Wares (FIGS. 48-9)

Sandy Wares : (a) *Medium sandy, moderately even-textured black fabric.*

Bowl

305. Grey-black surface, burnished all over outside (possibly a variant of Lyne and Jefferies 1979, Class 5; *c.* A.D. 60-150) (3/19).

Jar with upright neck and out-bent rim

306. Black surface lightly burnished outside (3/16).
 307. Dark grey surface, burnished over the rim and above a reserved band which simply has a burnished wavy line (*cf* Lyne and Jefferies 1979, Class 4.10, *c.* A.D. 60-150) (3/19).
 308. Similar to No. 307, with a black highly burnished surface outside (3/19).

Jars with upright necks and outbent rim

309. Jar or bowl, burnished on upper surface of rim and over the neck (similar to Lyne and Jefferies Class 5D, *c.* A.D. 150-200) (3/16).
 310-11. Light grey surface, burnished externally (*cf* Lyne and Jefferies Class 1, *c.* A.D. 60-150) (3/16).

Sandy Wares: (b) *Miscellaneous oxidised medium sandy wares*

Beaker

312. Medium sandy red-brown fabric with a red-brown surface, burnished externally (3/16).

Flagons

313. Fine sandy reddish-yellow fabric with a light brown surface; similar to wasters from a Claudio-Neronian group sealed by the amphitheatre seating-bank, excavated in 1979 (3/16).
 314. Medium sandy reddish-yellow fabric with a light yellow-brown surface; possibly an import (3/16).

Gritted Fabric**Jar with everted rim**

315. Hard, densely gritted (grits about 1 mm) fabric with a black surface, roughened all over. No other examples of this fabric were discovered (3/16).

B. Eastern side (5/13, 14)

A small group with Trajanic and Hadrianic samian and second-century coarse ware was sealed beneath the rampart behind the eastern gate-footing.

The Samian By Joanna Bird**(a) South Gaul**

Dr 24/5: mid first century (5/13).

(b) Central Gaul

Dr 18/31 or 31: Hadrianic or later (5/13).
 Dr 35: in first-century Lezoux fabric; probably Flavian (5/13).

- Dr 37: (Fig. 41, 3) with ovolo and beads used by Drusus I (X-3) of Les Martres (Stanfield and Simpson 1958, pl. 11, 129), here with a large formal leaf, *c.* A.D. 100-125) (5/13).
- Dr 37: (Fig. 41, 4) Les Martres; broken ovolo between bead rows and a bird (cf O.2289) in a wreath festoon (cf Stanfield and Simpson 1958, pl. 20, 250) by the Potter of the Rosette, *c.* A.D. 100-125) (5/13).

Coarse Wares (FIG. 49)

Medium grey sandy even-textured fabric (Alice Holt)

Beaker

316. Black surface, lightly burnished outside (5/14).

Jar with everted rim

317. Fabric with black margins, dark grey surface, lightly burnished externally (5/13).

2.7: RAMPART SECTION, EAST OF SOUTH GATE (1974)

(Layer 18, p. 37) (FIG. 49).

Both the samian and the coarse wares span a considerable time from the Neronian-Flavian period to the mid second century. The latest sherd is of Antonine samian (after *c.* A.D. 140). Few sherds need date later than *c.* A.D. 120.

The Samian By Joanna Bird

(a) *South Gaul*

- Dr 15/17 (two): Neronian-early Flavian.
 Dr 18 (three): Neronian-Flavian.
 Dr 27 (six): Flavian-Trajanic.
 Dr 29: with scroll, *c.* A.D. 50-75.
 Dr 29: with wreath, *c.* A.D. 50-65.
 Dr 29: with scroll with large leaves, very abraded; *c.* A.D. 50-70.
 Dr 29 (two): Neronian.
 Dr 33: Flavian; slightly burnt.
 Dr 37: *c.* A.D. 75-95.

(b) *Central Gaul*

- Dr 18 or 18/31: Early Lezoux; probably Trajanic-Hadrianic.
 Dr 27: *c.* A.D. 100-150.
 Dr 36: *c.* A.D. 100-150.
 Dr 38: Antonine.

Amphora (see p. 127)

Dressel 20.

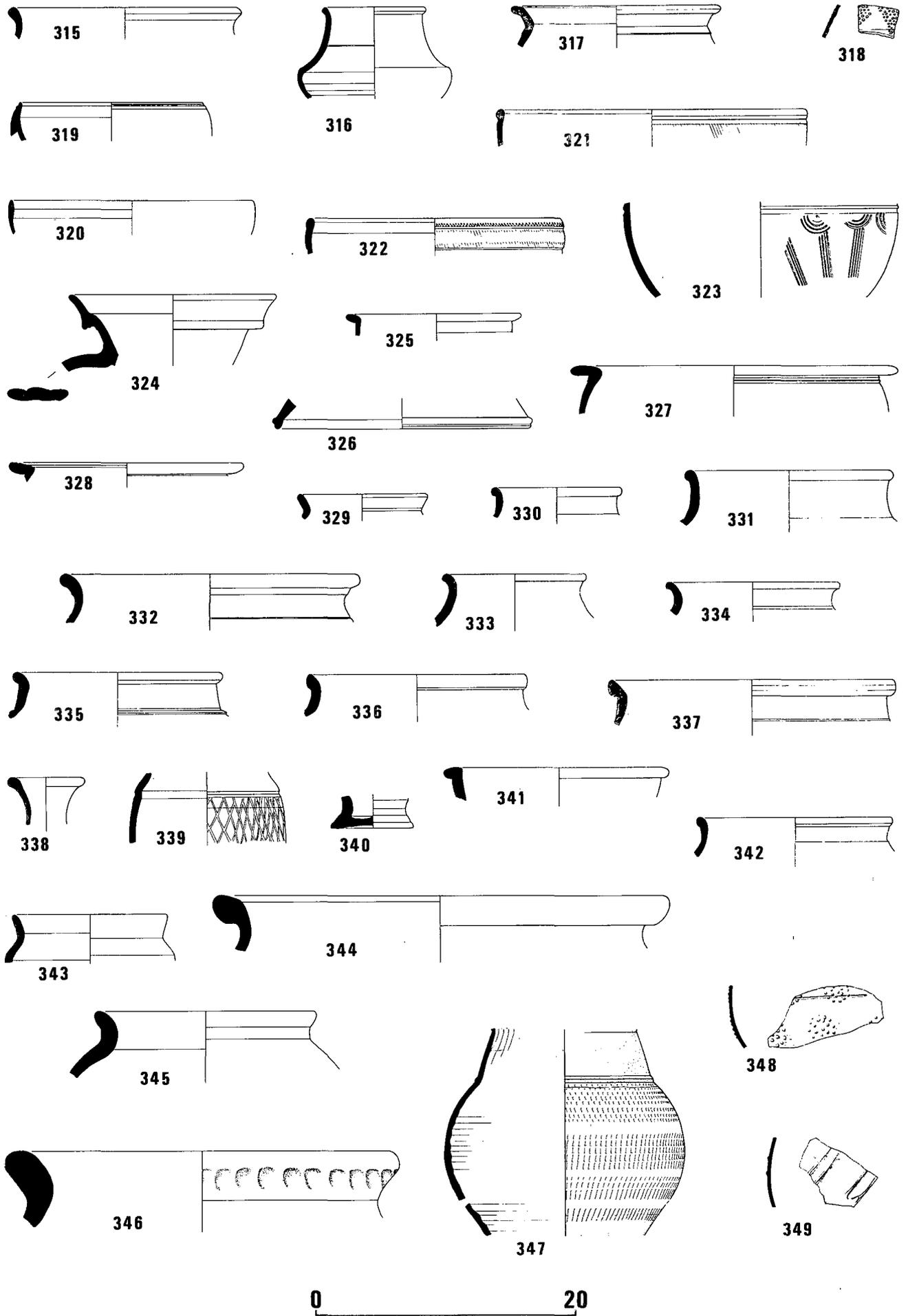


FIG. 49. The Pottery, Nos. 315-349 (Scale: $\frac{1}{4}$).

Other Fine Wares (FIG. 49)

British

Beaker

318. Body-shoulder; hard, fine sandy grey fabric with a smooth surface and barbotine-dot decoration; poppy-head beakers are rare at Verulamium before the beginning of the second century (cf Wilson 1972, fig. 112).

Bowls

319. *Mica-dusted*; reddish-yellow fine sandy fabric with a grey core and reddish-brown micaceous slip (cf Marsh 1978, Type 37, fig. 6.17, c. A.D. 90–130).
320. Grey, fine to medium sandy fabric with oxidised margins; micaceous brown slip outside (cf Marsh 1978, Type 42.13, fig. 6.19, c. A.D. 90–130).
321. 'London ware'; fine, hard grey fabric with an all-over black slip(?) or surface; fine rouletted decoration, a slightly micaceous finish (cf Marsh 1978, Type 42.31, fig. 6.18, c. A.D. 90–130).
322. Similar to No. 321, but the fabric is finer with a grey core and red-brown margins; it is laminating; black slip all over; fine rouletting outside (cf Marsh 1978, Type 42.1, c. A.D. 90–130); at Verulamium c. A.D. 85–105 (Wilson 1972, fig. 108, No. 318).
323. Body-shoulder, almost certainly of No. 322; all-over black surface (? slip) with incised decoration (cf Marsh 1978, Type 42. 1–2, c. A.D. 90–130).

TABLE 10

POTTERY GROUP 2.7

Fine wares

| | Samian (South Gaul) | | Samian (Central Gaul) | | Mica-dusted | | 'London' ware | | Totals | |
|--------|------------------------|------|--------------------------|-----|-------------|-----|---------------|-----|--------|------|
| | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % |
| Bowls | | | | | 0.22 | 3.8 | 0.10 | 1.8 | 0.32 | 5.6 |
| Flagon | | | | | | | 0.10 | 1.8 | 0.10 | 1.8 |
| Total | 0.84 | 14.8 | 0.12 | 2.1 | 0.22 | 3.8 | 0.20 | 3.6 | 1.38 | 24.3 |

Total (Imported): 0.96 (16.9%)
 (British): 0.42 (7.4%)

Coarse wares

| | Sandy ware (a) | | Sandy ware (b) (A–H) | | Sandy ware (c) (BB1) | | Grog- tempered ware (a) | | Grog- tempered ware (b) | | Silchester ware | | Totals | |
|----------------------------------|-------------------|-----|-------------------------|------|-------------------------|-----|-------------------------------|-----|-------------------------------|-----|--------------------|------|--------|------|
| | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % |
| Dish | | | | | 0.05 | 0.9 | | | | | | | 0.05 | 0.9 |
| Jars (necked and and everted) | 0.15 | 2.6 | 1.49 | 26.3 | | | 0.22 | 3.9 | | | 1.2 | 21.2 | 3.06 | 54.0 |
| Jars (storage) | | | | | | | | | 0.24 | 4.2 | | | 0.24 | 4.2 |
| Lid | 0.06 | 1.1 | | | | | | | | | | | 0.06 | 1.1 |
| Jug/flagon | | | 0.88 | 15.5 | | | | | | | | | 0.88 | 15.5 |
| Total | 0.21 | 3.7 | 2.37 | 41.8 | 0.05 | 0.9 | 0.22 | 3.9 | 0.24 | 4.2 | 1.2 | 21.2 | 4.29 | 75.7 |

Total (all wares): 5.67

V.E. = Vessel-Equivalent

Flagon ('London ware'(?))

324. Fine, grey to brown slightly micaceous fabric with an all-over burnished black surface (?slip).

Not illustrated: Glazed-ware body-sherd, fine to medium sandy reddish-yellow fabric; glazed all over with a dark yellow-brown glaze; decorated with roughening or rustication; possibly of the South-Central English glazed-ware group, of late first- to early second-century date (Arthur 1978, 312-17).

Coarse Wares (FIG. 49).

Sandy Wares: (a) Medium sandy, dark grey to black fabric (cf Group 1.1, Sandy Fabric (a), mainly a Claudio-Neronian fabric).

Jar with neck and outbent rim

325. Black surface, burnished all over.

Lid

326. Black surface partially burnished all over; possibly rim of an Alice Holt Class 5 bowl (Lyne and Jefferies 1979, fig. 17).

Sandy Wares: (b) Medium sandy grey fabric (Alice Holt)

Jars with everted rim

327. Grey core and reddish-yellow margins and a yellow-brown surface; blackening on the outside and over the rim.
 328. Grey surface; grooves on the upper surface of the rim.
 329. Grey surface, burnished over the inside and outside of the rim.
 330-32. Grey surface, horizontal burnishing on the neck.
 333. Grey surface, smoothed.
 334. Blackened surface; burnished on the neck as Nos. 330-32.
 335-37. Light grey surface, burnished on the upper surface of the rim and on neck; Alice Holt Class 1 (Lyne and Jefferies, fig. 6, 1.6, 1.8, 1.10-14; late first to mid second century); jars with similar rim are present in groups of c. A.D. 105-30 at Verulamium (Wilson 1972, fig. 112).

Flagons/flasks

338. Light grey surface, burnished(?) on the rim.
 339. Body-sherd of No. 338(?); plain surface overlaid with burnished lattice-decoration.
 340. Base; smoothed grey surface.

Sandy Wares: (c) BB1 (Dorset Black-burnished Ware)

Dish

341. Burnished surface all over, burnt; similar at Exeter from c. A.D. 80/100 (Bidwell 1979), fig. 64, 115).

Grog-Tempered Fabrics: (a) As described for Group 1.1, and mainly of pre-conquest date.

Jars with upright and everted rims

342. Dark brown surface; neck and upper surface of the rim are burnished.
 343. With black core and dark brown surface; burnished on neck and upper surface of rim.

Grog-Tempered Fabrics: (b) *Fine brown matrix tempered with abundant large inclusions of grog (up to 4 mm in size) and some fine grit (?flint) (up to 2 mm).*

Quite a different fabric to (a) above, and probably Flavian and/or later (cf Nos. 227 and 374).

Storage Jar

344. Brown surface, smoothed externally.

Flint-Tempered Fabric (Silchester Ware) (As described in Pottery Group 1.1)

Jar with bead rim

As no. 64, above.

Jars with everted rims

345. Brown surface, burnished on the rim.

346. Brown to black plain surface with finger-impressions around the rim (pie-crust effect).

2.8: MANOR FARM (1980): PRIMARY DITCH SILTS

(Layers 73, 74, 75, 82, 83, 84, 87, 88, 91, p. 38) (FIGS. 49–50)

This is an important group because it appears to contain very little residual material. The latest datable sherd is a South Gaulish Dr 37 of *c.* A.D. 75–95. The predominance of wheel-thrown sandy grey wares supports a Flavian date for the group as a whole. It should be compared with the earlier assemblages 1.1–2 and also Group 2.1.

The Samian By Joanna Bird

South Gaul

| | |
|-----------------|--|
| Ritterling 8: | pre-Flavian (73). |
| Dr 15/17 (two): | pre- or early Flavian (78,88). |
| Dr 18 (ten): | pre- or early Flavian (73–5, 88, 90). |
| Dr 18: | probably Flavian (87). |
| Dr 18 R: | pre- or early Flavian (75). |
| Dr 27: | pre- or early Flavian (73). |
| Dr 27: | Flavian (75). |
| Dr 27 (three): | first century (75, 78, 88). |
| Dr 29 (two): | pre-Flavian (73,88). |
| Dr 29: | (Fig. 41,5) scroll and wreath in lower frieze, <i>c.</i> A.D. 60–80 (75). |
| Dr 29: | (Fig. 41,6) lower frieze scroll with basal wreath of chevron motifs; <i>c.</i> A.D. 60–75 (78). |
| Dr 30(?): | first century (83). |
| Dr 30 or 37: | first century (75). |
| Dr 37: | (Fig. 41,7) with trident tongue ovolo; <i>c.</i> A.D. 75–95 (75). |
| Closed form: | fragment with part of saltire of wavy lines; probably Flavian (78). |
| Bowl: | base; pre- or early Flavian (74). |

Other Fine Wares (FIG. 49)

British

Beakers

347. Hard, fine sandy red-brown fabric. The outer surface has a white slip on the neck and

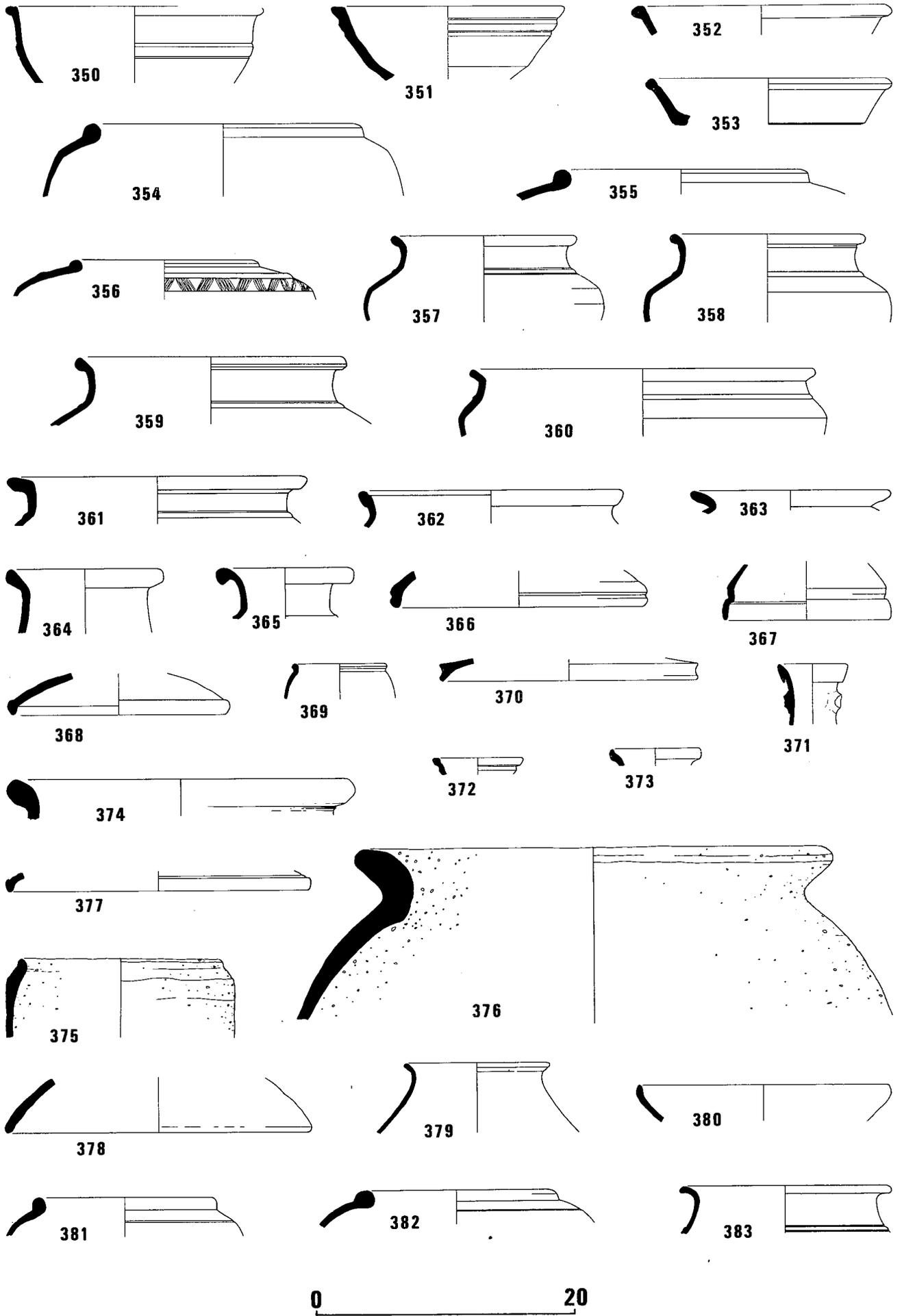


FIG. 50. The Pottery, Nos. 350-383 (Scale: $\frac{1}{4}$)

- base; the remainder of the body is smoothed, but with finely-rouletted decoration (75).
348. Fine, hard light grey sandy fabric with a smooth grey surface decorated with roundels composed of barbotine dots; similar at Verulamium from *c.* A.D. 55, but more commonly after *c.* A.D. 75 (Wilson 1972, fig. 103, No. 131) (73).
349. Fine, hard light grey sandy fabric with a smooth dark grey surface, decorated with barbotine 'hairpin' decoration; similar to that on Central Gaulish colour-coated ware from *c.* A.D. 70 (cf Greene 1978, fig. 2.3 No. 2) (73).

Coarse Wares (FIG. 50)

Sandy Wares: (a) Medium sandy even-textured grey fabric (Alice Holt)

Bowls

- 350-1. Burnished light to dark grey surface outside (cf Lyne and Jefferies 1979, Class 5, from *c.* A.D. 60-150) (75).

Dishes

352. Smoothed grey surface outside (75).
353. Burnished dark grey surface (74).

TABLE 11
POTTERY GROUP 2.8

Fine wares

| Samian (South Gaul) | |
|------------------------|------|
| V.E. | % |
| 0.71 | 11.2 |

Coarse wares

| | Sandy ware (a) (A-H) | | Sandy ware (b) | | Sandy ware (c) (misc. oxidised) | | Grog-tempered ware | | Silchester ware | | Totals | |
|----------------------------------|-------------------------|------|-------------------|-----|---------------------------------------|------|-----------------------|-----|--------------------|-----|--------|------|
| | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % |
| Beakers | † | | | | 0.30 | 4.7 | | | | | 0.30 | 4.7 |
| Bowls | 0.45 | 7.1 | | | | | | | | | 0.45 | 7.1 |
| Dishes | 0.12 | 1.9 | | | | | | | | | 0.12 | 1.9 |
| Jars (bead rim) | 0.44 | 6.9 | | | | | | | 0.20 | 3.1 | 0.64 | 10.0 |
| Jars (necked and everted rim) | 2.0 | 31.5 | 0.38 | 6.0 | | | | | 0.36 | 5.7 | 2.74 | 43.2 |
| Jars (narrow mouthed) | 0.40 | 6.3 | | | | | | | | | 0.40 | 6.3 |
| Jars (storage) | | | | | | | 0.05 | 0.8 | | | 0.05 | 0.8 |
| Lids | 0.14 | 2.2 | 0.20 | 3.1 | 0.15 | 2.4 | | | | | 0.49 | 7.7 |
| Jugs/Flagons | | | | | { 0.30 4.7 } | | | | | | 0.30 | 4.7 |
| | | | | | { 0.15 2.4 } | | | | | | 0.15 | 2.4 |
| | | | | | (Brockley Hill) | | | | | | | |
| Total | 3.55 | 55.9 | 0.58 | 9.1 | 0.90 | 14.2 | 0.05 | 0.8 | 0.56 | 8.8 | 5.64 | 88.8 |

Total (all wares): 6.35

V.E. = Vessel-Equivalent

Jars with bead rim

354. Plain dark grey surface (75).
 355. Light grey burnished surface (75).
 356. Light grey surface, burnished above the cordon; burnished lattice-decoration on reserved band below the cordon (75).

Jars with upright neck and everted rim

- 357-61. Grey surface, burnished outside (73,74,75).
 362. Grey surface, burnished outside, with a groove on the upper surface of the rim (75).
 363. Plain grey surface (75).

Jars with narrow neck

364. Grey surface, burnished outside (74).
 365. Light grey smoothed surface except on upper surface of the rim, which is burnished (75).

Lids

366. Plain grey surface (75).
 367. Fabric slightly vesicular and with brown margins; partly burnished outer surface (84).

Sandy Wares: (b) Medium sandy black fabric (same as Sandy fabric (a) in Pottery Group 1.1)

Jars with upright neck and everted rim

Not illustrated. Form as Nos. 357-61; black surface, burnished externally (75).

Lid

368. Grey to light brown surface; burnished on the upper surface (75).

Sandy Wares: (c) Miscellaneous medium sandy oxidised wares

Beaker

369. Reddish-brown fabric with a plain grey to black surface (75).

Lid

370. Reddish-brown ware with a black partially burnished outer surface (75).

Jugs/flagons

371. Hard, medium sandy reddish-brown fabric with a blackened reddish-brown plain surface (75).
 372. Hard, medium sandy yellow-red fabric with a plain yellow-red outer surface; probably Brockley Hill (cf Wilson 1972, fig. 107, Nos. 238-9; from c. A.D. 60) (75).
 373. Similar to No. 370, but finer and harder ware with burnished yellow-red surface (75).

Grog-Tempered Ware

Storage Jar

374. Hard, medium sandy grey fabric with abundant large grog inclusions (up to 2 mm); grey surfaces burnished externally (cf. those from Groups 2.2 and 2.7) (75).

Flint-Tempered Ware (Silchester Ware)

Jar with bead rim

375. Burnished externally (75).

Jar with everted rim

376. Burnished on upper surface of the rim (78,84).

2.9: MANOR FARM (1980): SECONDARY DITCH-SILTS INCLUDING F42 (FIGS. 50–51) (Layers 42, 65, 66, 70, 72, 90, p. 38)

The only sherds from this group which need be later than those from the primary silts are the mica-dusted lid, No. 378 (layer 72) and the jar with barbotine decoration on the rim, No. 385 (layer 66), which are probably Trajanic or Hadrianic in date.

The Samian By Joanna Bird

South Gaul

- Ritterling 12: pre-Flavian (72).
 Dr 18 (three): pre- or early Flavian (two) (72) and Flavian (66).
 Dr 27 (two): pre- or early Flavian (65), and Flavian (70).
 Dr 29: **(Fig. 41,8)** upper frieze scroll with rosette terminal and some wreath scrollery; *c.* A.D. 50–65 (72).

Amphora (p. 127)

Dressel 20.

Other Fine Wares (FIG. 50).

(a) Imported: Dish

377. Fine, highly micaceous cream to light brown fabric with an orange slip; first-century Lezoux (?) (72).

(b) British: Lid

378. Medium sandy reddish-brown to grey fabric with a black to grey (burnt) mica-dusted exterior, smoothed on the upper surface (72).

Coarse Wares (FIGS. 50–51)

Sandy Wares: (a) *Medium sandy, even-textured grey fabric (Alice Holt)*

Beaker

379. Dark grey fabric with a black surface, burnished outside (70).

Bowls

Not illustrated: As Nos. 350–1 in Group 2.8.

Dish

380. Fabric with brown margins and a grey to black burnished surface all over; Gallo-Belgic imitation (42).

Jars with bead rims

381. Grey surfaces, smoothed outside (72).
 382. Hard, somewhat coarser fabric with brown margins; black outer surface, burnished on

the outside above a reserved band (72).

Not illustrated: Joining sherd of No. 356 (72).

Jars with upright and everted rim

383. Grey surface, burnished on the outside (90).

Not illustrated: Other examples as Nos. 357–61 (66,70,72).

Sandy Wares: (b) Miscellaneous oxidised sandy fabrics

Beakers

384. Medium to coarse sandy reddish-brown fabric with a plain black slipped(?) surface; decorated with irregular barbotine dots above a zone of rouletting (90).

385. Hard, medium sandy light brown fabric with light grey margins and a smooth light grey surface with barbotine 'splashes' on the upper surface of the rim (72).

Grog-Tempered Fabric

Storage jar

386. Medium sandy, grey fabric with abundant grog temper (up to 2 mm); a black outer surface, smoothed externally and burnished on the upper surface of the rim (70).

2.10: MANOR FARM (1980): DITCH: UPPER SILTS SEALING F42

(Layers 28, 49, 51, 59, p. 40) (FIG. 51)

A sherd of samian provides a *terminus post quem* of c. A.D. 125–50.

The Samian By Joanna Bird

(a) *South Gaul*

Loeschke 2A: probably South Gaulish, but burnt; Claudian (59).

Dr 18 or 18R: Flavian-Trajanic (49).

Dr 27: Flavian-Trajanic (59).

Dr 30(?): Pre- or early Flavian (59)

Dr 36: later first century (49).

(b) *Central Gaul*

Dr 30 or 37: Hadrianic-Antonine (59).

Dr 37: **(Fig. 41, 9)** in the style of the Sacer-Attianus group. The ovolo and beads are shown on Stanfield and Simpson (1958) pl. 85, No. 6; and these potters also used the wreath festoons (Rogers 1974, Type F16). The animal is probably a small panther; c. A.D. 125–50 (51).

Dish sherd: second century (51).

Other Fine Wares

Beaker

387. Fine, light grey fabric with reddish-brown outer margins, dark brown slip all over; probably North Gaul Fabric 1 (Anderson 1980, c. A.D. 80–130/135) (59).

Lid

388. Lid or dish(?); medium reddish-brown to grey fabric with some grog(?) inclusions (up to 2–3 mm); smoothed (but worn) surfaces all over, dark brown outside, light brown interior; possibly Pompeian Red (cf Peacock 1977, Fabric 4, fig. 3, No. 2) (59).

Coarse Wares

Sandy Wares: (a) BB1 (Dorset Black-burnished Ware)

Beaker

389. Burnished externally (59).

Bowls

- 390–92. Burnished all over, with lattice-decoration superimposed outside, except on No. 390, which has the burnished lattice against a reserved background. Flat-rimmed bowls have been found at Exeter from *c.* A.D. 80/100 (Bidwell 1979, 203, fig. 64, Nos. 115, 117) and in the north from *c.* A.D. 120–150/60 (Gillam Types 219, 220, 306) (28, 59).

Sandy Wares: (b) Medium sandy, even-textured grey fabric (except No. 396)

Bowl

393. Dark grey fabric, with a black burnished surface on the inside; plain exterior; very similar to BB1 (51).

Jars with upright and everted rim

394. Dark grey fabric with white quartz sand temper; plain light grey surfaces (59).
 395. Light grey surface burnished externally (59).
 396. Reddish-brown fabric with grey surfaces, burnished on the outside (59).

3. THE EARTHEN ('ANTONINE') RAMPART**3.1: SOUTH-WEST ANGLE (1978(i)) (Layer 6, p. 58) (FIG. 51)**

The latest sherds include undecorated Antonine samian, a BB1 dish dated *c.* A.D. 160–200, and an Oxfordshire mortarium (No. 404) dating from *c.* A.D. 180.

The Samian By Joanna Bird*Central Gaul*

- Dr 18/31: Hadrianic–Antonine.
 Dr 33: Antonine.
 Dr 37: Antonine.

Amphora

- Dressel 20.

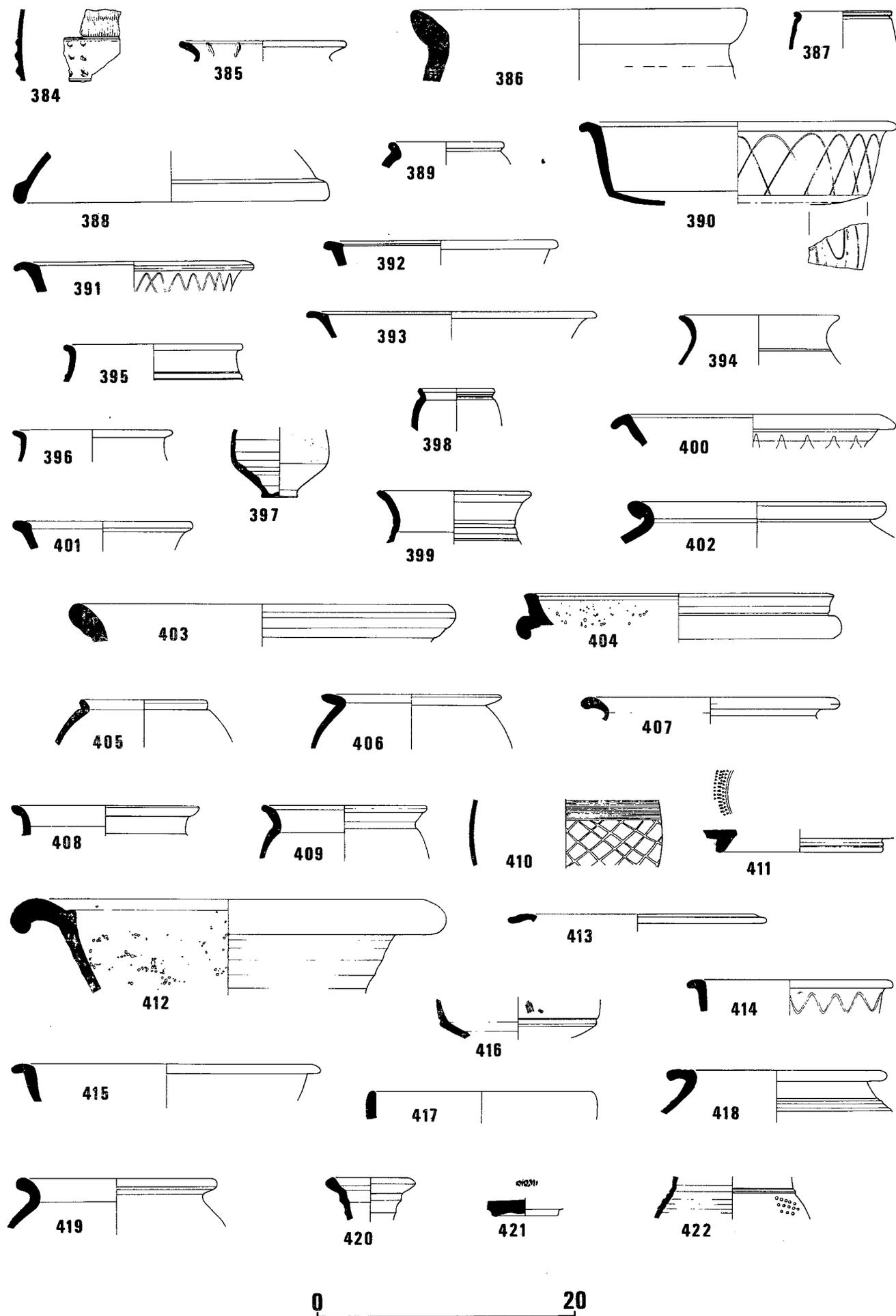


FIG. 51. The Pottery, Nos. 384-422 (Scale: $\frac{1}{4}$).

Other Fine Wares**Beaker**

397. Base; fine sandy orange-brown fabric with a metallic reddish-brown slip over rough-casting; North Gaul, Fabric 1 (Anderson 1980, fig. 11, *c.* A.D. 80–130/50).

Coarse Wares

Sandy Wares: (a) Medium sandy, even-textured grey fabric (Alice Holt)

Beaker

398. Grey to brown medium to coarse fabric with a black surface, well burnished outside and over the rim; reminiscent of BB1.

Jar with everted rim

399. Grey surface, burnished all over outside and over the rim.

Sandy Wares: (b) Medium sandy, even-textured black fabric, similar to but finer than BB1.

Bowls

400. Black surface, partly burnished with traces of lattice-burnishing on the body.

401. Similar to No. 400.

Not illustrated: Sherds of same vessel, No. 249 in Pottery Group 2.3 (Gillam Type 318, dated *c.* A.D. 160–200).

Dish

Not illustrated: Sherds of same(?) vessel (BB1), Nos. 250–1 in Pottery Group 2.3.

Sandy Wares: (c) Hard, coarse sandy (with abundant quartz sand up to 2mm) grey fabric.

Jars with everted rim

402. Plain grey surface all over.

Not illustrated: As No. 197 in Pottery Group 2.2.

Storage jar

403. Medium sandy grey fabric with rare larger rounded inclusions (?quartz) up to 5 mm; grey, smoothed surface with the larger grits showing on the surface.

Mortarium

404. Hard, fine fabric with a grey core and cream surface all over; rounded quartz trituration-grits; probably Oxfordshire (Young 1977, a variant of M 10–M 12, from *c.* A.D. 180).

3.2: AT THE SOUTH GATE (1975) (FIG. 51; p. 59)

The pottery from the body of the rampart on each side of the gate (Trenches 3, 4 and 5) is considered together. The latest pottery includes both plain and decorated Antonine samian including a bowl of Cinnamus, dated *c.* A.D. 150–180.

The Samian By Joanna Bird(a) *South Gaul*

Dr 18: Later first century, very worn inside (3/10).

(b) *Central Gaul*

Dr 31 (four): later second century (3/3; 4/2; 5/6).

Dr 33: mid second century (5/6).

Dr 37: mid second century, very worn footring (3/3).

Dr 37: **(Fig. 41, 10)** in the style of Cinnamus of Lezoux; the lion and boar (O.1491) are shown with similar leaf-tips as on Stanfield and Simpson (1958) pl. 163, No. 71, *c.* A.D. 150–180 (5/6).

Dr 37: **(Fig. 41, 11)** Les Martres. The ovolo is cramped but it is probably that also used with beads above on bowls attributed to Ioenalis (Stanfield and Simpson, pl. 38, No. 441) and Donnaucus (Terrisse, 1968, pl. XXVII, 396). The absence of a border beneath the ovolo is unusual; damaged, perhaps by fire; *c.* A.D. 100–125 (5/3).

Dr 38: Antonine (5/3).

Coarse Wares*Miscellaneous sandy fabrics***Beaker**

405. Medium sandy black fabric with traces of a burnished exterior; possibly BB1, but more likely an imitation (5/6).

Jars with everted rim

406. Fine sandy light grey fabric with a darker grey surface, burnished on the upper surface of the rim (5/3).

407. Medium to coarse sandy black fabric with a smooth black finish; burnished (?) on upper surface of the rim (5/6).

408. Medium sandy light grey fabric with a darker grey surface, burnished on the neck and rim (Alice Holt) (5/3).

409. BB1(?); burnt, medium sandy brown to grey fabric with a brown to grey and black surface (cf Gillam Type 127, *c.* A.D. 130–170) (5/6).

410. BB1; body-shoulder only with a regular lattice-burnished pattern below a zone of smooth burnishing (5/6).

Platter

411. Imitation Terra Nigra (?); fine to medium sandy light grey fabric with darker grey burnished(?) surface all over; rouletting on the inside of the base (5/6).

Mortarium

412. Hard, fine sandy off-white fabric with off-white surfaces; rounded translucent quartz trituration-grits; Oxfordshire (cf Young 1977, M 2. 2, *c.* A.D. 100–70; Wilson 1972, fig. 121, No. 769, from A.D. 140–50) (3/2).

3.3: RAMPART SECTION, EAST OF SOUTH GATE (1974)

(Layers 14, 16, p. 62) (FIG. 51)

This group complements the latest pottery from the underlying cultivated soil (Layer 18, above, p. 165). The latest samian is Hadrianic-Antonine.

The Samian By Joanna Bird(a) *South Gaul*

Dr 27: Neronian-early Flavian (14).

(b) *Central Gaul*

Dr 31: second century (16).

Dr 31: Hadrianic-early Antonine (14).

Dr 33: Hadrianic-early Antonine (14).

Dr 33 (two): second century (14, 16).

Coarse Wares*Miscellaneous Sandy Wares*

Bowls

413. Imitation Dr 33/36; hard, fine sandy light grey fabric with a smooth light grey surface (16).
414. BB1 (Dorset); burnished inside and on the rim; lattice-burnishing on a reserved background outside (Gillam Type 219, *c.* A.D. 120–150) (16).
415. Medium sandy dark grey fabric with a light grey surface (surface treatment lost) (14).
416. 'London ware'; fabric as Nos. 321–2, fine light brown fabric with grey margins; a black surface all over with 'comb' decoration (14).

Dish

417. Medium sandy light grey fabric with grey surface, burnished inside (14).

Jars with everted rim

418. Hard, medium sandy grey fabric with a plain dark grey surface; grooves on upper surface of the rim and around upper part of the body (14).
419. Coarse sandy grey fabric with a rough grey surface (14).

Flagon

420. Medium sandy even-textured orange fabric with a cream slip all over; similar at Verulamium in the first half of the second century (Wilson 1972, fig. 111, Nos. 403–406; fig. 116, Nos. 559–66) (16).
421. Stamped base; hard, fine sandy light red fabric, tending to laminate, smooth surface stamped centrally NIMII(?) (**Fig. 41, 13**) (16).

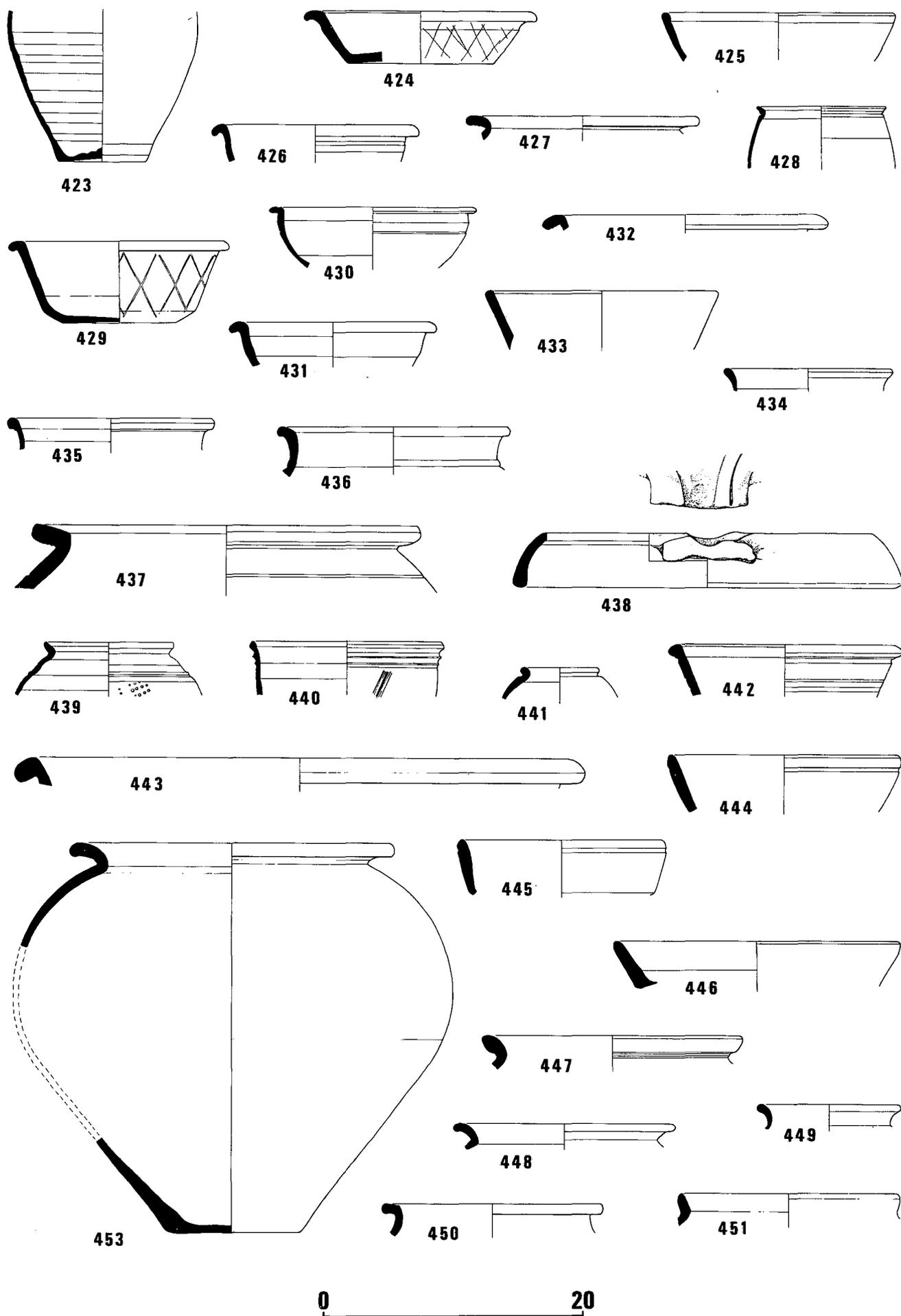


FIG. 52. The Pottery, Nos. 423-451 (Scale: $\frac{1}{4}$).

3.4: AT THE SOUTH-EAST GATE (1976) (FIGS. 51-52)

A. *Outside the gate; from the clay dumped upon the timber raft (1/3, 4, 5) (p. 65).*

The Samian By Joanna Bird(a) *South Gaul*

Dr 27: later first century (1/4).

(b) *Central Gaul*

Dr 18/31: slightly burnt; mid to later second century (1/3).

Dr 33: Antonine (1/3).

Other Fine Wares

Beakers

422. Hard, fine sandy grey fabric with a burnished grey surface and barbotine-dot decoration; similar at Verulamium *c.* A.D. 80-130 (Wilson 1972, fig. 107, No. 255) (1/4).

423. Beaker(?) base; medium sandy red-brown fabric with grey margins (the fabric is rich in white quartz sand, up to 0.5 mm); the outside has a grey to black lustrous surface (?slipped) and is rough to touch, but not deliberately roughcast (1/5).

Coarse Wares*Miscellaneous Sandy Fabrics*

Dishes

424. BB1 (Dorset); a worn exterior with traces of burnished lattice-decoration outside (cf Gillam Type 309, dated *c.* A.D. 160-200) (1/4).

425. Medium sandy grey fabric with rare sub-rounded inclusions up to 2 mm, and moderately abundant sub-rounded sand up to 0.5 mm, and a plain black surface (1/3).

426. Dish or bowl; medium sandy reddish-brown fabric with grey margins, with ill-assorted sub-angular quartz of *c.* 0.5 mm and sparse grits up to 2 mm; smoothed grey surface with burnishing on the rim and bands of burnishing around the body (1/3).

Jar with everted rim

427. Medium sandy grey fabric with light red margins and a plain reddish-yellow surface (1/3).

B. *Inside the gate: from the rampart to the east of the gate and from between the passage walls (2/2, 4, 6, 9, 11) (p. 63).*

The Samian By Joanna Bird(a) *South Gaul*

Dr 15/17 or 18: first century (2/6).

Dr 18 (two): pre-Flavian (2/9, 11).

- Dr 18: later first century (2/2).
 Dr 24/25: pre-Flavian (2/11).

(b) *Central Gaul*

- Dr 18/31: Les Martres, early second century (2/4).
 Dr 33(?): early to mid second century (2/6).

Other Fine Wares

Beaker

428. Fine sandy reddish-brown to grey fabric with rough-casting on the outside and a muddy blue-black slip all over; North Gaul, Fabric 1 (Anderson 1980, fig. 11, No. 1, *c.* A.D. 80–130/135) (2/4).

Coarse Wares

Miscellaneous sandy wares

Bowls

429. BB1 (Dorset); open burnished lattice-decoration (*cf* Gillam Type 219, *c.* A.D. 120–150) (2/4).
 430. Medium sandy light grey fabric with partly oxidised margins; grey surface, smoothed outside (2/2).
 431. Medium sandy grey fabric with a dark grey surface, burnished on the rim (2/2).
 432. As No. 431, but with a plain grey surface (2/2).

Dish

433. Fine sandy black fabric with some mica; plain surfaces, red-brown outside (2/4).

Jars with everted rim

434. Medium sandy light grey fabric, plain grey surface (2/2).
 435. Fine sandy grey fabric with dark grey-to-black surface, burnished outside (2/6).
 436. Hard, fine to medium grey sandy fabric with light grey surfaces, burnished on the outside and upper surface of the rim; Alice Holt, Class 1 (Lyne and Jefferies 1979, fig. 6) (2/2).

Storage jar

437. Medium to coarse sandy grey fabric with inclusions of rounded quartz (1–2 mm) and a plain grey surface (2/2).

Mortarium

438. Flange only; fine sandy cream fabric with a cream surface; Oxfordshire (*cf* Young 1977, M 3 fig. 18); *c.* A.D. 140–200) (2/4).

4. FILL OF THE CONSTRUCTION-TRENCH OF THE TOWN WALL (FIGS. 52-53)

4.1: RAMPART SECTION, EAST OF THE SOUTH GATE (1974): PRIMARY FILL (Layers 12, 17, p. 67)

Many of the sherds in the fill of the Wall-trench are of second-century date, probably deriving from the rampart itself and the underlying occupation. However, among the commoner coarse-ware types, there are examples of dishes (Nos. 444-5; 458-60) and jars (Nos. 448, 461) whose forms can be closely paralleled at Portchester (in the south of Hampshire) where the Shore Fort was probably constructed in the 280s. This site, therefore, provides a *terminus ante quem* for the above sherds which occurred in primary contexts. Unfortunately, because of the lack of published well-dated groups of the third century, it is not yet possible to discover when these types first appeared. A significant factor may also be the absence of slipped finishes on the jars and dishes (except for No. 453). Decoration of this kind is a common feature of these forms from the end of the third to the mid to late fourth century. A further point, which may yet prove significant with regard to date, is the relatively high proportion of BB1 in the assemblage, 9.5% in the primary fill and 29% in the upper fill (below, p. 187). In arriving at the date for this group, other factors also need to be taken into account, particularly the absence of examples of radiates and their imitations in the construction-trench (see above, p. 68). With these provisos, a date of *c.* A.D. 260-80 is suggested for this group.

The Samian By Joanna Bird

Central Gaul

- Dr 18/31: stamped [JM: *c.* A.D. 100-150 (12).
Dr 33: stamped POTITWI; Antonine (12).

Other Fine Wares

Not illustrated: Oxfordshire ware; body-fragment of a red-slipped mortarium, imitation Dr 45 (Young 1977, C 97, from *c.* A.D. 240/50) (12).

Amphora (see p. 128)

Pélichet 47 (South Gaul).

Coarse Wares (FIGS. 52-53)

The Sandy Wares: (a) *Hard, fine sandy light grey fabric*

Beaker

439. Light grey surface well-smoothed, with barbotine decoration (12).

Bowl

440. Light grey surface well-smoothed, with lightly impressed comb decoration (12).

TABLE 12

POTTERY GROUP 4.1 (*lower fill*)**Fine wares**

| | Samian (Central Gaul) | | Cologne | | Oxfordshire (red slip) | |
|-------|--------------------------|-----|---------|---|---------------------------|---|
| | V.E. | % | V.E. | % | V.E. | % |
| Total | 0.05 | 1.2 | † | | † | |

Coarse wares

| | Sandy ware (a) | | Sandy ware (b) (A-H) | | Sandy ware (c) (BB1) | | Sandy ware (d) | | Sandy ware (e) | | Total | |
|--------------------|-------------------|-----|-------------------------|------|-------------------------|-----|-------------------|------|-------------------|-----|-------|------|
| | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % | V.E. | % |
| Beakers | 0.16 | 3.7 | 0.20 | 4.6 | 0.06 | 1.4 | 0.24 | 5.6 | | | 0.66 | 15.3 |
| Bowls | 0.12 | 2.8 | 0.15 | 3.5 | 0.07 | 1.6 | 0.22 | 5.1 | | | 0.56 | 13.0 |
| Dishes | | | 0.43 | 10.0 | 0.25 | 5.8 | | | | | 0.68 | 15.8 |
| Jars (bead rim) | | | | | | | 0.08 | 1.9 | | | 0.08 | 1.9 |
| Jars (everted rim) | | | 1.53 | 35.4 | 0.03 | 0.7 | | | 0.06 | 1.4 | 1.62 | 37.5 |
| Lids | | | | | | | | | 0.12 | 2.8 | 0.12 | 2.8 |
| Flagons/jugs | | | 0.33 | 7.6 | | | | | 0.22 | 5.1 | 0.55 | 12.7 |
| Total | 0.28 | 6.5 | 2.64 | 61.1 | 0.41 | 9.5 | 0.54 | 12.6 | 0.4 | 9.3 | 4.27 | 99.0 |

Total (all wares): 4.32

† Body-sherds present, but no rim-sherds

V.E. = Vessel-Equivalent

*Sandy Wares: (b) Hard, fine to medium grey sandy fabric (Alice Holt)***Beaker**

441. Plain light grey surface (12).

Bowls

442. Grey smoothed surfaces (12).

443. Bowl or large jar; grey surface, burnished over the rim and exterior (12).

Dishes

444. Light grey surface partially burnished outside; grooves below the rim (cf Lyne and Jefferies 1979, Class 6A.8, fig. 36; c. A.D. 270-400) (12).

445. As No. 444, but without external burnishing; groove on the rim (12).

446. Dark grey surface with partial horizontal burnishing inside and out (12).

Jars with everted rim

447. Plain grey surfaces (12).

448. Dark grey surfaces, with burnishing on the upper surface of the rim, as at Portchester from c. A.D. 280/90 (Fulford 1975(b), Type 127) (12).

449. Grey surfaces, smoothed (12).

450. Grey surface, burnished on the upper part of the rim and on the exterior (12).

451. Plain grey surfaces (12).
 452. Grey sandy, smoothed all over (12).
 453. Joining sherds of about half the vessel; burnished black slip outside and over the rim; heavily lime-encrusted inside and out (12).

Flagons

454. Traces of horizontal burnishing over the exterior (12).
 455. Traces of a black slip on the rim (12).

Sandy Wares: (c) BB1 (Dorset Black-burnished Ware)

Beaker

456. Burnished outside and over the rim (12).

Bowl

457. Burnished inside all over; burnished areas on reserved background outside (12).

Dishes

- 458–60. Burnished inside and on the rim; burnished arc- or lattice-decoration outside against a reserved background; at Portchester from *c.* A.D. 280/90 (Fulford 1975 (b), Type 107.7–10; cf also Gillam Type 329, *c.* A.D. 190–340) (12).

Jar with everted rim

461. Burnished on the upper surface of the rim; at Portchester from *c.* A.D. 280–90 (Fulford 1975(b), Type 126; cf also Gillam Type 146, *c.* A.D. 280–350) (12).

Sandy Wares: (d) Miscellaneous reduced grey or black medium sandy wares.

Beaker

462. Dark grey to black medium sandy; smoothed externally and inside the rim (12).

Bowls

463. Medium sandy black fabric, burnished black outside and over the rim; probably a variant of Alice Holt Class 5 (Lyne and Jefferies 1979, fig. 13, from *c.* A.D. 60–150) (12).
 464. Imitation BB1; dark red-brown to black, medium sandy fabric with burnishing over the inside and upper surface of the rim; no trace of further burnishing on the outside of the body. (12).

Jar with bead rim (Storage jar)

465. Coarse sandy light grey-to-brown fabric with a grey surface, burnished outside (12).

Sandy Wares: (e) Miscellaneous oxidised medium sandy wares.

Jar with out-bent rim

466. Medium sandy red-brown fabric with a black surface all over, burnished on the upper surface of the rim and outside (12).

Lid

467. Medium sandy reddish-yellow fabric with a reddish-yellow to grey surface (12).

Flagon

468. Medium sandy yellow fabric with a smooth cream-yellow surface; similar at Verulamium *c.* A.D. 135–90 (Wilson 1972, fig. 32, No. 1072) (12).

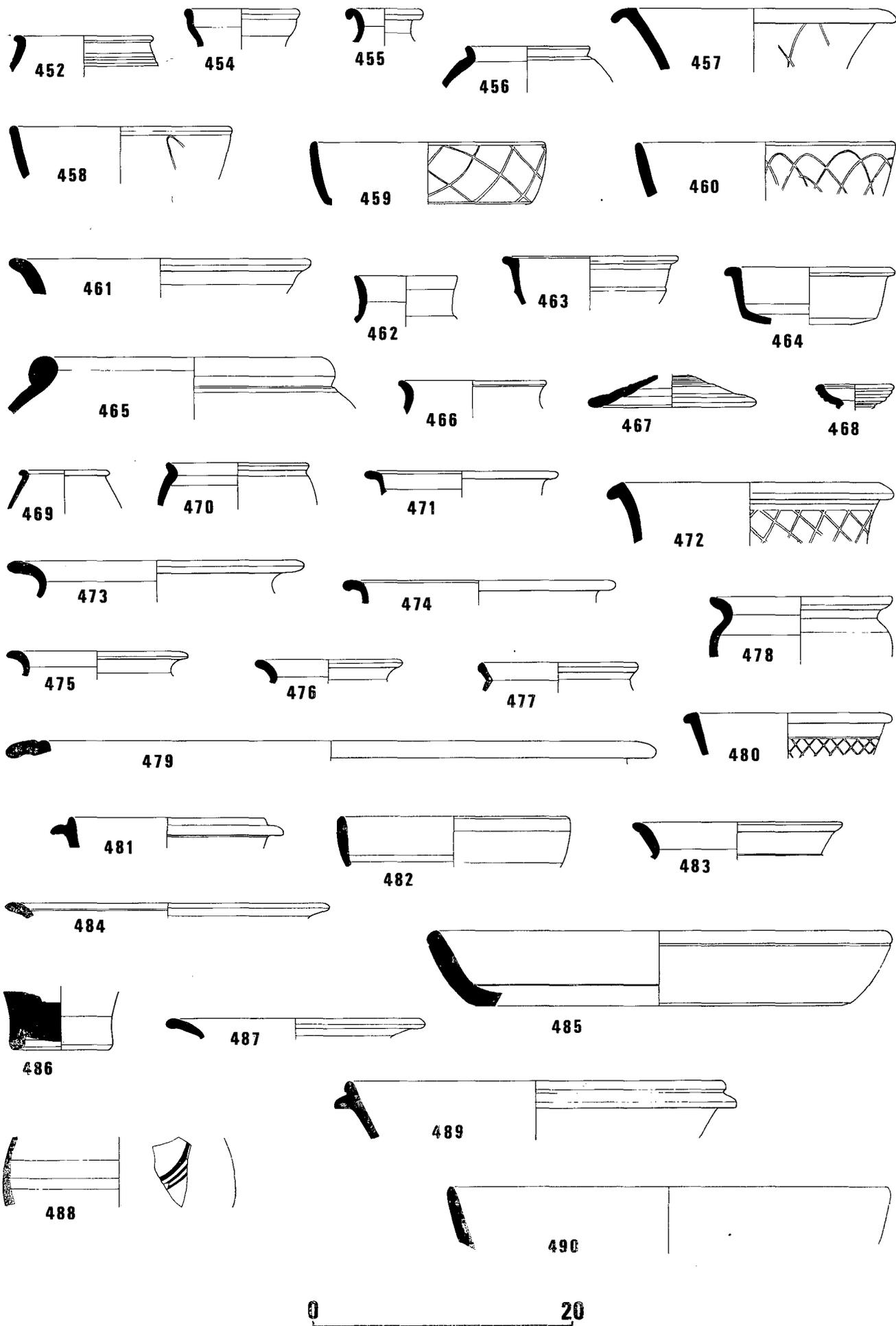


FIG. 53. The Pottery, Nos. 452-490 (Scale: $\frac{1}{4}$).

4.2: RAMPART SECTION (1974): CONSTRUCTION-TRENCH, UPPER FILL.

(Layers 5–10, p. 67) (FIG. 53)

The upper fill of the trench contained a greater number – and higher proportion – of the commoner later Roman bowl, dish and jar forms which first appeared in the primary fill of the trench. The latest sherds from the primary fill are of a date-range similar to that of the latest material from the secondary fill. As in 4.1, very few vessels are decorated with a grey or black slip. Although the significance of this is as yet unclear, BB1 (Dorset) accounts for a very high proportion (29%) of the group. Altogether, this suggests that the assemblage was composed within the last two(?) decades of the third century, following closely after the primary fill.

Fine Wares

Beaker

469. Fine, grey fabric with a light brown core; grey surface outside, light brown inside (10).

Coarse Wares

Sandy Wares: (a) Medium sandy even-textured grey fabric (Alice Holt)

Beaker

470. Black surface, burnished externally (7).

Bowls

471. Black slip all over, burnished inside (7).
472. Light yellow-grey surface, burnished on the rim; burnished lattice-decoration outside; Alice Holt Class 5D.1 (Lyne and Jefferies 1979, fig. 34, c. A.D. 150–80) (6).

Jars with everted rim

473. Grey surface, smoothed all over (8).
474. Grey surface, burnished on the upper surface of the rim; at Portchester from c. A.D. 280–90 (Fulford 1975(b), Type 132.1–2) (5).
475. Grey surface, burnished on the upper surface of the rim; at Portchester from c. A.D. 280–90 (Fulford 1975(b), Type 129) (8).
476. Brown fabric, black surface all over; burnished on the upper surface of the rim; at Portchester from c. A.D. 280–90 (Fulford 1975 (b), Type 127) (5).
477. Brown fabric, plain grey surface; at Portchester from c. A.D. 280–90 (Fulford 1975(b), Type 131.3) (10).
478. Light grey to off-white fabric with a smoothed, light grey surface outside and over the rim (5).

Sandy Wares: (b) BB1 (Dorset Black-burnished Ware)

Bowls

479. Burnished on the upper surface of the rim (Gillam Type 306, c. A.D. 120–60) (8).
480. Burnished all over inside and over the rim; burnished lattice-decoration outside (cf Gillam Type 309, c. A.D. 160–200) (8).
481. Burnished all over inside and over the upper surface of the flange; at Portchester from c. A.D. 280–90 (Fulford 1975(b), Type 85); similar at Exeter from the late third century (Bidwell 1979, fig. 67, 200).

Dish

482. Burnished all over inside; traces of burnished area outside; at Portchester from *c.* A.D. 280–90 (Fulford 1975(b), Type 107.7–10) (5).

Jar with everted rim

483. Upper surface of the rim is burnished; at Portchester from *c.* A.D. 280–90 (Fulford 1975(b), Type 126; cf also Gillam Type 146, *c.* A.D. 280–350) (5).

Sandy Wares: (c) Miscellaneous

Bowl or jar

484. Medium sandy red-brown fabric; traces of burnishing on the upper surface of the rim (6).

Dish

485. Coarse sandy dark grey fabric with brown margins and a black surface all over; burnished inside and smoothed outside (8).

4.3: SOUTH-EAST GATE (1976): WALL CONSTRUCTION-TRENCH: UPPER FILL

(Layer 2/3, p. 69) (FIG. 53)

The coarse-ware sherd suggests a late third-century date, probably after *c.* A.D. 280.

Amphora

486. Pélichet 47 (South Gaul); base.

Coarse Ware

Jar with everted rim

487. BB1 (Dorset); burnished on upper surface of the rim; at Portchester from *c.* A.D. 280–90 (Fulford 1975(b), Type 126; cf also Gillam Type 148, *c.* A.D. 290–370).

5. THE SOUTH GATE (1975): LATE ROMAN GROUPS (FIGS. 53–55)

5.1: NORTH-SOUTH STREET: ROAD GULLY (LOWER FILL)

(Layer 2/11, p. 74) (FIGS. 53–4)

A small group whose contents suggest a date at the end of the third or beginning of the fourth century. Associated with the group was a coin of Carausius, A.D. 286–93.

Fine Wares

New Forest (Fabric 1(a))

Beaker

488. Sherd with concentric circular grooves (Fulford 1975(a), Type 39, from *c.* A.D. 270/300).

Oxfordshire

Imitation samian Dr 45 (Young 1977, Type C 97, from *c.* A.D. 240–50).

Coarse Wares

Sandy Wares: (a) Medium sandy, even-textured grey fabric (Alice Holt)

Bowl

489. Grey-black slip all over (cf Lyne and Jefferies 1979, Class 5B.4–5, *c.* A.D. 270–350).

Dish

490. Grey slip all over (cf Lyne and Jefferies 1979, Class 6A.4, *c.* A.D. 270–350).

Jars with everted rim

491–92. Plain light to dark grey surface.

493. Grey slip all over, burnished on the upper surface of the rim.

Grog-Tempered Fabric

Jar with everted rim

Not illustrated: Hand-made coarse grey fabric, tempered with grog, chalk (up to 3 mm) and finer grit (1–2 mm); with a grey surface, burnished on the upper surface of the rim. (Type as No, 496, below; cf Fulford 1975(b), *c.* A.D. 280–400).

5.2: ROAD-GULLY (UPPER FILL) (2/4, p. 74) (FIG. 54)

A coin of Magnentius, A.D. 351–3, is associated with this group.

Fine Ware*Oxfordshire*

Bowl

494. Red-slipped with fine rouletting below the rim (Young 1977, Type C 68, *c.* A.D. 300–400).

Coarse Wares*Miscellaneous Fabrics*

Jars with everted rim

495. Fine to medium sandy fabric with a black slip all over, burnished on the upper surface of the rim and body; traces of burnished lattice-decoration below.

496. Hand-made coarse grey fabric tempered with grog (up to 2–3 mm), chalk (up to *c.* 3 mm), finer grits (1–2 mm); grey surface, burnished on the rim.

5.3: MAKE-UP TO THE LATEST SURFACE OF THE ROAD

(1/2-3, 2/2, 5/8, p. 74) (FIG. 54)

This group has a *terminus post quem* of A.D. 351 (Group 5.2).

Fine Wares*New Forest* (Fabric 1(a))

Beakers

Not illustrated: Body-sherd (Fulford 1975(a), Type 27).

Not illustrated: Body-sherd with traces of white painted lattice/ladder decoration, as on Fulford 1975(a), Type 42.1-2 from *c.* A.D. 270/300.

Oxfordshire

Bowl

497. Possibly another fragment of No. 494; red-slipped bowl with rouletted decoration beneath the rim (Young 1977, C 68; *c.* A.D. 300-400) (5/8).

Not illustrated: Base of white-ware mortarium.

Coarse Wares

Sandy Wares: (a) *Fine to medium sandy grey fabric (Alice Holt).*

Bowl

498. Black slip all over; burnished inside and on the rim (Lyne and Jefferies 1979, Class 5B, 6, 8-10; *c.*A.D. 270-420) (1/3).

Jars with everted rim

499. Plain grey surface (1/2).

500. Plain grey surface; at Portchester from *c.* A.D. 280-300 (Fulford 1975(b), Type 131) (1/3).

Sandy Wares: (b) *Coarse sandy (up to 1-2 mm) grey fabric with light brown margins; light grey rough surface.*

Storage jar

501. Light grey, rough surface (1/2).

5.4: SOUTH GATE (1975): LATE ROMAN RUBBISH-DEPOSIT ON THE TAIL OF THE RAMPART (4/3, 4, 5, p. 75) (FIGS. 54-55)

The latest coins in this group are of Valens (364-78) and Gratian (367-75). Among the New Forest and Oxfordshire wares are types which occur only after *c.* A.D. 350.

Fine Wares*New Forest* (Fabric 1(a))

Beakers

502. With impressed decoration (Fulford 1975(a), Type 36, from *c.* A.D. 300).

Not illustrated: Fulford 1975(a), Types 27, 27.1 from *c.* A.D. 260-70.

Bowl

Not illustrated: Body-*sherd* with red slip and 'ovolo'-type stamped decoration (as on Fulford 1975(a), Type 75.1 from *c.* A.D. 345–50).

Oxfordshire

Beakers (not illustrated)

- (i) Rim of globular beaker (Young 1977, C 23–33, from *c.* A.D. 270).
- (ii) Body-*sherd* with rouletted decoration (Young 1977, C 23, from *c.* A.D. 270).
- (iii) Body-*sherd* with white painted decoration (Young 1977, C 26–27, from *c.* A.D. 270).

Bowls with red slip

503. With rosette stamping (cf Young 1977, C 83, from *c.* A.D. 340/50).

Not illustrated: (i) Body-*sherd* with demi-rosettes as No. 503.

- (ii) Body-*sherd* with rouletted decoration (Young 1977, C 75, from *c.* A.D. 325).
- (iii) Handled bowl (Young 1977, C 85, from *c.* A.D. 350).
- (iv) Imitation Dr 31 (Young 1977, C 45, from *c.* A.D. 270).
- (v) Imitation Dr 36 (Young 1977, C 47, from *c.* A.D. 270).
- (vi) Imitation Dr 38 (Young 1977, C 51, from *c.* A.D. 240).

Mortaria with red slip (not illustrated)

- (i) Imitation Dr 45 (Young 1977, C 97, from *c.* A.D. 240).
- (ii) Flanged rim (Young 1977, C 100.2–3, from *c.* A.D. 300).

Mortarium with white slip (not illustrated)

As Young 1977, WC 7, from *c.* A.D. 240.

Mortaria with white sandy fabric and white to cream surfaces (not illustrated)

- (i) As Young 1977, M 18, from *c.* A.D. 240.
- (ii) As Young 1977, M 22, from *c.* A.D. 240.

Nene Valley

Beaker (not illustrated)

Body-*sherd* with white painted scroll in barbotine.

Mortarium (not illustrated)

Body-*sherd* (cream-buff fabric and surfaces).

Coarse Wares

Sandy Wares: (a) *Medium sandy, even-textured grey fabric (Alice Holt)*

Bowls

- 504. Plain grey surface (cf Lyne and Jefferies 1979, Class 5C.3, from *c.* A.D. 270).
- 505. Imitation BB1; with black slip all over; burnished all over inside and on the rim; traces of burnished lattice-decoration outside; Alice Holt(?) (cf Gillam Type 221, dated *c.* A.D. 140–180).
- 506–7. With an off-white to dark grey slip, burnished inside and over the rim.
- 508–9. As Nos. 506–7, but with traces of a burnished lattice-decoration inside (cf Lyne and Jefferies 1979, Class 5B. 4–9, from *c.* A.D. 270).

Dishes

- 510. Black surface, burnished internally.

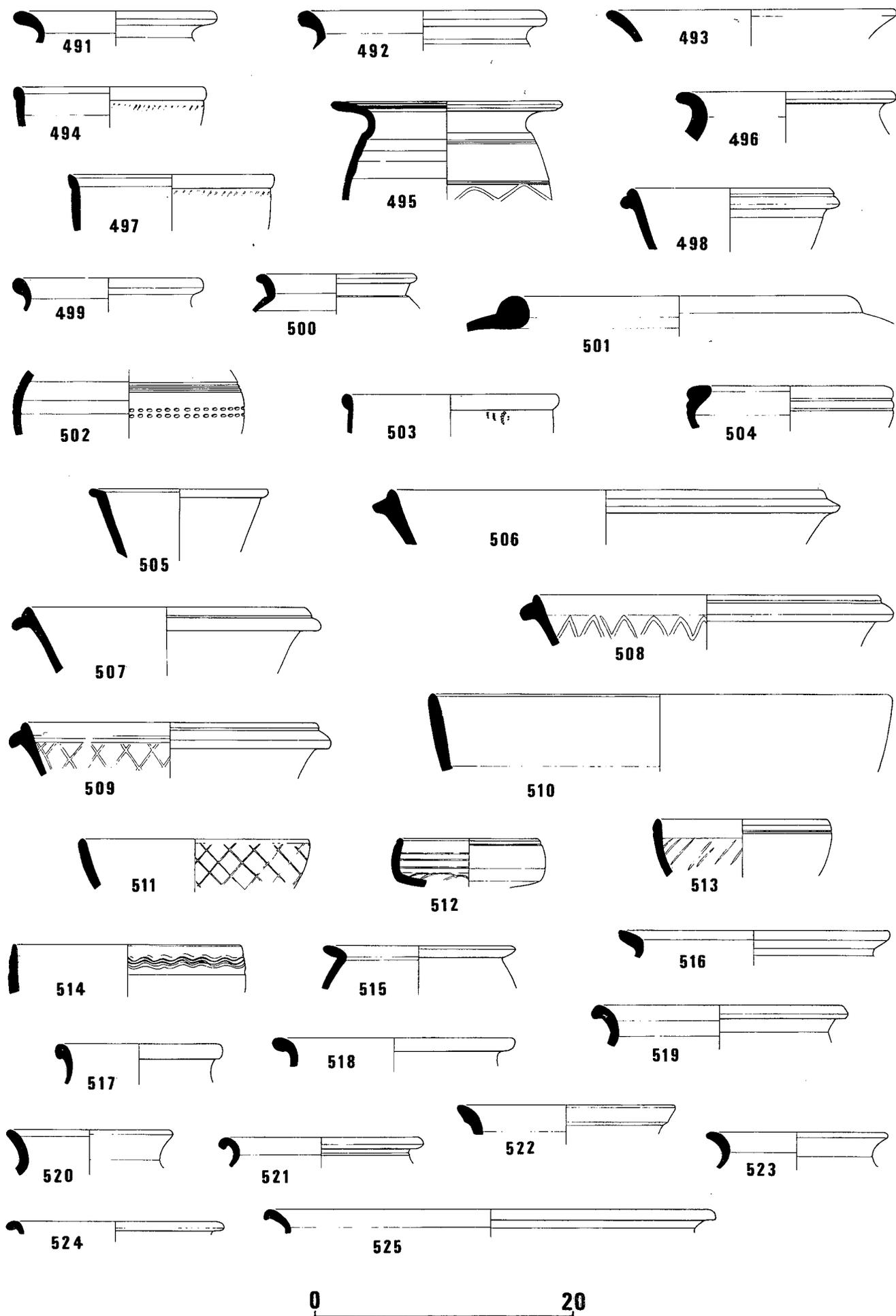


FIG. 54. The Pottery, Nos. 491-525 (Scale: $\frac{1}{4}$).

TABLE 13

POTTERY GROUP 54

Fine wares

| | Samian (Central Gaul) | | Nene Valley | | New Forest | | Oxfordshire | | Total | |
|----------|--------------------------|-----|-------------|---|------------|-----|--------------|------|-------|------|
| | W.E. | % | W.E. | % | W.E. | % | W.E. | % | W.E. | % |
| Bowls | | | † | | 0.10 | 1.7 | 0.27 | 4.6 | 0.37 | 6.3 |
| Bowls | 0.27 | 4.6 | | | † | | 0.09 | 1.5 | 0.36 | 6.1 |
| Mortaria | | | † | | | | 0.18 | 3.1 | 0.39 | 6.7 |
| | | | | | | | 0.21 | 3.6 | | |
| | | | | | | | (white slip) | | | |
| Total | 0.27 | 4.6 | | | 0.10 | 1.7 | 0.75 | 12.8 | 1.12 | 19.1 |

Coarse wares

| | Sandy ware (a) (A-H) | | Sandy ware (b) (?A-H) | | Sandy ware (c) (BB1) | | Grog-tempered | | Total | |
|--------------------|-------------------------|------|--------------------------|-----|-------------------------|-----|---------------|-----|-------|------|
| | W.E. | % | W.E. | % | W.E. | % | W.E. | % | W.E. | % |
| Bowls | 1.03 | 17.6 | | | 0.17 | 2.9 | 0.18 | 3.1 | 1.38 | 23.6 |
| Dishes | 0.96 | 16.4 | 0.04 | 0.7 | 0.12 | 2.1 | 0.13 | 2.2 | 1.25 | 21.4 |
| Jars (everted rim) | 1.39 | 23.8 | 0.16 | 2.7 | 0.16 | 2.7 | 0.06 | 1.0 | 1.77 | 30.2 |
| Jars (storage) | 0.05 | 0.9 | | | | | | | 0.05 | 0.9 |
| Bids | 0.08 | 1.4 | | | | | | | 0.08 | 1.4 |
| Jugs/flagons | 0.20 | 3.4 | | | | | | | 0.20 | 3.4 |
| Total | 3.71 | 63.4 | 0.20 | 3.4 | 0.45 | 7.7 | 0.37 | 6.3 | 4.73 | 80.9 |

Total (all wares): 58.5

† Body-sherds present, but no rim-sherds

W.E. = Vessel Equivalent

511. Grey to black slip inside, burnished lattice-decoration outside.
 512. Grey surface; burnished pattern inside; at Portchester from c. A.D. 280-90 (Fulford 1975(b), Type 109.1-3).
 513. Grey to black slip, burnished pattern inside; at Portchester from c. A.D. 345 (Fulford 1975(b)), Type 109.5-6).
 514. Black slip, burnished inside; plain black exterior with wavy combed decoration (cf Lyne and Jefferies 1979, Class 6A.12, from c. A.D. 270)

Jars with everted rim

- 515-22. With plain grey surfaces. Vessels of this kind are a feature of third-century production at Alice Holt (Lyne and Jefferies 1979, 35 (Class 3)), and at Portchester similar jars were less popular after c. A.D. 345 (Fulford 1975(b), 357).
 523-25. Grey to black slip on the rim, whose upper surface is usually burnished. Vessels of this kind became popular from the later third century (Lyne and Jefferies 1979, Class 3B, from c. A.D. 270); at Portchester, commonly from c. A.D. 280-90 to c. A.D. 350 (Fulford 1975(b), 357).
 526. Grey slip on the upper surface of the rim (Lyne and Jefferies 1979, Class 5E.2-3, from c. A.D. 270).

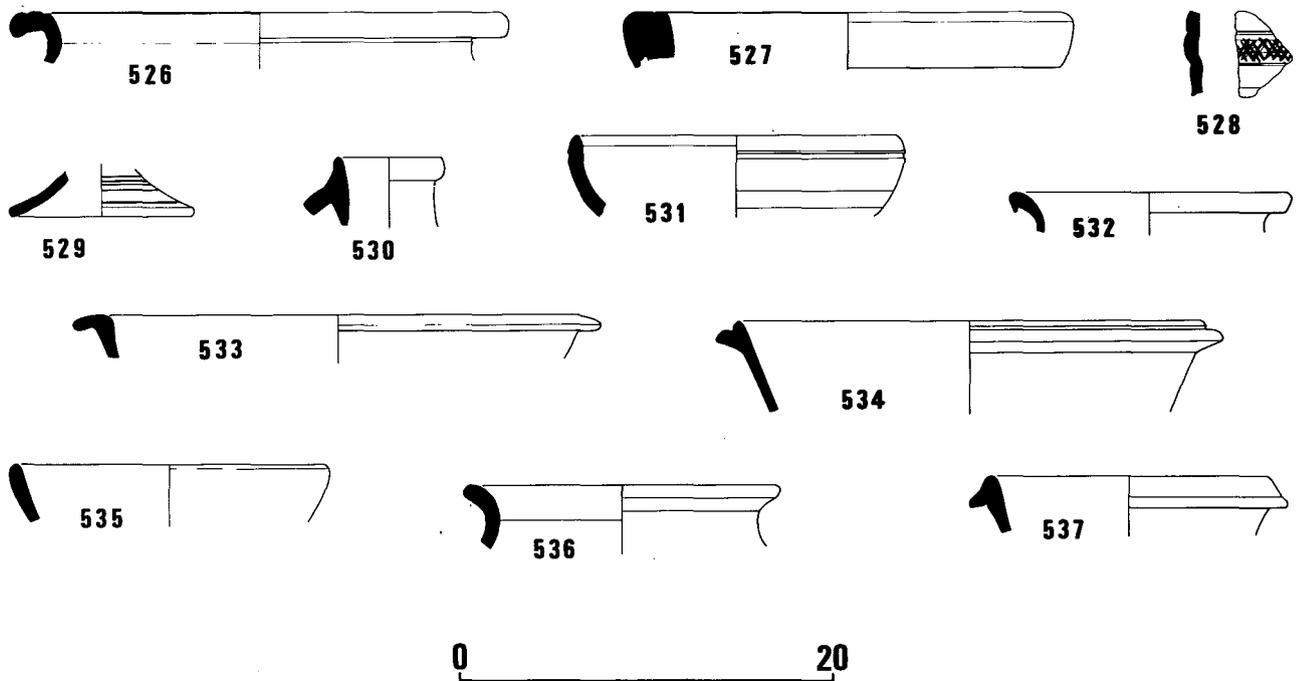


FIG. 55. The Pottery, Nos. 526–537 (Scale: $\frac{1}{4}$).

Storage jar (see also below, p. 195)

527. Grey, finely burnished upper surfaces (Lyne and Jefferies 1979, Class 1C.3, from *c.* A.D. 270).
 528. Storage jar(?); grey surface with cross-hatched decoration on the cordon (Lyne and Jefferies 1979, Class 1A, from *c.* A.D. 300).

Lid

529. Plain dark grey surface.

Jug or flagon

530. Grey-black slip outside (cf Lyne and Jefferies 1979, Class 8A.11–14, from *c.* A.D. 270); at Portchester from *c.* A.D. 280–90 (Fulford 1975(b), Type 159).

Sandy Wares: (b) *Hard, medium sandy, reddish-yellow fabric* (Portchester, Fabric D; Fulford 1975 (b), 299–301; Alice Holt; ‘Surrey Buff Ware’ (Lyne and Jefferies 1979, 35).

Dish

531. Plain reddish-yellow surface; at Portchester from *c.* A.D. 330 (Fulford 1975(b), Type 109.8; cf also Lyne and Jefferies 1979, Class 6A.11, from *c.* A.D. 330).

Jar

532. Plain, reddish-yellow surface (cf Lyne and Jefferies 1979, Class 3C.13, from *c.* A.D. 330).

Sandy Wares: (c) *BB1 (Dorset Black-burnished Ware)*

Bowls

533. Burnished on the upper surface of the rim (cf Gillam Types 308/309, from *c.* A.D. 130/160 to 180/200).
 Not illustrated: As at Portchester, from *c.* A.D. 280–90 (Fulford 1975(b), Type 85.6–8).

Dishes

- Not illustrated: As at Portchester, from *c.* A.D. 280–90 (Fulford 1975(b), Type 107.7–10).

Jars with everted rim

Not illustrated: As at Portchester, from *c.* A.D. 280–90 (Fulford 1975(b), Type 126).

Grog-Tempered Fabrics (Hand-Made) (cf Portchester, Fabric A; Fulford 1975(b), 286–92)

Bowl

534. Grey fabric coarsely tempered with grog (*c.* 2 mm) and other finer inclusions; grey-black surface, burnishing inside; at Portchester from *c.* A.D. 280–90 (Fulford 1975(b), Type 86).

Dish

535. Smoothed grey surfaces; at Portchester from *c.* A.D. 280–90 (Fulford 1975(b), Type 107.1–6).

Jar with everted rim

536. Medium sandy grey fabric with white sub-angular inclusions (1–2 mm) of chalk(?) and rounded inclusions of grog (up to 2mm). This fabric is sandier and has a higher proportion of non-grog temper than the South Hampshire grog-tempered wares. Brown to black surface, burnished on the upper surface of the rim; similar at Portchester from *c.* A.D. 280–90 (Fulford 1975(b), Type 123).

Grass- or Chaff-Tempered Ware

Bowl

537. Hand-made fine dark grey fabric with a light brown to dark grey surface with a vesicular-appearance; impressions of fired-out grass or chaff visible on the exterior and in the breaks. Neither this fabric nor the form find good parallels in a later or sub-Roman grass-tempered ware, but Alan Vince (pers. comm.) has suggested the possibility of a tenth- or eleventh-century date.

Note on Storage Jars

In addition to Nos. 527–8, storage jars are also represented by body-sherds in two other fabrics:

- (a) Medium sandy brown fabric with sparse sub-rounded quartz sand (*c.* 2 mm).
 (b) Medium sandy black fabric with moderately abundant angular flint-temper (*c.* 2 mm).

XI. REPORT ON TILES.³ By T.K. GREEN

SOUTH GATE (1975)

1. *From surface of latest roadway* (pp. 74-5).

(a) A random sample of 57 reasonably large pieces was drawn from the many hundreds of tile-fragments in this layer, none showing complete edges or sides. They were all found to come from flat tiles, fired reddish-brown. A study of the frequency-distribution against thickness gave the following results:⁴

TABLE 14

| THICKNESS, in: inches: | 1 | 1 $\frac{1}{4}$ | 1 $\frac{3}{8}$ | 1 $\frac{1}{2}$ | 1 $\frac{5}{8}$ | 1 $\frac{3}{4}$ | 1 $\frac{7}{8}$ | TOTAL |
|---------------------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|
| QUANTITY: | 1 | 5 | 11 | 24 | 13 | 1 | 2 | 57 |

This suggests that they represent an almost completely homogeneous group of flat tiles, with a certain variability in thickness (observable on separate parts of some specimens, in fact); mixed with the odd example specifically thinner (1") or thicker (1 $\frac{7}{8}$ "). The mean of the 57 readings thus considered is 1.44"; the best estimate of the population standard deviation is 0.12". This gives 95% confidence limits to the population of 1.2" and 1.67" — say, 1 $\frac{1}{4}$ " and 1 $\frac{3}{8}$ " — which are almost exactly those observed. This is a good indication that the assumed group of tiles did come from a single population, not from a mixture. None of the specimens in the sample — nor the entire lot at a superficial glance — bore any traces of mortar. They appear to represent the debris of an unheated floor. Sub-floor tiles, 15 $\frac{3}{4}$ " square, for hypocausts, were 1 $\frac{5}{8}$ " thick at Itchingfield (Green 1970, 33). One fragment at Silchester bore the scar of a detached 'mammata' lump. Two others bore impressed 'rainbow' arcs: they were demonstrably not *tegula* fragments from their thickness and lack of flanges on any edge. A dog's footprint was on one fragment.

(b) The excavations had set aside a group of five fragments of large tiles. They were rather under-oxidised, with blistered upper surfaces, and so varied in thickness between 1 $\frac{1}{2}$ " and 1 $\frac{7}{8}$ "; the two specimens in (a) 1 $\frac{7}{8}$ " thick were of this type. Their unevenness and distorted shape make it hard to see these tiles being used for floors but, as they bore no traces of mortar, neither can they have been used for bonding. The largest piece gave their size as in excess of 12" by 8". One fragment bore a signature like a swirling open letter **p**.

2. *Filling of F7 (p. 48) in centre of gateway.*

A total of 168 fragments were examined and the following frequencies of various types found:

3. In the reports of the Society of Antiquaries' excavations, these tiles are sometimes referred to as 'bricks': e.g. Fox and St. John Hope 1890, pl. xxxii, fig. 3; 1894, 230. The generic term 'tile' is preferred, since the objects all meet the dictionary definition of 'flat slab of baked clay' (= tile) better than 'building block of baked clay' (= brick).

4. The use of Imperial, rather than metric measurement is deliberate. The Romans used inches very nearly the same as our own, and their tiles were made in standardised sizes based on modules of one Roman inch. Furthermore, tiles shrink during firing, by an amount determined by the moisture content of the clay, so that the edges are never straight. Measurements of tiles in metric units, quoted to the nearest millimetre, convey a quite spurious idea of precision. Using a larger unit, e.g. one inch, and choosing appropriate fractions of it, e.g. $\frac{1}{8}$ ", conveys the relative degree of precision claimed in the measurements far more effectively and scientifically.

TABLE 15

| | | |
|--|-----|---------|
| <i>Tegula</i> : (mostly $\frac{7}{8}$ " thick) | 86 | (51.2%) |
| Flat tile: ($\frac{3}{4}$ " thick, probably <i>tegula</i>) | 6 | (3.6%) |
| <i>Imbrex</i> : | 3 | (1.8%) |
| Flat tiles: $\frac{7}{8}$ "-1" thick | 21 | (12.5%) |
| Flat tiles: $1\frac{1}{8}$ " thick | 13 | (7.7%) |
| Flat Tiles: $1\frac{3}{4}$ " thick, mortar on both faces | 1 | (0.6%) |
| Flat tiles: $1\frac{7}{8}$ " thick | 2 | (1.2%) |
| Uneven tile; as in 1(b) above, 2" thick | 1 | (0.6%) |
| Unattributable fragments | 35 | (20.8%) |
| | 168 | |

The *tegula*-fragments were identified from the presence of flanges, cut-away corners, or the thumb-grooves along the base of the flanges' inner face. The flanges were highly variable in shape and development. Most of the lower corner cut-outs were made with a diagonal and a vertical cut. The flanges at the top corners were cropped off square. Single and double 'rainbows' were seen.

This assemblage has to be contrasted with that from the latest road-surface, discussed above. The fact that 51% consists of *tegula*-fragments, which are not found in the sample from the roadway, is statistically significant. Had the assemblages been obtained from the same source, it is inconceivable that they would have appeared so different. This does not mean that the deposits cannot be contemporary, of course, but merely that they came from separate sources or were deliberately sorted.

3. *Facings of Gateway* (pp. 42-6)

The gateway was faced, at least near ground-level, with special tiles not like those used in houses or bath-buildings. They are oblong, roughly 17" by 12" and $1\frac{3}{4}$ "- $1\frac{7}{8}$ " thick. Because they were firmly mortared in, and some ran back behind the facing-courses of the wall, measurements of only some of their dimensions could be obtained. The readings are as follows:

TABLE 16

| | | | | | | | | | | |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|--|
| LENGTH (inches) | $16\frac{1}{2}$ | $16\frac{5}{8}$ | 17 | $17\frac{1}{8}$ | $17\frac{1}{2}$ | TOTAL | | | | |
| QUANTITY | 1 | 1 | 3 | 1 | 1 | 7 | | | | |
| WIDTH (inches) | $11\frac{5}{8}$ | $11\frac{3}{4}$ | $11\frac{7}{8}$ | 12 | $12\frac{1}{8}$ | $12\frac{1}{4}$ | $12\frac{3}{8}$ | $12\frac{1}{2}$ | TOTAL | |
| QUANTITY | 1 | 2 | 4 | 9 | 6 | 6 | 1 | 5 | 34 | |

The first thing to notice is the range of variability: a full inch in the first case, $\frac{7}{8}$ " in the second. Though most of the length measurements were made on the tiles at the inner end of the eastern side, behind the gate-socket, and so might be held to form a separate group, the width measurements disprove this idea. Their ranges are: outer facing, western side, $\frac{3}{4}$ "; outer facing, eastern side, $\frac{7}{8}$ "; inner facing, eastern side, $\frac{3}{4}$ ". The width measurements appear to come from a single group, with a mean of 12.11" and a population standard deviation (best estimate) of 0.232", giving 95% confidence limits to the population of 11.66" ($11\frac{1}{2}$ ") and 12.56" ($12\frac{9}{16}$ "); again, just those observed in the sample. The five readings at the upper extreme are found to be random results; they do not influence the standard deviation unduly.

Two points in the earlier reports seem worthy of discussion here. The 'voussoir tile' found in the re-examination of the South Gate by Fox and St. John Hope is very similar to these

facing-tiles (1890, 753, pl. XXXII, fig. 4.) Its length and maximum thickness – 17" and 1 $\frac{3}{4}$ " – are identical, though its taper to 1 $\frac{3}{8}$ " takes it below the range seen by me in 1975. How they could decide its width was originally double the observed 6" is not clear, but the resulting 12" is just what that of the facing-tiles turned out to be. The fact that no mortar adhered to the 'front' and 'bottom' edges is explicable if it came from one of the (destroyed) corners of the plinths. Nonetheless, a taper of $\frac{3}{8}$ " over 17" gives an arch of such tiles an aperture of 10ft. 4in., very close to the estimated original width of 11'. The 'voussoir tile' found in the West Gate is not of this kind, being 2 $\frac{3}{8}$ " thick at its widest and displaying a taper that would give an arch aperture of 7ft. 4in. (*ibid*, 755, pl. XXXIII, fig. 3): incompatible, incidentally, with any of the rooms or archways shown on the plan (*ibid*, pl. XXI, fig. 3).

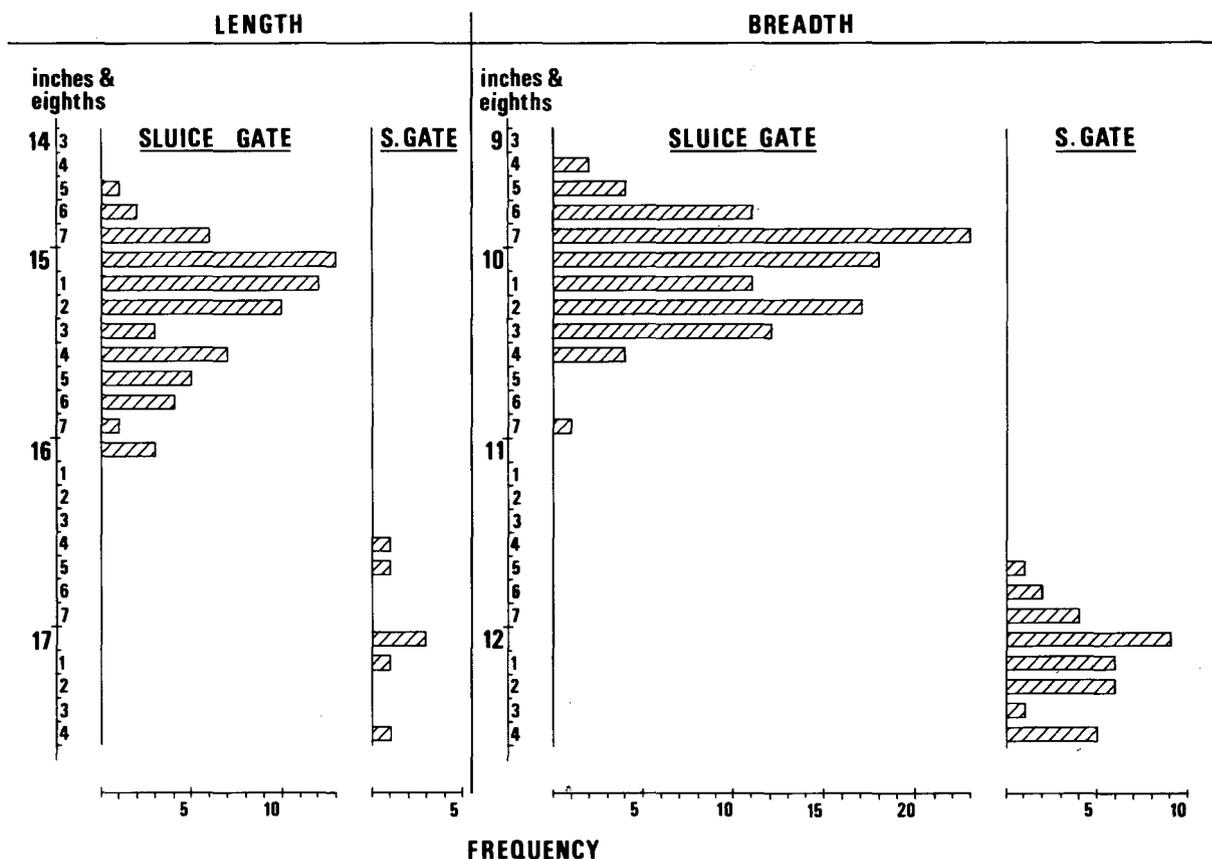


FIG. 56. Tile measurements: South and South-East Gates.

South-East Gate (1976) (pp. 54, 58)

Report on tiles used in first-period gateway

In view of the opportunity afforded to compile a group of measurements from tiles *prima facie* of one batch, the parameters calculated may well have future uses beyond their local contexts. This is already possible in drawing comparisons between the South and South-East gates.

A total of 170 measurements of tiles used in building the piers of the South-East Gate or the retaining walls are taken. As the tiles were often broken across, more breadth than length dimensions were taken. Thickness was not measured in this case; it is relatively much more variable (e.g. tiles 'dish' towards their centres) and is less useful diagnostically than length or breadth. The tiles were nonetheless about 1 $\frac{3}{4}$ " thick. Measurements were taken to the nearest $\frac{1}{8}$ " (3.2 mm) so as to ignore the minor irregularities in the tiles' surface. The results are shown as histograms in FIG. 56.

Useful statistical parameters are as follows:

TABLE 17

| <i>South-East Gate</i> | <i>Length</i> | <i>Breadth</i> |
|---|---------------|----------------|
| No. of measurements | 67 | 103 |
| Average (arithmetic mean) | 15.254" | 10.047" |
| Standard deviation (population best estimate) | 0.326" | 0.254" |

For comparison, the measurements for tile used in the South Gate are given:

South Gate

| | | |
|---------------------|---|--------|
| No. of measurements | — | 34 |
| Average | — | 12.11" |
| Standard deviation | — | 0.232" |

The first statistical point is how alike the standard deviations are. The Variance Ratio (F) test shows they are not significantly different even at the 90% level. The pooled estimate for the standard deviation for these simple building tiles comes out at 0.252"; we may suggest a figure around $\frac{1}{4}$ " (6.5 mm) can be expected in general.

The second statistical point is how *unlike* the mean breadths are. The difference in the means is 1.864"; the Standard Error of this difference only 0.05". While it is only fair to point out that the distributions shown are not precisely Gaussian, so that marginal levels of significance (if calculated using Normal Distribution theory) must be treated with caution, a difference in the averages of apparently 37 Standard Errors brooks no argument. These tiles come from two distinct batches.

XII. THE ANIMAL BONES. By MARK MALTBY

1. THE ANIMAL BONES FROM THE 1974, 1975 AND 1978 EXCAVATIONS

The animal bones from the 1974, 1975 and 1978 seasons of excavations at Silchester were analysed at the Department of the Environment's Faunal Remains Project at the University of Southampton. A total of 2,391 animal bone fragments was examined. These fragments were computer-recorded using the system devised by Jones (n.d.). The number of fragments recovered is shown in Table 18, in which the bones are subdivided by period into pre-Flavian, late first- to later second-century, and late fourth-century assemblages. The corresponding pottery-groups are listed in brackets.

The Pre-Flavian Deposits (c. A.D. 40–70) (Group 1.1–2)

A total of 746 fragments was examined, 598 of them from one layer (Group 1.2). This deposit, located by the south-west angle of the city wall contained a dense concentration of bones, particularly of cattle and unidentifiable large mammal (TABLE 18). Detailed analysis of the anatomical parts represented revealed that the cattle assemblage was dominated by skull, mandible and metapodia fragments (TABLE 19, FIG. 57). The major meat-bearing limb bones were very poorly represented. The sample was therefore biased towards fragments of the skull and limb extremities. This in turn suggests that the cattle assemblage was derived principally from waste from the primary butchery and from the skinning of their carcasses. This is supported by the fragmentation and butchery-evidence that revealed a consistent pattern of carcase dismemberment. This is worth recording in detail.

TABLE 18

NUMBER OF ANIMAL BONE FRAGMENTS RECOVERED FROM SILCHESTER

| Species | Pre-Flavian (Group 1.2) | Other Pre-Flavian (Group 1.1) | Flavian- Antonine (Groups 2.1-5, 2.7) | Fourth century (Group 5.4) |
|---------------------|----------------------------|-------------------------------------|--|-------------------------------|
| Cattle | 244 | 29 | 201 | 164 |
| Horse | 1 | — | 6 | 6 |
| Sheep/goat | 86 | 23 | 91 | 73 |
| Pig | 25 | 7 | 70 | 91 |
| Dog | 3 | — | 9 | 2 |
| Red deer | — | — | 3 | 7 |
| Roe deer | — | — | 2 | 11 |
| Hare | — | — | — | 1 |
| Domestic Fowl | 11 | — | 4 | 13 |
| Dom. Duck/Mallard | — | — | — | 4 |
| Partridge | — | — | — | 11 |
| Golden Plover | — | — | — | 11 |
| Raven | 2 | — | — | — |
| Large mammal | 175 | 64 | 288 | 265 |
| Sheep-sized mammal | 45 | 18 | 197 | 65 |
| Unidentified mammal | 16 | 7 | 52 | 6 |
| Unidentified bird | — | — | 2 | — |
| TOTAL | 598 | 148 | 925 | 700 |

(a) Skull and Mandibles

Most of the numerous skull fragments did not bear butchery marks. One fragment, however, bore chop-marks made during the removal of the horn-core. Only two small fragments of horn-core were recovered from this deposit and it seems likely that the horns were removed along with the major meat bones, probably for working. A fragment of a frontal bone bore a superficial chop-mark which suggested that the top of the skull had been opened to remove the brain. Eight of the mandible-fragments consisted just of part of the ramus, and three of these bore chop-marks on their lateral surface just below the condylar process, made during the separation of the mandible from the skull. Finer knife-cuts were found on the medial aspects of two anterior fragments of mandibles, possibly made during the removal of the tongue.

TABLE 19.

BONE ELEMENTS OF THE PRINCIPAL STOCK ANIMALS REPRESENTED IN PRE-ELAMIAN DEPOSITS.

| Bone | Group 1.2 | | | Group 1.1 | | |
|---------------|-----------|------------|-----|-----------|------------|-----|
| | Cattle | Sheep/Goat | Pig | Cattle | Sheep/Goat | Pig |
| Mandible | 35 | 24 | 1 | 2 | 2 | — |
| Skull | 54 | 5 | 4 | 1 | — | 1 |
| Loose teeth | 18 | 10 | 2 | 1 | 8 | 1 |
| Scapula | 23 | 2 | 2 | 2 | — | — |
| Humerus | 6 | 3 | 2 | 5 | 1 | — |
| Radius | 1 | 9 | — | — | 1 | 1 |
| Ulna | 2 | — | 1 | 1 | 1 | 1 |
| Pelvis | 11 | — | 2 | 3 | — | 1 |
| Femur | 2 | 5 | 3 | 4 | — | — |
| Tibia | 5 | 11 | 3 | 1 | 7 | 2 |
| Astragalus | 2 | — | — | 1 | — | — |
| Calcaneus | 3 | — | — | — | — | — |
| Other tarsals | — | — | — | 1 | — | — |
| Metacarpal | 21 | 3 | 1 | 1 | — | — |
| Metatarsal | 27 | 11 | 1 | 1 | 2 | — |
| Metapodial | 2 | — | 1 | — | — | — |
| Phalanx: 1 | 11 | 1 | — | 1 | — | — |
| Phalanx: 2 | 6 | — | — | — | — | — |
| Patella | — | — | — | 1 | — | — |
| Vertebrae | 9 | 2 | 2 | 3 | 1 | — |
| Ribs | 6 | — | — | — | — | — |
| TOTAL | 244 | 86 | 25 | 29 | 23 | 7 |

(b) Scapula, Pelvis

The presence of a relatively large number of girdle-bone fragments suggests that although the assemblage consisted mainly of the waste from the carcass extremities, some refuse was derived from the process of dismembering the limb bones from the trunk of the body. Six of the pelvis fragments had been chopped through the acetabulum to enable the severance from the femur. Two of the scapula-fragments had been chopped near the articulation with the humerus to remove the forelimb.

(c) Major Limb Bones

Two of the humeri bore butchery-marks. One small midshaft fragment had been chopped near the proximal articulation. A distal fragment had been chopped through during the disarticulation of the cubital joint. A shaft-fragment of a tibia had been chopped superficially on the posterior surface.

(d) Metapodia

All the metapodia examined had been broken open, and roughly equal numbers of proximal and distal portions were represented. They were broken presumably to extract the marrow before they were discarded. In addition, two metatarsi had knife-cuts close to the proximal articulation on the posterior surface, made either during the disarticulation of the bone from the tarsals or during the skinning of the carcasses.

(e) Phalanges

Four first phalanges had small knife-cuts on the posterior of the bone, almost certainly made during skinning.

(f) Ribs

Including butchery-marks observed on unidentifiable large mammal rib fragments (in the absence of many horse and red deer bones these too almost certainly belonged to cattle), 14 bore either chop-marks or knife-cuts or both.

Discussion

The assemblage can be interpreted as evidence for the organised butchery of cattle carcasses and the redistribution of their meat, horns, skins and marrow. The scale of this activity is uncertain. The bones from this deposit belonged to a minimum of only 10 cattle, although there is no reason to suppose that so few beasts are in fact represented by these bones. Several factors, however, suggest that the butchery-operation was performed on a large scale. The first is that the density of bones in the deposit was great and the limits of this deposit were not reached. In addition, there was much less canid gnawing evident on these bones compared to those from other deposits (2% of the cattle-bones bore gnawing-marks, compared to 9% in the Flavian to Antonine deposits and 18% in Group 5.4 (fourth century)). This could indicate that the bones were dumped and buried quite quickly before the dogs had access to them.

Evidence for large-scale organisation of cattle butchery has been found previously in Silchester. Most notable was the extensive and dense accumulation of cattle mandibles discovered in 1905 in Insula VI. In an area of less than half a cubic yard, 71 cattle mandibles were recovered, associated only with a few cattle scapula fragments and one or two bones from other domestic animals. The deposit, which can be dated to the first century A.D., extended over a much greater area, and the number of cattle represented seems to have been very large (Newton 1906, 165-67; Boon 1974, 290). Elsewhere, a deposit of at least 60 horn-cores, also probably dating to the late first century A.D. has been found (Boon 1974, 290). This find complements the evidence from the present assemblage, which indicated that the horn-cores were removed from the rest of the skull to be processed elsewhere.

Other Romano-British towns have produced similar deposits. The types of bone represented at Silchester have close parallels to a more extensive collection of cattle bones recovered from the Rack Street excavations in Exeter and dated to the late first century A.D. (Maltby 1979, 11). Both samples were dominated by mandibles, and by skull and metapodia fragments (FIG. 57). Another close parallel for this butchery-process has been found in London. Excavations at Aldgate revealed a pit densely filled with bones consisting predominantly of cattle mandibles, skull fragments, metapodia and phalanges. This assemblage was dated to the late first or early second century and was associated with military occupation (Watson 1973). The butchery practised on these assemblages was very similar to the one from Silchester. The metapodia had been broken almost invariably into proximal and distal portions and, despite the large number of skull fragments, virtually no horn-cores were present. The early date of the Silchester deposit makes it seem likely that this system of butchery was introduced during the early Roman occupation and was organised initially by the military forces, who themselves in any case made great demands upon the food-supply. The system seems to have continued in these urban centres at least into the second century.

The cattle bones in the concentration of butchery-waste at Silchester belonged mainly to adult animals, although four out of nine distal metacarpi and two out of nine distal metatarsi had

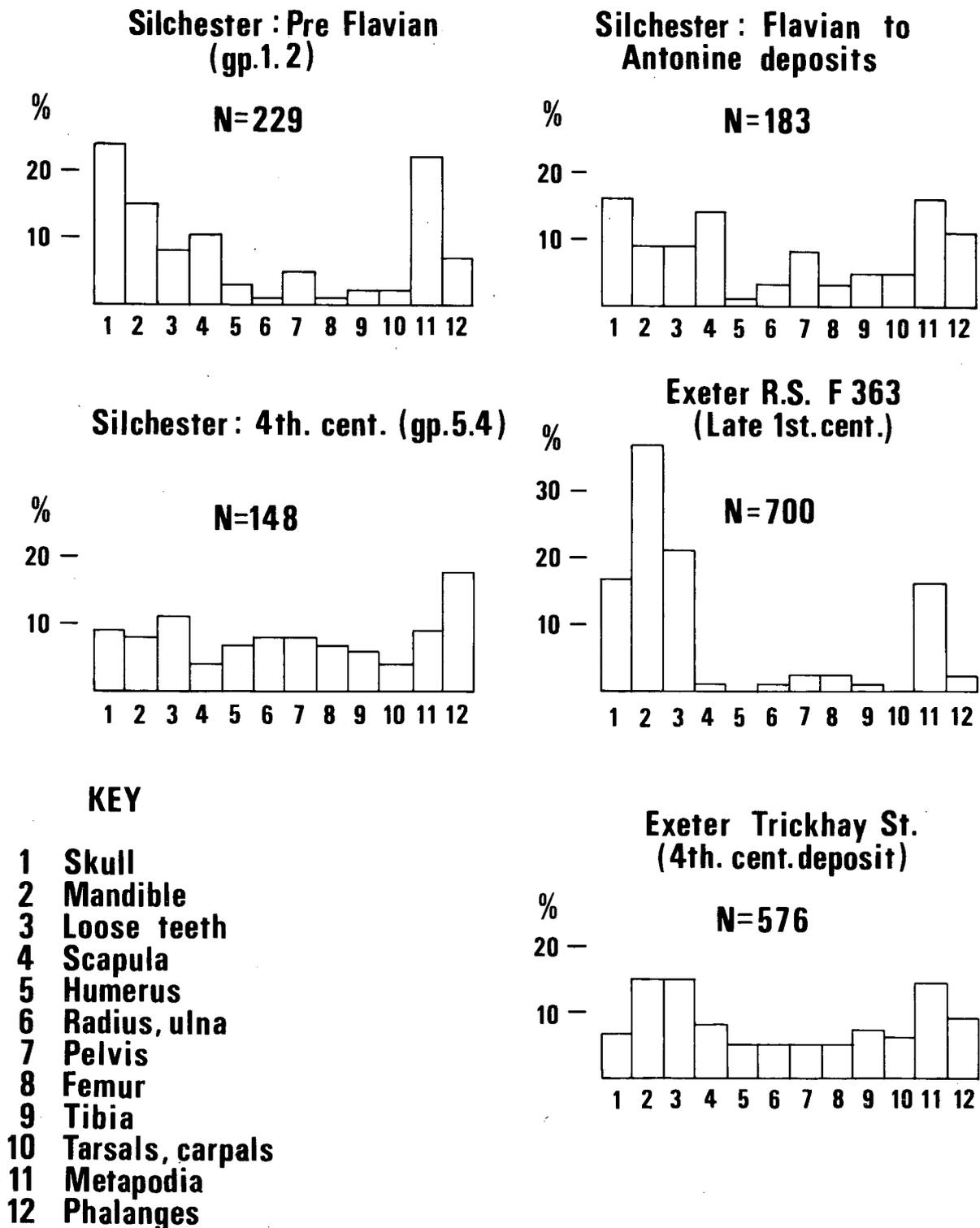


FIG. 57. Silchester and Exeter: comparison of bone assemblages.

unfused epiphyses and thus belonged to relatively young animals. Metrical analysis of the bones showed that most belonged to relatively small animals, no larger than specimens of Middle Iron Age date in Hampshire. Given that, in many part of England, cattle increased in size during the Romano-British period (Maltby 1981, 185-7), this evidence may suggest that the cattle brought to the site were local, unimproved stock. Too little is known, however, about the stock of the late Iron Age in the area, and the sample here is too small to provide firm conclusions.

Of the other species in this deposit, only sheep and pig were represented in any numbers.

Thirteen of the 86 sheep/goat fragments could be identified definitely as sheep, whereas goat was not positively identified. The sample contained a relatively large number of mandibles (24) and relatively few good meat-bones, and it is possible that some primary butchery of sheep was performed alongside cattle. However, the more fragile sheep skeletons are more likely to have been affected by the differential preservation of their elements. Sturdy fragments, such as the mandible, loose teeth and shafts of the radius, tibia and metapodia are often over-represented in poorly-preserved samples and all are well represented here (TABLE 19). Eight of the sheep mandibles could be aged. Five of these had the second molar in an early stage of wear but with the third molar not erupted. These therefore belonged to immature animals, possibly second-year cullings when the animals were at an age and size suitable for slaughtering for their meat. Many Romano-British sites have concentrations of sheep slaughtered around this age (Maltby 1981, 175). The other three mandibles had fully-erupted tooth-rows and belonged to animals probably well over three years of age. Pig (25 fragments) was poorly represented in this deposit,

TABLE 20

BONE ELEMENTS OF THE PRINCIPAL STOCK ANIMALS REPRESENTED IN FLAVIAN-ANTONINE DEPOSITS.

| Bone | Cattle | Sheep/Goat | Pig |
|-------------|--------|------------|-----|
| Mandible | 16 | 15 | 11 |
| Skull | 30 | 9 | 5 |
| Loose teeth | 17 | 10 | 14 |
| Scapula | 25 | 5 | 3 |
| Humerus | 1 | 5 | 6 |
| Radius | 2 | 4 | 3 |
| Ulna | 4 | — | 2 |
| Pelvis | 14 | 3 | 2 |
| Femur | 6 | 6 | 4 |
| Tibia | 9 | 11 | 3 |
| Astragalus | 2 | 1 | 1 |
| Calcaneus | 6 | 1 | 1 |
| Carpals | 1 | — | — |
| Metacarpal | 13 | 7 | 3 |
| Metatarsal | 15 | 9 | — |
| Metapodial | 1 | 1 | 1 |
| Phalanx 1 | 8 | 2 | 1 |
| Phalanx 2 | 11 | — | — |
| Phalanx 3 | 2 | — | — |
| Patella | 1 | — | — |
| Fibula | — | — | 7 |
| Vertebrae | 10 | — | 1 |
| Ribs | 7 | 2 | 2 |
| TOTAL | 201 | 91 | 70 |

and bones of horse, dog, raven (*Corvus corax*) and domestic fowl were present (Table 18). The discovery of domestic fowl is of interest since their remains are absent from many Iron Age sites (Maltby 1981, 161-2).

Only 148 fragments were recovered from other pre-Flavian contexts and most of these were in a poor state of preservation. The sample was too small to draw any firm conclusions.

Flavian to Antonine Deposits (Groups 2.1-2, 2.4-5, 2.7)

A total of 925 fragments of animal bone was examined from several contexts of this date, nearly all from the 1978 excavations ((Groups 2.1-2). Once again cattle dominated the sample (201 fragments). In addition, when we consider the low representation of horse and red deer, it is likely that nearly all the unidentified large mammal fragments ((288) also belonged to cattle (TABLE 18). The cattle sample was again dominated by fragments of mandible, skull, metapodia and scapulae, although phalanges were found more commonly than in the earlier deposit.

TABLE 21

BONE ELEMENTS OF THE PRINCIPAL STOCK ANIMALS REPRESENTED IN GROUP 5.4.

| Bone | Cattle | Sheep/goat | Pig |
|-------------|--------|------------|-----|
| Mandible | 12 | 7 | 10 |
| Skull | 13 | 3 | 5 |
| Loose teeth | 17 | 15 | 13 |
| Scapula | 6 | 2 | 5 |
| Humerus | 10 | 4 | 3 |
| Radius | 7 | 6 | 3 |
| Ulna | 5 | — | 3 |
| Pelvis | 12 | 4 | 2 |
| Femur | 10 | 5 | 3 |
| Tibia | 9 | 12 | 8 |
| Astragalus | 4 | 1 | — |
| Calcaneus | 2 | — | 5 |
| Metacarpal | 6 | 6 | 8 |
| Metatarsal | 7 | 7 | 5 |
| Metapodial | 1 | — | 7 |
| Phalanx 1 | 19 | — | 4 |
| Phalanx 2 | 6 | — | — |
| Phalanx 3 | 2 | — | — |
| Fibula | — | — | 1 |
| Vertebrae | 13 | — | 4 |
| Ribs | 3 | — | 2 |
| Sternum | — | 1 | — |
| TOTAL | 164 | 73 | 91 |

Fragments of the major meat-bearing bones were still quite rare, although slightly better-represented (TABLE 20, FIG. 57). It is therefore possible that some of this material belonged to the waste from primary butchery of cattle carcasses. This may imply a long-term practice of such activities in that area of the town. Alternatively, there could simply have been some admixing of bones from the earlier levels. Certainly this material could have been derived from several different disposal-processes, and it is not purely a primary butchery-assemblage.

Fourteen of the 91 sheep/goat fragments were identified as sheep, whereas only a single horn-core fragment definitely belonged to a goat. Although mandible fragments were still the most common bone element recovered, they did not dominate the sheep/goat assemblage as much as in Group 1.2 (TABLE 20). Eight of these mandibles could be aged. Of these, six had completely-erupted tooth-rows and belonged to adult animals, one had the second molar in an early stage of wear and another belonged to a lamb that had only the first of the molars in early wear. Pig (70 fragments) was better represented in these levels. Loose teeth and mandible-fragments were (as usual in pig assemblages) the most commonly-occurring bones, but most other elements of the skeleton were recovered in small numbers (TABLE 20). Of the other domestic species, bones of horse, dog and domestic fowl were found in small numbers. Evidence for the occasional consumption of horsemeat was found. The proximal portion of a radius in Group 2.2 (layer 21) was found to have been chopped in several places, presumably during the disarticulation of the cubital joint. No butchery-marks were found on the remaining few horse or any of the dog bones. Red deer (*Cervus elaphus*) was represented by three bones, including a scapula that had been chopped near the articulation with the humerus during dismemberment and by a sawn offcut of antler. Roe deer (*Capreolus capreolus*) was represented by a mandible of an immature animal and by a metapodial fragment. Domestic fowl was the only species of bird represented (TABLE 18).

Fourth-Century Deposit (Group 5.4; 1975 4/4)

A total of 700 fragments was examined from the fourth-century deposit of rubbish piled around the back of the South Gate on the tail of the old rampart behind the city wall. This material was dry-sieved through a 5 mm mesh during excavation. The limits of the deposit were not reached. It contained a substantial assemblage of fragmentary bones. A large percentage (11%) of the material showed evidence of canid gnawing, indicating that the assemblage had been modified by dog-scavenging. Of the identifiable material, cattle bones again dominated (TABLE 18). However, the bias towards mandibles and fragments of skull and metapodia was not evident in this deposit. In contrast, meat-bones were found more commonly, and there was a much more even representation of the different carcass elements (TABLE 21, FIG. 57). Apart from the presence of a comparatively large number of phalanges and a smaller number of mandibles, this sample compares reasonably closely with the fourth-century material recovered from Trickhay St. in Exeter (FIG. 57, Maltby 1979, 13, 102). Most of the cattle represented were adult animals but the material was too fragmentary for detailed ageing or metrical analysis.

The poorer preservation of bone in this deposit is reflected in the sheep/goat sample (TABLE 21). Over 20% of the fragments were loose teeth, and the sturdier shaft fragments of the radius, tibia and metapodia formed a large part of the assemblage. Despite sieving, no phalanges, carpals or tarsals were recovered from this layer. No goat bones were positively identified, whereas seven fragments certainly belonged to sheep. Pig (90 fragments) was better represented than sheep/goat, but whether this is an indication for the increased importance of pork cannot be determined from the evidence of a single deposit. Loose teeth and mandible fragments continued to be the most common pig elements recovered, but metapodial fragments increased significantly, forming over 20% of the assemblage (TABLE 21). Large concentrations of the bones of pig trotters thrown away as waste have been found in some Romano-British contexts (Huggins 1978; Maltby 1979, 11–13), and it is possible that this assemblage included a small amount of butchery waste. The assemblage from Group 5.4, however, did not have marked concentrations of primary butchery waste and it appears to have been built up of material that could have been derived from a whole range of disposal activities, including kitchen and cooking refuse. Butchery-marks, mostly chop-marks, were found quite commonly on bones of all these species.

Of the other species represented, the six fragments of horse included a third metatarsal that had been worked. The bone consisted of the proximal articulation and the top part of the shaft. It bore superficial chop- and saw-marks near the articulation where the bone had been disarticulated from the tarsals. The bone had also been sawn through the shaft *c.* 75 mm from the proximal articulation. It is probable that the central portion of the shaft had been required for working, and this fragment represents an offcut from that process. No other butchery was found on the horse bones. Only two dog bones were found, including a mandible in which the third premolar had been lost during life. Such an ante-mortem loss is not uncommon in dogs. Seven fragments of red deer were identified including an antler fragment and a portion of the ilium which had been chopped through the acetabulum during the disarticulation of the hind limb, a practice similar to that carried out on cattle pelvis in the same context. Roe deer and hare (*Lepus* sp.) were each represented by a single fragment. Nineteen bird bones were identified, the majority (13) belonging to domestic fowl. Four bones belonging to domestic duck or its wild equivalent, the mallard (*Anas platyrhynchos*), were found, including a humerus with knife-cuts on it. A single bone each of a partridge (*Perdix perdix*) and a golden plover (*Pluvialis apricaria*) were recovered, and these species too could have been an occasional supplement to the meat diet.

TABLE 22

SILCHESTER MANOR FARM (1980): NUMBER OF FRAGMENTS RECOVERED FROM PRIMARY SILTS OF DITCH (A.D. 70-90)

| Layer | Total | Cow | LM | S/G | Pig | SM | UM | Fowl | Fish | Gn | E | F | I | B | Bt |
|----------------------------------|-------|-----|----|-----|-----|----|----|------|------|----|---|----|---|---|----|
| (For explanation see note below) | | | | | | | | | | | | | | | |
| 69 | 8 | 3 | 4 | 1 | - | - | - | - | - | - | - | 3 | - | - | - |
| 73 | 27 | 9 | 5 | 4 | 2 | 5 | 2 | - | - | - | 1 | 10 | 1 | - | 1 |
| 74 | 11 | 2 | 4 | 3 | 1 | 1 | - | - | - | 2 | - | 1 | 1 | 1 | - |
| 75 | 115 | 26 | 42 | 17 | 8 | 18 | 2 | 1 | 1 | 4 | 1 | 44 | 4 | 1 | 4 |
| 76 | 1 | - | - | 1 | - | - | - | - | - | - | - | 1 | - | - | 1 |
| 77 | 8 | 3 | 2 | 2 | 1 | - | - | - | - | 1 | - | 1 | - | - | 1 |
| 78 | 14 | 1 | 5 | 4 | 1 | 3 | - | - | - | - | - | 7 | 1 | - | - |
| 80 | 2 | 1 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | - |
| 82 | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 83 | 2 | - | 1 | - | - | - | 1 | - | - | - | - | 1 | - | - | - |
| 86 | 11 | 3 | 6 | - | 1 | 1 | - | - | - | - | - | 6 | - | - | 4 |
| 87 | 12 | 6 | 5 | - | - | 1 | - | - | - | - | - | 7 | - | - | - |
| 88 | 8 | 1 | 1 | 2 | - | 4 | - | - | - | - | - | 3 | - | - | - |
| 91 | 22 | - | 6 | 6 | 2 | 7 | - | 1 | - | 2 | - | 8 | - | - | 2 |
| TOTAL | 242 | 55 | 83 | 40 | 16 | 40 | 5 | 2 | 1 | 9 | 3 | 92 | 7 | 2 | 14 |

Cow = cattle; LM = unidentified large mammal; S/G = sheep/goat; SM = unidentified sheep-sized mammal; UM = unidentified mammal; Gn = gnawed by canid; E = eroded; F = flaking; I = ivoryed; B = burnt; Bt = butchered.

2. THE ANIMAL BONES FROM MANOR FARM (1980)

A total of 456 bones from various layers of the ditch was examined. They were divided into three groups for analysis. These correspond to the Pottery Groups 2.8-10.

The Primary Silts (c. AD 70-90) (Group 2.8)

A total of 242 fragments was recovered from 14 layers (TABLE 22). In these and subsequent layers most of the bones were stained dark brown. In the primary silts the bones appear to have been little modified by canid gnawing. Many of them however (38%) showed evidence of cracking and flaking of the outer layers of the bone. Although the preservation of the bones was generally quite good, such conditions probably favoured the survival of bones of large mammals.

Cattle and unidentified large mammal bones provided the bulk of the assemblage, followed by sheep/goat and pig. Table 23 lists the types of element recovered. Although the sample is too small to warrant a detailed analysis, several interesting points are worthy of note. The first is that the cattle assemblage contained an unusually high proportion of scapula fragments (17 out of 55 fragments). Another is that rib fragments of both large and sheep-sized mammals were found in some numbers. Although their numbers may have been increased by fragmentation resulting from the friable nature of the bones, their abundance nevertheless may be indicative of preferential disposal of such bones within these layers of the ditch. In contrast to the assemblages examined from the 1974, 1975 and 1978 excavations in Silchester, mandible, skull fragments and loose teeth of all species were relatively poorly represented here. The assemblage seems to have been formed mainly from the sporadic disposal of bones, possibly from kitchen waste. Butchery marks were found on 14 bones, seven of them on large mammal (almost certainly cattle) ribs, which had been cut or chopped into small sections. A cattle scapula had been chopped across its distal articulation when separated from the humerus; an astragalus of the same species had been chopped distally to separate it from the foot-bones. Similarly, a pig ulna had been chopped through near its proximal articulation during the disarticulation of the cubital joint. A lumbar vertebra of a pig had knife-cuts on the ventral aspect of its lateral process, made when the flanks of the animal had been cut away from the spinal column. Finally, the top of a sheep's skull had been chopped through to enable the brain to be removed.

Ageing evidence was limited. Two cattle mandibles had fully erupted cheek-tooth rows with the fourth premolar in an early stage of wear. These jaws belonged to animals probably over five years of age. Two other cattle mandibles still had the deciduous fourth premolars in wear; one specimen had its second molar just in wear; the other had its third molar nearly fully erupted but not in wear. These belonged to animals slaughtered for meat probably between three and four years of age. Two sheep/goat mandibles had fully-erupted cheek-tooth rows with heavy wear on the first molar, thus belonging to relatively old animals. Another specimen still had its deciduous premolars in wear and belonged to an animal killed under two years of age.

The few measurable bones included a sheep metatarsus with a maximum length of 145.6 mm. This measurement gives an estimated withers height of 66.1 cm, employing Teichert's (1975) conversion factors. The bone therefore belonged to a relatively large animal, substantially larger than the average size of Iron Age sheep examined from Hampshire sites in recent years. The introduction of new stock, or the improvement of existing stock, appears to have taken place during the early Romano-British period in some regions of England (Maltby 1981, 189-91). Other measurements of cattle and sheep/goat bones in this assemblage fell within the ranges recorded both for Iron Age and Romano-British specimens in southern England.

The bones of two other species were found in these layers; a humerus and a skull fragment of a domestic fowl, and an articular of an unidentified species of sea bream (*Sparidae*).

Secondary (a) Fills (c. A.D. 90-120) (Group 2:9)

Only 49 fragments were found (TABLE 24) and these were generally less well-preserved than the bones from the primary silts. All but nine were cracked and friable, some severely. The types of bones represented are listed in Table 25. Only two butchery marks were recorded: a pig scapula had been chopped superficially across its spine; and an unidentified large mammal longbone fragment had been cut with a knife. The few measurements included a fairly large sheep calcaneus (length = 54.1 mm), again indicating the presence of an improved type of sheep.

Secondary (b) Fills (c. A.D. 120-150) (Group 2:10)

The 165 fragments from six layers again consisted mainly of cattle and unidentified large mammal fragments. Overall the preservation of this assemblage was better than in the previous layers, but this figure is biased by the low percentage of cracked and friable bones in layer 28, which formed a substantial part of this assemblage (TABLE 26). In other layers over half the bones were friable. The types of bone element represented (TABLE 27) were distributed fairly evenly from all parts of the skeleton. The butchery, however, was markedly different from some other assemblages studied from Silchester. A total of 17 bones bore butchery marks of several types:

TABLE 23

SILCHESTER MANOR FARM, (1980): ELEMENTS OF MAJOR SPECIES IDENTIFIED FROM PRIMARY SILTS OF DITCH.

| Element | Cattle | | LM | Sheep/Goat | | Pig | SM | |
|----------------|--------|-----------|-----------|------------|-----------|-----|-----------|-----------|
| | | Fgs. | | Fgs. | Fgs. | | Fgs. | Fgs. |
| Mandible | 4T | 5 | — | 3T | 5 | 1T | 3 | — |
| Maxilla | — | — | — | — | — | 1T | 1 | — |
| Skull fragment | — | — | — | 4 | — | — | — | — |
| Loose teeth | — | 1 | — | — | — | — | 1 | — |
| Scapula | 1D | 17 | — | 1D | 3 | 1D | 1 | — |
| Humerus | 1D | 2 | — | 1D | 1 | — | — | — |
| Radius | 1P | 1 | — | 1D | 2 | — | — | — |
| Ulna | — | 3 | — | — | — | — | 1 | — |
| Carpal | — | 1 | — | — | — | — | — | — |
| Metacarpal | P | 1D | 2 | — | 1D | 2 | 1C | 1 |
| Os Coxae | — | 1 | — | 1J | 3 | 1J | 2 | — |
| Femur | — | 2 | — | — | 2 | — | — | — |
| Patella | — | 1 | — | — | — | — | — | — |
| Tibia | 1D | 8 | — | 2P | 1D | 8 | — | — |
| Fibula | — | — | — | — | — | — | 1 | — |
| Astragalus | — | 2 | — | — | — | — | — | — |
| Calcaneus | 1P | 1 | — | — | 1P | 1 | — | — |
| Metatarsal | 1P | 1 | — | 3P | 1C | 5 | 1P | 1 |
| Phalanx 1 | 2C | 2 | — | — | — | — | — | — |
| Phalanx 2 | 1C | 1 | — | — | — | — | — | — |
| Phalanx 3 | — | 1 | — | — | — | — | — | — |
| Metapodial | — | 1 | — | — | — | 1C | 1 | — |
| Thoracic vert. | — | 1 | 4 | — | — | — | — | 3 |
| Lumbar vert. | — | — | 1 | — | — | — | 1 | — |
| Vertebra frag. | — | — | 1 | — | — | — | — | 1 |
| Rib | — | 1 | 47 | — | 3 | — | 1 | 27 |
| Longbone frag. | — | — | 12 | — | — | — | — | 4 |
| Fragment | — | — | 18 | — | — | — | — | 4 |
| TOTAL | | 55 | 83 | | 40 | | 16 | 40 |

Abbreviations

Fgs. = total number of fragments

T = with teeth

C = complete bone

P = proximal articulation present

D = distal articulation present

J = acetabulum present

See Table 22 for other abbreviations

All these bones belonged to cattle or unidentified large mammal (again almost certainly cattle). The first type of butchery was found on small portions of the joint-surfaces of longbones that had been chopped through longitudinally at least once and sometimes repeatedly. Nine examples were found; four were small unidentifiable fragments, the others were a proximal articulation of a radius, two distal joint-surfaces of humeri and two distal articulations of tibiae. Such butchery would have facilitated the removal of marrow and also could have been undertaken to allow the bones to be boiled for broth. A calcaneus had been chopped in a similar manner, probably for the same purpose. A second type of butchery-mark consisted of the removal of small slivers of bone, usually in a longitudinal direction, from the shafts of the longbones. The type of implement used for this operation was not clear. Superficially the marks have the appearance of chop-marks, but similar marks can be made with a strong knife drawn across the surface of the bone. The operation seems to have been a fairly crude (but possibly quick) method of stripping meat and ligaments from the bones. Two unidentified longbone fragments bore such marks, in addition to two cattle femora fragments and the shaft of one of the distal humeri that had also been chopped through longitudinally. Other butchery in this assemblage consisted of two ulnae that had been chopped across the proximal joint-surface during the disarticulation of the cubital joint, and a large mammal rib-fragment that had a small knife-cut on its lateral aspect.

Longitudinal chopping of joint-surfaces of longbones has parallels on some Roman sites in Europe (van Mensch 1974). Both this type of chopping and the meat-stripping marks were found in abundance in a deposit at Cirencester dated to the third century or later (Maltby in prep.). In her comparison between cattle butchery in early Romano-British deposits at Colchester and Sheepen Hill, Luff (1982, 102-4) noted the greater incidence of halving and quartering bones at the former settlement. This type of butchery was not found in any of the other assemblages analysed from the 1974, 1975 and 1978 excavations at Silchester. Nor was it found in the early Roman-British deposits at the rural settlement of Cowdery's Down, Basingstoke (Maltby *Arch. Journ.* cxi 1983). The butchery at that settlement exhibited a mixture of Romano-British and traditional Iron Age features. Such diversity of butchery-techniques within settlements and between contemporary settlements in the same region deserves fuller investigation.

The limited metrical analysis revealed the presence of another large sheep metatarsus (maximum length = 143.1 mm, estimated withers height = c. 65 cm) and a metacarpus of a smaller sheep (length = 123 mm, estimated withers height = 60.1 cm).

TABLE 24

SILCHESTER MANOR FARM (1980): NUMBER OF FRAGMENTS RECOVERED FROM SECONDARY (a) FILLS OF DITCH (AD 90-120).

| Layer | Total | Cow | LM | S/G | Pig | SM | Gn | E | F | I | Bt |
|-------|-------|-----|----|-----|-----|----|----|---|----|---|----|
| 62 | 5 | 2 | 2 | 1 | - | - | - | - | 4 | - | 1 |
| 63 | 5 | 1 | 1 | 2 | 1 | - | - | 2 | 5 | - | - |
| 65 | 11 | 4 | 3 | 2 | 2 | - | - | - | 9 | - | - |
| 66 | 2 | - | 2 | - | - | - | - | - | 1 | 1 | - |
| 70 | 13 | 2 | 5 | 4 | - | 2 | 1 | 1 | 9 | - | - |
| 71 | 4 | - | 2 | 1 | - | 1 | - | - | 3 | - | - |
| 72 | 9 | 3 | 2 | 1 | 3 | - | - | 1 | 9 | - | 1 |
| Total | 49 | 12 | 17 | 11 | 6 | 3 | 1 | 4 | 40 | 1 | 2 |

See Table 22 for abbreviations.

Although the faunal samples collected from the Manor Farm site were small, it was possible to show significant differences between these and other assemblages from Silchester. The relative number of skeletal elements represented and the methods of cattle butchery differed markedly from the other assemblages considered in this report. The size of several sheep bones indicate the presence of a larger type of animal than the type exploited during the Iron Age in the area.

TABLE 25

SILCHESTER MANOR FARM (1980): ELEMENTS OF MAJOR SPECIES IDENTIFIED FROM SECONDARY (a) FILL OF DITCH

| Element | Cattle | | LM | S/G | | Pig | | SM |
|----------------|--------|------|------|-----|------|-----|------|------|
| | | Fgs. | Fgs. | | Fgs. | | Fgs. | Fgs. |
| Mandible | — | — | — | 1T | 1 | 1T | 1 | — |
| Maxilla | — | — | — | — | — | 1T | 1 | — |
| Skull fragment | — | — | — | — | — | — | 1 | 1 |
| Loose teeth | — | — | — | — | 1 | — | — | — |
| Scapula | — | — | — | 1D | 1 | 1D | 1 | — |
| Radius | — | 1 | — | — | 1 | — | 1 | — |
| Ulna | — | 1 | — | — | — | — | — | — |
| Os Coxae | 1J | 3 | — | 1J | 2 | — | — | — |
| Tibia | — | 1 | — | 2D | 4 | 1D | 1 | — |
| Calcaneus | — | 1 | — | 1P | 1 | — | — | — |
| Metatarsal | — | 2 | — | — | — | — | — | — |
| Phalanx 1 | 1C | 1 | — | — | — | — | — | — |
| Thoracic vert. | — | 2 | 2 | — | — | — | — | — |
| Rib | — | — | 9 | — | — | — | — | 2 |
| Longbone frag. | — | — | 5 | — | — | — | — | — |
| Fragment | — | — | 1 | — | — | — | — | — |
| Total | | 12 | 17 | | 11 | | 6 | 3 |

See Tables 22–3 for abbreviations.

TABLE 26

SILCHESTER MANOR FARM (1980): NUMBER OF FRAGMENTS RECOVERED FROM SECONDARY (b) FILLS OF DITCH (A.D. 120–50).

| Layer | Total | Cow | Hor | LM | S/G | Pig | SM | UM | Gn | E | F | Bt |
|-------|-------|-----|-----|----|-----|-----|----|----|----|---|----|----|
| 28 | 76 | 20 | — | 36 | 7 | 7 | 5 | 1 | 2 | — | 8 | 10 |
| 42 | 1 | 1 | — | — | — | — | — | — | — | — | 1 | — |
| 49 | 39 | 7 | — | 18 | 3 | 4 | 6 | 1 | — | 4 | 19 | 3 |
| 51 | 19 | 7 | 1 | 8 | — | 1 | 1 | — | 1 | 1 | 6 | 3 |
| 59 | 26 | 5 | 1 | 11 | 5 | 3 | 1 | — | 1 | — | 18 | 1 |
| 90 | 4 | 2 | — | 1 | — | 1 | — | — | — | — | 3 | — |
| Total | 165 | 42 | 2 | 74 | 15 | 16 | 13 | 2 | 4 | 5 | 55 | 17 |

Hor = horse; for other abbreviations see Table 22.

TABLE 27

SILCHESTER MANOR FARM (1980): ELEMENTS OF MAJOR SPECIES IDENTIFIED FROM SECONDARY
(b) FILL OF DITCH.

| Element | Cattle | LM | S/G | Pig | SM | | |
|----------------|--------|------|-----|------|------|----|---|
| | Fgs. | Fgs. | | Fgs. | Fgs. | | |
| Mandible | 1T | 4 | — | — | 1T | 3 | — |
| Skull fragment | | 2 | 2 | — | — | — | — |
| Loose teeth | | 2 | — | 1 | 1 | — | — |
| Scapula | 1D | 8 | — | 1D | 2 | 1D | 2 |
| Humerus | 1D | 3 | — | — | — | — | 1 |
| Radius | 1P | 2 | — | 2P | 2 | 1D | 2 |
| Ulna | | 2 | — | — | — | 1 | — |
| Metacarpal | 1D | 2 | — | 1C | 1 | — | — |
| Os Coxae | | — | — | 2J | 2 | — | — |
| Femur | 1D | 5 | — | 1 | 1 | 1 | — |
| Tibia | 2D | 5 | — | 1D | 2 | 1D | 1 |
| Fibula | | — | — | — | — | 1D | 3 |
| Astragalus | | — | — | — | — | 1 | — |
| Calcaneus | | 2 | — | — | — | — | — |
| Metatarsal | | — | — | 1C | 1P | 2 | — |
| Phalanx 1 | 2C | 2 | — | — | — | — | — |
| Phalanx 3 | | 3 | — | — | — | — | — |
| Metapodial | | — | — | — | 1C | 1 | — |
| Vertebra frag. | | — | 2 | — | — | — | — |
| Rib | | — | 26 | — | 2 | — | 3 |
| Longbone frag. | | — | 24 | — | — | — | 5 |
| Fragment | | — | 20 | — | — | — | 3 |
| Total | | 42 | 74 | 15 | 16 | 13 | |

See Tables 22–3 for abbreviations.

XIII. TREE RING ANALYSIS OF WOOD FROM THE SOUTH-EAST GATE

By RUTH A. MORGAN

During excavation of the South-East Gate of Silchester in 1976, a number of piles and timbers were discovered in two contexts, the first from a raft associated with the construction of the town rampart in the late second century and the second from the foundations of the town wall of c. A.D. 260–80. Sections of 22 large trunks and stems, and a bulk sample of brushwood, were submitted for identification and tree-ring analysis, in the hope of determining the relative

time-lapse between the two contexts and if possible the absolute date of each. Dendrochronology is rapidly proving a valuable and accurate dating technique in Britain; by comparing the patterns of wide and narrow annual rings in a wood sample, it is possible in certain circumstances to allocate an exact date to the felling of the tree. To achieve this, a reference curve of the growth-pattern for the region and period concerned is essential; such a curve has not yet been established in Britain as far back as the Roman period, so the second aim must be one for the future.

METHOD

Cross-sections of the piles and stems were reduced to a thickness of about 100 mm, and deep-frozen in their water-logged condition. This allowed the soft wood to be cleaned and surfaced with a surform plane, so that the structure and annual rings were visible. The wood could then be examined under the microscope, and the rings measured on a travelling stage if suitable. The rings are plotted on semilog paper which can be overlaid for visual comparison of the patterns; those which exceed 40 years in length may be compared by computer.

Phase I, earthen rampart (later second century)

Sections of 10 stems came from a raft connected with the city rampart (1/5), as well as a bulk brushwood sample identified by Mrs. C. Keepax (Ancient Monuments Laboratory) as twig- and branch-material of hazel (*Corylus avellana* L.), oak (*Quercus* sp.) and willow/poplar (*Salix/Populus* sp.). The larger stems consisted of six oak, two birch (*Betula* sp.) and two alder (*Alnus glutinosa* L.) (Gaetrn.).

Five of the six oak stems, the only species really suited to tree-ring dating, were aged on average 31.8 years (with a range of 29–37 years) and had an average diameter of 87 mm (range 75–105 mm). All were complete stems with their bark or bark edge still remaining, but the soft outer sapwood had in some cases been crushed. It was evident that they were much too young for dendrochronological dating, but the rings of the five stems were measured to see if the stems were contemporary and perhaps even cut from the same trees. Their growth-patterns are shown in FIG. 58a; they are linked particularly by the distinctive zone of alternating wide and narrow rings between arbitrary years 10 and 15, the remainder of the patterns being less sensitive. The very similar growth-patterns, and the termination of the three stems measured out to the bark edge in the same year, indicate that all the stems are contemporary and may have come from the same tree(s). Their relationship is shown as a block diagram in FIG. 58b, with hatching representing sapwood and 'b' indicating the bark or bark edge. Samples 5 and 8 were so crushed at the outside that their outermost rings could not be measured.

The stage of growth of the outermost ring below the bark could be determined in two cases; the completely-formed ring indicates that these stems were felled in winter.

The sixth oak timber consists of a quarter of the trunk of an original diameter of about 200 mm, with 24 wide growth-rings and no sapwood. It is clearly of a different type to the others and may have been re-used.

The two alder stems were 20–30 years old and about 100 mm in diameter, while the two birch stems were about 20 years old and about 70 mm in diameter.

Phase II, foundations of city wall (c. A.D. 260–80)

From this context (1/7) came sections of seven substantial piles identified by Mrs. C. Keepax as alder (*Alnus glutinosa* L.) (Gaetrn.) and five small oak (*Quercus* sp.) stems. The alder piles were between 25 and 40 years old, but their wide uniform growth-rings led to an increased diameter of 120–220 mm. Again all were complete trunks with bark edge present, and the outermost rings suggested winter felling, though this is much more uncertain in species like alder than it is in oak.

The five small oak stems were complete, with bark in two cases, aged 14–30 years with diameters of 60–80 mm. None of these stems were suitable for ring-width measurement.

Conclusions

The wood-samples indicate that the late second-century raft was constructed of deliberately-

1.5

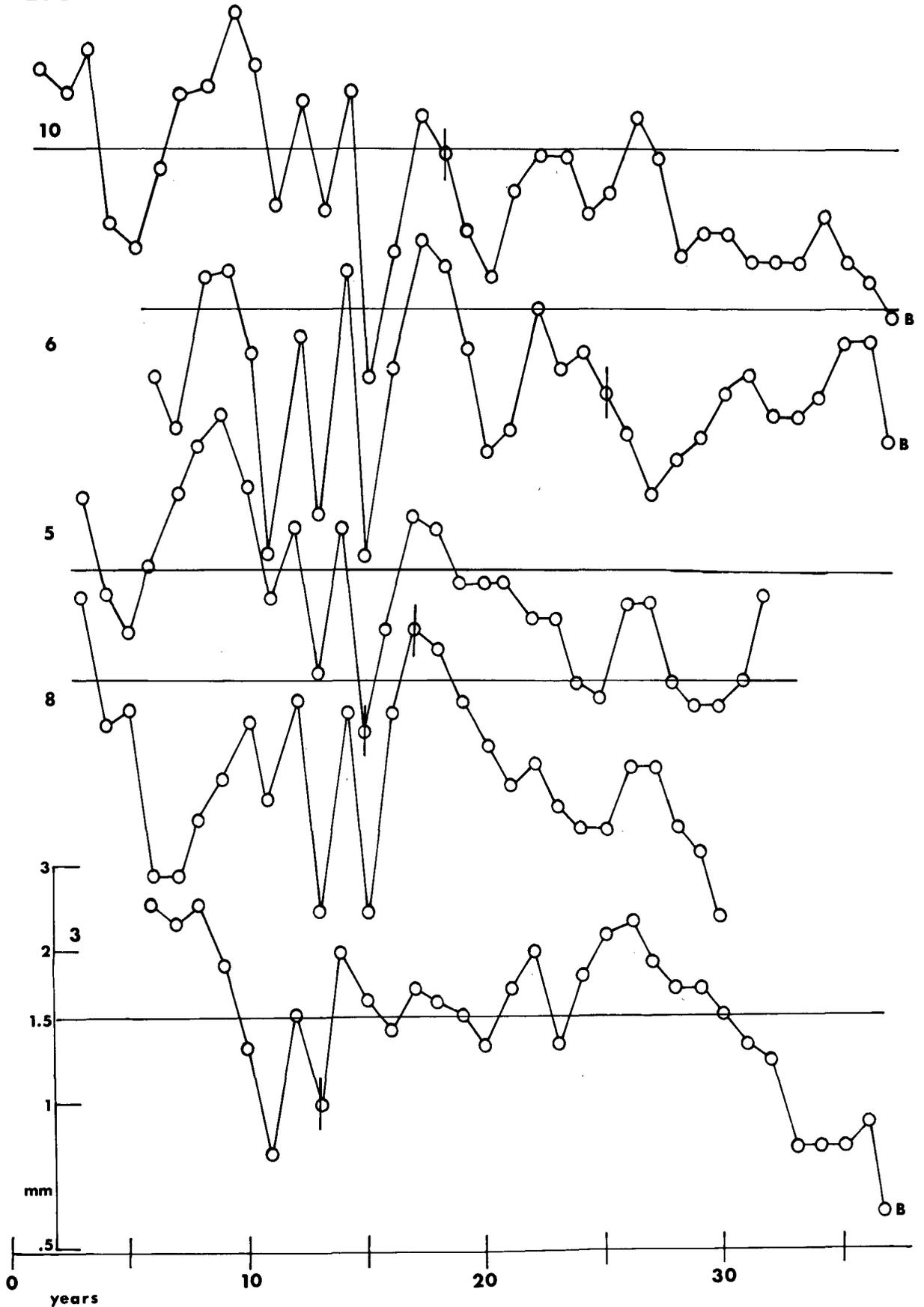


FIG. 58(a). Ring-width curves from five oak stems used in the rampart-base raft. The scale is logarithmic in mm, and the years represented are arbitrary. B= bark edge. Vertical lines through ring-width values indicate the transition from heartwood to sapwood for each stem.

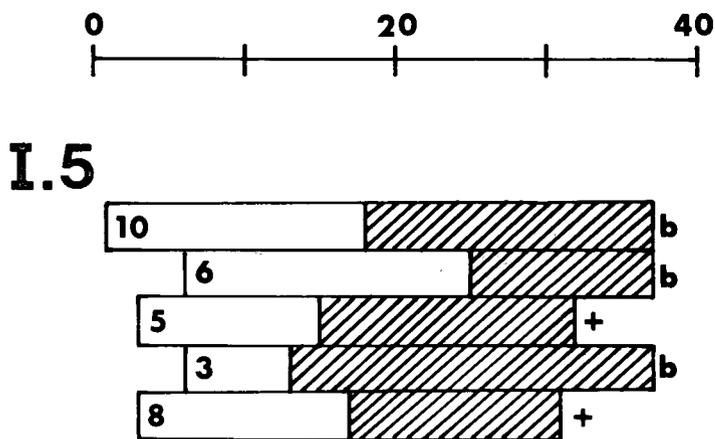


FIG. 58(b) Block diagram simplifying the information shown in FIG. 58(a), in which hatching represents sapwood. The scale is in arbitrary years.

felled, and possibly of some re-used, young trees 20 to 40 years old and about 70 to 100 mm in diameter of varied species. The later third-century city wall was founded on substantial alder piles, a choice of wood recommended by Vitruvius in soft or marshy conditions (III iv 2).

The piles and stems from the Silchester excavations, despite the misleadingly large size of some of them, were quite unsuitable for dendrochronological dating because of their immaturity and variability of species, but their examination gives further evidence of the types and ages of trees being exploited.

XIV. ANALYSIS OF POLLEN FROM SOUTH-EAST GATE By D.M. KEITH-LUCAS

Description of profile

A 65-cm monolith incorporating a buried soil from a putative pond or marsh was provided for pollen analysis. The sample was taken from the east section outside the gate. It included rampart(?) material (1/3) as well as the waterlogged deposits beneath (1/4-5). The soft humose sediments at the base of the profile had been consolidated by laying timbers horizontally across them, and had then been sealed by construction of the earthen rampart not later than A.D. 200 (p. 235). The material used for building the rampart probably came from a nearby ditch, and was composed of a silty soil mixed with rubble. This ditch was probably dug within the marsh itself, and would have supported a similar flora to that of the buried marsh. The upper part of the profile was therefore inverted and probably considerably mixed.

A description of the recognisably different zones within the profile and of the levels from which the samples were taken is given below.

| Depth (cm) | Extent of zone (cm) | Sample No. | Description of sediments |
|------------|---------------------|------------|---|
| 0 | 0-15 | 1 | Grey coarse sandy loam with numerous small rounded and angular flints and some large rounded flints (up to 5 cm). Abundant fragments of brick, tile, mortar and charcoal, and scattered patches of yellow-green sand. |
| 10 | | 2 | Similar coarse sandy loam to above, but more mottled with yellow-green sand (gleyed). |

| | | | |
|----|-------|----|---|
| 20 | 15-25 | 3 | Grey clay loam with less sand but with many brick and charcoal fragments and numerous small flints. |
| 30 | 25-35 | 4 | Grey silty clay with numerous small flints, but less brick and charcoal than above, and very little sand. |
| 40 | 35-41 | 5 | Grey silty clay with amorphous organic matter and a few wood fragments. |
| | 41-44 | | Layer of small flints. |
| 45 | 44-51 | 6 | Grey-brown silty clay with numerous small flints. |
| 50 | | 7 | Grey-brown silty clay with abundant small flints. |
| 55 | 51-55 | 8 | Grey-brown silty clay rich in decomposed organic matter. |
| 60 | 55-65 | 9 | Black humose silt with two larger timbers and other small fragments of wood. |
| 65 | | 10 | Base of profile. Black silt rich in amorphous organic matter. Scattered angular and rounded flints. |

It is not possible to pin-point the level corresponding to the surface of the original marsh exactly, but it was probably at about 55 cm.

The moisture-content of the samples was measured shortly after receipt of the monolith, but slight drying of the monolith had occurred before sampling, so the values do not accurately represent the moisture-content at the time of collection, but they do indicate the way in which the water-holding capacity increased with depth, as the sediments became progressively less sandy and more clayey and humose.

The percentage of organic matter, after removal of the larger charcoal and wood fragments, was also measured on samples fired at 450°C, and is given with the moisture-contents below:

| Sample No. | Depth (cm) | Water content g/100g oven-dry soil | Organic matter g/100g oven-dry soil |
|------------|------------|--|---|
| 1 | 0 | 12.6 | 8.7 |
| 2 | 10 | 14.3 | 9.8 |
| 3 | 20 | 14.6 | 9.7 |
| 4 | 30 | 20.3 | 9.9 |
| 5 | 40 | 27.5 | 10.7 |
| 6 | 45 | 28.4 | 11.2 |
| 7 | 50 | 32.3 | 10.6 |
| 8 | 55 | 29.6 | 10.7 |
| 9 | 60 | 36.0 | 11.2 |
| 10 | 65 | 44.6 | 11.5 |

The two timbers at the base of the profile occupied most of the lower 10 cm. The lower timber, identified microscopically, was alder (*Alnus glutinosa*), 4 cm in diameter and 20 cm long; with its bark intact; the upper was oak (*Quercus*, probably *Q. robur*), approximately elliptical in section, with a major axis of 9 cm, a minor axis of 6 cm and a length of 15 cm.

Scalariform end-plates from vessels of the wood of alder were also noted in the pollen preparations at a depth of 20 cm.

Preparation of samples.

About 3g of oven-dry sediment were weighed out for each sample. Slides were prepared for pollen-analysis following the method of Dimbleby (1961), except that the entire schedule for each sample was carried out within a single polypropylene centrifuge tube to minimize losses. Glycerine jelly was used as the mounting medium and 50 µl of stained suspension of pollen-grains were placed on each slide. Between 100 (the upper two samples in which the pollen was sparse

and poorly preserved) and 300 (the remaining samples), pollen-grains of land-plants were counted at each level. The remainder of each slide was then scanned for any additional species, the presence of which is recorded by a plus sign in FIG. 59.

Results

The results (FIG. 59) are expressed as percentages of total pollen (spores excluded) and also as the number of pollen-grains or spores per gram of oven-dry soil. Several pollen-species were recorded as present at one level only and are not included in the diagram. These are the following:

| Sample No. | Depth (cm) | Pollen species |
|------------|------------|---|
| 1 | 10 | <i>Acer</i> |
| 3 | 20 | <i>Lycopodium clavatum</i> |
| 5 | 40 | <i>Myrica</i> , <i>Sagina</i> -Type |
| 8 | 55 | <i>Lonicera</i> , <i>Chrysosplenium</i> |
| 9 | 60 | <i>Sambucus</i> , <i>Prunus</i> |
| 10 | 65 | Labiatae: <i>Mentha</i> -Type |

The degree of preservation deteriorated towards the top, and the upper two samples in particular had a higher proportion of pollen-grains which were bacterially etched, folded or occluded by fragments of charcoal, than the preparations from the deeper levels which were on the whole clear and offered few such handicaps to identification.

The number of grains per gram similarly declined towards the top of the profile, and this is probably due, at least in part, to destruction of pollen-grains. It is likely that a degree of differential destruction had also taken place, and this might account for the apparent rise in the percentage of Compositae, *Alnus* and *Corylus* pollen for example. However, other highly-resistant grains and spores do not show such a rise, for example *Polypodium*; likewise other more delicate pollen-grains, such as those of Cyperaceae and *Salix*, do not exhibit a decline towards the top of the profile. Thus, in the interpretation of the results, it cannot be assumed that all the changes in relative proportions are necessarily the result of differential destruction, but some of the real changes may themselves be masked by differential destruction.

Interpretation and discussion

Although some minor changes are apparent, there are no very marked trends in the values of proportional representation of the species through the profile, suggesting that the sediments both of the marsh and the rampart material were laid down under similar conditions over a fairly short time-span. The low proportions of tree and shrub pollen, along with low values of *Filicales* and *Polypodium*, are typical of sites with permanent forest clearance, and there is no reason to suppose that the diagram spans anything longer than the Roman period up to A.D. 200 at the latest.

The species and genera present in the pollen record can be ascribed to at least four distinct types of plant community. First they represent a marsh flora, the species of which were undoubtedly growing locally, and include many insect-pollinated members, from which pollen would have been incorporated directly into the deposit. The following pollen-species might be derived from marshland plants:

- (Cyperaceae (Sedges, etc.)
- Lychnis*-Type (Ragged Robin)
- Stellaria*-Type (Chickweeds)
- (Cruciferae (Cress family)
- Hydrocotyle vulgaris* L. (Marsh Pennywort)

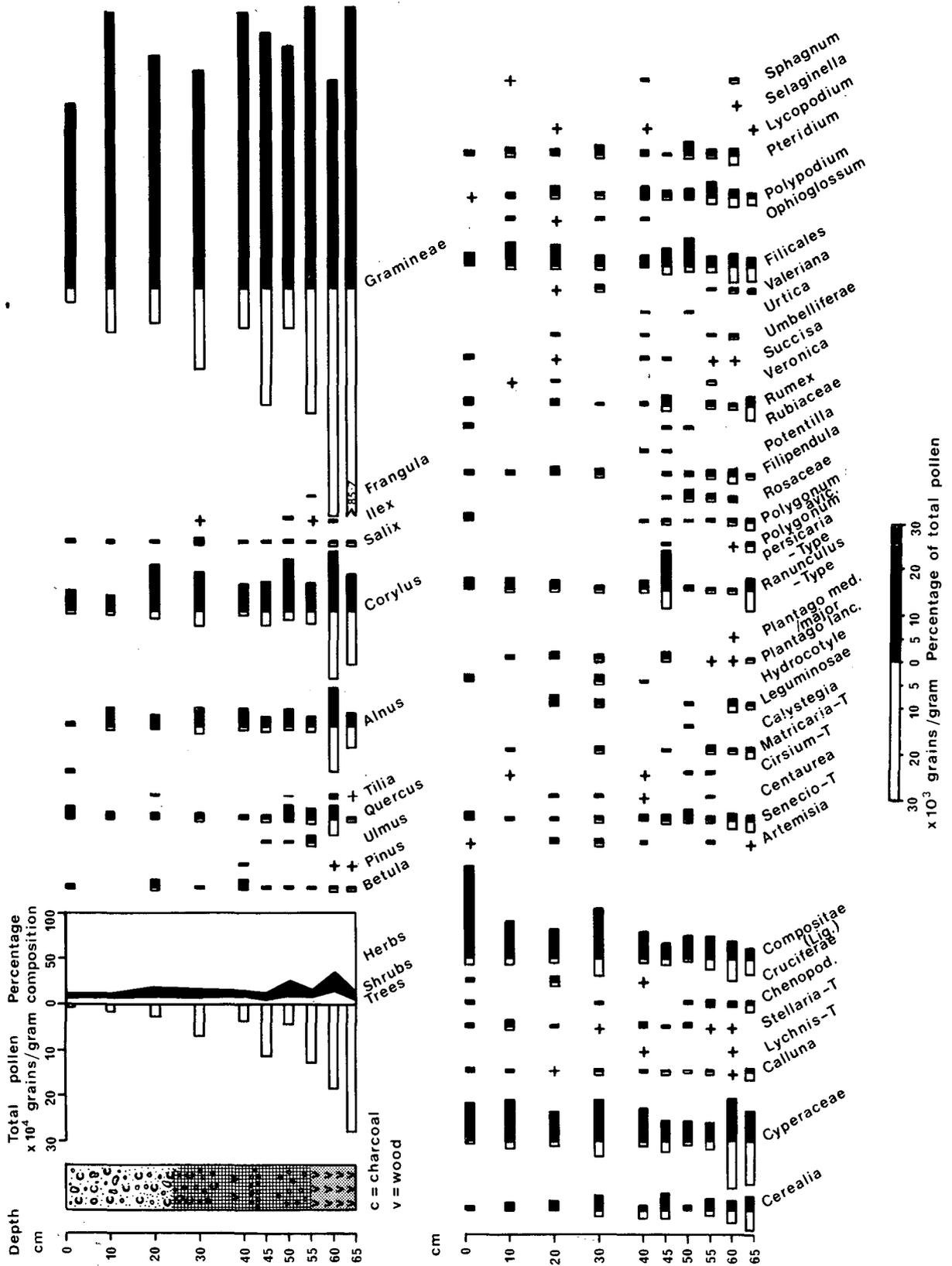


FIG. 59. South-East Gate: Pollen diagram.

Labiatae *Mentha*-Type (Mints, etc.)
Polygonum persicaria-Type (Redshank, Water-pepper, etc.)
Ranunculus-Type (Buttercups)
Filipendula ulmaria (L.) Maxim. (Meadowsweet)
Potentilla-Type (Cinquefoils, Water Avens, etc.)
 Rubiaceae (Bedstraws)
Rumex spp. (Docks)
Veronica sp. (Speedwell)
 Umbelliferae (Hogweed family, e.g. Hemlock)
Valeriana officinalis L. (Valerian)

The presence of spores of *Ophioglossum vulgatum* (Adder's Tongue) is interesting, and it might have been growing either in this community or in neighbouring damp meadows.

The pollen from this marsh flora was not confined to the basal layers, and this is the reason for the assumption that the material used for building the rampart also came from a waterlogged area, supporting a similar vegetation. No pollen of exclusively aquatic species was found, so the hypothesis that this was a pond must be discounted, though it is quite possible that there was a small pond, or more probably a small stream, nearby.

All the pollen-species assigned to marshland plants (except *Ophioglossum*) could have been derived from plant species previously recorded from Silchester as macrofossils by Reid (1901). Reid found the presence of the remains of marsh plants difficult to explain 'on so dry a site as Silchester', adding that there was 'no suitable habitat for these plants within a considerable distance'. He suggested that the seeds which he found had been brought into the city with *Carex riparia* (Great Pond-sedge) for thatching. The abundance of Cyperaceous pollen intimates this marsh as a possible source for such thatching material and, with the spring-line at the junction between the Plateau Gravels and the underlying Bagshot Sands emerging all along this south-eastern side of the city, it is probable that the marshy area was quite extensive. The location of the baths and the springs which are still active today in the region of the South-East Gate make Reid's comments a little difficult to understand, as these features themselves were probably important in the selection of the site for the city in the first place.

Around the marsh, and probably to a certain extent intermingled with it, was the second type of plant community, namely a damp Alder carr woodland. From the complete pollen-spectrum, the species growing locally would probably have included the following:

Quercus ? *robur* L. (Oak)
Alnus glutinosa (L.) Gaertn. (Alder)
Betula ? *pendula* Roth. (Silver Birch)
Acer ? *campestre* L. (Field Maple)
Corylus avellana L. (Hazel)
Frangula alnus Mill. (Alder Buckthorn)
Ilex aquifolium L. (Holly)
Prunus sp. (Blackthorn, Cherry, etc.)
Sambucus nigra L. (Elder)
Lonicera periclymenum L. (Honeysuckle)
Calystegia ? *sepium* (L.) R.Br. (Larger Bindweed)
Chrysosplenium ? *oppositifolium* L. (Golden Saxifrage)
Urtica dioica L. (Stinging Nettle)
 Filicales (Polypodiaceae) *endospores* (Various ferns)
Polypodium vulgare L. (Common Polypody)

Where question-marks precede the specific epithet, the exact species cannot be established by pollen-analysis but, to judge from the habitat, those listed are the most likely. Other genera such as *Crataegus* (Hawthorn) and *Rubus* (Bramble) are recorded from the remains of their fruits but have not been critically separated from the group 'Rosaceae' in this analysis. Pollen of *Juncus*, of which large numbers of seeds were recorded, does not preserve well nor survive the treatments used in the preparation of the samples.

It is interesting that, from fairly low percentages at the base, *Quercus*, *Alnus* and *Corylus* all rise to maximal values at 60 cm, followed by a decline at 55 cm. This decline might reflect the felling of locally growing trees to provide the timbers for consolidating the marsh before the building of the rampart. These three genera, along with *Betula* and *Salix*, have been identified from the layer of horizontal trunks, and the timber used for such an operation would undoubtedly be a fairly random selection of that growing as near as possible to the construction-site.

The fact that most of the timbers were straight and narrow suggests that these were trunks of coppiced trees or saplings rather than branches of larger trees. If this were the case, many of the trees might have reached flowering age only shortly before they were felled. This might account both for the lower percentages at the base of the profile and also for the lower percentages in the sediments which were dug and placed on top of the horizontal timbers to form the rampart.

Other woodland trees such as *Ulmus* (Elm), *Pinus* (Pine) and *Tilia* (Lime) were probably present nearby, but would be unlikely to be found in the alder carr.

Only seven of these woodland species were recorded by Reid (1901), with the addition of *Ilex* by the same author in 1906. The new records from the pollen are *Betula*, *Pinus*, *Ulmus*, *Tilia*, *Acer*, *Frangula*, *Lonicera*, *Calystegia*, *Chrysosplenium*, Filicales (Polypodiaceae) and *Polypodium*. It is of course less likely that remains of woodland plants would be brought into the city with thatching than that remains of growing marsh plants intermingled with the sedge (*Carex riparia*), and this adds weight to Reid's theory. Thus the pollen-analysis supports the seed-analysis in giving a picture of a marsh with scrub woodland growing on this site in the Roman period.

A third vegetation-type discernible from the pollen-flora is heathland. None of the constituent species are represented by high percentages, and it can therefore be assumed that these are air-borne pollen-grains and spores blown in from neighbouring areas of heath. Typical components of heathland which were identified are:

- Betula ? pendula* Roth. (Birch)
- Pinus sylvestris* L. (Scots Pine)
- Myrica gale* L. (Bog Myrtle)
- Calluna vulgaris* (L.) Hull (Common Heather or Ling)
- Succisa pratensis* Moench. (Devil's-bit Scabious)
- Pteridium aquilinum* (L.) Kuhn (Bracken)
- Lycopodium inundatum* L. (Marsh Clubmoss)
- L. clavatum* L. (Stag's-Horn Moss)
- Selaginella selaginoides* (L.) Link. (Lesser Clubmoss)
- Sphagnum* spp. (Bog Mosses)

It is possible that the *Succisa* was also present in the marsh flora. *Potentilla*-Type and *Rubiaceae* could equally be of heathland origin, but being insect-pollinated are more likely to derive from marsh species.

It is interesting that the clubmosses and *Myrica*, although formerly present in several of the nearby valley bogs, are now extinct in the area.

Of these heathland species, Reid (1901) records only bracken, and comments that much of the surrounding countryside was probably covered with this species. However the relatively low percentages of *Pteridium* spores argue against this. At the present day bracken is largely confined to the outcrops of Bagshot Sands on the sides of the valleys of small streams which drain the Plateau Gravels to the north and west of Silchester. However, it is almost totally absent from the compact Plateau Gravels themselves, which are largely occupied by *Calluna* heaths or Pine plantations, and it is also absent from the low-lying London Clay and alluvial soils. *Calluna* heathland was probably more widespread in the Roman period on these Plateau Gravels than it is now. Small valley bogs with *Sphagnum*, *Myrica* and the clubmosses would also have existed on the floors of these bracken-sided valleys much as they still do today, though drainage has probably reduced the extent and species-richness of these bogs.

The remaining pollen represents arable land, waste-land, hay meadows and open pasture. The very high values of pollen of non-cereal Gramineae suggest a largely pastoral landscape, though some of this will be of local marshland origin; but cereals were also grown nearby. The cereal pollen-grains, in those instances where the identification could be established with some degree

of certainty, all proved to be of *Triticum* (Wheat). It is difficult to separate the weeds of arable land from those which were growing on waste-land around the city. The fact that the ditch, if this indeed was the origin of the rampart material, contained some building-material, suggests that much of the pollen may have been derived from weeds growing on heaps of rubble around the city before these were thrown into the ditch or marsh, only to be re-excavated to form the rampart later. Such weeds might include:

- Sagina*-Type (Pearlwort)
- Chenopodiaceae (Goosefoot; Good King Henry, etc.)
- Compositae, Liguliflorae (Dandelions; Hawkbits; etc.)
- Artemisia* spp. (Mugwort)
- Senecio*-Type (Daisies; ragworts)
- Centaurea*-Type (Knapweeds; cornflower)
- Cirsium*-Type (Thistles)
- Matricaria*-Type (Mayweeds)
- Leguminosae (Vetches; clovers; etc.)
- Plantago media/major* L. (Plantain)
- Polygonum aviculare* agg. (Knotgrass)
- Rumex* spp. (Dock)

Many of the pollen-species assigned to the marsh flora could equally well come from weed-species, and without seed and fruit identifications of these plants it is impossible to be certain which species were involved. Such 'dual-habitat' types include:

- Stellaria*-Type
- Cruciferae
- Polygonum persicaria*-Type
- Ranunculus*-Type
- Rumex* spp.
- Veronica* sp.
- Umbelliferae

The very high percentages of Compositae, section Liguliflorae, are rather surprising and not easily explicable. Certainly differential destruction is not the sole reason, because the percentages are high in the well-preserved sediments at the base of the profile.

Equally it is not always possible to separate the weeds of arable or waste-land from those of pasture or hay meadows. *Plantago lanceolata* L. (Ribwort plantain) however is typically a species of pastoral land, so this reinforces the picture of mixed arable and pastoral land use.

All of these weeds were recorded by Reid (1901, 1903) (*Centaurea* added in 1903) with the exception of *Sagina* and *Artemisia*-Type.

Summary

Pollen-analysis of a buried marshland soil and of the spoil material which sealed it proves the existence of a marsh and alder carr outside the South-East Gate at Silchester, up to the time of the building of the rampart in the late second century. It also establishes the existence of a largely open landscape around Silchester at this time, comprising heathland, pasture and arable land. Most of the pollen of weeds and marsh plants can be attributed to species already recorded from Silchester by Reid (1901 *et seq.*), but most of the carr woodland and heathland species are new records. There is some evidence from the pollen diagram that trees were felled locally to consolidate the marsh before the building of the rampart.

XV. PLANT MACROFOSSILS

1. THE SOUTH-EAST GATE. By M. MONK

Two large soil-samples from contexts 1(4) and 1(5) were received for examination. Plant-remains were extracted from sub-samples by paraffin/water flotation, collecting the flots in 250-micron-mesh sieves. Identifications were made by comparison with modern reference specimens. Taxa identified are listed in Table 28.

The two small seed-assemblages recovered consist predominantly of damp grassland and ruderal taxa. Two species – *Filipendula ulmaria* and *Lycopus europaeus* – are more characteristic of river-banks and drainage-ditches. Fruit-stones and seeds of *Rubus fruticosus*, *Crataegus monogyna* and *Sambucus nigra* probably reflect the presence of bramble, hawthorn and elder scrub in the vicinity. There are no remains of cultivated plants.

Seed-assemblages of this type, representing disturbed grassland vegetation with some scrub, very commonly occur in waterlogged archaeological deposits, and the species identified in the present samples were all noted by Reid (1901) in the course of his extensive studies of the plant-remains of Roman Silchester.

TABLE 28
PLANT MACROFOSSILS IDENTIFIED IN THE SAMPLES.

Nomenclature and order of families as in Clapham, Tutin and Warburg (1962). All taxa represented by fruits or seeds apart from lf = leaf fragments.

| | 1 (4) | 1 (5) |
|--|--------|--------|
| <i>Ranunculus cf. repens</i> L. | 2 | 1 |
| <i>Stellaria</i> sp. | 2 | – |
| Carvophyllaceae indet. | 1 | 4 |
| <i>Chenopodium album</i> L. | 2 | – |
| cf. <i>Filipendula ulmaria</i> (L) Maxim | – | 1 |
| <i>Rubus fruticosus</i> agg. | 2 | – |
| <i>Potentilla</i> sp. | – | 3 |
| <i>Crataegus monogyna</i> Jacq. | – | 1 |
| <i>Conium maculatum</i> L. | 1 | 1 |
| <i>Polygonum aviculare</i> agg. | 3 | 4 |
| <i>Polygonum persicaria</i> L. | 4 | 4 |
| <i>Polygonum</i> sp. | – | 3 |
| <i>Rumex</i> sp. | 4 | 2 |
| Polygonaceae indet. | – | 1 |
| <i>Urtica dioica</i> L. | 10 | 11 |
| <i>Solanum nigrum</i> L. | 1 | 2 |
| <i>Lycopus europaeus</i> L. | – | 1 |
| <i>Sambucus nigra</i> L. | – | 1 |
| <i>Juncus</i> spp. | common | common |
| <i>Carex</i> spp. | 2 | – |
| Gramineae indet. | 1 | 1 |
| Gramineae indet. (1f) | – | + |
| Indeterminate | 7 | 4 |
| Sample volume (ml) | 500 | 500 |

2. MANOR FARM. By MARTIN JONES

Seeds were examined from two contemporary contexts (69, 75) which sealed the primary silts of the Flavian ditch and can be dated *c.* A.D. 70/90. They had been extracted during paraffin/water flotation and collected in a 670-micron-mesh sieve.

TABLE 29

| | Context | Sample size | Context | Sample size |
|---|---------|-------------|---------|-------------|
| | 69 | 7.0 kg | 75 | 4.5 kg |
| <i>Triticum</i> sp. (Wheat) | 1 | | 2 | |
| Unidentifiable cereals | 0 | | 2 | |
| <i>Carex</i> sp. (sedge) | 3 | | 4 | |
| <i>Cerastium</i> sp. (<i>mouse-ear</i>) | 1 | | — | |
| <i>Chenopodium</i> sp. (<i>fat-hen/goosefoot</i>) | — | | 1 | |
| <i>Eleocharis</i> sp. (<i>spike rush</i>) | 7 | | 14 | |
| <i>Galium aparine</i> (<i>goosegrass</i>) | — | | 1 | |
| Graminae (<i>grasses</i>) | — | | 2 | |
| <i>Polygonum</i> cf <i>mite</i> | 1 | | — | |
| <i>Polygonaceae</i> indet. | — | | 1 | |
| <i>Ranunculus</i> sp. (<i>buttercup</i>) | 4 | | 8 | |
| <i>Rumex acetosella</i> (<i>sheeps sorrel</i>) | 1 | | 1 | |
| <i>Rumex</i> sp. | 2 | | 13 | |
| <i>Stellaria media</i> (<i>chickweed</i>) | 2 | | — | |
| <i>Trifolium</i> sp. (<i>clover</i>) | — | | 2 | |
| <i>Vicia/lathyrus</i> (<i>vetch</i>) | 2 | | 1 | |
| Indeterminate | 10 | | 27 | |
| TOTAL | 34 | | 79 | |

Although there are differences between this seed-assemblage and that from the marshy deposit outside the South-East Gate, it is also dominated by plants associated with damp meadow-like environments, with just a few wheat grains. This is consistent with the context which seals the primary silts of the early Flavian ditch.

XVI. THE CONSTRUCTION OF THE TOWN RAMPART

By D.W.A. STARTIN

From the published plan (Boon 1969, pl. 1) and sections (Cotton 1947, pl. XXX) it is possible to make an estimate of the volumes of gravel and clay excavated, transported and dumped to form the defensive circuit at Silchester, and hence to calculate the work effort involved. A detailed account of the general principles behind such calculations has been published elsewhere (Startin 1982).

I estimate that the approximate *original* cross-sectional areas of the two ditches and the bank are as follows: Inner ditch: 98 sq. ft.; Outer ditch: 200 sq. ft.; Bank: 315 sq. ft. (of which *c.* 73 sq. ft. was of gravel, the rest of clay), and that the perimeters were: Inner ditch: 8326 ft.; Outer ditch: 8510 ft.; Bank: 8050 ft. (the gravel part of the bank having an approximate perimeter of 8000 ft). These estimates are crude but of the right order of magnitude. Accordingly, the volumes of material can be calculated to be about: Inner ditch: 820,000 cu. ft.; Outer ditch: 1,702,000 cu. ft.; both ditches together: 2,522,000 cu. ft.; bank: 2,530,000 cu. ft. (of which the gravel makes up 584,000 cu. ft.). There is good agreement between the estimates of the volume of the bank and the combined volumes of both ditches, suggesting that both ditches were required for the construction of the bank.

A picker and a shoveller working as a team can excavate *c.* 36 cu. ft. of gravel per hour and *c.* 54 cu. ft. of clay (Startin 1982). The labour involved in excavating the ditches, but not in transporting the material away, can therefore be estimated at $2 \cdot (584000/36 + [2522000 - 584000]/54) = 104,200$ man hours. I shall guess that, on average, a picker and a shoveller may have required 4 basketers to remove their spoil and pile it into a bank. Thus the total labour involved in constructing the defences may be estimated at $6 \cdot (104200/2) = 312,600$ man hours.

On the basis of the above calculations, I suggest that it may have been possible to erect the defences with a labour investment of 300–350,000 man hours. For comparison (see Startin 1982) an average Wessex hillfort might have involved *c.* 200,000 man hours and a large henge monument *c.* 500,000 man hours. To attempt to put the figure for Silchester in context, we can note that a labour force of 300 might have been able to complete the work in 100–120 days of 10 hours, considerably less than half a year.

XVII. THE ROCK-TYPES REPRESENTED IN THE TOWN WALL OF SILCHESTER (PL. XXVI) By BRUCE W. SELLWOOD

Most of the material comprising the town wall consists of flint from the Upper Cretaceous Chalk and can thus be regarded as a relatively local material. The blocks of flint have mostly not been worked, or abraded by natural transportation processes, and they appear to have been dug directly from the Chalk itself. The most probable source for these flints is the middle portion of the Upper Chalk. Mapledurwell is about the nearest place to Silchester where this flinty unit of the Chalk crops out and is one of the villages noted in the area as being of largely flint construction. As Osborne White noted (1909), however, flint in conjunction with brick or stone has been employed for building in many local villages including North Waltham, Crondall, Upper Nately, Ellisfield and Farleigh Wallop.

Untrimmed flints in a mortar matrix do not provide a stable framework for a high wall, and the structure is improved by the addition of regular courses of flat-stone bonding layers. Up to five such layers in the Silchester wall are preserved in places, and the composition of the stones within these layers is illuminating in terms of their provenance (FIG. 60). Exotic stones are not confined to these layers but also occur as random clusters in places throughout the wall.

The regular bonding courses contain two major lithologies: glauconite sandstones and limestones. The glauconite sandstones are most probably Upper Greensand of late Lower Cretaceous age while the bulk of the limestones comprise a varied group of lithologies and are far more difficult to pin down stratigraphically, but they are most probably of Middle Jurassic age. In addition to the two major lithologies, a number of minor lithologies are present, including several types of Tertiary sandstones (limonite-cemented sandstones, quartz arenites and calcite-cemented quartzose arenites) that are all relatively local in terms of their provenance.

GREENSAND CLASTS

Blocks of glauconitic sandstone and glauconitic quartzose limestone representing the Upper Greensand range in size up to 70 by 20 cm. They have a green or black speckled appearance in the Wall and weather a light rusty brown. A range of varieties is present encompassing coarse, medium and fine-grained examples. The quartz content in these rocks is variable, ranging from over 50% to less than 20%, the bulk of the non-quartz material being composed of skeletal carbonate, carbonate cement, mud and glauconite. Glauconite sometimes accounts for 30% of the whole rock, occurring as both rotted and fresh grains with a pelleted form. The more muddy facies is strictly a wackestone to packstone, and mostly the mud is of mixed fine-grained (micritic) carbonate and clays. Rare specimens have identifiable micro-fossils in this matrix in the form of globigerinid foraminiferans and abundant siliceous sponge spicules, and such quartzose packstone-wackestones would be fairly typical of the Upper Greensand below the Chalk in the so-called MALMSTONE. Skeletal debris includes: crinoid, bivalve (especially oyster), echinoid, bryozoan, brachiopod, benthic forams and occasional sponge. Accessory particles include mica, feldspar, meta-quartzite and chert.

It is not possible to give a precise provenance for this material. Comparable facies occur to the south-east in the vicinity of Farnham, to the north at Shillingford and Roake (Oxon), and in the west around Devizes. At Potterne near Devizes a bed of dark-grey compact and fine-grained sandy limestone has been quarried from time to time for building-stone but this bed seldom exceeds 60 cm. The Malmstone of Farnham has been used as a local building-stone over many centuries and consists of a white siliceous building-stone and a 'blue' calcareous building-stone. Both beds were used extensively as hearth-stones and as oven-beds in former times (Jukes-Brown and Hill 1900). The Upper Greensand also crops out beneath the Chalk in the Kingsclere anticline to the south-west of Silchester, but appears never to have been quarried there. At the moment the Farnham area appears to be the most likely place from which the Greensand has been obtained. Calcareous Upper Greensand has also been extensively quarried as a building-stone in the Vale of Wardour, west of Salisbury.

Sponge-bryozoan limestones: quartzose and glauconitic exceedingly fossiliferous limestones are locally abundant in patches of blocks. Such rocks are rusty brown and very coarse-grained, exhibiting a jumble of shell debris in the hand specimen. This material has been interpreted as being of Lower Cretaceous age by the British Museum (Natural History) on the basis of the bryozoans, and again probably represents a facies of the Upper Greensand. Black specks in the hand specimen are chert clasts and rare glauconite grains. In thin-section this rock-type is spectacular. It is more correctly a quartzose glauconite skeletal grainstone with packstone patches. The bulk of the fossil material is represented by calcareous sponge and bryozoan fragments. Some of these large clasts were bored by bivalves as grains. Associated skeletal material includes oyster, crinoid and bone.

The non-carbonate material consists of terrigenously-derived quartz grains with both mono- and polycrystalline grains. Most of the monocrystalline grains are strained. Glauconite occurs as pellets. It is mostly fresh and green, but some particles have been degraded and their degradation to limonite has helped to produce the rusty brown weathering colour of the rock. In addition to the quartz, other terrigenous grains are represented by chert fragments. These are transparent and brown in thin-section and mostly very finely cryptocrystalline. Some, however, have been partly glauconitized and retain a ghosted crystalline structure and may thus be altered igneous fragments. Terrigenous debris accounts for about 20% of the whole rock.

Quartz and chert grains are well rounded, except where etching has occurred in response to reaction with the carbonate cement. The cement is very complex. An early rim cement to individual grains is now incorporated within the later calcite spar that provides the main cement to the rock. Scattered siderite crystals form dispersed rims to some of the grains.

Although this is such a distinctive lithology, at the moment I am unable to offer any reliable suggestion as to the provenance of this rock. The Lower Cretaceous age is good enough, but actual localities escape me. It is possible that the Farnham area also has this rock-type, but little

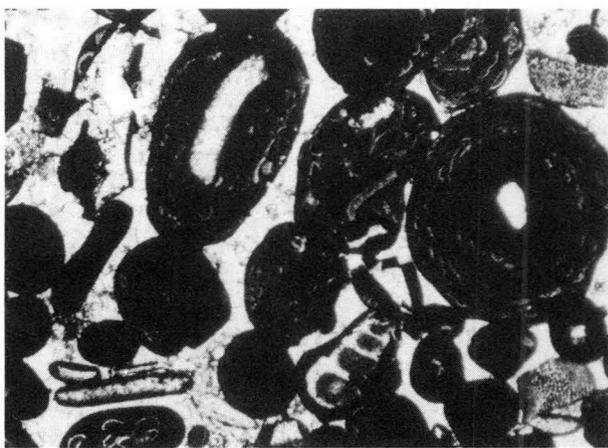
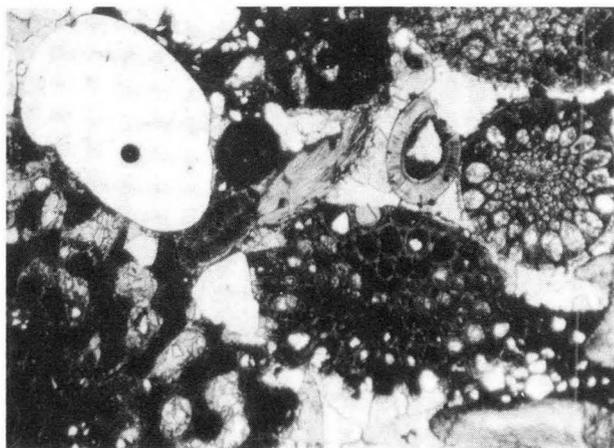
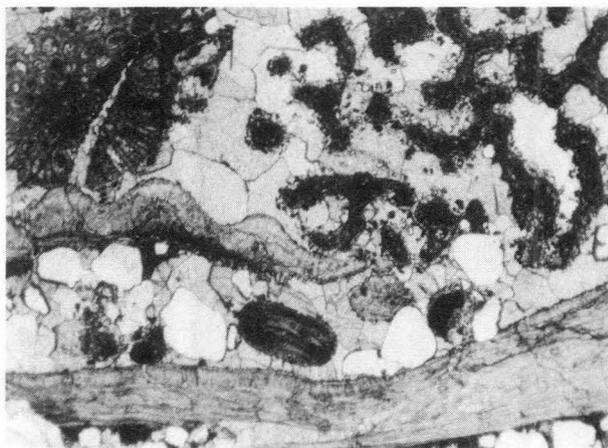
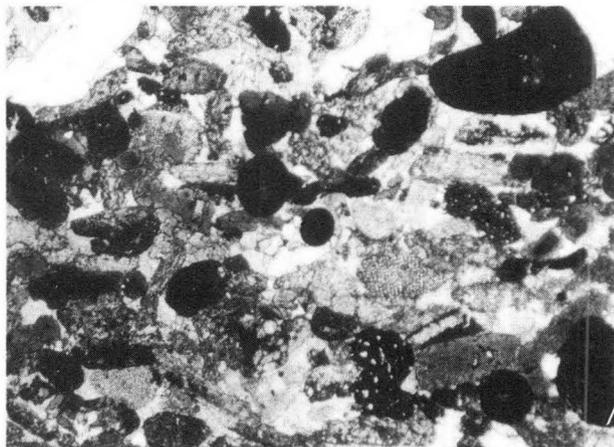
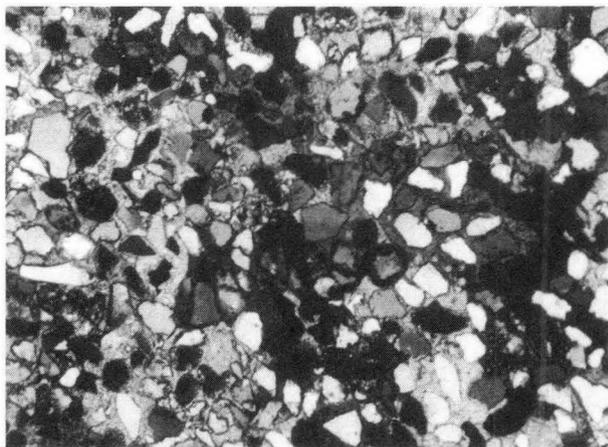
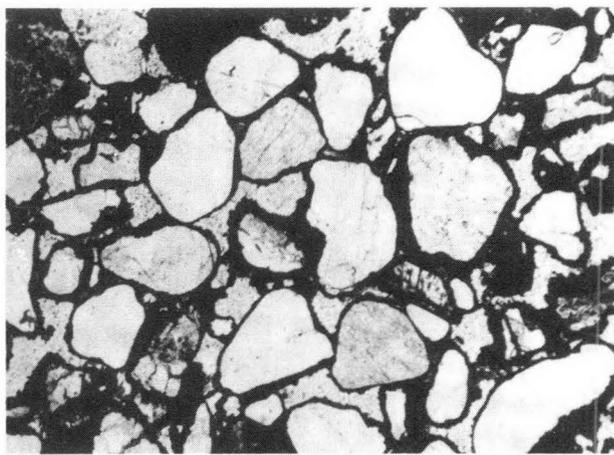
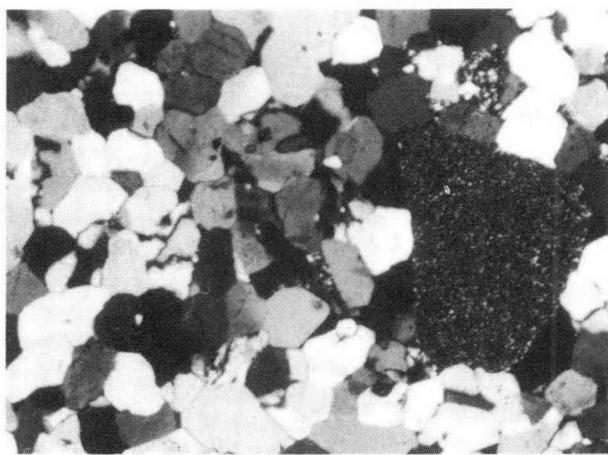


PLATE XXVI

(Photo: Department of Geology, University of Reading)

| | |
|----------|----------|
| 1 | 2 |
| 3 | 4 |
| 5 | 6 |
| 7 | 8 |

Photomicrographs from thin sections of specimens taken from the walls of Silchester.

1. Sarsen. Medium-grained well-sorted quartz arenite with occasional chalk-derived flint fragments (right). Every quartz particle has a well-developed quartz cement, and cement-cement contacts cause the angular appearance under polarising crossed-nicols. $\times 33$.
2. Limonite-cemented Tertiary sandstone. Medium-grained well-sorted sublith-arenite (mostly quartz grains but with some rock-fragment particles) in which each grain is coated with a dark rim of limonite (hydrated iron oxide). Plane-polarised light view. $\times 33$.
3. Carbonate-cemented Tertiary sandstone (? Reading Beds). Fine to medium-grained well-sorted sandstone with a recrystallised ferroan calcite cement. Glauconite occurs as about 5% of the whole-rock. Crossed-nicols view. $\times 33$.
4. Lower Cretaceous (Upper) Greensand. Coarse to very coarse grained glauconitic quartzose grainstone with a well-developed calcite cement. The glauconite pellets are the well-rounded dark grains. Quartz grains, which account for less than 20% of the rock, are mostly clear and white in this view. The greyish material is fossil debris and calcite cement. Crossed-nicols. $\times 12$.
5. Lower Cretaceous (Upper) Greensand. Coarse to very coarse grained glauconitic quartzose grainstone rich in calcareous sponge (fence-work pattern), bryozoans (top left) and oysters (large humpy pattern). Clear white grains are quartz. Plane-polarised light view. $\times 12$.
6. Lower Cretaceous (Upper) Greensand. Coarse-grained glauconitic quartzose packstone (sandy muddy limestone) with abundant sponge (bottom left), bryozoan (circular and oblate grains with internal network-like pattern) and other fossil debris. Large rounded white particules are of quartz. Plane-polarised light. $\times 12$.
7. Middle Jurassic Limestone. Coarse-grained ironshot pisolitic grainstone. The larger concentrically laminated particles are algal pisolites (or oncolites). Other grains include algally coated fossil debris such as gastropods and bivalves. Between the grains is a well developed calcite cement. Plane-polarised light. $\times 12$.
8. Middle Jurassic Limestone. Coarse-grained skeletal grainstone (shelly limestone). The bulk of the grains represent fossil debris from bivalves and brachiopods. Most of the bivalves are preserved as calcite cement-filled micrite envelopes. The clear crystalline material between the fossil fragments is calcite cement. Plane-polarised light. $\times 12$.

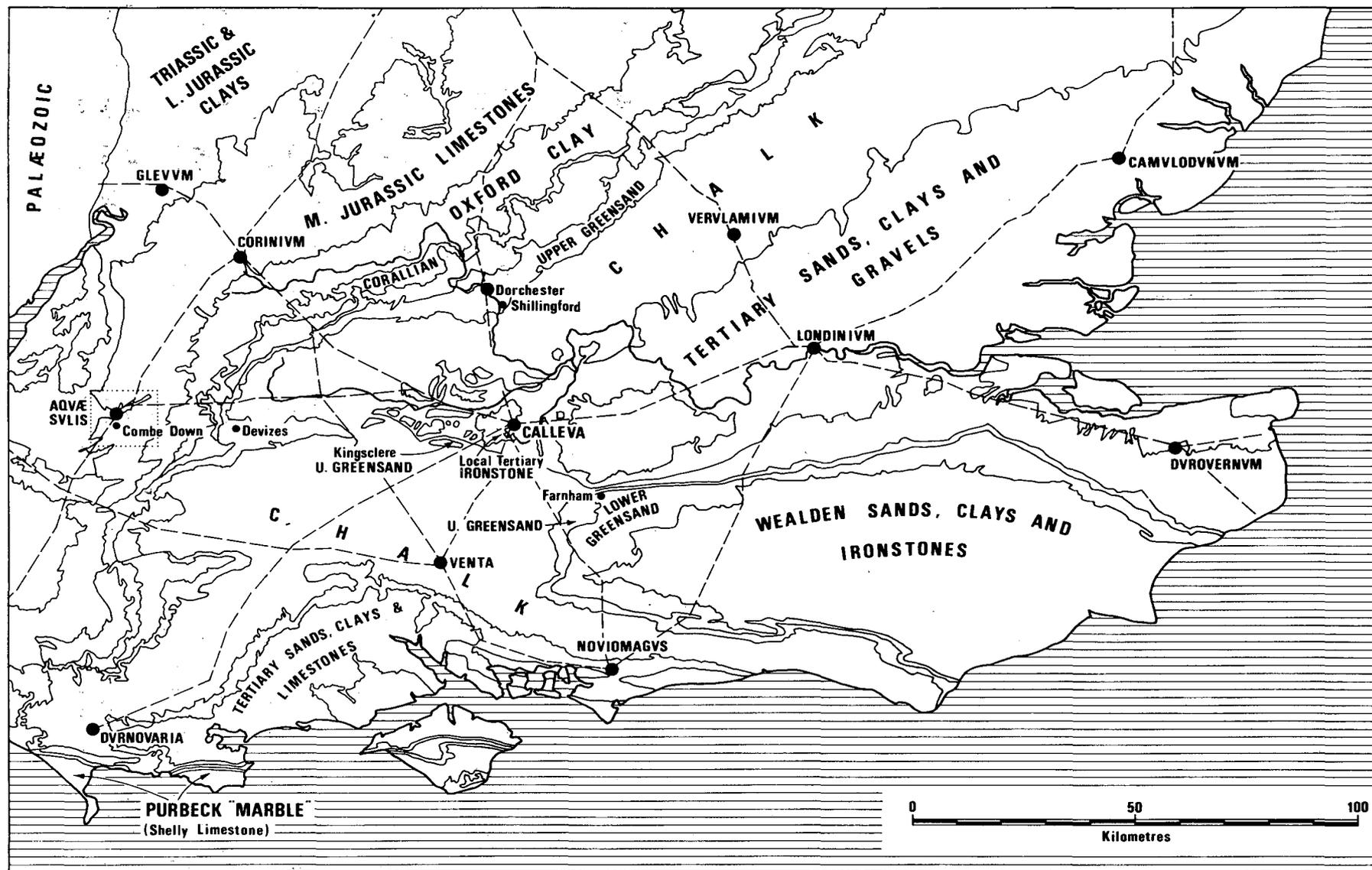


FIG. 60. Geological map of southern Britain with source-areas of the principal rock types used in the Town Wall.

work has been done on the Upper Greensand since the early part of this century. I must say that I am baffled at the lack of siliceous sponge material in this supposed Upper Greensand. Sowan (1975) has recently reviewed the firestone and hearthstone mines in the Upper Greensand of east Surrey, and there were many sources for this type of stone at the foot of the North Downs extending as far east as Merstham and Godstone, so any number of places between Farnham and Godstone could have provided the material. As Sowan (1975) admits, once the stone has been incorporated into a building it is most difficult to establish its exact source. Similar lithologies reappear several times within the Lower Cretaceous of southern England, and a Lower Greensand provenance is alternatively possible.

LIMESTONES

The limestones are represented by coarse-grained coral grainstones, oyster-rich packstones, pisolitic (oncolitic) grainstones, oolitic and pelletal packstones and glauconitic quartzose pelletal packstones. Such lithologies recur within the Middle Jurassic (Great Oolite Group), and again in the Upper Jurassic (Corallian Beds), and so a unique answer to the provenance question is not possible.

Coral limestones: are mostly coarse to very coarse grained sparitic grain-stones with a creamy or brown weathering colour. In the Wall they are very conspicuous as they have centimetre-sized finger-like caverns representing the places from which *Thamnasteria* corals have been leached. There are also patches of well-developed crystalline calcite spar where such coral-formed secondary spores have been later filled with cement. Both of these features would have been present in the freshly quarried rock and have not resulted from *in situ* weathering in the wall. At first sight, these rocks have many of the characteristics typical of the Corallian Limestones of the Faringdon area. In thin-section, however, these spectacularly fossiliferous limestones contain a number of features not typical of the Corallian Coral Rag and lack a number of essential features. First, the Coral Rag contains abundant, usually calcified, siliceous sponge spicules of the genus *Rhaxella*, which are absent here. Other skeletal fragments include brachiopod, abundant bivalve (especially oyster and micrite enveloped shells), gastropod, crinoid and echinoid particles. Accessory grains consist of rare pellets. Oyster shells have been sometimes selectively part-silicified. This material was originally interpreted by Melville (Palaeontology Dept. of the Institute of Geological Sciences) as being Forest marble from the neighbourhood of Cirencester. He suggested a Middle Jurassic age on the basis of the contained echinoid spines (reported in Cotton 1947). On the basis of the recent petrographic studies, the closest comparisons appear to be with Middle Jurassic limestones, but the exact locality is still in doubt. One set of clues is provided by the associated blocks of limestone. Such coral beds, however, occur in the vicinity of Bath on Hampton Downs and were reported by Tomes (1885) as follows: 'The bed in which the corals occur has not at all the appearance of a coral-bed, properly speaking, but it is like a deposit into which the corals have been drifted from some near coral-bank and scattered about. . . Of the exposures on Hampton Downs, I am unable to give detailed sections; but at the south end of that plateau are some ancient and abandoned excavations, which are usually denominated the Hampton Rocks'.

Woodward (1894) notes the odd association of corals, bryozoans and sponges in these beds. This bed occurs at the top of the Great Oolite Limestone, and other coral limestones of similar type, but generally lacking the additional sponges, occur northwards into the area of Malmesbury and Cirencester. However, there are a number of other pointers to the possibility of a Bath provenance in the other limestone facies with which the coral limestones are associated in the Silchester wall.

Pisolitic limestones: are not as abundant as the coral limestones but they also provide a distinctive and readily recognisable lithology in the Wall. The pisoliths weather out as creamy white pea-sized grains. They are coarse to very coarse grainstones and packstones containing abundant

algal pisoliths and skeletal debris set in a calcitic sparite cement. As well as pisoliths and shell material, ooids are also present and these sometimes have quartz grains as nuclei. In sheltered positions this lithology is mostly creamy white in colour but on weathering takes on a rusty brown appearance. This is because of the presence of ferruginous grains within the limestone. Skeletal debris is very strongly abraded, consisting of gastropod, bivalve, brachiopod and echinoderm material.

This rock-type is very similar to certain facies of the Twinhoe Beds (the Twinhoe Ironshot facies), which also occurs in the vicinity of Bath in the Combe Down-Hampton Downs area. These rocks have been described in detail by Green and Donovan (1969), but the Silchester material differs slightly from the described lithologies in containing small amounts of quartz.

Oncolitic beds (pisolitic) are also known from the Cirencester area but these also appear to lack quartz and are not as extensive as those of the Bath area.

Oolitic and pelletal packstones: occur as creamy white and yellowish medium-grained blocks in the Wall. They are locally quartzose and contain small amounts of glauconite. Their fossil contents are usually fragmental, the grains having oolitic coatings. Skeletal debris consists of oyster and other bivalves as the dominant components, brachiopod, bryozoan and crinoid materials. Serpulids are also locally well-developed.

This sort of material is very hard to identify. It has many of the characteristics of Forest Marble limestone but could equally easily come from other parts of the Jurassic sequence. As it is associated with the other limestones already described, I suggest a Forest Marble origin, again from the neighbourhood of Bath.

OTHER LITHOLOGIES

In addition to the main rock-types described above, there are a number of minor lithologies represented, such as Sarsen stones, limonite-cemented sandstone and calcite-cemented glauconite sandstone. All of these rock-types occur within the local Tertiary sequence.

Sarsen stones: are medium grained grey and well sorted quartz arenites. The grains are sub-angular to sub-rounded with a well-developed cement of syntaxially-overgrowing quartz around each of the grains, producing a rock with almost no porosity. Accessory grains include orthoclase feldspar, cherts and composite quartz. They are of early Tertiary age. Such stones are distributed on top of the Chalk in Berkshire, Hampshire and Wiltshire.

Glauconitic calcareous sandstones: are fine to medium grain-size, well sorted, and consist of sub-angular to sub-rounded grains that have been modified by etching through their reaction with the carbonate cement. Skeletal grains are very rare and consist of bivalve debris. Accessory grains comprise glauconite (about 5%) and heavy minerals such as tourmaline. The cement consists of a large-scale poikilotopic mosaic, and this rock type is typically to be found in the local Reading Beds of the early Tertiary.

Limonite-cemented sandstones: are medium and coarse grained sub-litharenites. They are moderately sorted with the grains mostly showing etched boundaries rimmed with a brown layer of limonite. Although scattered in clusters throughout the Wall, there are some large well-trimmed blocks of this distinct brown rock at the South Gate. There are also local masses of an iron-oxide cemented flint conglomerate containing clasts much coarser than those in the sandstones.

Both of these lithologies occur in the neighbourhood of Silchester. The sandstone is from the local Tertiary sequences, while the conglomerate was more probably derived from the Plateau Gravels which directly underlie the Silchester—Padworth Common Plateau.

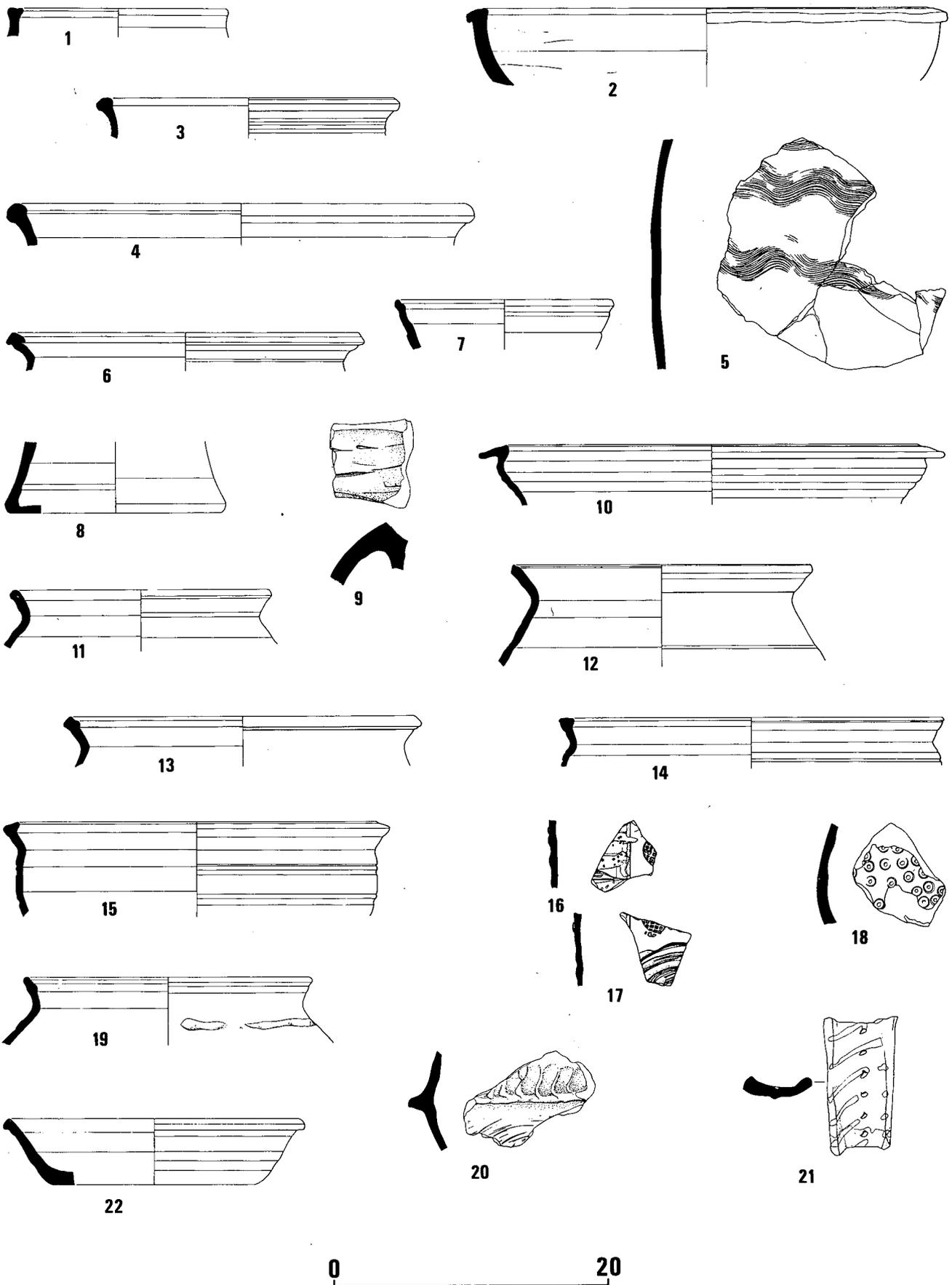


FIG. 61. The Medieval Pottery (see p. 232) (Scale: $\frac{1}{4}$).

XVIII. THE MEDIEVAL POTTERY (FIG. 61) By DAVID HINTON

With the exception of one sherd of tenth- or eleventh-century date from the South Gate (p. 75 and FIG. 55 No. 537), all the medieval pottery was found in the excavation immediately outside the South-East Gate and in the Section across the defences a little to the east of the latter gate.

The earliest sherds, four in number, are from unglazed cooking-pots and bowls (FIG. 61, Nos. 1-2) and are probably of late twelfth-century date. They are in a flint- and sand-tempered fabric paralleled at Newbury (Vince, forthcoming, Fabric 3). Large quantities of later twelfth-century wares have since been found in the excavations of the amphitheatre begun in 1979.

The majority of sherds are, however, of thirteenth- and fourteenth-century date, mostly locally made and paralleled at Newbury (Vince, forthcoming), although some are not otherwise known in east Berkshire or northern Hampshire. Fabrics include Newbury 4, a flint, sand and limestone-tempered fabric used for unglazed cooking-pots (FIG. 61, Nos. 3-4) and storage vessels (FIG. 61, No. 5); Newbury 5/17, a medium-grained quartz sand fabric in a red-fired matrix, used for unglazed cooking-pots (FIG. 61, No. 6), and dark green-glazed jugs, some of which are white-slipped beneath the glaze (FIG. 61, Nos. 7-9); Surrey white-gritted bowls with splashes of light green glaze (FIG. 61, No. 10); and wares in a pink fabric with fine sand temper used for unglazed cooking-pots (FIG. 61, Nos. 11-15) and dark green-glazed jugs (FIG. 61, Nos. 16-18). Two of these (Nos. 16-17) have applied pads with stamped decoration in an iron-rich clay which gives a dark purple colour after firing. The ring-and-dot motif on No. 18 was used at the Camley Gardens kilns, Maidenhead. Sherds of two vessels (FIG. 61, Nos. 19-20) in a grey fabric tempered with sparse sand and large white mica flakes are also represented; one of an unglazed cooking-pot, the other of a green-glazed jug with a thumb-impressed foot-ring.

A few post-medieval sherds were found, of which one unglazed bowl, in a very hard brick-red fabric (FIG. 61, No. 22) and a glazed handle (No. 21) are illustrated. The latter, from the Manor Farm site, has a medium sandy fabric with reddish-brown margins; the centre of the handle has a row of impressed marks. Streaks of white slip have been applied obliquely across the handle before coating with an incomplete orange glaze.

XIX. THE DEFENCES: SUMMARY AND DISCUSSION

In setting out the results of the excavations on the defences, a chronological approach has been adopted. It seems appropriate to follow this scheme in the discussion, which brings together the main conclusions of the specialist reports and those of the stratigraphic record.

PRE-FLAVIAN OCCUPATION

a) *Pre-conquest*

The trenches at the South-west angle, the South Gate and through the Rampart to the east all lie within the circuit of the Inner Earthwork which Boon regards as Claudian in date (Boon 1969; 1974, 446), although he argued for this despite a *terminus post quem* of c. A.D. 25 (but see also below). Beneath the bank of this earthwork, close to its southern entrance, evidence of occupation was recovered (Boon 1969, 13–14 (Site J)). While the character of the material suggested a date of c. A.D. 25, it was difficult to assign an upper limit. Gallo-Belgic and other imports were absent, except for one scrap of butt-beaker (1969, 74, No. 101) and three other sherds of non-local, but probably British butt-beaker. Strictly, this material is sufficient to suggest a *terminus post quem* of c. 15/10 B.C. at the very earliest. Among the coarse wares the rarity of Silchester ware (exceedingly common in Claudio-Neronian deposits) and the comparative abundance of soapy (grog-tempered) fabrics was noted (*ibid*, 74–80). A pre-conquest pit was also recorded in Collis's 1968 excavation (Trench 1), between the South Gate and the 1974 rampart section (Collis 1983, 59). Mark Corney's field survey (Part III, below) indicates that pre-conquest and, presumably, pre-Inner Earthwork pottery-scatters were fairly extensive in the field outside the South Gate (L.P. 0001) and in L.P. 6803, which lie inside the Rampier Copse earthwork, as well as further north, outside the western section of the defences. To this evidence we can add a handful of negative features of uncertain purpose from the trench outside the South Gate and certain of the features found beneath the rampart to the east of the South Gate. Pit 1 provided an important assemblage of pottery, mostly of pre-conquest date, but probably terminating early in the Claudian period. Imports from this pit, particularly Gallo-Belgic ware, accounted for 29% of the assemblage, and this can be compared with the high proportion of imports that Corney has recorded from outside the South Gate in Field 0001. Besides Gallo-Belgic imports, the presence of Italian and early South Gaulish sigillata and Dressel 1 and 2–4 amphorae may be noted. Altogether this indicates that the area around the South Gate extending eastwards to the 1974 rampart section included a nucleus of very rich pre-conquest occupation which we are now beginning to parallel from the current excavation beneath the site of the basilica.

b) *Pre-Flavian (general)*

Pre-conquest occupation can be isolated at the South Gate in the 1974 rampart section, but the absence of sealed pre-conquest features at the South-west angle need not preclude occupation of this date in the area nearby. The field outside the western circuit would support this assertion (Part III). However, sherds of definite pre-conquest pottery are greatly outnumbered by pottery of Claudio-Neronian date from this Trench, and the pre-Flavian rubbish-deposit must be regarded as essentially post-conquest. An interesting element of this rubbish-deposit was the faunal assemblage (p. 199), which was dominated by the skull, mandible and metapodium fragments of cattle and other large mammals. Maltby suggests that this bone assemblage was principally derived from the waste of primary butchery and the skinning of carcasses. Similar deposits, probably of first-century date, were found in Insulae VI and XXXVI. Silchester apart, this practice of organised butchery of cattle has also been found in first-century Exeter and London, and Maltby argues that it may have developed in response to the needs of supplying the Roman army.

At the South Gate (1974) and in the rampart sections to its east (1968, Trench 1; 1974) the evidence suggested continuity of occupation even if the size of areas examined precluded any possibility of identifying structures among the negative features (Collis 1983, 59). Imported

pottery in all the other pre-Flavian contexts from the rampart section accounted for 18% of the assemblage, a figure directly comparable with the proportion of foreign imports in the contemporary South-west angle assemblage (17%). No pre-Flavian occupation was recorded at the South-East Gate or in the 1978 section across the ditches to the north-east. This may partly be explained by the marshy nature of the ground in this area. One pre-Flavian (probably post-conquest) pit was recorded at Manor Farm. The scarcity of pre-Flavian occupation at Manor Farm may partly be a reflection of the amount of modern destruction of the stratigraphy above the subsoil. Further to the north, Mrs Cotton's sections of the earthen rampart produced some evidence of pre-Flavian occupation, but none of pre-conquest activity (1947).

FLAVIAN TO ANTONINE

Structural evidence was only found at one site, the 1974 excavation outside the South Gate. Although not closely dated, a hearth, well and possible property-boundary adjacent to the course of the north-south street seem to be contemporary and of Flavian date. A curious feature is the proximity of the well-shaft to the street. The latter was sectioned on a very small scale, producing evidence that the first street-surface could scarcely be earlier than Flavian in date. Elsewhere along the southern circuit where material of Flavian to Antonine date was recovered, the most satisfactory explanation for the contemporary stratigraphy was that it had developed through cultivation. This was particularly clear in the 1974 section east of the South Gate, with a homogeneous, loamy and gravelly soil between the pre-Flavian occupation-horizon and the construction of the earthen rampart. This development invites comparison with the 'Upper occupation level, Trench 1' recorded during the 1968 excavations (Collis 1983, 59-60). The stratigraphy at the South-west angle was comparable, although a break in development suggests discontinuous cultivation. The faunal remains, although still dominated by cattle, no longer appear to have been derived from a primary butchery assemblage, but from several different disposal processes.

No activity of Flavian to Antonine date was recorded at the South-East Gate or in the 1978 excavation just to the north. However, at the Manor Farm an unexpected discovery was a major negative feature, reasonably interpreted as a ditch running obliquely across the northern end of the trench. Although too small an area for excavation was available for the interpretation to be certain, a defensive interpretation is favoured. The feature seems to be on the wrong alignment and perhaps of too great a size to have served as a *temenos* ditch. Neither among the pottery, nor among the faunal remains is there evidence to suggest anything but domestic waste accumulating in the primary silts. The fact that the line of the ditch was later marked by the construction of a palisade along one edge indicates that it served a continuing function. It is possible that this ditch formed part of a defensive circuit to replace the 'Inner Earthwork' (see above, p. 41). The pottery from the lowest excavated (and very probably the primary) silts is an important group of Flavian date. If we assume a defensive function, it is arguable that the digging of the ditch may have been initiated in the aftermath of the Boudiccan rebellion. It might be compared with the '1955 ditch' at Verulamium (Frere 1983, 44-9).

After initial silting, the ditch remained stable long enough for a turf-line to develop. This produced a seed-assemblage which was dominated by those of plants associated with damp meadow-like environments with only a very few wheat grains present. Given the context, this assemblage almost certainly reflects vegetation growing in the ditch. Although the ditch was allowed to silt up, in the early second century the inner (or town) edge was marked by the construction of a fence or palisade, set in a trench 0.4-0.5 m wide and 0.5-0.6 m deep. Even if the ditch had lost any defensive capability it might once have had, the palisade suggests that as a boundary its line was still important enough to be prominently marked. The removal or collapse of the palisade and the upper filling of the ditch both belong to the mid second century. The rubbish, both pottery and animal bones, suggested that the ditch continued to receive domestic waste. The animal bone showed evidence for an unusual form of Roman butchery (p. 208). The pottery suggests that nearby occupation was not particularly rich.

The Earthen Rampart and the Gates

Of the ten properly-recorded sections through the city's rampart on the southern and eastern sides, only one of those recorded by Mrs. Cotton has produced structural evidence below the bank extending into the second century. Elsewhere the only other site to produce structural evidence extending into the second century was the trench dug in 1974 outside the South Gate. Thus the line chosen by the builders of the rampart did not (on the eastern and southern sides) exclude or destroy much habitation. In fact the rampart follows fairly closely the edge of the plateau-gravel spur along the southern and south-eastern flanks, and only cuts across one marshy and inhospitable area by the South-East Gate. A very slightly more generous line could have been laid out on the north-east side, the side where Mrs. Cotton excavated, in order to include more of the well-drained plateau-gravels. That these additional areas were not included supports the evidence from Mrs. Cotton's trenches that actual structures in use in the second century were too infrequent to justify a different course. As the field survey has shown, even in the second century the main area of extra-mural occupation was focussed on the line of the main east-west highway. On the north-eastern and south-eastern side the rampart probably excluded very little. The masonry building in Field 3000 (p. 263) to which the South-East Gate presumably gave access was a notable exception. Although the potential for settlement on the western side was much greater than to the east, the builders of the rampart chose a line which excluded a substantial area within the line of the Sandy Lands and Rampier Copse earthworks, for the very good reason that it was not built on. Mrs. Cotton's investigations in Rye House Meadow in 1938-9 indicated an absence of first- and second-century occupation. As for the ribbon development to east and west, it simply was not practical to include this in any defensive scheme.

The excavations of 1974-78 were successful in producing more evidence to date the construction of the rampart. Most trenches produced material, notably samian and BB1 ware dating from between *c.* 160 and *c.* 180, and these discoveries are consonant with Dr. Collis's and Mrs. Cotton's findings.

At the South-west angle two even later sherds were found in a layer *beneath* the rampart; these were part of an Oxfordshire *mortarium* not otherwise attested before *c.* A.D. 180 (No. 267) and one of BB1 (Gillam type 226-7) which probably dates no earlier than 'the very end of the second century' (No. 208). Another similarly-dated *mortarium* sherd (No. 404) was found within the rampart itself. The dating evidence for the rampart is set out under the various sites examined, on pp. 59, 62-3, and 65. The crucial sherds are:

A. *Below the rampart*

Two bowls of Cinnamus (Drag. 37) (p. 153) Other pottery: Nos. 208, 250, 251, 267.

B. *In the rampart*

One bowl of Cinnamus (Drag. 37) (p. 178). Other pottery: No. 404 and Gillam type 318 (p. 177), unfigured, cf. No. 249.

This material would not, therefore, rule out the possibility that the construction of the earthen rampart did take place at the time of Clodius Albinus's usurpation and expedition to Gaul in 197-8 (see Wachter 1966 and, most recently, Hartley 1983 and Frere, *Britannia* xv (1984) for discussions of the context of these earthen defences).

The adjacent part of the earthwork itself has now been shown to be stratigraphically later than the construction of the South Gate which can itself be paired with the North Gate (Fulford 1983, 86). The East and West Gates with their double portals are also remarkably similar to one another in plan, and the manner of their construction argues forcefully for them being earlier than the town wall (*ibid*, 86). Excavation of the East Gate in 1908 showed that it abutted the city wall with a straight joint on the northern side (St. John Hope 1909, 474-6, pl. LXXXIV). Whether, like the South Gate, their construction preceded that of the rampart has yet to be discovered. Since they are the principal gates of the city this would seem highly likely. Another point in favour of them being primary is that, unlike the north and south pair, the East and West Gates are not set well back behind the line of the rampart. Since the South and North Gates are positioned thus, it could be argued that they actually replace a timber gate set further forward on the line of the rampart.

Such an alteration would warrant a small addition to the rampart to link it with the new gate. In fact, in the case of the South-East postern, brick cladding was added to the timber structure *in situ*. Although the idea that at the South and North Gates a timber gate may be found in a position different to that of the masonry one might be tested archaeologically, it is better in the light of our present knowledge to regard the two pairs of main gates as primary to the rampart. Moreover, the primacy of gate-structure over rampart can also be paralleled at Cirencester (Wacher 1961, 65–7), Verulamium (Wheeler 1936, 63–70, pls. XXII–XXIII) and Exeter (Fox 1968, 12–13). Thus, in the case of three *civitas* capitals and one *municipium*, it can be seen that the provision of defences started with the construction of some or all of the gates and was then hastily concluded (or in the case of Verulamium, left incomplete) with a rampart of inferior build. The re-excitation of the South-East Gate also proved very rewarding. Not only was it clear that here too the gate-structure had preceded the construction of the town wall, but also that it was absurd to continue to regard the structure as the sluice-gate which the original excavators had suggested.

As for the structure of the rampart, a trench cut at the south-west corner, which exposed the outer base, showed no evidence of external revetment or internal structure; the front simply sloped, *glacis* fashion, down to the edge of the ditch. At the South-East Gate a wattle fence provided an insubstantial revetment to the front of the rampart. Study of the timbers beneath the rampart by Ruth Morgan shows that they were cut in the winter.

An interesting comment on the construction of the rampart is Mr. Startin's calculation that it need only have involved a gang of some 300 men working 100 days to complete the operation. The work could easily have been fitted in between the spring sowing and summer harvest. Given the new dating evidence which pushes the date of construction to the end of the second century, it is possible to see the construction of the rampart as an immediate and makeshift response to a sudden threat, such as the withdrawal of forces from Britain by Clodius Albinus. Mr. Startin's calculations make it clear that, as one would expect, the rampart required two ditches to be dug to provide the necessary spoil (cf Boon 1974, 105–6). Thus the outer ditch, which has a wide and shallow profile, is likely to have been a later Roman recut and extension of an earlier outer ditch originally contemporary with the rampart. An alternative interpretation is that the earthen rampart could have served as a cheap alternative to a stone wall for which, perhaps, adequate resources were lacking in the latter part of the second century.

One of the most valuable pieces of evidence to emerge from the excavation at the South-East Gate was the pollen sealed by the construction of the rampart here. This was the first pollen to be analysed from Silchester, thus complementing the study of seeds and other plant-remains by Reid at the beginning of the century (1901, *et seq.*). Besides demonstrating the existence of a marsh and alder carr at the time of the building of the rampart, Dr. Keith-Lucas's analysis has also shown the presence of a largely open landscape around Silchester, comprising heath-land, pasture and arable land. The carr woodland and heathland species are new records for Silchester.

The construction of the town wall can now reasonably be dated between *c.* A.D. 260 and *c.* 280, much later than the date suggested by Mrs. Cotton on the basis of the pottery available to her (1947). The dating evidence for the Wall is discussed on pp. 68, 183; further support for the date-range suggested is provided by pottery from the construction-trench of the wall, found during Collis's 1968 excavations. Collis argued that this pointed to a date after *c.* 250, but before the end of the third century (Collis 1983, 63–4). It is as well to remember that the dating of these and the sherds from the 1974 trench depends upon a *terminus ante quem* of *c.* 280, rather than any secure *terminus post quem*. However, further refinement of the date is offered by a reconsideration of the context of two barbarous radiates from the 1968 excavations which add support to a date for building spread over a number of years centering on A.D. 270. The materials and the way in which they were used in the construction of the wall represent an unusual feature for Silchester which has only recently been paralleled in the rebuilding of the amphitheatre (Fulford 1982, 330). It has been noted that the South and South-East gate structures employ tiles either for bonding or for the whole fabric, as in the case of the repaired South-East Gate. The town wall, however, employs a variety of stones in its levelling-courses. As Dr. Sellwood's study shows, the most important materials are glauconite sandstones and limestones. The former are derived from the Upper Greensand of the Lower Cretaceous and could have been obtained from a number of

locations where it outcrops, such as Farnham (Surrey), Potterne near Devizes (Wiltshire), and Shillingford and Roake (Oxfordshire). Kingsclere (Hampshire) remains another possible source. The limestones occur within the Middle Jurassic (Great Oolite group) and in the Upper Jurassic (Corallian Beds), again suggesting a variety of sources, although Hampton Downs near Bath (Avon) provides the best general match. Similar lithologies do however occur further northwards in the region of Malmesbury (Wiltshire) and Cirencester (Gloucestershire). Additional material such as sarsen and ironstone was obtained more locally from the Tertiary sequences. George Boon has already drawn attention to the enormous input of labour required to furnish the materials and construct the wall (1974, 101-2). Although the work-force at Silchester itself may have been smaller than that required to construct the earthen rampart, the labour-requirement to provide the materials must surely have been considerably greater, drawing widely on the resources and energies of the *civitas* as a whole. Although the flint and Tertiary stones which form the greatest proportion of the building-material could have been obtained within the *civitas*, Dr. Sellwood's reassessment of the limestone used in the levelling-courses confirms that quarries outside the *civitas* were also employed. How this material was acquired and whether the quarries were in imperial ownership is a matter that has been discussed by Boon (1974, 100-101). More recently, Dr. Blagg has drawn attention to the massive investment of effort required to construct the town walls of Britain in the third century (Blagg 1981). The only savings made in the building of the wall were the four main and one of the minor gates which, as we seen, were already in existence. The only gate which we can be reasonably certain was contemporary with the wall was that by the amphitheatre; but in all probability we can also add the South-West Gate (Boon 1974, 103-4).

At the same time as the walls were built there is some evidence to suggest a partial resurfacing of the main north-south street at the South Gate. Otherwise the evidence for later Roman activity is confined to the deposit of rubbish which accumulated on the rampart at the back of the South Gate. This contained an interesting group of late Roman pottery associated with coins, the latest of which belonged to the House of Valentinian, and an assemblage of animal bones (a large percentage of which showed evidence of canid gnawing) that probably derived from a range of disposal-activities including domestic and cooking-waste. Nearby, metalworking is indicated by lumps of copper alloy and molten lead, which may well have been derived from the house immediately to the north of the South Gate (VIII, 4), which is thought to have been used for refining silver.

The South Gate itself may have become increasingly choked with rubble after 350-60. This, together with the presence of certain ambiguous features within the gate itself, may be regarded as possible evidence of the disuse of the gate before the beginning of the fifth century. However, it is equally possible that the same activities could have been carried out much later, but without necessarily leaving any evidence of a later date. While a question-mark hangs over the fate of the South Gate, that of the South-East Gate is certain. It was deliberately blocked in the later Roman or sub-Roman period. This action cannot be dated at the gate itself; but excavation of the building in Field 3000, to which the postern gave access, may provide a more precise answer.

Apart from one sherd of possible tenth- or eleventh-century date from the South Gate, the only post-Roman material found is that excavated outside the South-East Gate and from the upper fill of the ditches to the north, excavated in 1978. Most of the pottery was of thirteenth- to fourteenth-century date. The fresh character of this material indicates that it cannot simply be regarded as derived from manuring scatters. Thus the pottery gives some indication of the extent of the medieval village south and westwards from the church.

In conclusion, it cannot be stressed too strongly how rewarding the re-excavation of Victorian excavations at the South and South-East Gates proved to be. Except for the 1974 trench and the Manor Farm excavation, further work is possible at all the other sites excavated between 1974 and 1978.

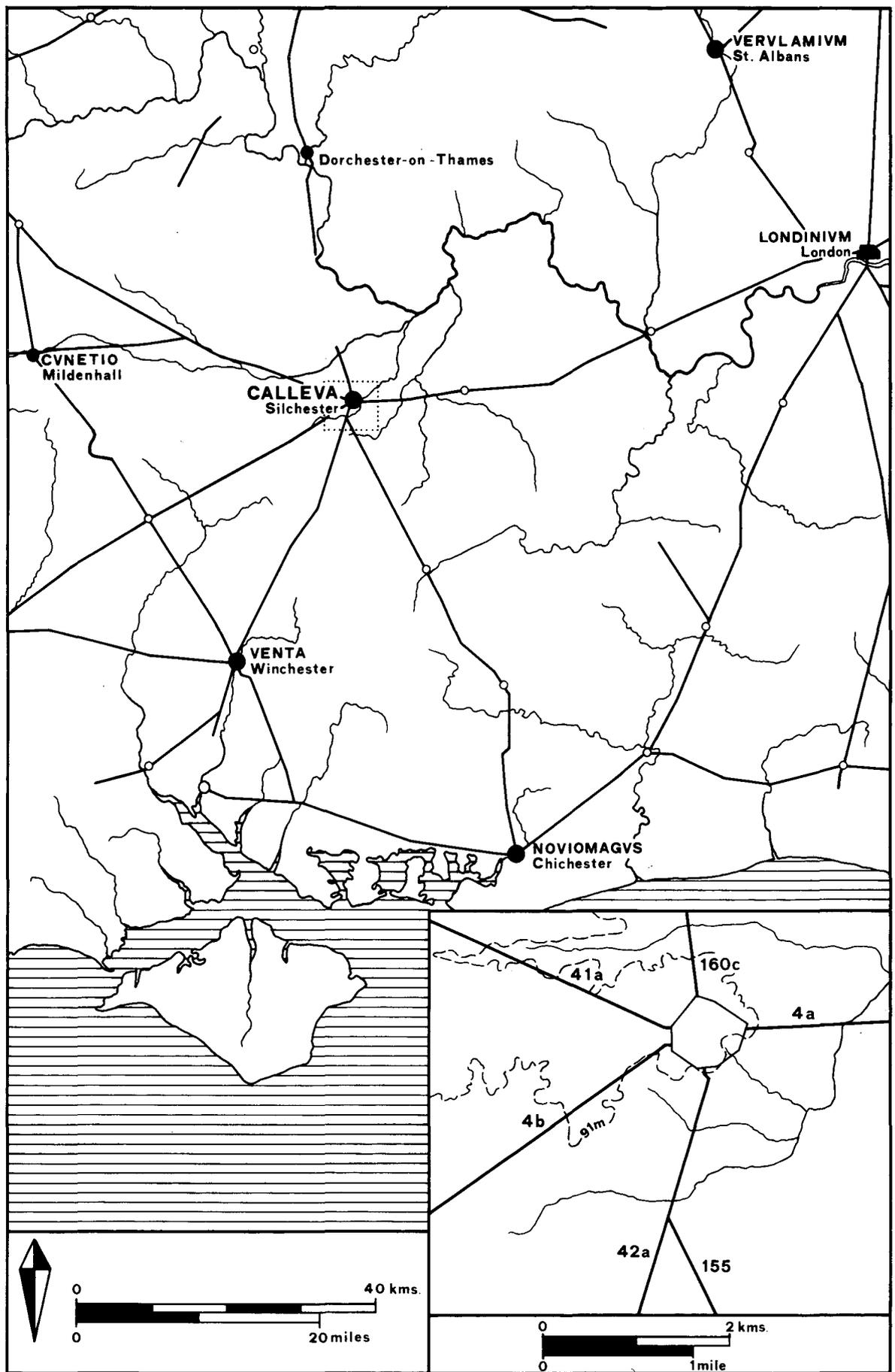


FIG. 62. Location of *Calleva* showing the Roman road-system.

PART III

A FIELD SURVEY OF THE EXTRA-MURAL REGION OF SILCHESTER

BY MARK CORNEY

The *civitas* capital of *Calleva Atrebatum*, modern Silchester, in Hampshire, is best known as the only such site in Britain where what passes as a complete plan of the intra-mural stone buildings has been recorded. In common with other major *civitas* capitals in Britain, very little attention has been paid to the extra-mural region at Silchester; thus depriving us of knowledge of the full extent of the settlement. This present work is an account of the results of field-walking, which has been undertaken every year between 1969 and 1981, on the surrounding farmland.

No comparable survey has been carried out at any other *civitas* capital, and so the results presented here may have an important bearing on how such sites should be viewed in their entirety. Silchester is one of the few *civitas* capitals where such a survey can be undertaken, the others being Aldborough, Caerwent, Caistor-by-Norwich and Wroxeter. However, no similar work has been done at these sites.

It must be stressed from the outset that whilst the areas examined are designated 'extra-mural', it must not be forgotten that *Calleva* only received the defences, within which the Victorian campaign of excavation took place, at the end of the second century. Therefore, earlier material recovered may indicate the extent of the pre-Roman settlement and earlier Roman town, and show how much of this area was excluded when the decisions were taken to build defences.

The sheer quantity of material recovered (over 162 kg of pottery) has meant that, given the limits of space and length, only a representative selection of the material is presented to demonstrate the dating for each period.

THE SITE AND ITS SETTING

Location (FIG. 62)

Silchester is located at the eastern end of a gravel plateau, on a spur some 91 m (300 ft) above sea-level, some 6 km south of the Kennet valley, and 10 km north of the chalk downs near

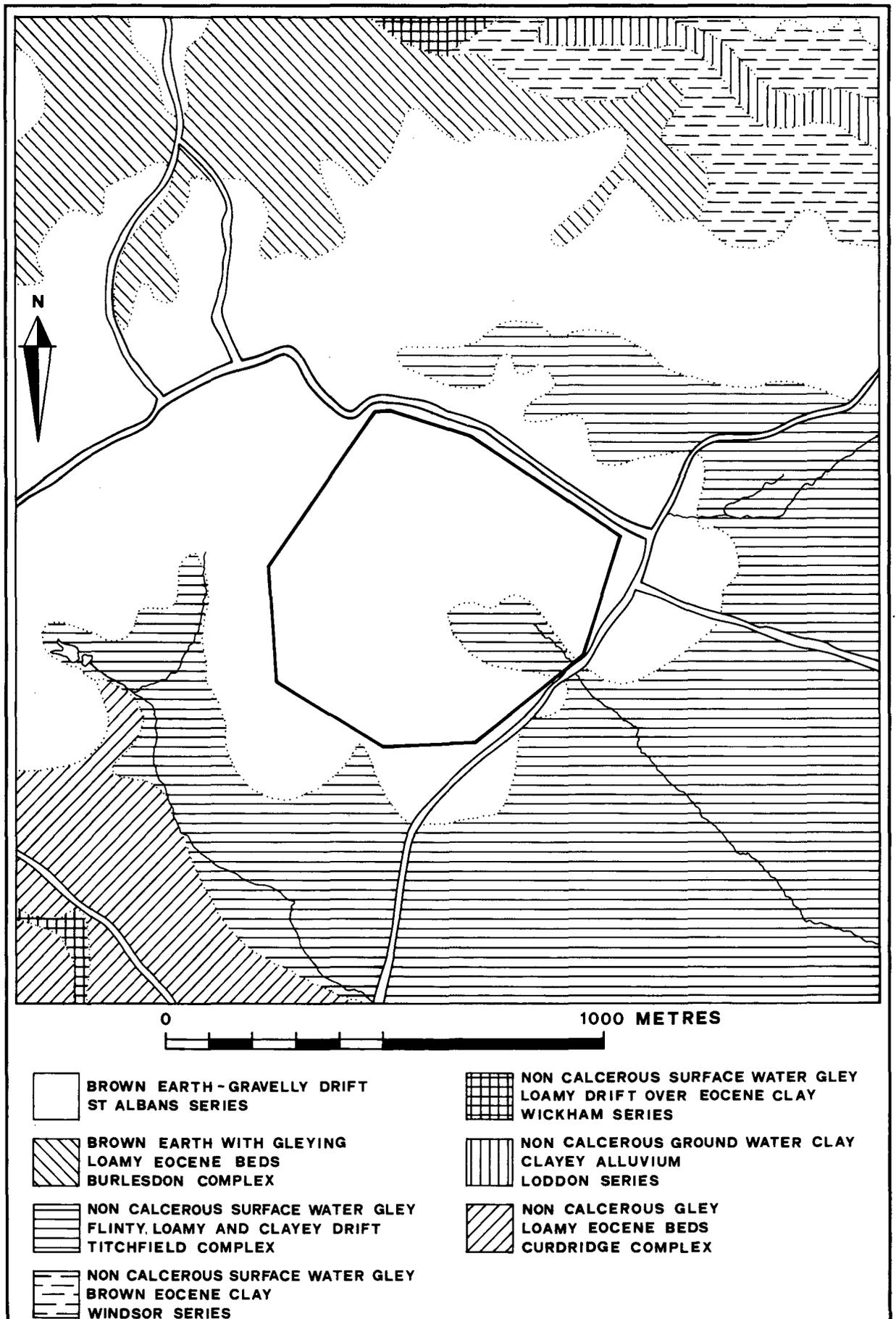


FIG. 63. Surface geology of Calleva and environs (after Jarvis 1968).

Basingstoke. During the Roman period the site was a major road-junction (FIG. 62 inset). The main road from London – ‘The Devil’s Highway’ – (Margary 4a) divides here, providing communications with Cirencester, Bath and South Wales (via Margary 41); with the south-west via Old Sarum (Margary 4b); with the south coast by way of Winchester (Margary 42) or Chichester (Margary 155), and with the Midlands via Dorchester-on-Thames and Alchester (Margary 160).

Drift, Geology and Topography (FIG. 63)

The site and its surrounding area are situated on two main soil-types (Jarvis 1968):

- (i) drift gravels.
- (ii) clayey loams.

To the north of the city the land falls steeply from the plateau-gravel edge into a valley of clayey alluvium. This was, until recently, heavily wooded. East of the city, a gentler slope, on the mainly clayey soils of the Titchfield Complex, runs down into the valley of Silchester Brook. The clay content increases lower down the slope, a factor which may in part account for the poor response to crop-marking in this area. Closer to the East Gate, in Land Parcel (henceforward L.P.) 6346, the junction between the St. Albans series gravels and the Titchfield soils can be clearly seen (PLS. XXXI, XXXIII). The Titchfield soils continue south of the city (FIG. 63), with sandy outcrops becoming more common, especially in L.P.s 0001 and 0068.

Beyond the limits of FIG. 63, to the south and west, the Curdridge complex, again a clay and sand loam, predominates. Like the Titchfield Complex, Curdridge soils tend to hold water in winter and to dry out rapidly in summer, tending to leave a hard, impervious crust. This land supports small copses (FIGS. 65–6), some of which may be remnants of a more extensive tract of woodland, still represented south-west of the site by Pamber Forest.

As with the Titchfield soils, the Curdridge Complex has proved, on the whole, to be unresponsive to crop-marking in areas of known occupation, such as Latchmore Green (FIGS. 81–83). Marking does occur, however, where the complex is overlain by drift gravel (PL. XL).

Small streams rise at the junctions of the plateau-gravel, and flow south-east and eastwards into Silchester Brook, from where via the Foundary Brook water flows into the Kennet at Reading. How far the Roman water-courses correspond to the modern drainage-pattern is difficult to assess, for there has been extensive modern channelling and diversion to aid drainage and cultivation.

AIMS, METHODS AND SOME PROBLEMS

The aim of the survey was the total recovery of all archaeological material, with the exception of building-debris, from all available land within 500 metres of the Roman defences. By grouping and dating this material, and by using the limited aerial coverage, it was hoped to gain an outline of the development and use of this extra-mural area, from the later Iron Age until the end of the Roman period. On the basis of this information, recommendations for selective excavation to test some of the observations made below have been made (below, pp. 287–92).

The work was organised with line-walking, the larger concentrations of material being collected over five-metre grids. Everything except building-material was collected. It is this material which has been used in the study presented here.

This systematic form of collection has also allowed an assessment to be made on the movement of archaeological material in the plough-soil. An illustration of this comes from L.P. 0068 (below, p. 257 and FIGS. 67–68), where a probable early Roman cemetery has been identified. Grid collection over the largest of the pre-Conquest and Claudio-Neronian scatters (Groups 5 and 16, FIGS. 67–68) has shown that sherds from the same vessel can be found over successive seasons within an area of two square metres.

Similar trends are visible at Silchester with building-materials. L.P. 5333 (FIGS. 69, 72, 74, 75) has been walked for eleven years; the areas of rubble-spreads plotted have shown little or no variation from year to year. The only exception was Group 39, which first appeared in 1978,

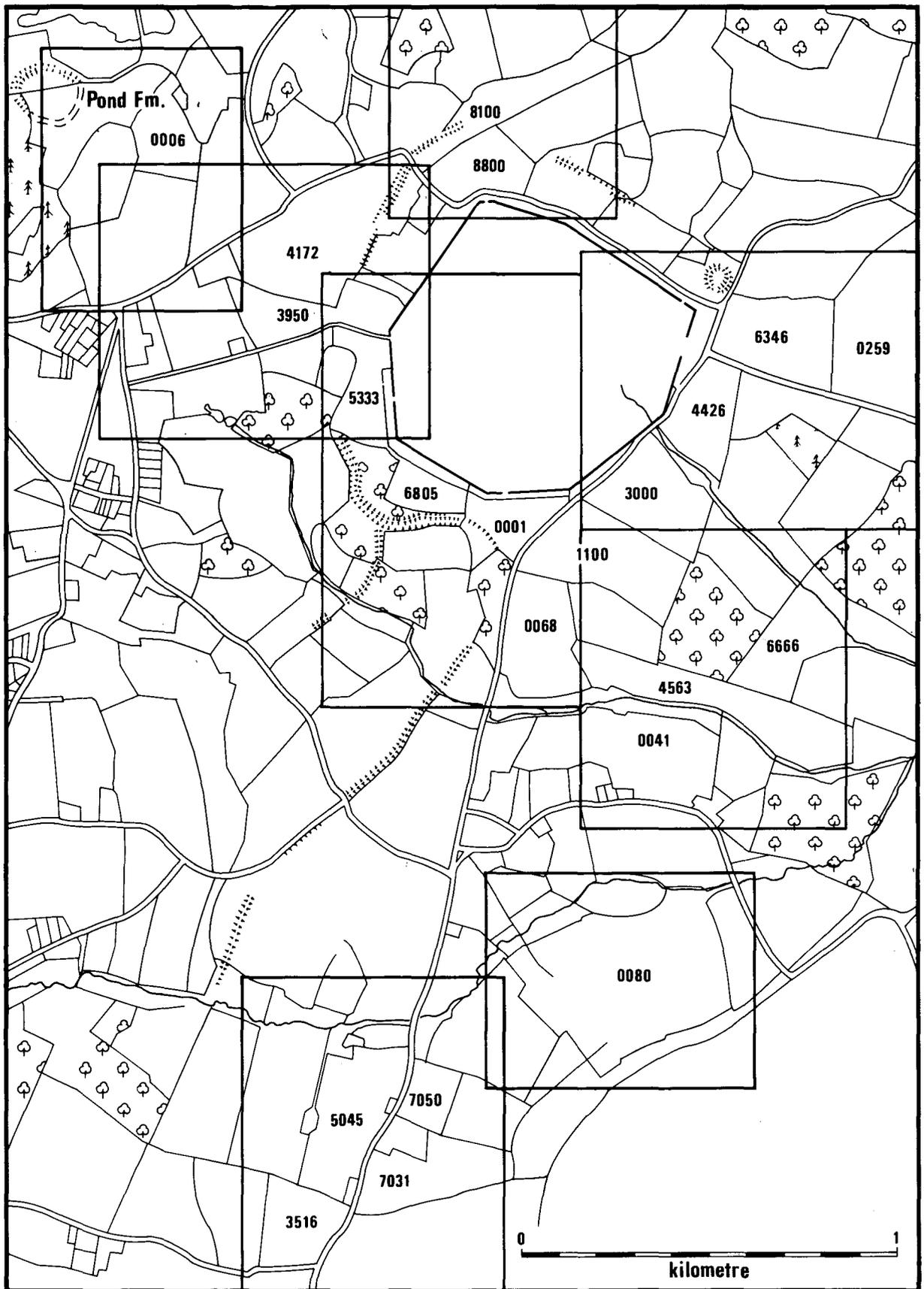


FIG. 64. The Survey Areas: the 'boxed' areas correspond to the detailed survey maps of FIGS. 67-83.

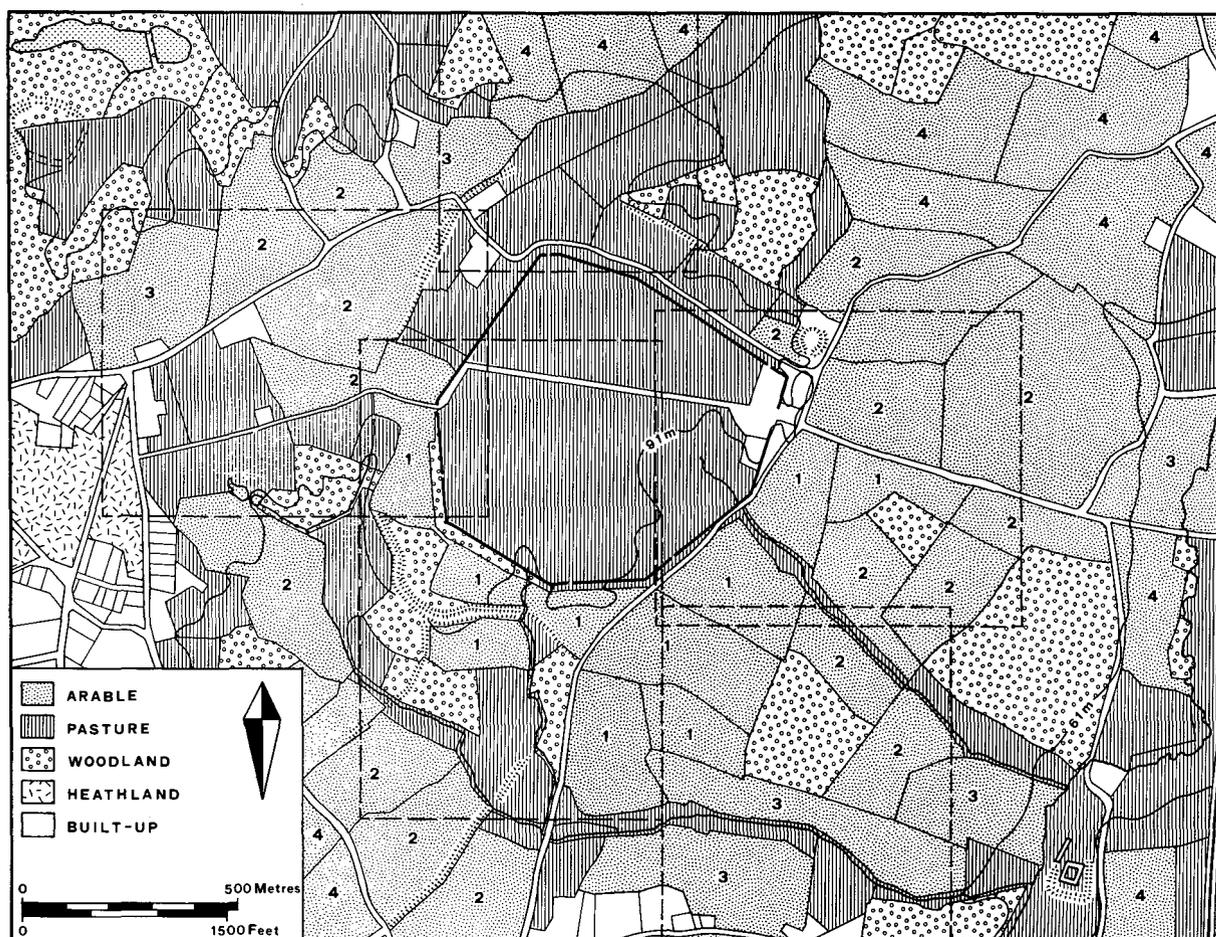


FIG. 65. Modern land-use around the walled town. The 'boxed' areas correspond with those marked on FIG. 64, and the detailed maps of FIGS. 67–80. For the numbers, see p. 245.

probably because of a change in the depth of ploughing (see below, p. 245).

The building-material plotted may be a significant indication of occupation and structures and it is, therefore, important that any other possible explanation for its presence be discussed. The most obvious alternative at Silchester is that some at least may have been derived from the town wall. This could be argued for the large concentration of debris in the north-east corner of L.P. 5333 (FIG. 69). This is felt to be unlikely, however, as the wall at Silchester used a mixture of greensand, limestone and ironstone in its bonding-courses and no such stone is present in any of the scatters beyond the walls. Further confirmation of this comes from the fact that the scatter in L.P. 5333 does not continue across the ploughed-out section of the wall ditch south of the West Gate. This might be expected if material was coming from the wall.

The commonest building-materials encountered in the extra-mural area are flint and tile, although small amounts of other stone including sarsen and chalk also occur, the latter particularly in the north-west corner of L.P. 5333 (FIG. 69).

In other areas, such as L.P.s 3000, 6346 and 0259 (FIGS. 71, 73, 76) concentrations are too far from the wall for it to be considered a likely source. Furthermore some spreads, such as that by Groups 61 and 82 in L.P. 6346, are made up exclusively of roofing-tile – both *tegulae* and *imbrices*. Such spreads are more suggestive of substantial timber buildings with tiled roofs, although ultimately only excavation could decide the point.

The almost total lack of post-Roman occupation in the survey area has made it somewhat easier to assign a probable Roman date to scatters even if datable material is lacking.

Further confirmation of the existence of extra-mural buildings, as well as features such as land boundaries, divisions and pits, comes from the aerial coverage. These are mainly from the National Monuments Record collection, and nearly all were taken in a single season during June and July 1970. They form the basis of the plots in the text figures (Appendix 1 lists all the

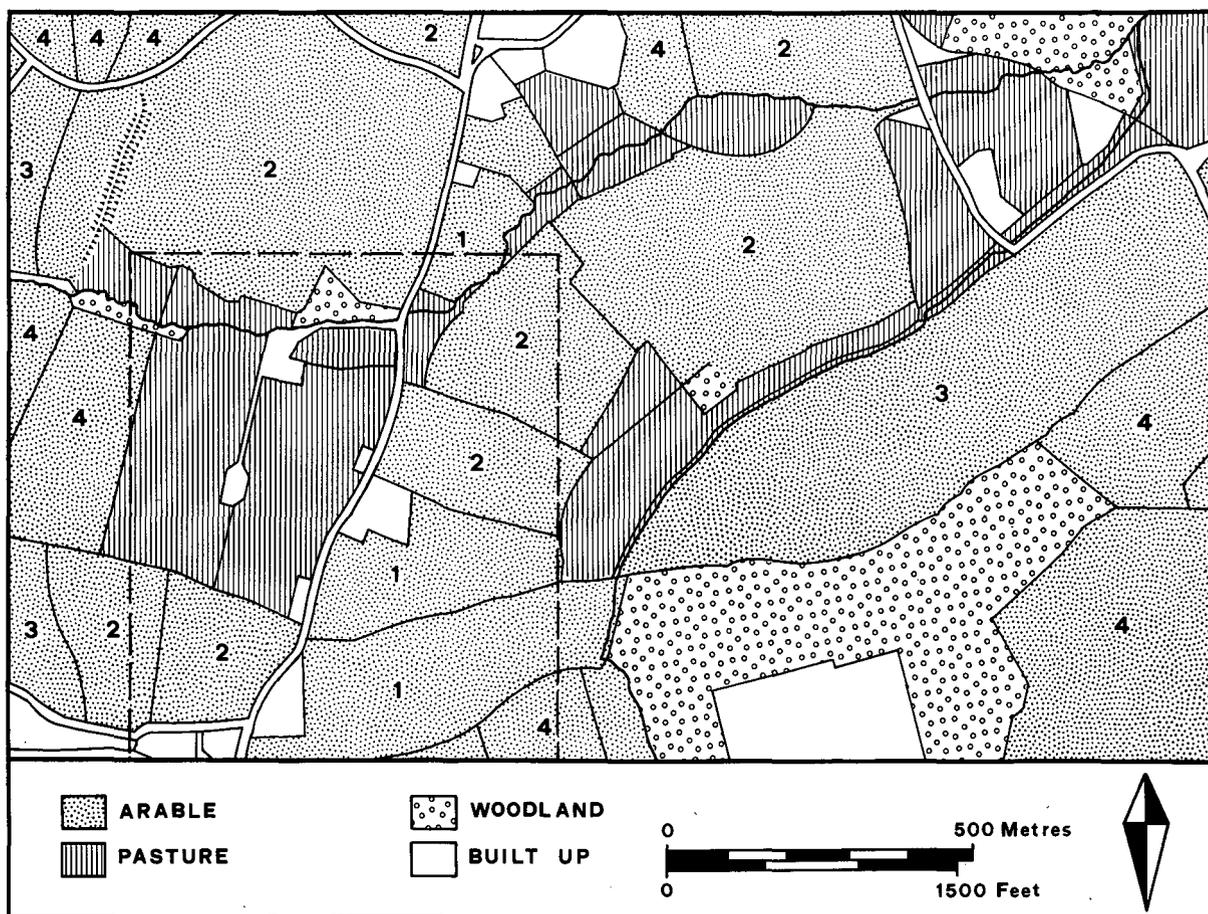


FIG. 66. Modern land-use south of *Calleva*. The 'boxed' area corresponds with that marked on FIG. 64 and the detailed maps of FIGS. 81–83. For the numbers, see p. 245.

photographs examined). Mr. Roger Palmer also kindly made available his plots of photographs in the University of Cambridge collection. Examination of PLS. XXVII–XXX and FIGS. 70 and 75 shows that, especially in the western area, many of the rubble scatters do relate to masonry buildings, visible as crop marks. Other areas, especially east of the town, show less certain structures: this may, in part, be a reflection of the nature of the subsoil. It is indeed unfortunate that the same energy shown in photographing the inside of the town walls has not been applied outside as well.

Certain factors affect the recovery of material in such a survey. First and foremost there is the modern land-use pattern, which governs the areas which can be walked. FIGS. 65 and 66 show the pattern for the survey area, and are supplemented by Table 30. The dashed lines on FIGS. 65 and 66 show the locations of the larger-scale plans in the body of the text (FIGS. 67–83).

TABLE 30

| Land Use | Area (Hectares) | % of Total |
|----------|-----------------|------------|
| Arable | 113.0 | 60 |
| Pasture | 42.6 | 22 |
| Woodland | 28.7 | 15 |
| Built-up | 5.7 | 3 |
| Total | 190.0 | 100 |

The main area where a combination of modern land use and a denial of access has hindered work is to the north of the town. This is made more unfortunate by the fact that the region probably contains one of *Calleva's* cemeteries, to judge from the sarcophagus which was found in the area in 1852 (below, p. 276); Boon 1974, 186; Fox (1892), pl. XXV).

The numbers on the arable fields on FIGS. 65 and 66 indicate the number of years over which each field has been examined.

TABLE 31: AREAS SURVEYED AND NUMBER OF SEASONS

| | | Hectares | % |
|-------|---------------|----------|-----|
| 1. | 6 - 10+ years | 24.88 | 22 |
| 2. | 3 - 5 years | 56.98 | 50 |
| 3. | 1 - 2 years | 21.46 | 19 |
| 4. | not examined | 9.68 | 9 |
| TOTAL | | 113.00 | 100 |

Most of the areas examined have been walked under a variety of conditions, ranging from freshly ploughed to rolled with up to two months weathering. Many other factors affecting recovery could be quoted, and for these the reader is referred to the report of a survey of the Berkshire Downs, where conditions were very close to those encountered at Silchester (Richards 1978, 14-15).

Other factors which have undoubtedly affected the recovery of certain materials also exist. One, which has been a source of growing concern at Silchester, is the activity of treasure-hunters using metal-detectors. Three fields in particular are known to have suffered from the activities of these persons: L.P.s 5333, 4426 and 0001. At least one pre-Roman coin is known to have been taken from L.P. 0001.

The depth of cultivation has been seen to be an important factor affecting the recovery of material. L.P. 6805 (FIG. 67) has been regularly walked for eight years, yet it was only in the last two seasons that any material was recovered. Conversation with the ploughman revealed that the depth of ploughing had been increased from nine to twelve inches (a similar change also occurred in L.P. 5333, see above, p. 243). The effect of this extra penetration was startling; nearly 12 kg of pottery were recovered, about 25% of which was pre-Conquest, including the earliest material yet found.

This reinforces the need for long-term field-walking projects, and raises some other relevant points. For instance, some of the apparently 'sterile' fields, such as L.P.s. 6991 or 6530, may yet turn out to have more to offer.

The distribution and dating of the material recovered is presented on FIGS. 67-83.

The close dating of some Romano-British pottery types, especially when unstratified, can be a problem. Because of this, and the nature of the groups, no attempt has been made to give an elaborate chronological breakdown. Broader brackets, such as 'Flavian-Hadrianic' are adopted, and for the later period, given the long life of some forms, a range of 'Mid Third to late Fourth Century' is used.

However, by using the pie-charts accompanying the distribution-plots it is possible to distinguish some possible chronological differences. For example, Group 64 in L.P. 0001 (FIG. 74) consisted of 1.35 kg of Period 5 pottery (p. 271), 63% of which are coarse wares, 14% New Forest wares and 23% Oxfordshire *mortaria* (mainly M 20: Young 1977, 76). The lack of Oxfordshire colour-coated wares, the high proportion of New Forest products and the date of c. A.D. 240-300 for M 20 *mortaria* suggests that this may be a later third-century group, pre-dating the

monopolising of the local fine-ware market by the Oxfordshire industry. Further support for this may be evident in the coarse ware, where few of the Alice Holt/Farnham ware sherds have the slip coating, which became increasingly common from *c.* A.D. 270 (Lyne and Jefferies 1979). The only identifiable New Forest forms from Group 64 are of Type 27, which began *c.* A.D. 270 (Fulford 1975 (a), 50–51).

A bias in the earlier pottery may be caused by 'Silchester Ware'; this was produced from about the second quarter of the first century until the early Flavian period (Charles 1979). As no distinction can, at present, be made between pre- and post-conquest types, all such material is placed in the Claudio-Neronian (Period 2) range. Thus, it is possible that the pre-conquest (Period 1) totals have been underestimated. The possibility also remains that other pre-conquest types may not weather well in the plough-soil (*cf* Shennan and Schadla-Hall 1981, 106–21).

The text figures show all modern and archaeological features, including those appearing on the aerial coverage. For the sake of clarity, the course of the Inner Earthwork is omitted from FIGS. 72, 74 and 75 (Period 4 onwards) as Boon's excavations showed that it was no longer a dominant feature of the landscape by the later Roman period (Boon 1969, 6–8).

PREVIOUS WORK

Of the very small amount of excavation carried out beyond the town walls, almost all has been concerned with elucidating the sequence of earthwork defences. Information obtained about settlement has been a fortuitous by-product of these investigations.

The major excavations by The Society of Antiquaries between 1890 and 1909 were primarily concerned with the area within the walls. In 1909, at the end of this campaign, the defences were sectioned and traces of earlier occupation were found in a number of places (St John Hope and Stephenson 1910). A section cut immediately south of the West Gate across the ditch recorded a waterlogged feature, some 4ft. 6in. (1.37 m) deep, which passed under the wall. Finds included bone and second-century pottery, with two samian stamps, **CRACIS M** and **LVPPA**. A pit, cut by the wall ditch in the same area, contained material which from its description probably belongs to the first century A.D. It included '... coarse black ware with calcined grit in the paste,' which is probably 'Silchester Ware', and a large iron fibula (St John Hope and Stephenson 1910, 326). A further pit cut by the ditch north of the West Gate contained material of a similar date, including brooches, glass, bronzework and samian, together with stamps of **CARILLI.O.**, **SECVNDVS**, **IVSTI.M** and **OF.CRESTI**, all of which date between Claudius and the end of the first century. Further pits pre-dating the defences were located near the North Gate and the South-western Postern. One of the pits near the West Gate also contained a fragment of a 'coin-flan mould' (Boon 1954, 69–79).

An interesting find by the Antiquaries is one which, unfortunately, cannot now be located with certainty; the discovery of two pottery kilns '... in a field to the north-east of the city' (St John Hope and Stephenson 1910, 327–8). Two small updraught kilns were found by a local farmer whilst digging for gravel, and were examined by Mill Stephenson. The material recorded included 'wasters' and 'seconds' of a type indicative of later first- to early second-century date (May 1916, pls. LXXIX, LXXX).

The present survey has located probable kiln debris immediately west of the amphitheatre, associated with first-century pottery. If this was the site of the kilns discovered in 1909, one might have expected some mention to have been made of the amphitheatre. Claudio-Neronian wasters were discovered in 1979 beneath the tail of the western seating-bank during the excavation of the amphitheatre. The exact location of the 1909 kilns therefore remains a mystery, although the fact that they were found during gravel-digging indicates that they were somewhere on the plateau north-east of the city.

Towards the end of, and after, the Society of Antiquaries' excavations, small-scale investigations were undertaken by a local amateur, Colonel Karlake. The best-known of these was that undertaken in Rampier Copse, the bulbous projection of the Outer Earthwork south-west of the

city (FIG. 67). Both the inner and outer slopes of the bank were found to contain Roman cremation burials, mainly of second-century date (Karlsruhe 1910, 330–32).

Further to the north-west, Karlsruhe investigated a gap in the earthwork through which the Sarum Road passed (Margary 4b). The gap was found to be a secondary feature in order to allow the passage of the road, of which two surfaces were encountered. A hornwork was said to exist to the front of this gap, no trace of which can be seen today – if it really existed. Karlsruhe also recorded investigating the area between this gap and the wall (L.P. 5333) where he states that he found ‘. . . native habitations unequally spaced and approached by gravel paths. . .’ Both rectangular and circular structures were reported, some with clay-lined pits and central hearths. No plans were ever published of these structures or of any other of Karlsruhe’s discoveries (1910). Work relating to the ‘Outer Earthwork’ is discussed above (pp. 79–93).

No further work was then undertaken until 1938–39 when Mrs. M.A. Cotton investigated the wall and Outer Earthwork. Four sections were cut through the wall bank in the north-eastern sector, all of which produced traces of pre-bank occupation beginning in the Claudio-Neronian period (Cotton 1947, 123–34). Further west, in Rye House Meadow (L.P. 6667), between the wall and Outer Earthwork, trenching showed that in this area the street-system extended as far as the earthwork. Close to the one north-south street identified, the fragmentary remains of a circular hut were found, associated with coins ranging from Constantius II to Valentinian I (*ibid*, 135–7, fig. 5). The rest of Cotton’s work was directed to the Outer Earthwork (see above, p. 80).

From 1954 to 1958 George Boon undertook a series of excavations, mainly outside the town, that were greatly to increase our knowledge of early Silchester. The main aim was to date an earthwork, noted from the air, which enclosed some 32 hectares (the ‘Inner Earthwork’). Its course lay inside that of the ‘Outer Earthwork’ and also partly underlay the later town (Boon 1969, 1–18). Boon argued for a date of construction in the later 40s of the first century A.D. although the evidence would equally well allow a pre-Conquest date (below, pp. 287–8).

The road to Winchester (Margary 42) was shown partly to overlie the filling of the Inner Earthwork ditch, whilst between that earthwork and the later town wall occupation of the later first century A.D. was encountered. Excavation on other parts of the circuit showed that the main filling of the ditch had taken place by c. A.D. 60 and was completed by the mid to late second century (Boon 1969, 6–8).

To the west, Boon investigated the ‘Primary Outer Earthwork’ in Fields 3950 and 4172 (FIG. 70 and Boon 1969, 18–21, pls. I and X; see above, p. 80). Although primary dating evidence was lacking, it was shown that in L.P. 3950 the earthwork was at least partially backfilled in the third century to allow the passage of a track or droveway. The 1970 aerial photographs show other presumably Roman features crossing the line of the earthwork (PLS. XXVII, XXVIII). The date of the earthwork in L.P. 4172 remained problematical, although crop-marks of fields respecting its line are visible. There is strong circumstantial evidence for these fields being of late Roman date (below, p. 269).

A further section was cut across the main road to the west country (Margary 41), south of the hedge dividing L.P.s 4172 and 3950, just inside the earthwork. This located part of an early fourth-century timber structure flanking the road (Boon 1969, 21, pl. X), as well as a succession of road-surfaces. Small sondages in the area located pits, some quite large, containing later Roman pottery. Similar pits appear on the 1970 aerial photographs (PL. XXVII). Since 1958 the only work carried out outside the town walls concerned the course of the ‘Outer Earthwork’ (above, p. 81).

SURVEY GAZETTEER

THE SUBURBAN REGION

In this chapter the material recovered is divided into five broad phases. Description and discussion is reserved for those groups considered to be of interest, and in certain cases a more

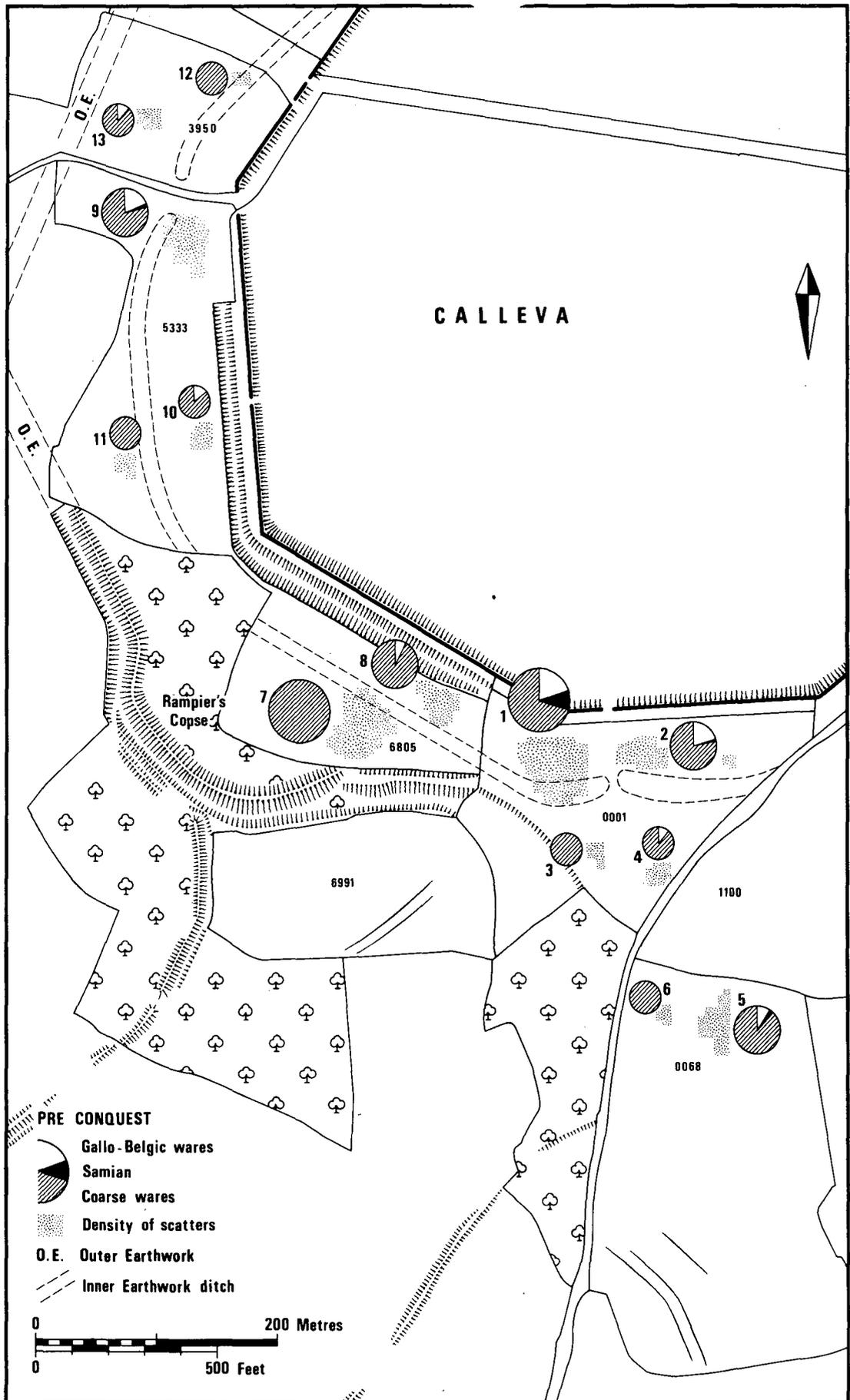


FIG. 67. Pre-Conquest groups of finds and undated cropmarks south and west of the town. Undated cropmarks in L.P.s 0068 and 6991.

detailed analysis has been presented. All the groups are presented in tabular form, giving the area covered and the weight of pottery dated to each period. The number assigned to each group corresponds with the number attached to each pie-chart on FIGS. 67-76 and 81-83. Some discussion of the groups and their relationships to other elements is included where appropriate, but the main discussion and conclusions are reserved for the concluding section (pp. 287-92).

Period 1: Pre-Conquest (FIG. 67)

Pottery which can be dated to the pre-conquest period was recovered from 13 areas to the south and west of the walled city. With the exception of Groups 5 and 7, the larger collections were found within the line of the Inner Earthwork. Two phases can tentatively be suggested for this pottery:

1A: mid to late first century B.C.

1B: Augustan to mid first century A.D.

TABLE 32: PRE-CONQUEST GROUPS

| GROUP NO. | AREA (m ²) | TOTAL WEIGHT (kg) | PROBABLE PHASE |
|-----------|------------------------|-------------------|----------------|
| 1 | 1300 | 3.05 | 1B |
| 2 | 800 | 1.20 | 1B |
| 3 | 200 | 0.65 | 1A |
| 4 | 250 | 0.45 | 1B |
| 5 | 850 | 0.35 | 1B |
| 6 | 150 | 0.20 | 1B |
| 7 | 1900 | 2.45 | 1A |
| 8 | 700 | 1.10 | 1B |
| 9 | 1400 | 1.80 | 1B |
| 10 | 300 | 0.30 | 1B |
| 11 | 300 | 0.25 | 1A |
| 12 | 150 | 0.30 | 1B |
| 13 | 250 | 0.20 | 1B |
| TOTAL | 8550 | 12.30 | |

Period 1A

Period 1A pottery is all hand-made, with a 'soapy' texture, and is tempered with either a fine-to-medium grit or grog. The latter is the more common temper. Two rim-types are particularly distinctive, both being 'squared off' (FIG. 84, Nos. 7, 8) and may be compared to examples from Ufton Nervet (Manning 1973-4, fig. 18, No. 119) and Aldermaston Wharf (Cowell *et al.* 1980, fig. 13, No. 7). Other types can also be compared at Ufton Nervet (Manning 1973-4, fig. 18, Nos. 115-117). Further parallels are difficult to find, highlighting the general lack of knowledge of Mid to Late Iron Age pottery in the Silchester region.

In the absence of independently dated material (such as imports) associated with the pottery from Ufton Nervet and Aldermaston Wharf, the dating of Phase 1A is difficult. Typological affinities with Iron Age 'saucepan pot' ware, the prevalence of grog-tempering and the absence of

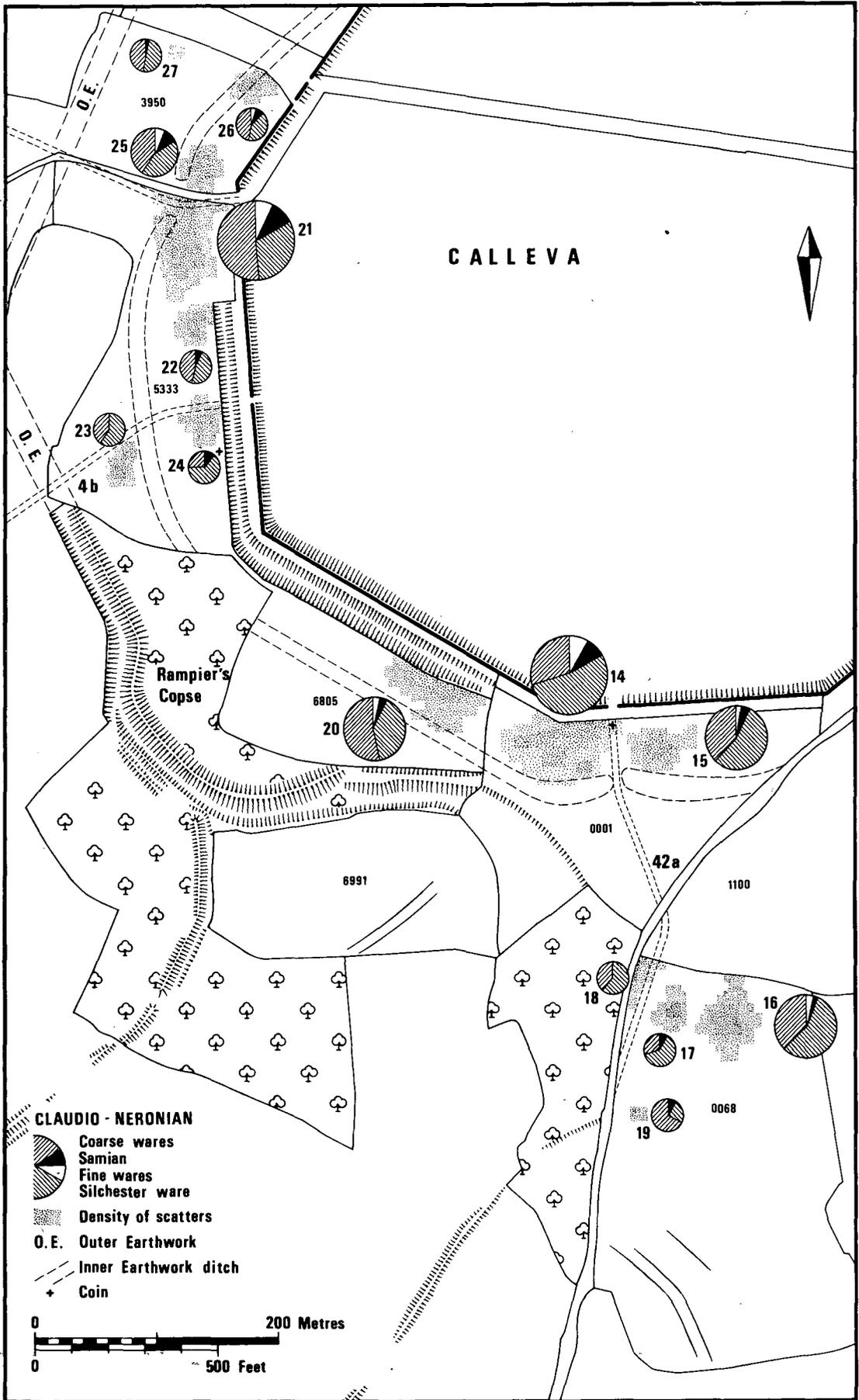


FIG. 68. Claudio-Neronian groups of finds and undated cropmarks south and west of the town.

Gallo-Belgic imports or their imitations point to a date-range in the second half of the first century B.C. Since grog-tempered wares form a high proportion of the stratified group found beneath the 1974 rampart section (Pit 1, pp. 30, 128) it is likely that some of the pottery in question continued in use up to the Claudian period.

The largest Period 1A collection is that from L.P. 6805 Group 7, which is located on the line of the 'Salient Dyke' (Boon 1969, pl. 1). A first-century B.C. date for this group is further reinforced by the total absence of Gallo-Belgic products.

Of particular interest in Group 7 was the presence of two fragments of so-called 'coin-mould flans' (FIG. 84, Nos. 5, 6) for producing two different sizes of flans. Whatever their connection with coin production (cf. Sellwood 1976, 65), these objects only seem to occur in 'oppida' or larger open sites of the Late Iron Age (for a gazetteer of finds see (Tournaire *et al.* 1982). Other examples have been found at Silchester during previous and current excavations (Boon 1954, 68-70; Fulford, pers. comm.).

Two smaller collections of Period 1A pottery were found in L.P. 0001, Group 3, and L.P. 5333, Group 11. Group 1 (Period 1B) in L.P. 0001 also contained two sherds of amphora, identified by Dr. Peacock as being from a Dressel 1 (one body-sherd and one handle-fragment, probably Dressel 1b).

Period 1B

The bulk of the Period 1B pottery can best be paralleled with the material recovered by Boon from beneath the Inner Earthwork bank (Boon 1969, figs. 14-16) and from Pit 1 in the 1974 excavation (above, p. 128). The coarse wares are generally wheel-made, in a brown or black fabric, tempered with fine grits or grog (Boon 1969, fig. 15; pp. 190-203). Pedestal urns were also present in Group 1, with at least seven vessels represented (Boon 1969, fig. 15, pp. 186-88). Boon argued for a date after *c.* A.D. 25 for his group, but the scrap of imported beaker need not rule out a late Augustan *terminus post quem*.

Gallo-Belgic wares are well represented, with Terra Nigra more common than Terra Rubra by a ratio of 3:1. The rim-forms collected were examined by Dr. Jane Timby, who felt that the

TABLE 33
SAMIAN IN GROUP 1

| FORM | NO. OF VESSELS | SOURCE | DATE |
|--------------|----------------|----------|-------------------|
| Loeschcke 1 | 2 | ? Arezzo | Augusto-Tiberian |
| Loeschcke 2 | 1 | ? Arezzo | Augusto-Tiberian |
| Loeschcke 8a | 1 | ? Arezzo | Augusto-Tiberian |
| Body-sherds | 4 | ? | Augustan-Claudian |

SAMIAN IN GROUP 9

| FORM | NO. OF VESSELS | SOURCE | DATE |
|-------------|----------------|---------------|------------------|
| Loeschcke 2 | 2 | ? Arezzo | Augusto-Tiberian |
| Drag. 27 | 1 | South Gaulish | Tiberio-Claudian |
| Body-sherds | 3 | ? | Tiberio-Claudian |

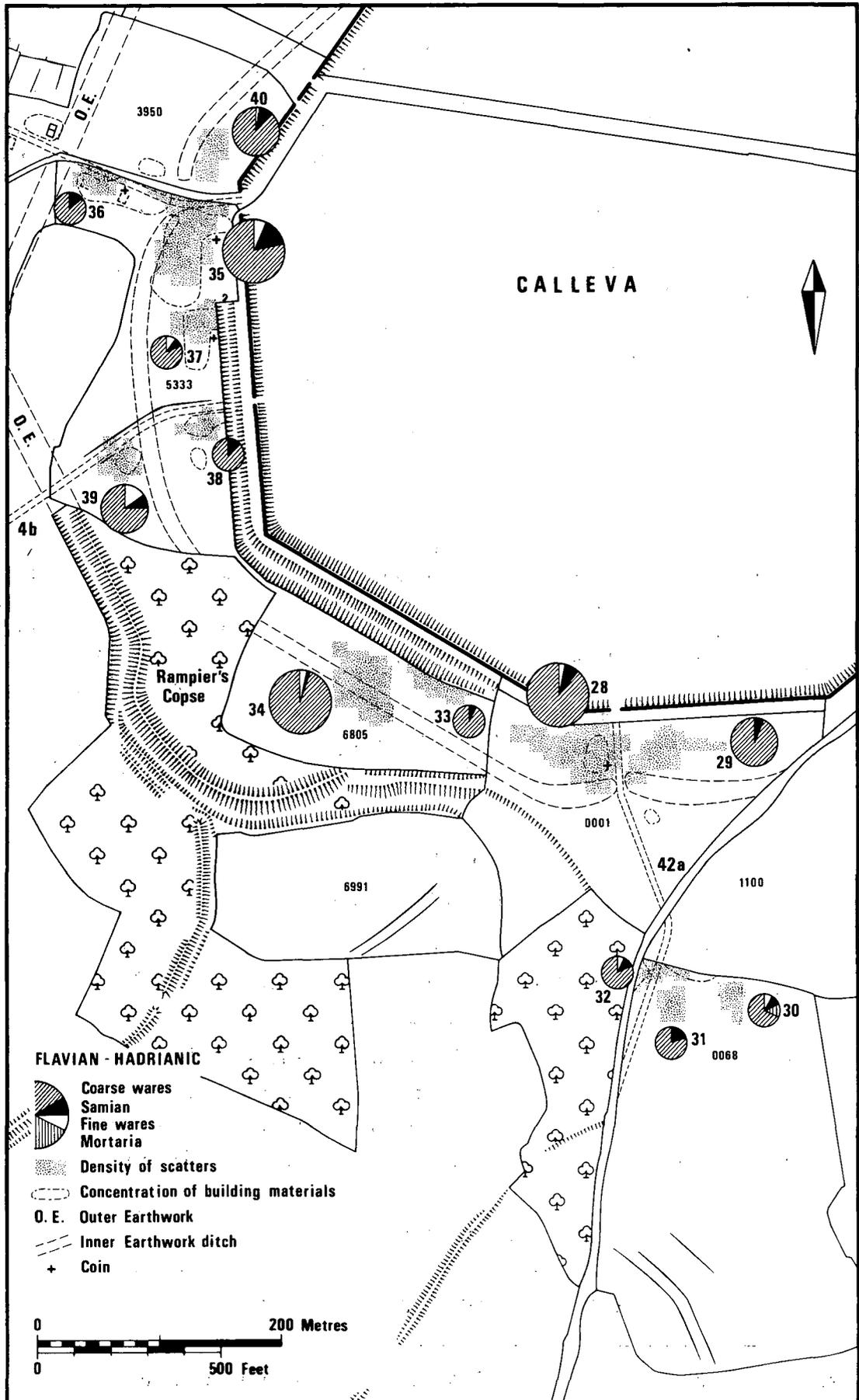


FIG. 69. Flavian-Hadrianic groups of finds, south and west of the town.

material could all be pre-conquest. The following forms were identified (forms and dates taken from Hawkes and Hull 1947 and Partridge 1981): Cam. 2, Augusto-Tiberian; Cam. 5, Augusto-Tiberian; Cam. 7, Augusto-Tiberian; Cam. 12/13, Tiberio-Claudian; and Cam. 56, pre-Claudian (in T.R. only): Cam. 16 was also recorded (in T.N. only), but is counted in the Period 2 fine wares, as it appears to be mainly of Claudio-Neronian date.

Butt-beaker sherds in both white and T.R.3 wares are also present, but as these also run into the Claudio-early Neronian period, they have been recorded with Period 2 material. A total of 1.65 kilos of Period 1B Gallo-Belgic material was recovered.

Amphora sherds, possibly of this period, were recovered from Group 1, and were identified by Dr. Peacock as being from a Dressel 1/Pascual 1 and a Cam. 186. Given the long production-span of Cam. 186, it too may belong in Period 2 (Peacock 1971).

Samian from Groups 1 and 9 was examined by Mr. G. Dannell (p. 251): pre-conquest samian from the other groups were all body-sherds.

The largest concentrations of Period 1B material are within the line of the ditch of the Inner Earthwork, and it is possible that they are derived from the ploughed-out bank. If so, this provides further support for the defence having actually destroyed occupied areas when constructed (for occupation beneath the bank, cf Boon 1969, 13-14).

Outside the line of the Inner Earthwork, Group 5, L.P. 0068, may represent part of a cemetery, as calcined bone is often seen on the surface after ploughing, mixed with darker soil and pottery. The area was certainly used as a cemetery by Period 2 (Group 19, FIG. 68, p. 257), but the cemetery may have originated in Period 1B.

No pre-conquest coins were found by the survey. No other Period 1 material has been noted elsewhere outside the walls of Silchester.

Period 2: Claudio-Neronian (FIG. 68)

Period 2 material covers a similar area to that of Period 1 although, in most cases, the quantity of Period 2 material is greater.

TABLE 34

QUANTIFICATION OF CLAUDIO-NERONIAN GROUPS

| GROUP NO. | AREA (m ²) | TOTAL WEIGHT (kg) |
|-----------|------------------------|-------------------|
| 14 | 3300 | 5.90 |
| 15 | 1300 | 2.60 |
| 16 | 1750 | 3.00 |
| 17 | 800 | 0.70 |
| 18 | 500 | 0.25 |
| 19 | 150 | 0.80 |
| 20 | 2100 | 2.60 |
| 21 | 2700 | 5.55 |
| 22 | 700 | 0.85 |
| 23 | 600 | 0.65 |
| 24 | 800 | 0.55 |
| 25 | 800 | 1.40 |
| 26 | 700 | 0.70 |
| 27 | 100 | 0.20 |
| TOTALS | 16300 | 25.75 |

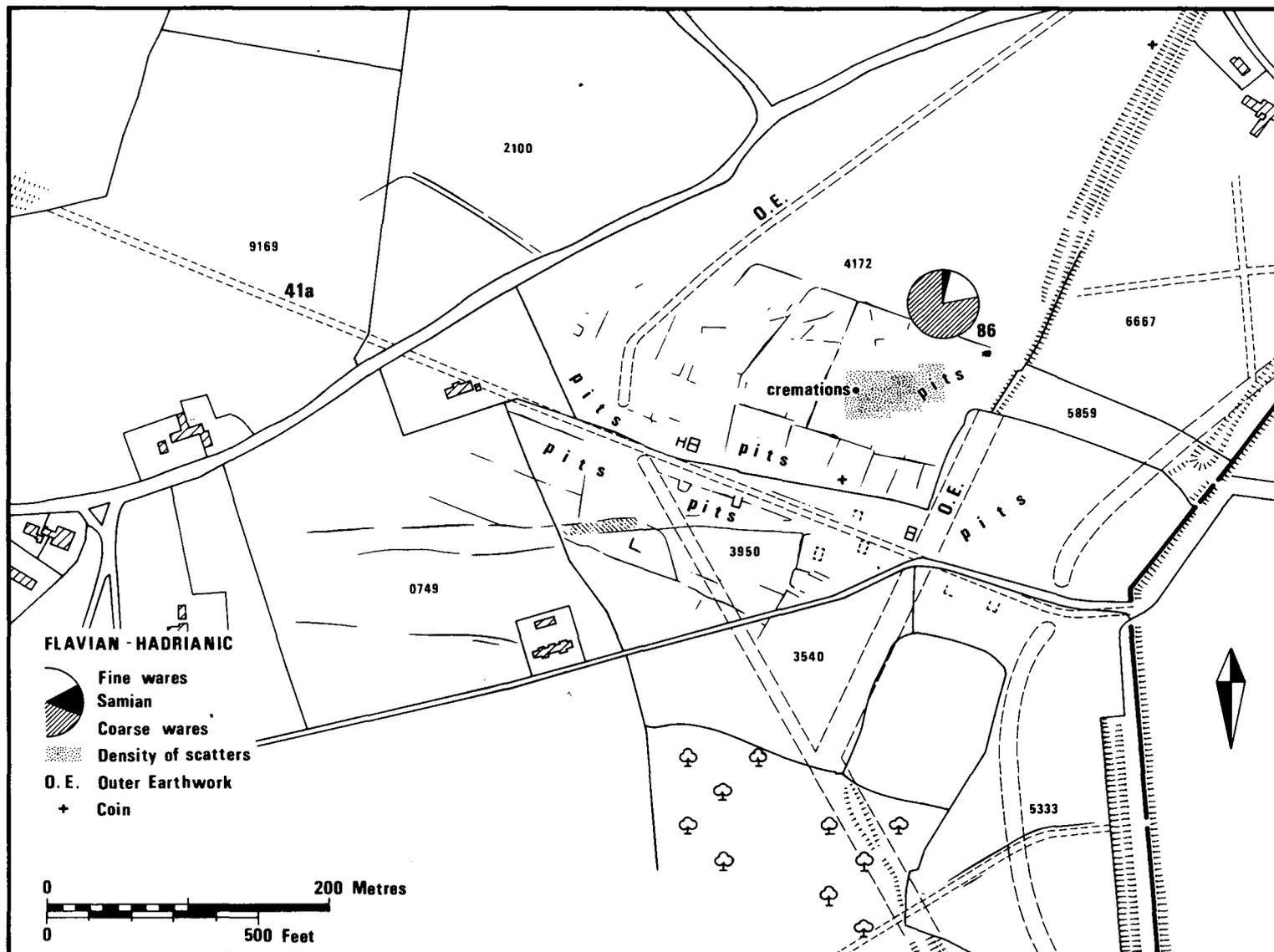


FIG. 70. Flavian-Hadrianic groups of finds and undated crop-marks west of the town.

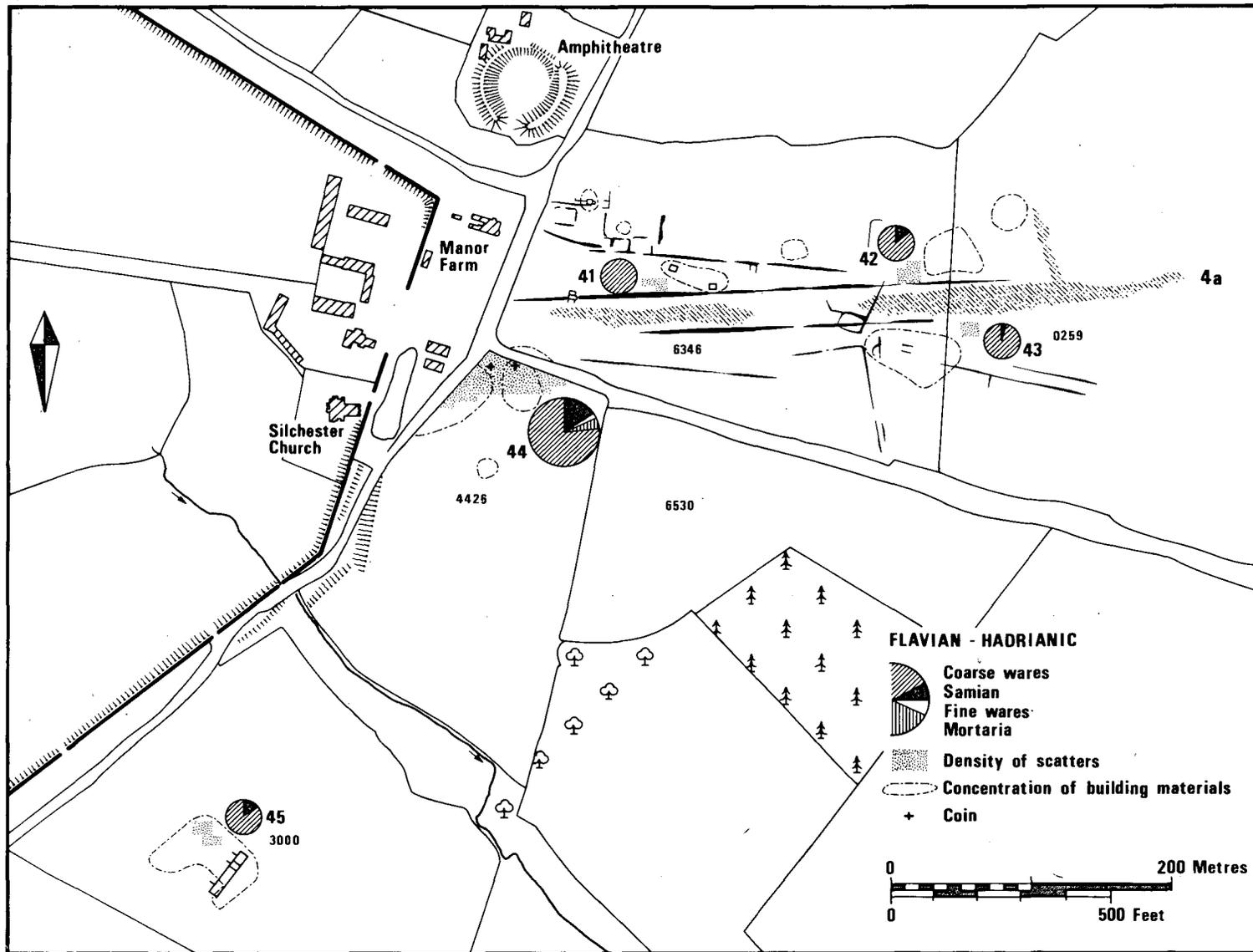


FIG. 71 Flavian-Hadrianic groups of finds and undated cropmarks east of the town.

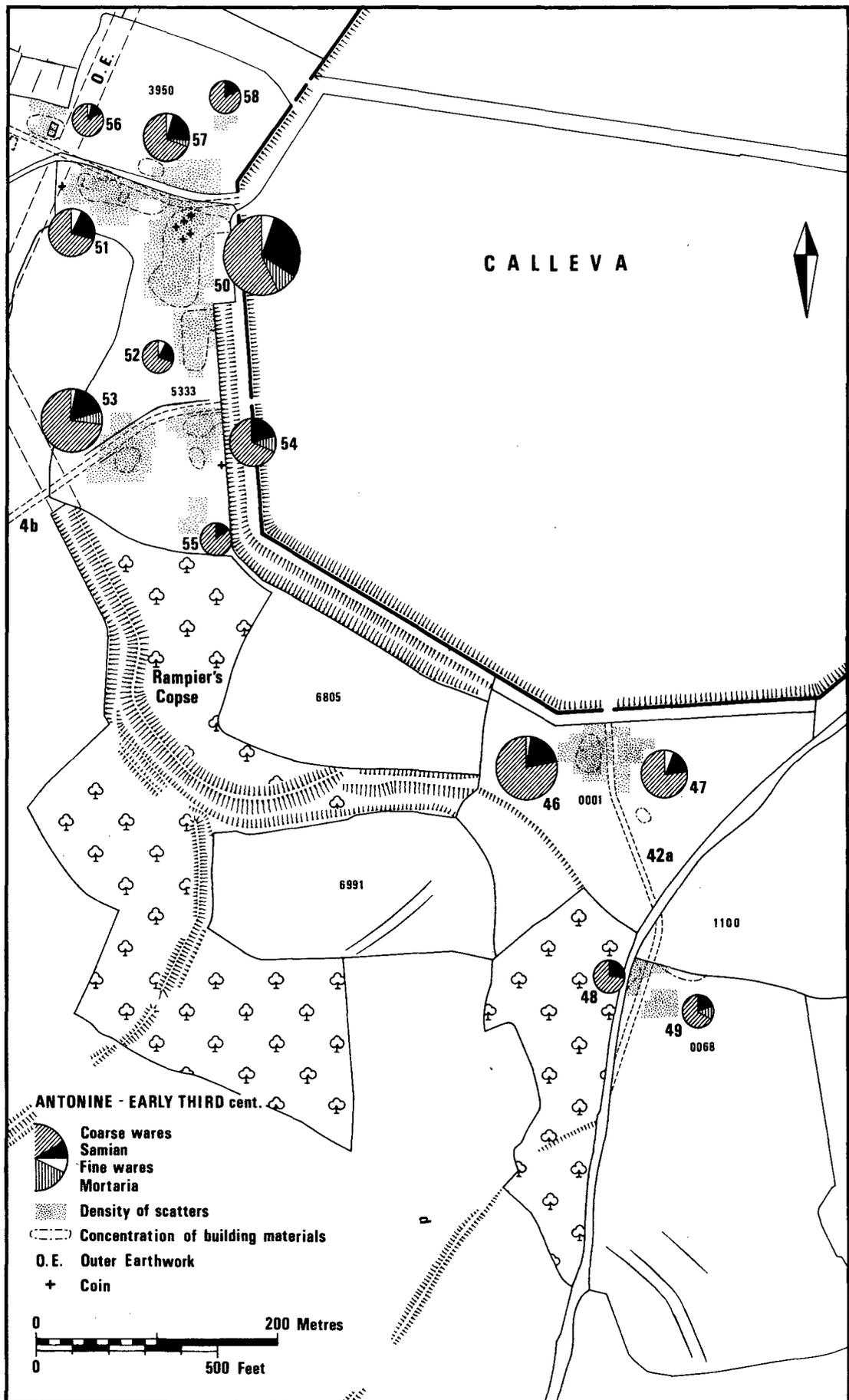


FIG. 72. Antonine to early third-century groups of finds and undated cropmarks south and west of the town.

Increased activity is particularly noticeable in the area flanking the main roads to the south (Margary 42a) and west (Margary 41a). In the south the increase in material fits well with the Neronian *terminus post quem* obtained for the earliest metalling of the Winchester road at the South Gate (above, p. 37). The date of Margary 41a at Silchester has not been firmly established by excavation but, given its strategic importance, linking the civil zone with the early frontier region to the west, it also is probably early.

The overall picture for Period 2 is one of increase, both in the number and the size of scatters within the line of the Inner Earthwork – Groups 21, 22, 24, 25 and 26 on the west, and Groups 14, 15 and 20 on the south and south-west.

The cemetery postulated for Period 1B in L.P. 0068 spreads south in Period 2, with Group 19 representing a probable single burial, ploughed up in 1975. This consisted of a spread of cremated bone and dark soil, 1 m by 50 cm, surrounded by pottery, including a samian Ritterling 12, 0.15 kg of 'Silchester Ware', 0.60 kg of other coarse wares, including two-thirds of the rim of a cordoned jar in a hard brown sandy fabric. Also associated was a fragment of a pillar-moulded glass bowl (FIG. 84 No. 4).

The fact that 'Silchester Ware' may have originated before the conquest but is all classed as of Period 2 (see p. 246) may account for the high proportion of that ware in Groups 14 to 18, where it accounts for between 50 and 60% of the total recovered.

Apart from 'Silchester Ware', the coarse wares are mainly forms similar to those of Period 1B, except that they now appear in a variety of black, brown or grey sandy fabrics. In addition, copies of 'Gallo-Belgic' forms, particularly platters, are also present, and seem best placed in this period (cf Cotton 1947, fig. 11, Nos. 12 and 14).

The samian is all South Gaulish, and includes a platter fragment, which Mr. Dannell has identified as a probable product of Montans (Group 14, L.P. 0001). The forms are mainly plain with Drag. 15/17 and 18 predominating, many in the brilliant gloss finish typical of the Neronian period. Group 21 contained the base of a Ritterling 9, stamped [JTI, which Mr. Dannell believes to be a stamp of Crestus, of Claudian date.

Two coins were found: an *as* of Nero in Group 14, and an *as* module, probably a Claudian copy, near Group 24.

Part of a bronze fibula, with traces of silvering or tinning of Hod Hill type, from Group 14, is best placed in this period (FIG. 84, No. 3).

East of the town, in L.P. 4426, about 0.10 kg of 'Silchester Ware' was recorded from the same area as Group 44 of Period 3 (FIG. 71). No other Period 2 material was found there, and this small deposit may go with Period 3.

Period 3: Flavian-Hadrianic (FIGS. 69–71)

Period 3 sees the first substantial amounts of material appearing to the east of the town (FIG. 71). To the west and south, the areas with material are essentially similar to those of Period 2, with only two new larger areas being evident, Group 34 in L.P. 6805, and Group 86 in L.P. 4172. Group 36 in L.P. 5333 may hint at the beginning of ribbon development along the road Margary 41.

The period was also one of growth for Silchester, seeing the extension if not the laying out of the regular street-grid (Boon 1974, ch. 3). Mrs. Cotton's excavations found streets on the alignment of the grid between the town wall and the Outer Earthwork to the north-west, in Rye House Meadow (L.P. 6667) (Cotton 1947, 135–7). Despite their appearance on the most recent plan (Boon 1974) there is no evidence for the streets beyond the line of the walls elsewhere around the town (except in L.P. 8800, FIG. 77; see also p. 81, above). However, the gaps between the rubble scatters corresponding with Groups 35 and 37 may mark the continuation of the street which runs due west from the Forum-Basilica. There is, of course, no evidence to show that these scatters date from Period 3, and the gaps may be purely fortuitous.

Since some streets run to the Outer Earthwork on the north-west, it may be asked whether this barrier was utilised as the formal western boundary of the town. Some supporting evidence for this is provided by Group 86 in L.P. 4172 (FIG. 70). This scatter proved to mark the site of a cemetery of Period 3 date (see Appendix 2) from which four cremation burials were recovered

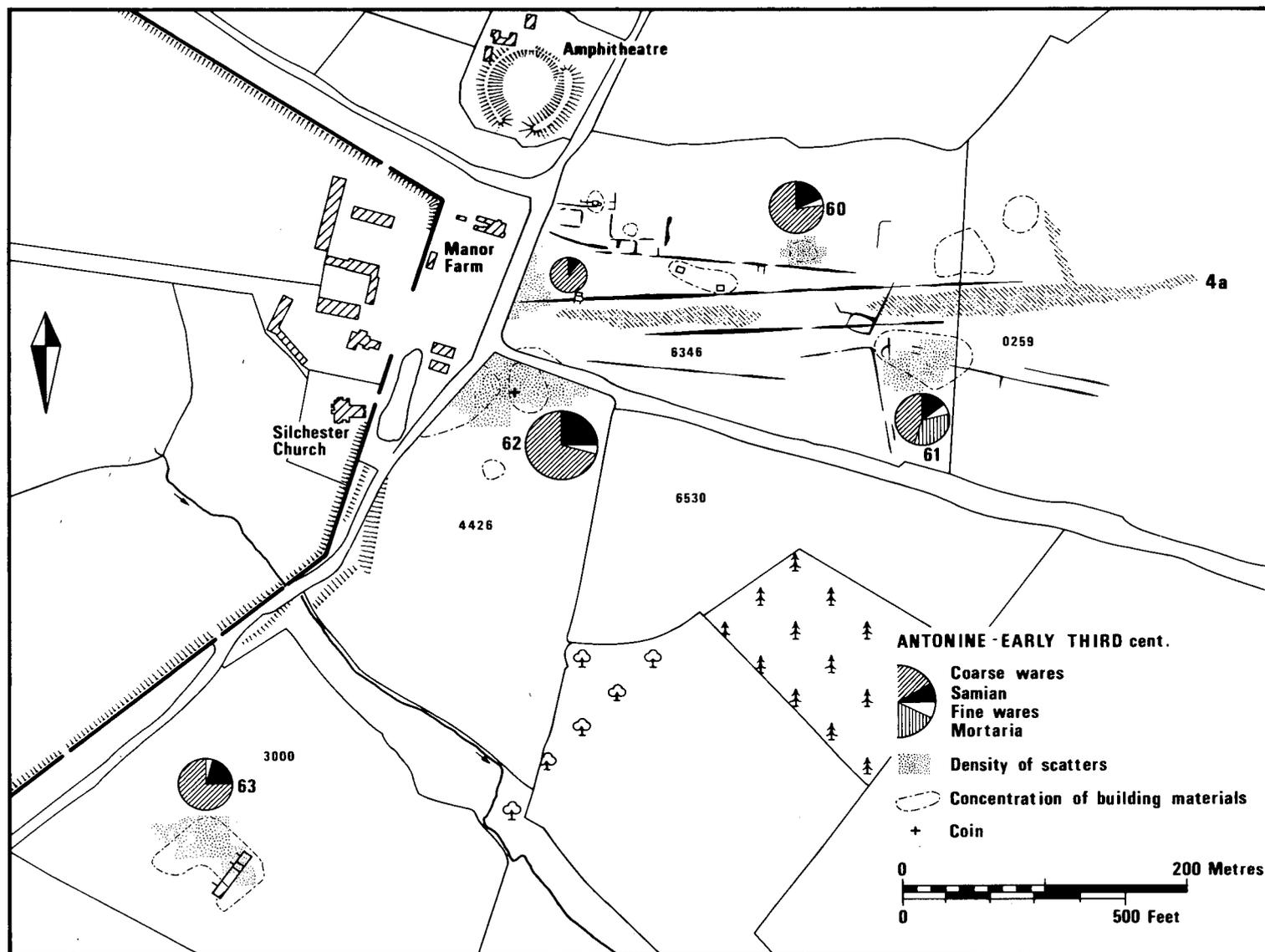


FIG. 73. Antonine to early third-century groups of finds and undated cropmarks east of the town.

TABLE 35

QUANTIFICATION OF FLAVIAN — HADRIANIC GROUPS

South and west — FIGS 69 and 70

| GROUP NO. | AREA (m ²) | TOTAL WEIGHT (kg) |
|-----------|------------------------|-------------------|
| 28 | 2600 | 4.20 |
| 29 | 1600 | 1.20 |
| 30 | 600 | 0.90 |
| 31 | 550 | 0.65 |
| 32 | 400 | 0.85 |
| 33 | 550 | 0.90 |
| 34 | 1900 | 3.30 |
| 35 | 2300 | 4.55 |
| 36 | 650 | 0.50 |
| 37 | 700 | 0.70 |
| 38 | 400 | 0.45 |
| 39 | 600 | 1.00 |
| 40 | 600 | 1.20 |
| 86 | 2150 | 3.85 |
| TOTALS | 15600 | 24.25 |

East — FIG. 71

| GROUP NO. | AREA (m ²) | TOTAL WEIGHT (kg) |
|-----------|------------------------|-------------------|
| 41 | 150 | 0.55 |
| 42 | 200 | 0.50 |
| 43 | 150 | 0.20 |
| 44 | 1600 | 2.40 |
| 45 | 250 | 0.40 |
| TOTALS | 2350 | 4.05 |

after exposure by the plough in 1979. The extensive spread of Group 86 overlies a series of crop-marks, which may indicate further burials cut into the gravel subsoil (PLS. XXVII, XXVIII). Given the Roman practice of only allowing burial beyond the legal limit of a town, the Outer Earthwork (Sandy's Lands) may have served such a purpose, irrespective of its original construction-date. On the other hand both the inner and outer slopes of the Rampier Copse earthwork appear to have been used for burial (Karslake 1910, 330).



(Photo: RCHM (England) Crown Copyright)

PL. XXVII Cropmarks west of the town (L.P.s 3950 and 4172), North at top (see FIGS. 70, 75).

The largest group located to the east of the city is Group 44, in L.P. 4426, immediately south of the London road, Margary 4a. Three smaller groups were located adjacent to the road in L.P. 6346: Groups 41, 42 and 43. None of these three exceeds 0.55 kg in weight, but Group 44 amounted to 2.4 kg.

The samian includes both decorated and plain vessels, including Drag. 29, 30 and 37 and Drag. 18 and 27. Stamps of **OF PATRICI**, La Graufesenque, *c.* A.D. 70–95 (Drag. 18) and **OF RVFI**, South Gaulish, *c.* A.D. 75–100 (Drag. 27) were found in Groups 35 and 37 respectively. Two illegible stamps, both on Drag. 27, were recovered from Group 28.

The coarse ware of this period is typified by 'off-set bowls' (Lyne and Jefferies 1979, Class 5, fig. 17), flanged bowls, often with reeded rims (Cotton 1947, fig. 13, Nos. 15, 23, 25 and 27), flat-rim jars similar to Alice Holt products (Lyne and Jefferies 1979, Class 3a, fig. 13) and mica-dusted vessels (Boon 1969, fig. 11, No. 9).

Eight bronze coins were found: three of Domitian, one from Group 28 and two isolated examples in L.P. 4172; three of Trajan, two from Group 44 and one from Group 35; and two of Hadrian, one each from Groups 36 and 37.

Period 4: Antonine to Early Third Century (FIGS. 72 and 73)

This period sees increased activity outside the East and West Gates, whilst to the south the decrease in material which was first noted in Period 3 continues, suggesting a main focus around the main east-west route. No Period 4 material has been recorded from L.P. 6805. This change in the distribution may be due, in part, to the erection of the earthen defences, with masonry gates,

towards the end of the second century. Because of the topography, this act would limit the area of settlement immediately south of the new defences where the ground falls away.

TABLE 36

QUANTIFICATION OF ANTONINE TO EARLY THIRD-CENTURY GROUPS

South and west – FIG. 72

| GROUP NO. | AREA (m ²) | TOTAL WEIGHT (kg) |
|-----------|------------------------|-------------------|
| 46 | 1400 | 2.45 |
| 47 | 700 | 1.15 |
| 48 | 350 | 0.50 |
| 49 | 500 | 0.85 |
| 50 | 3900 | 7.90 |
| 51 | 1900 | 1.25 |
| 52 | 1000 | 0.70 |
| 53 | 1900 | 2.05 |
| 54 | 1100 | 1.05 |
| 55 | 400 | 0.70 |
| 56 | 450 | 0.80 |
| 57 | 1050 | 1.20 |
| 58 | 150 | 0.40 |
| TOTALS | 14800 | 21.00 |

East – FIG. 73

| GROUP NO. | AREA (m ²) | TOTAL WEIGHT (kg) |
|-----------|------------------------|-------------------|
| 59 | 600 | 0.35 |
| 60 | 500 | 1.45 |
| 61 | 1400 | 1.90 |
| 62 | 2700 | 3.40 |
| 63 | 1800 | 1.20 |
| TOTALS | 7000 | 8.30 |

In L.P. 0001, Group 46 only covers 1400 m² compared with its predecessor in Period 3, Group 28 covering 2600 m². The corresponding pottery totals are also halved (TABLES 35 and 36). Further south in L.P. 0068 Group 31 (Period 3) has no counterpart in Period 4, suggesting that

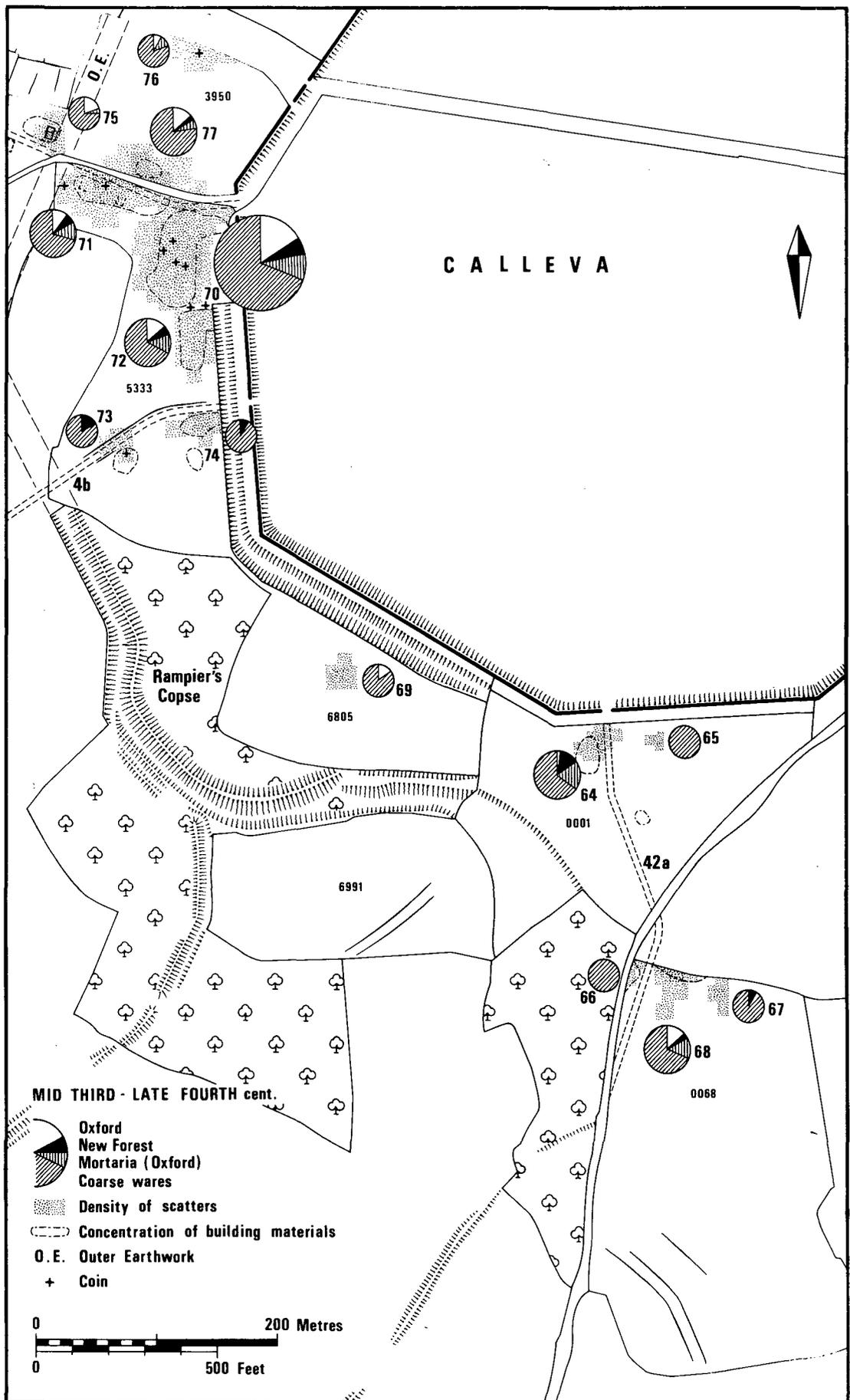


FIG. 74. Mid third- to late fourth-century groups of finds and undated cropmarks south and west of the town.

the postulated cemetery was in decline or, alternatively, that there was a change in the burial site. It might be that less goods were placed in graves, or that interments were placed deeper in the subsoil beyond the reach of the plough.

Ribbon-development along the major east-west routes appears to increase. On the west (FIG. 72) this may be marked by Groups 50, 51, 56 and 57, either side of Margary 41a, and Groups 53 and 54 beside Margary 4b. It is also noticeable that from Period 4 the pottery-groups closely correspond with rubble scatters plotted in L.P.s 5333 and 0001, although it should by no means be assumed from purely surface evidence that any possible structure dates from this or any other period.

East of the city, in L.P. 6346, Group 60 was found mixed with calcined bone and a small spread of tile (all *tegulae*). This may mark the site of further burials. If the tile formed part of the burial it may indicate a more elaborate grave-type. Two small structures visible on aerial photographs, which lay some 70 m west of Group 60 have been interpreted by Boon as mausolea (PL. XXXII; Boon 1974, 186). No pottery of any period has been noted from these, although a spread of flint and tile has been recorded.

South of road Margary 4a in the south-east corner of L.P. 6346, just under 2 kg of pottery was recovered, mixed with roofing-tiles, both *tegulae* and *imbrices* (Group 61). The high proportion of mortaria is noteworthy here and all, where identified, were Oxfordshire products dated *c.* A.D. 180–240 (Young 1977, M 10,). The presence of *mortaria*, given their rarity as grave-goods, argues against this group having been derived from disturbed burials. Rather, it may indicate settlement or other activity, which could be associated with the tracks visible on aerial photographs south and east of it. The western edge of this scatter could be marked by a possible field or similar enclosure, two sides of which are visible (PL. XXXIII, FIG. 73).

As in Period 3, no material was recorded from the south-western corner of L.P. 6346 (FIG. 73), although south of the modern road, in L.P. 4426, Group 62 shows an increase in activity in terms of the amount of material recovered.

Group 63, in L.P. 3000, corresponds with the full extent of a rubble scatter, which has been confirmed from the air as a large building (above, p. 235). The crop-marks show a long structure some 37 m by 8 m with possible sub-divisions at its northern end. Faint traces of walls running east of the main block at each end are also visible, suggestive of a possible courtyard arrangement. This building (PL. XXXIV), the only such structure away from the main roads, may be a possible reason for the provision of the small postern gate in the south-east defences of the town (above, p. 58). It seems that this building was considered by the planners of the defences to be important enough to warrant its own access from the city. An immediate question which springs to mind is whether this was a private or 'public' structure of special function. The postern gate was blocked in the late Roman period, although the exact date could not be ascertained (p. 76). The drop in Period 5 material from this area (FIG. 76) may help to clarify this problem (below, p. 276).

The coarse wares considered to be typical of Period 4 include products of the Dorset Black-burnished industry (BB1) (Farrar 1973) and products of the Alice Holt/Farnham industry (Lyne and Jefferies 1979) as well as other possible local wares.)

BB1 products include bowls (Gillam, Types 219–224, 306–312) and everted-rim jars (Gillam, Types 130–139). Alice Holt/Farnham types datable to the period include the bowl with rim of flat or triangular section (Lyne and Jefferies 1979, fig. 31, Type 5A; Millett 1979, fig. 2, Types 11 and 12); jars (Lyne and Jefferies 1979, fig. 22, Nos. 1.25–1.30) are also present in some quantity.

Large quantities of samian were recovered, most being Central Gaulish products. The commonest plain forms were Drag. 33 and 18/31, with later plain forms such as Walters 79 and 80 also represented, especially from Group 50. The decorated forms are dominated by Drag. 37 with the styles of Cinnamus and his contemporaries pre-eminent (Stanfield and Simpson 1958). The following stamps were recorded: **ALBVCIANI**, Lezoux, *c.* A.D. 160–200 (Drag. 31 or 18/31) and **MARCIMA**, Lezoux, *c.* A.D. 160–90 (Drag. 33) from Group 50; **CELSI M**, Lezoux, *c.* A.D. 150–90 (Drag. 33) from Group 62.

Eight coins were recorded; two of Antoninus Pius from Group 50; four illegible *as/dupondius* modules, probably Period 4, from Groups 50 and 54. Two plated *denarii* were also found, one of

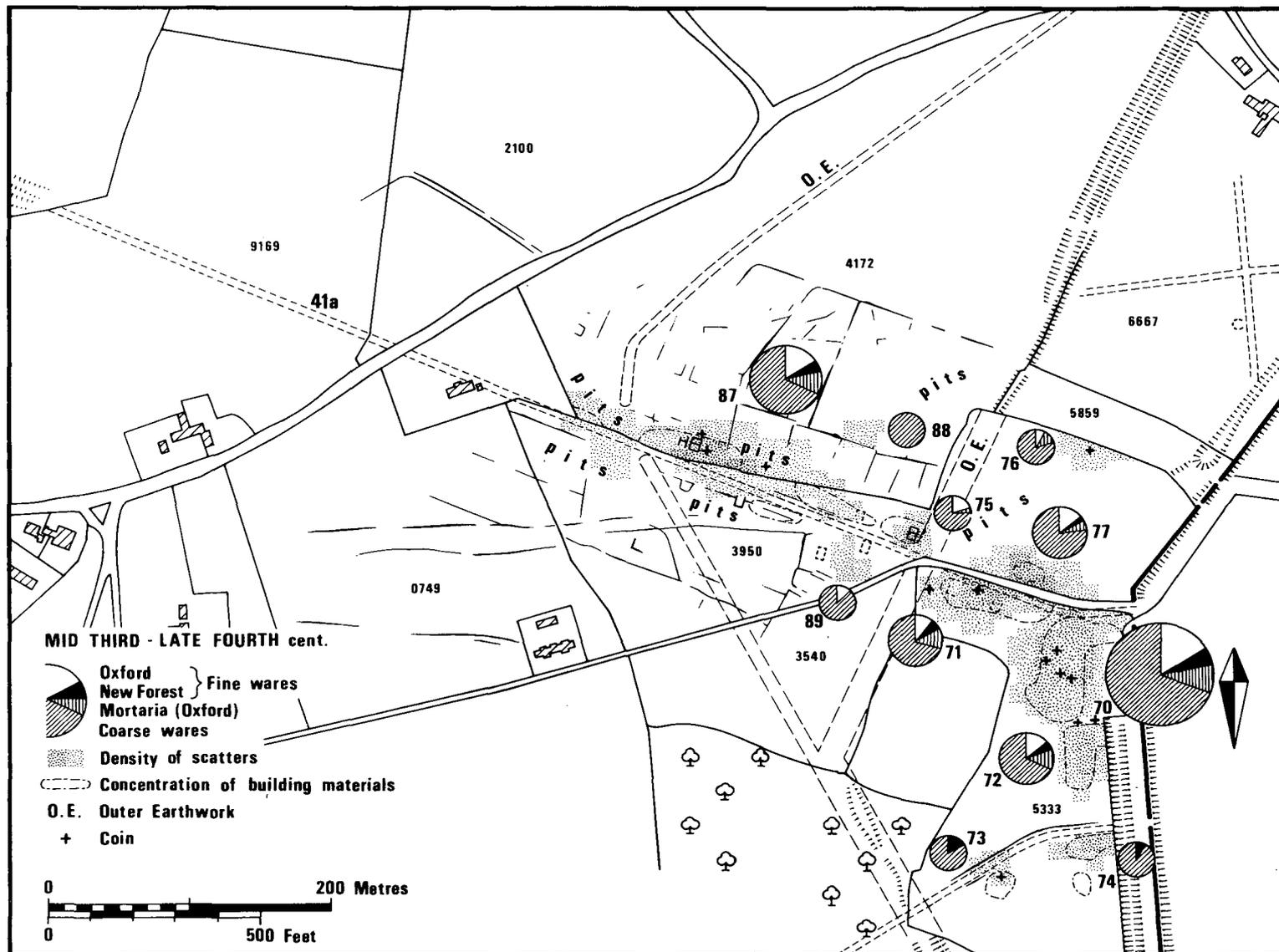


FIG. 75. Mid third- to late fourth-century groups of finds and undated cropmarks west of the town.

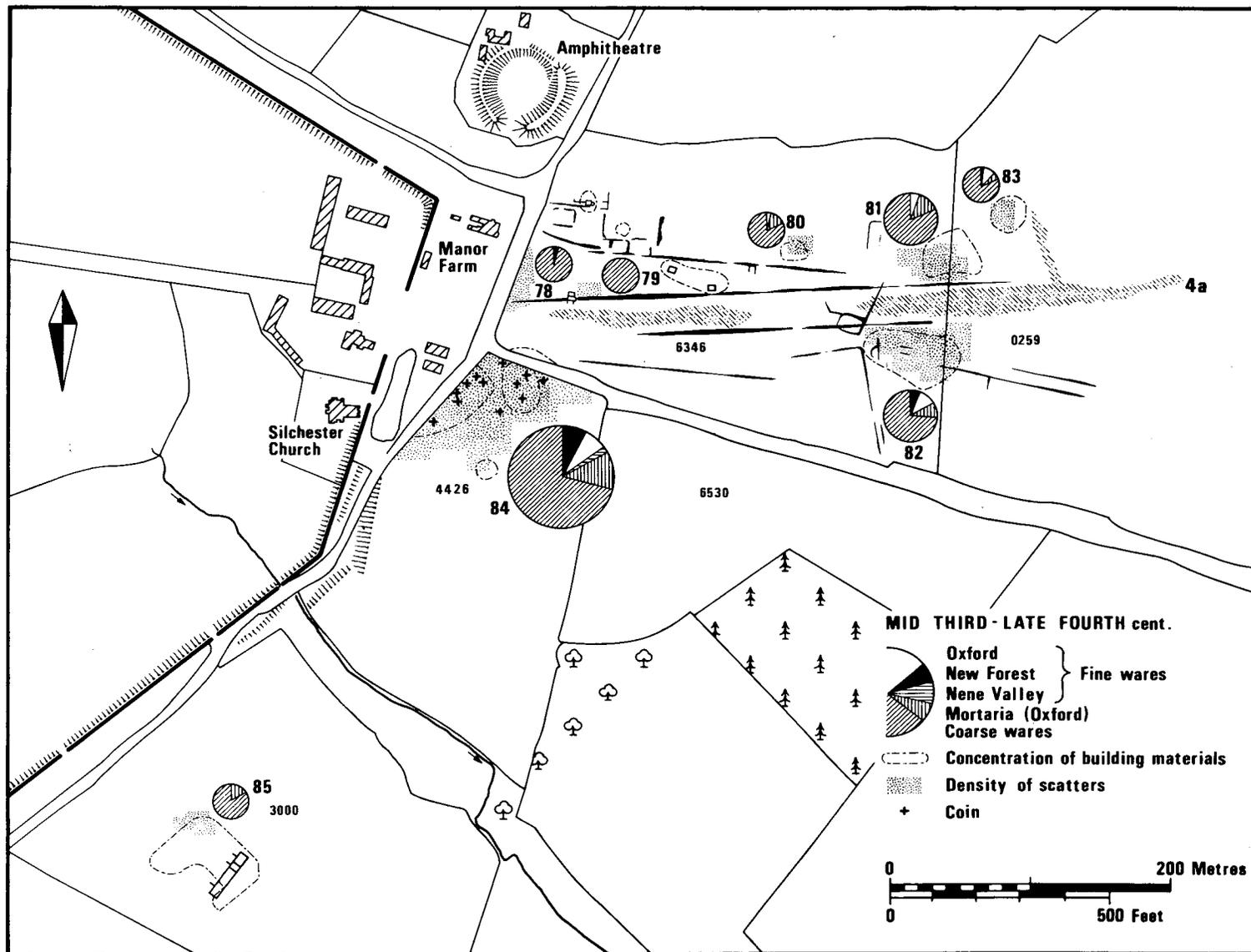


FIG. 76. Mid third- to late fourth-century groups of finds and undated cropmarks east of the town.

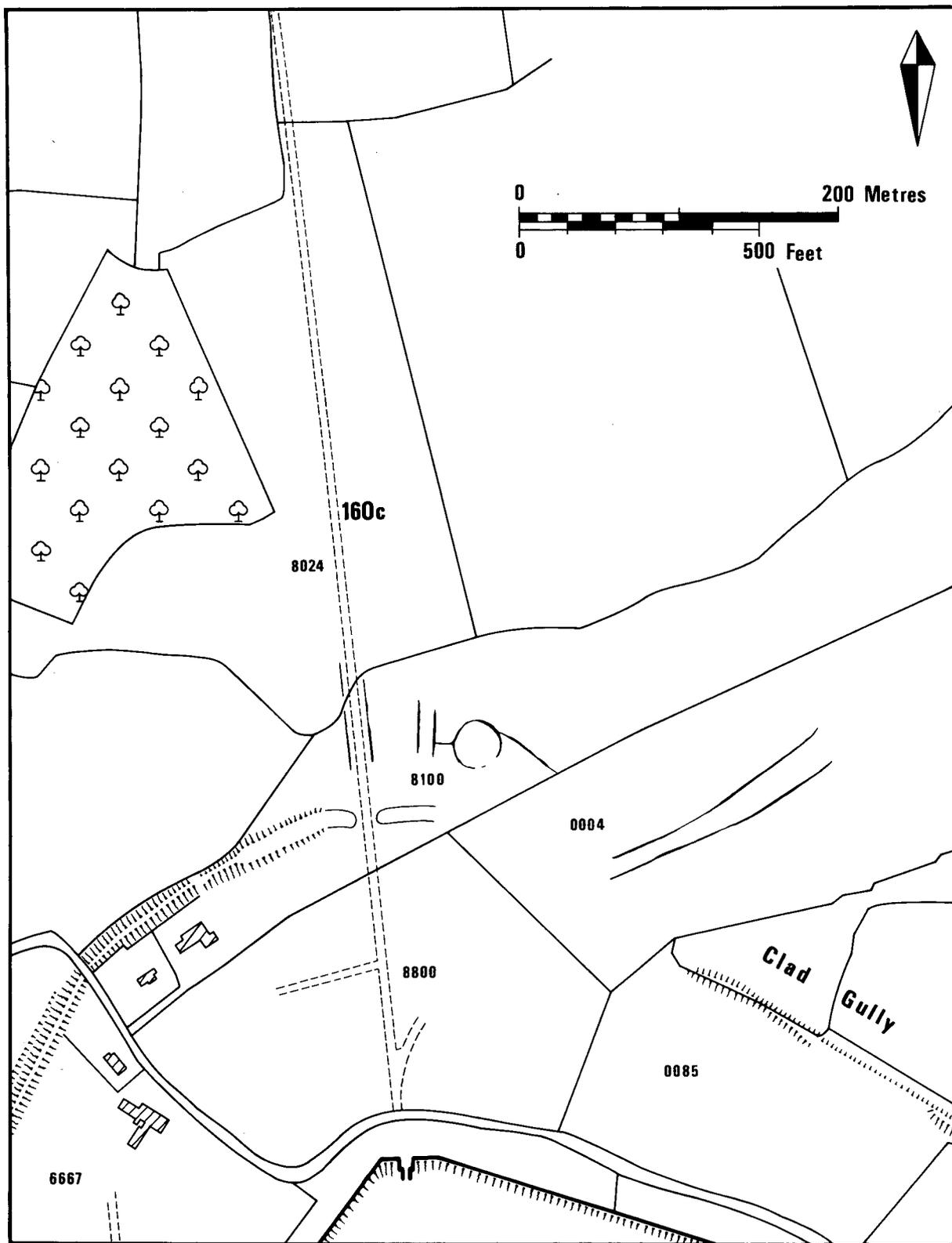


FIG. 77. Cropmarks north of the town (p. 276).

Septimius Severus in Group 62 and one of Severus Alexander in Group 51.

Period 5: Mid Third to Late Fourth Century (FIGS. 74–76)

The final phase sees quite a dramatic increase in the quantities of material recovered. To the west, ribbon-development extends for at least 400 metres along Margary 41a. Similar activity is seen outside the East Gate, where, apart from Group 84, activity is densest some 360 metres from the defences.

TABLE 37

QUANTIFICATION OF MID THIRD- TO LATE FOURTH-CENTURY GROUPS

West and south (FIGS. 74-75)

| GROUP NO. | AREA (m ²) | TOTAL WEIGHT (kg) |
|-----------|------------------------|-------------------|
| 64 | 600 | 1.35 |
| 65 | 150 | 0.20 |
| 66 | 100 | 0.15 |
| 67 | 400 | 0.55 |
| 68 | 700 | 1.30 |
| 69 | 500 | 0.75 |
| 70 | 4500 | 11.65 |
| 71 | 2300 | 1.15 |
| 72 | 1350 | 1.15 |
| 73 | 400 | 0.30 |
| 74 | 600 | 0.55 |
| 75 | 500 | 0.85 |
| 76 | 700 | 0.40 |
| 77 | 1600 | 1.30 |
| 87 | 6700 | 4.60 |
| 88 | 450 | 0.30 |
| 89 | 600 | 0.95 |
| TOTALS | 22150 | 27.50 |

East (FIG. 76)

| GROUP NO. | AREA (m ²) | TOTAL WEIGHT (kg) |
|-----------|------------------------|-------------------|
| 78 | 600 | 0.60 |
| 79 | 150 | 0.25 |
| 80 | 200 | 0.75 |
| 81 | 900 | 1.20 |
| 82 | 2300 | 2.25 |
| 83 | 300 | 0.70 |
| 84 | 5100 | 11.10 |
| 85 | 350 | 0.30 |
| TOTALS | 9900 | 17.15 |

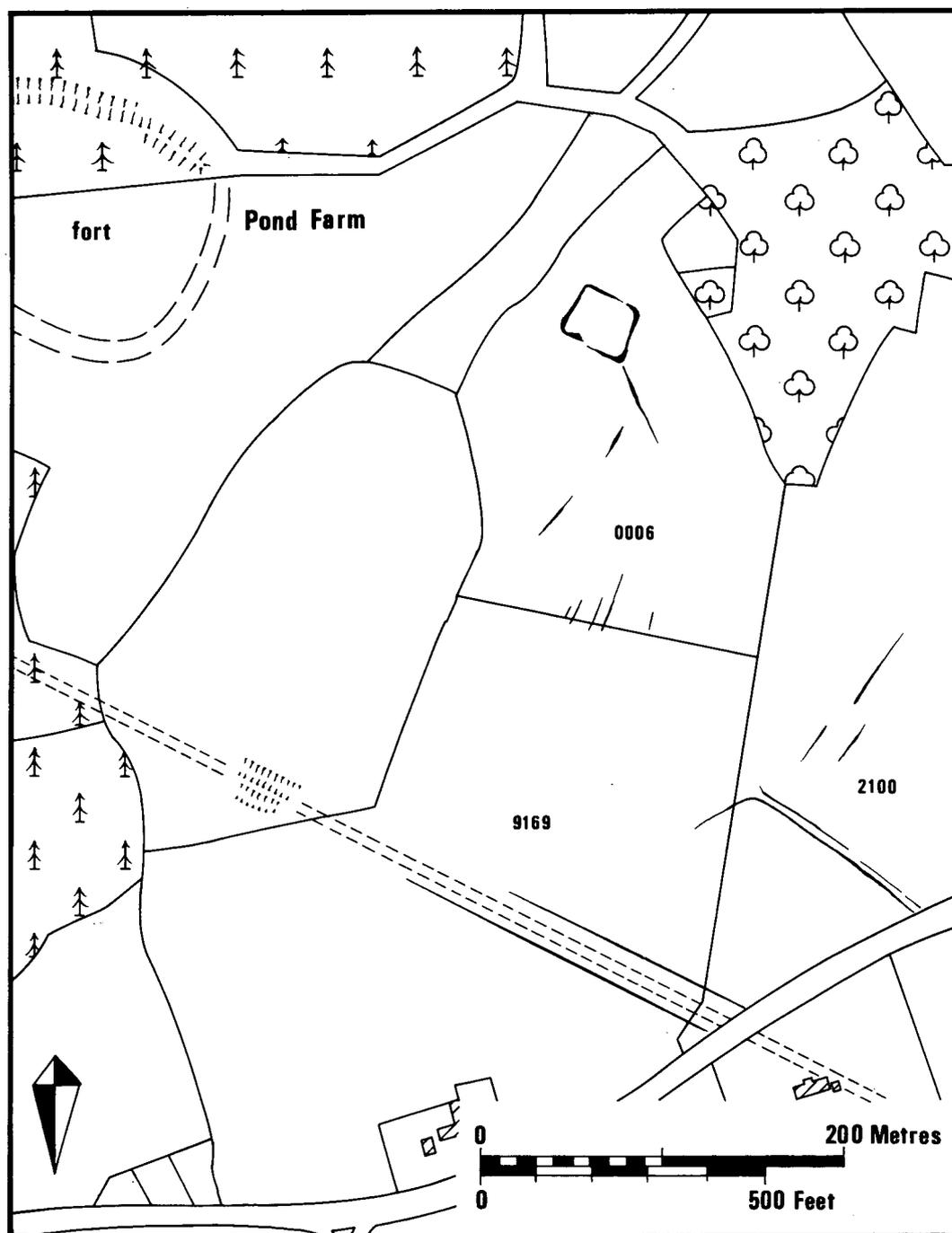


FIG. 78. Cropmarks north-west of the town (p. 278). For location of this area see FIG. 64.

The distribution of Period 5 pottery in L.P.s 4172 and 3950 strongly suggests that buildings visible on aerial photographs may belong to this phase, given the lack of earlier material (FIG. 75, PL. XXVIII). Some backing for this suggestion may be found in the results of Boon's excavations in the area (Boon 1969, 21; above, p. 247). A timber building facing the road was associated with material of the first half of the fourth century. Similar structures may have existed between the masonry examples referred to.

Some degree of organisation can be discovered from the crop-marks in this area. The southern edge of L.P. 4172 is made up of small rectangular enclosures, their short axis facing the road (Margary 51a). Each of the buildings visible from the air appears to take up the forward position of one of these enclosures. This is suggestive of a workshop-cum-dwelling unit, with space to the rear for further activity or cultivation. Pits are visible within some of these plots (PLS. XXVII, XXVIII).



(Photo: RCHM (England) Crown Copyright)

PL. XXVIII Cropmarks west of the town (L.P.s 3950 and 4172). North at top (see FIGS. 70, 75).

The northern boundaries of these enclosures are not all aligned on the same axis, and development of at least three stages may be evident. North of the enclosures are large fields; the unusual shape of the westernmost two may be caused by the 'primary' Outer Earthwork still existing as a major feature in the landscape. As this field-system is obviously associated with the smaller enclosures flanking the road, it may be tentatively suggested that it too is of late Roman date. If so, it also seems highly likely that the Period 3 cemetery was no longer in use, especially if it was within an agricultural zone.

Occupation north of road Margary 41a, additional to the hut found by Mrs. Cotton in L.P. 6667 (FIG. 75) (1947 and above, p. 247), may be marked by Group 76.

To the south, in the western half of L.P. 3950 (FIG. 75), the crop-marks present a more complex picture. All the material from this area is of Period 5.

The 'Primary Outer Earthwork' is crossed by a probable field-system running parallel to the road (FIG. 75). This system is in turn cut by a droveway or track which leaves Margary 41a not far north-west of Group 89. The drove crosses the earthwork by way of a gravel causeway, excavated by Boon (Boon 1969, 20). The causeway itself contained no datable material, although a section through the earthwork close by showed that the ditch was still filling in the late third and fourth centuries. This would suggest that the fields west of the town are probably all late Roman in date. The track or drove can be seen for a further 200 m across L.P. 0749 where, 60 m south, a narrower example is also visible. A similar track is visible north of Margary 41a in L.P. 2100 (FIG. 75).

Immediately south-west of Group 89 in L.P. 3950 crop marks of smaller enclosures, some



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PL. XXIX Cropmarks west of the town (L.P.s 3950 and 0749). North at top (see FIGS. 70, 75).



(Photo: RCHM (England) Crown Copyright)

PL. XXX Cropmarks west of the town (L.P. 0749). North at bottom (see FIGS. 70, 75).

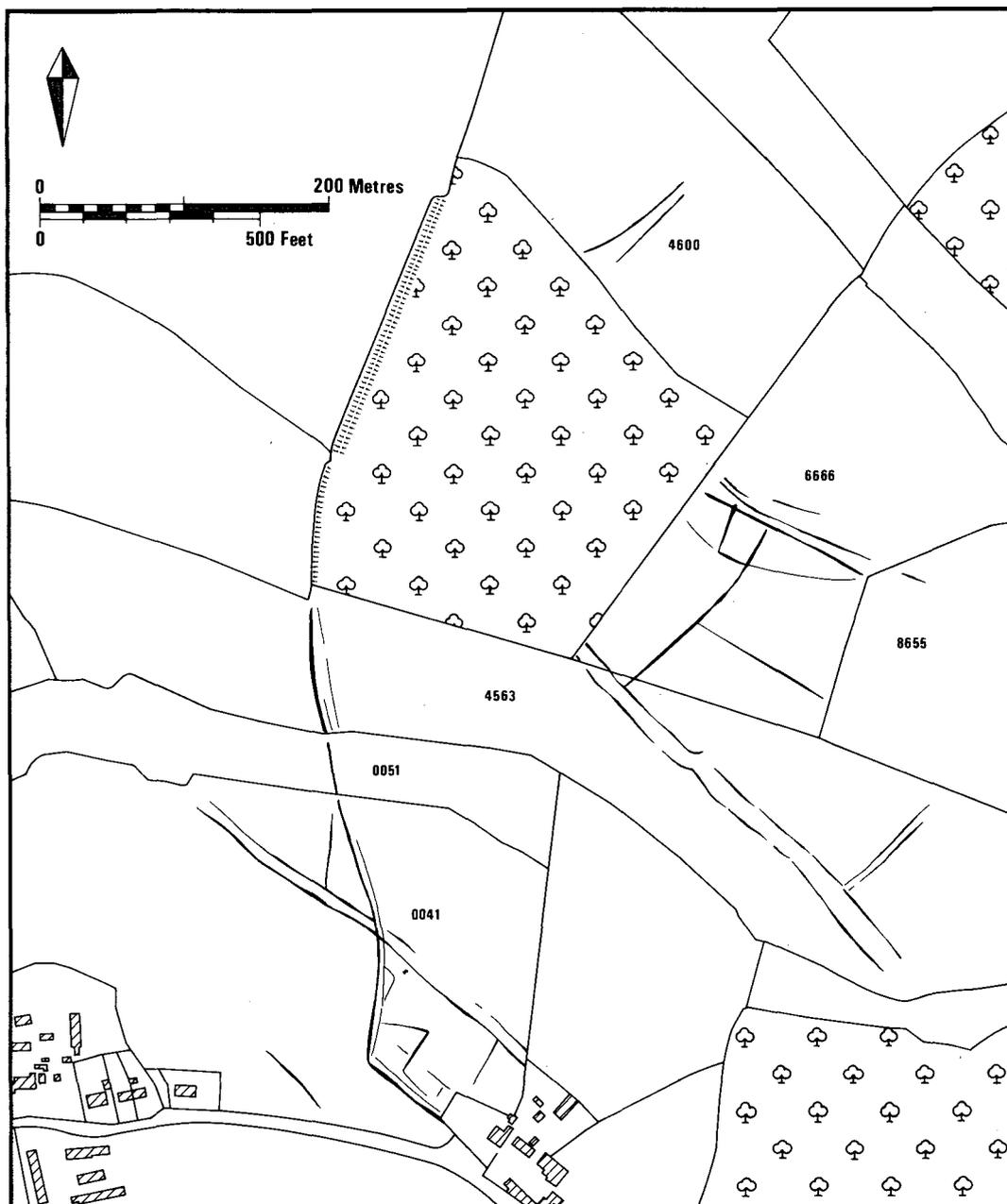


FIG. 79. Great Scrub Copse: cropmarks (p. 279). For location of this area see FIG. 64.

divided by tracks can be seen (PL. XXVIII); north of the group two possible buildings may be visible as lighter rectangular patches.

Closer to the town, in L.P. 5333, Groups 70 and 72 may suggest that further activity was concentrated between the two roads, Margary 41a and 4b. If this activity took the form of actual settlement, it must have caused some obstruction to the field of view from the western defences. However, Dr. A.S. Esmonde-Cleary, in a recent work on settlement outside the defences of Romano-British towns, has noted that this does not seem to have been considered a problem. He cites Water Newton, Kenchester and Irchester as other sites where settlement existed which would have obstructed the view from the defences (Esmonde-Cleary 1979, 246). Also noted by Dr. Esmonde-Cleary is the fact that the provision of external towers would necessitate a clear 'field of fire'; we may note that no towers have as yet been found at Silchester, and their existence is thought to be unlikely (above, p. 66).

The small groups beside roads Margary 4b and 42a, in L.P.s 5333 and 0001 (FIG. 74), are felt to be of some interest. None of these groups contains Oxfordshire colour-coated products. This may be due to a sampling bias, but (given the number of times these areas have been walked) it is

felt that this is unlikely. The difference then may be chronological, indicating that these groups are mainly later third-century in date, but before Oxfordshire products became the main tableware. This may be reinforced by the small amount of Alice Holt/Farnham sherds with a white or grey slip applied to them – a practice which only became common towards the end of the third century. It may also be significant that the only datable *mortaria* from Group 64 are of Young Type M 20, dated *c.* A.D. 240–300 (Young 1977, whilst the only coin from Group 73 is an *antoninianus* of Carausius.

The coarse pottery of Period 5 is dominated by products of the Alice Holt/Farnham industry, and to a lesser extent by BB1. The bowls are dominated by flanged and beaded-rim vessels (Gillam, Types 227–231 in BB1: Lyne and Jefferies 1979, Type 58 with Millett 1979, Types 13

TABLE 38:

QUANTIFICATION OF WESTERN GROUPS, PERIOD 5: OXFORDSHIRE WARES AND COINS

Group 70: L.P. 5333

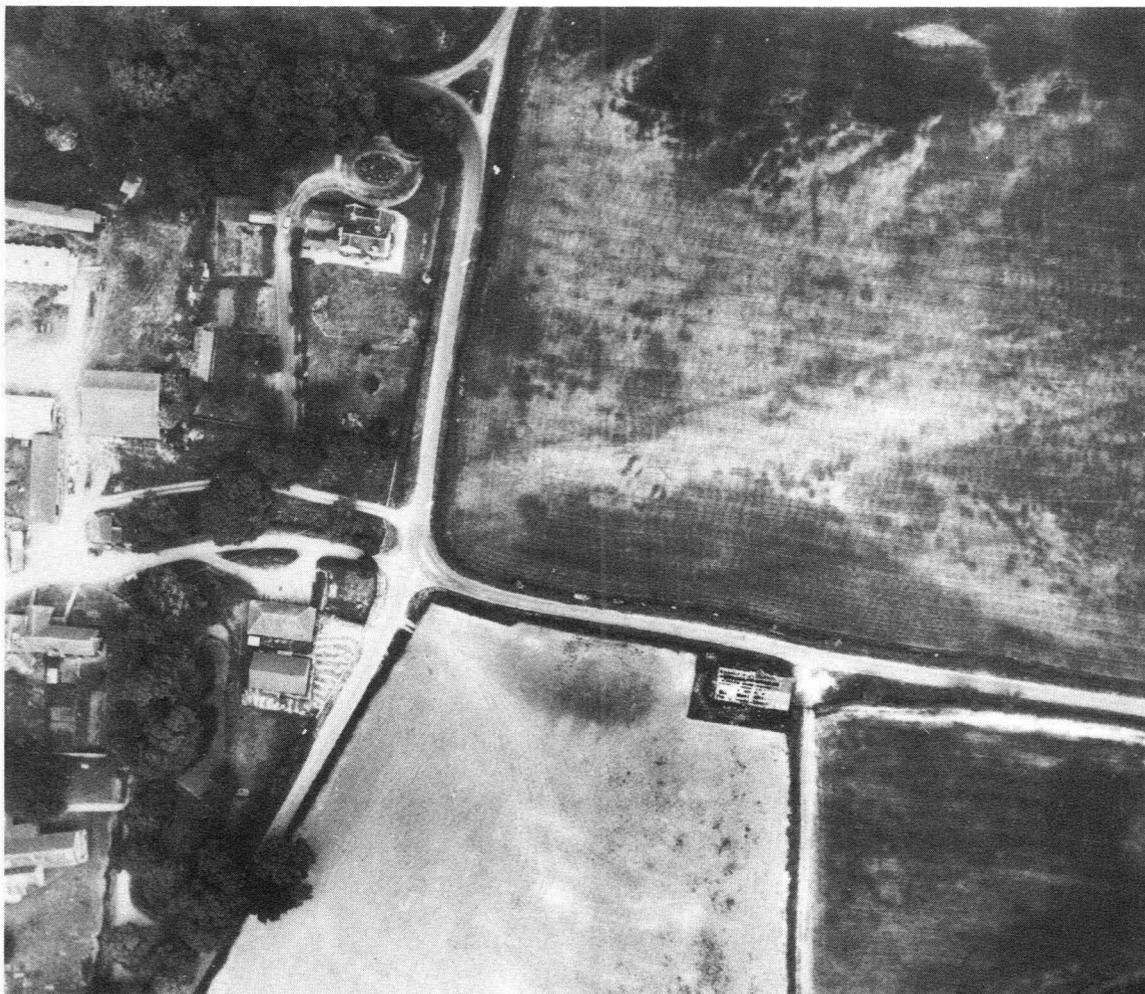
| | | | | | | | |
|---------------------|---------------|---------|---------------|---------|---------------|---------|---------|
| Young's Form | C 45 | C 77 | C 83 | C 97 | C 100 | P 24 | M 17–22 |
| Date | 270–400 | 340–400 | 300–400 | 240–400 | 300–400 | 240–400 | 240–400 |
| Min. no. of vessels | 6 | 6 | 5 | 2 | 4 | 3 | 18 |
| Coins | Gallic Empire | | Constantinian | | Valentinianic | | |
| | 3 | | 2 | | 1 | | |

Group 87: L.P. 4172

| | | | | | |
|---------------------|---------------|---------|-----------------------------|---------|---------|
| Young's Form | C 78 | C 61 | C 51 | C 81 | M 22 |
| Date | 340–400 | 350–400 | 240–400 | 300–400 | 240–400 |
| Min. no. of vessels | 4 | 3 | 3 | 2 | 2 |
| Coins | Constantinian | | Valentinianic or Theodosian | | |
| | 1 | | 2 | | |

Group 77: L.P. 3950

| | | | | |
|---------------------|---------|---------|---------|---------|
| Young's Form | C 45 | C 77 | C 100 | M 17 |
| Date | 270–400 | 340–400 | 300–400 | 240–400 |
| Min. no. of vessels | 3 | 1 | 3 | 3 |
| Coins | none | | | |



(Photo: RCHM (England) Crown Copyright)

PL. XXXI Cropmarks east of the town (L.P. 6346). North at top (see FIGS. 71, 73, 76).

and 14 from the Farnham area). Jars have rims which are either everted or out-curved and undercut (Gillam, Types 145–148 in BB1: Lyne and Jefferies 1979, Type 3B.11 to 3B.14, 3C and Millett 1979, Types 23–27 in Farnham ware).

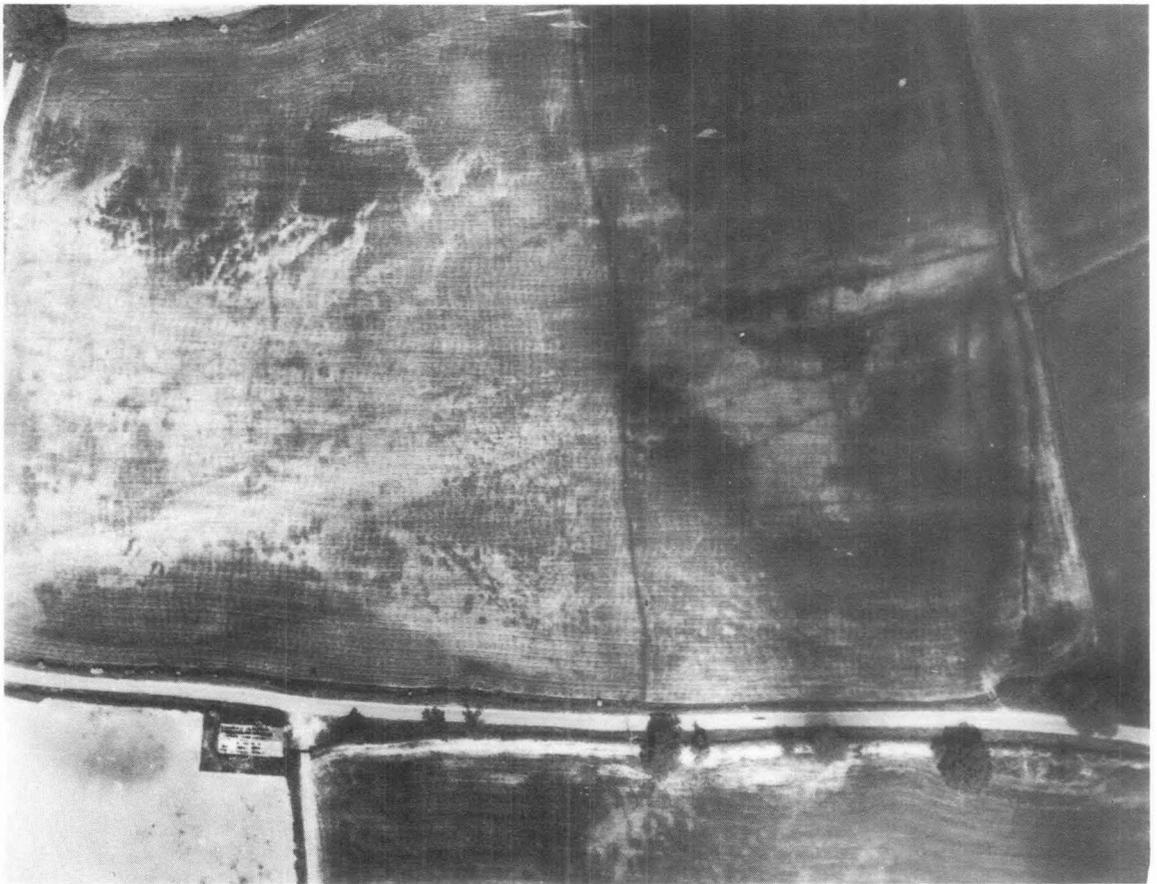
The close dating of such types is difficult, and it is only with the Oxfordshire fine wares that some limited approximations can be made. This is most useful where forms dating to the mid fourth century or later are present. Three of the larger western groups are presented opposite in Table 38, giving details of the identifiable Oxfordshire products and the coins. The forms are all taken from Young (1977).

Obviously the selection of just part of an assemblage is by no means conclusive evidence, but it may act as a general guide to those areas where occupation could run into the third quarter of the fourth century, given the nature of surface deposits. To suggest any activity beyond this, into the late fourth or even early fifth century is premature. Only excavation could possibly clarify the facts.

East of the city (FIG. 76) the greatest concentration of material comes from L.P. 4426, Group 84, which corresponds with the full extent of the surface rubble-scatter, which here consists of flint and tile.

In L.P. 6346 most material comes from the eastern end of the field, running over into L.P. 0259 – Groups 81–83. All correspond with areas of building-materials: 81 and 83 with flint and tile, 82 with tile only. Group 83 may be of interest, since only Period 5 pottery was found here. It may be a fourth-century building served by a spur from road Margary 4a (PL. XXXIII).

The crop-marks in the eastern area are not as clear as those to the west, and some possible



(Photo: RCHM (England) Crown Copyright)

PL. XXXII Cropmarks east of the town (L.P. 6346). North at top (see FIGS. 71, 73, 76).



(Photo: RCHM (England) Crown Copyright)

PL. XXXIII Cropmarks east of the town (L.P.s 6346 and 0259). North at top (see FIGS. 71, 73, 76).

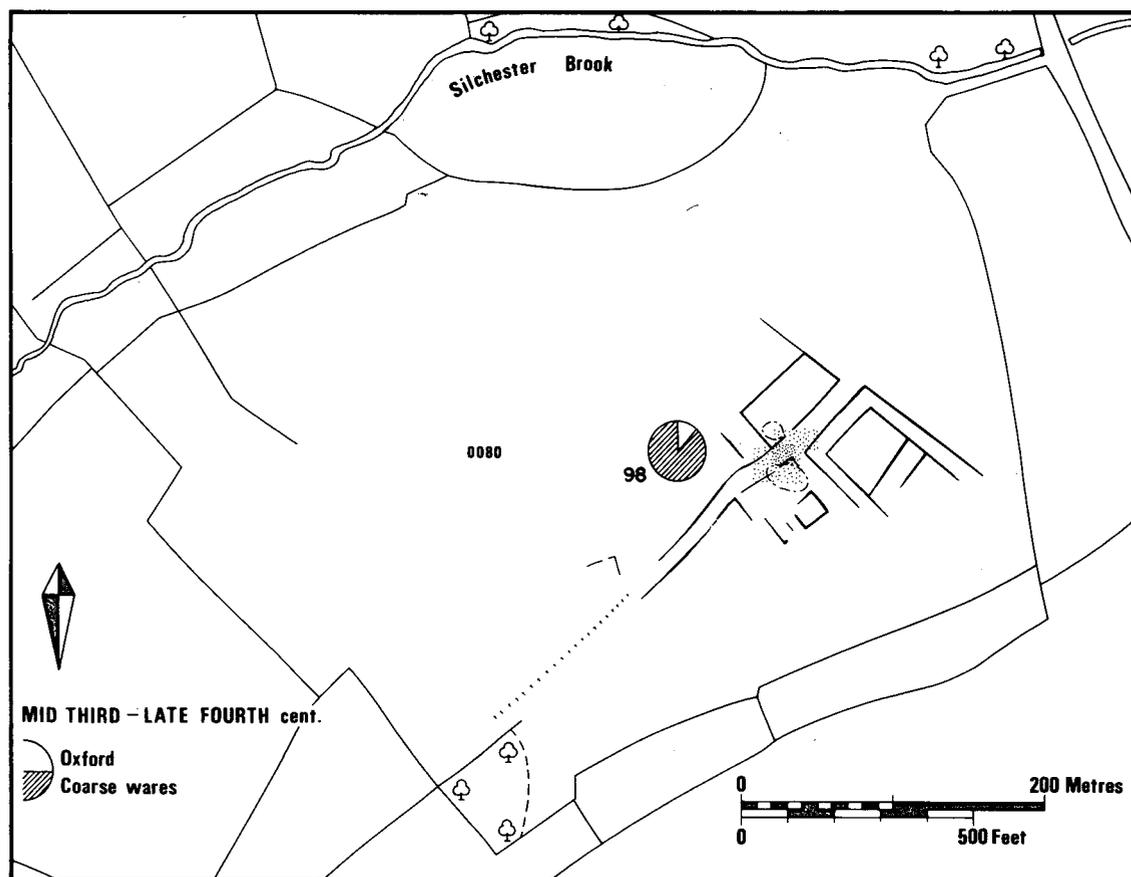


FIG. 80. Three Ashes: mid third- to late fourth-century pottery-scatter and undated cropmarks (p. 280). For location of this area see FIG. 64.

TABLE 39:

QUANTIFICATION OF EASTERN GROUPS, PERIOD 5: OXFORDSHIRE WARES AND COINS

Group 84: L.P. 4426

| | | | | | | |
|---------------------|---------------|-----------|---------------|---------------|----------------|---------|
| Young's Form | C 45 | C 61 | C 77 | C 83 | P 24 | M 17-22 |
| Date | 270-440 | 350-400 | 340-400 | 300-400 | 240-400 | 240-400 |
| Min. no. of vessels | 3 | 3 | 2 | 3 | 4 | 10 |
| Coins | Gallic Empire | Carausius | Constantinian | Valentinianic | Fourth Century | |
| | 6 | 2 | 1 | 2 | 2 | |

buildings do not correspond to surface groups of datable material such as pottery. Between Groups 78 and 79 in L.P. 6346 (FIG. 76) a building, apparently overlying the northern side-ditch of road Margary 4a, can be seen (PL. XXXII). Three rooms are visible, the central one having an east-facing apse. About 100 m north is a smaller structure again with an east-facing apse (PL. XXXI). This last building has been located by a surface scatter of flint and tile, but no pottery was found. Other features in the field are difficult to interpret, although two possible phases of division are visible either side of the side-ditches of road Margary 4a. Their date, however, could

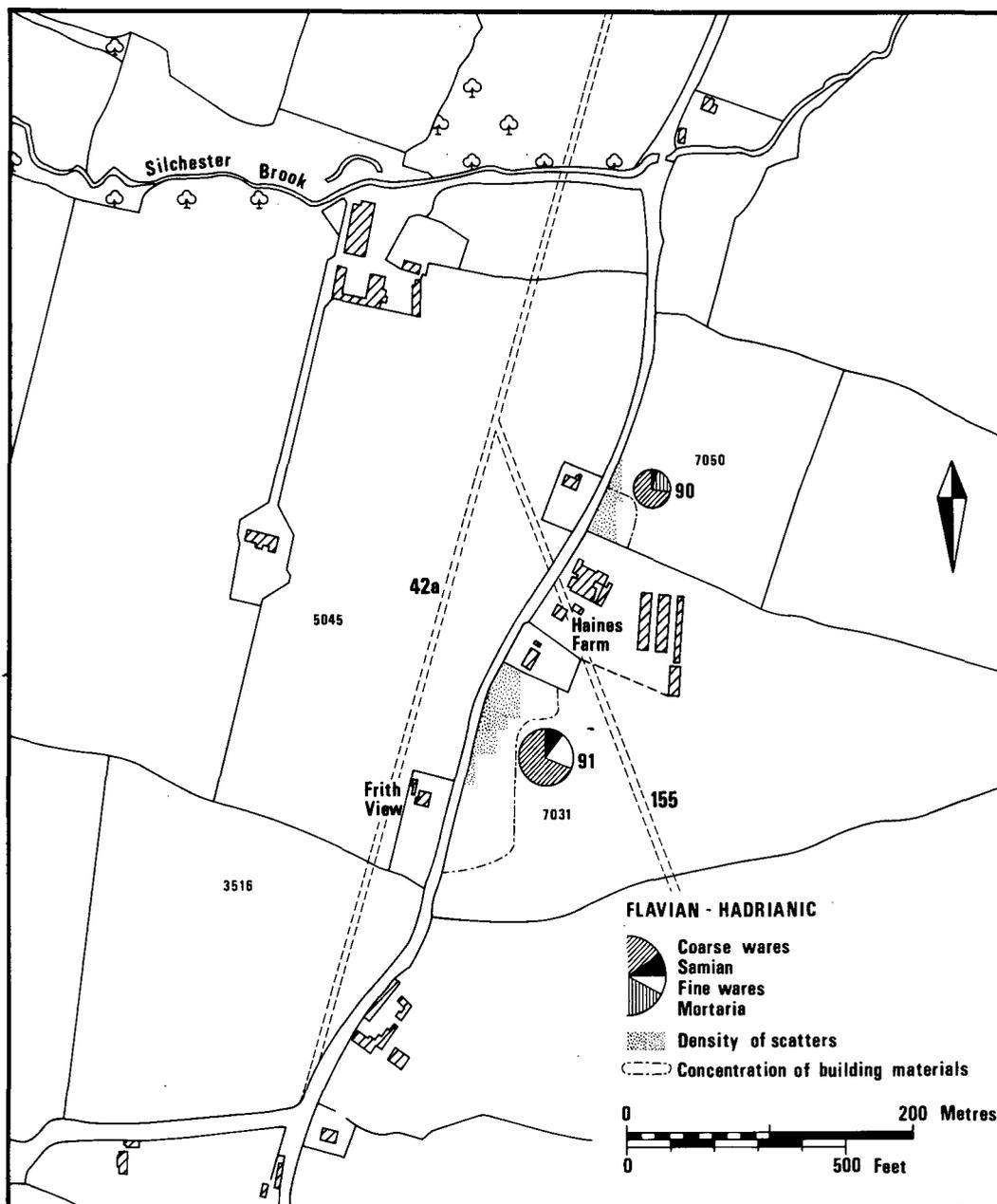


FIG. 81. Latchmore Green: Flavian-Hadrianic pottery-groups and course of Roman roads (p. 283). For location of this area see FIG. 64.

reasonably be established only by excavation, the same being true for the enclosure which cuts the road-surface north of Group 82 (PLS. XXXII, XXXIII).

Group 85, in L.P. 3000 (FIG. 76), is restricted to the northern end of the rubble scatter, and may indicate a decline in activity or occupation around the building in the fourth century.

In conclusion it must be recorded that some traces of industrial activity were found during the work, although none can be dated with any certainty. Iron slag was found in Group 82, L.P. 6346, some adhering to a coarse-ware vase of indeterminate form but of a fabric typical of the Alice Holt/Farnham products. Bronze slag was noted in Groups 70, 71 and 87. Two crucible-fragments were found in Group 70 (FIG. 84, Nos. 1 and 2).

Northern Extra-Mural Area (FIG. 77)

No field-walking could be undertaken in this area, although some features are visible from the air. The area is thought to have contained a cemetery (Boon 1974, 186), this being based on the discovery, somewhere in L.P. 8100 in 1852, of a sarcophagus made of Bath stone, which is



(Photo: RCHM (England) Crown Copyright)

PL. XXXIV Cropmarks south-east of the town (L.P. 3000). North to left.

thought to have lain within a circular masonry tomb; but the material and the circumstances of recovery have never been fully published.

Crop-marks in L.P. 8800 (PL. XXXV) show a length of east-west street possibly linking with a north-south length, west of road Margary 160c, the Dorchester road. This east-west street is not quite on the same alignment as the city's street-grid, and may prove to be an addition. Closer to the North Gate, part of a metalled track can be seen branching off north-eastwards from road Margary 160c, and may link up with a drove visible in L.P. 0004.

North of the Outer Earthwork, in L.P. 8100, the most interesting feature is a small circular enclosure, attached to a pair of parallel ditches some 20 m to the west. A single-lined feature runs south-east from the north-east arc of the enclosure. No walking was possible in this field either, and it remains possible on morphological grounds that this could be a pre-Roman enclosure. West of this complex the side-ditches of road Margary 160c are plainly visible (PL. XXXVI).

The Outer Earthwork is visible as a soil mark in L.P. 8100, and an entrance is clearly marked by the slight inturns of the ploughed-out bank. The existence of a stretch of earthwork east of the Dorchester road raises the problem of where it terminates (see above, p. 79). There is no trace of it in L.P. 0004 where the ground falls away to Clad Gully.



(Photo: RCHM (England) Crown Copyright)

PL. XXXV Cropmarks north of the town (L.P.s 8800 and 0004). North to right (see FIG. 77).

BEYOND THE SUBURBS – RURAL SETTLEMENT

Although only the areas contained by the Outer Earthwork, either as a real or inferred line, has been studied in depth, some work has been possible on the major crop-mark sites in the vicinity of *Calleva* (up to 1.5 km from the walls). A total survey of the entire parish proved beyond the resources of the team. Four crop-mark sites are commented upon here.

Crop-marks north-west of the town (PL. XXXVII, FIG. 78)

Examination of aerial photographs of this area resulted in the recognition of a rectangular ditched enclosure on the 91 m contour, measuring 37 m by 28 m. The enclosure is 240 m north of road Margary 41a, and 210 m east of the undated hillfort at Pond Farm. A probable entrance is visible in the centre of the southern side.

Although the subsoil geology has caused some obscuring of detail, it is possible that the eastern side of this enclosure is related to a linear feature visible for some 40 m from the south-eastern corner of the enclosure. Unfortunately it was not possible to walk this field during its brief period of use as arable, and it is now permanent pasture.



(Photo: RCHM (England) Crown Copyright)

PL. XXXVI Cropmarks north of the town (L.P.s 8100 and 8024). North to left (see FIG. 77).

Further south of the enclosure are faint and intermittent traces of what appears to be an extension of the field system visible north of road Margary 41a immediately west of the Outer Earthwork.

Great Scrub Copse crop-marks (FIG. 79)

Three aerial photographs taken by the Natural Monuments Record show a series of roughly parallel tracks or droves in the area south-east of the city (PLS. XXXVIII-XXXIX). Some of these are clearly of more than one period. That which crosses L.P. 4563 appears to kink, suggesting that an addition had been made to it. Further south-east a smaller track meets it roughly at right angles. At the point of junction the main track appears to be continuous. A further possible element of this system can be seen emerging from the Copse in L.P. 4600. It does not show as an earthwork within the wood. A prominent feature which cuts the north-west to south-east track in L.P. 0041 has been tentatively identified with the park pale which still survives on the west side of Great Scrub Copse. This pale is probably the one licensed to Ralph Bluet in 1204 (Page 1911, 53).

This possible field-system may then pre-date the park pale. No datable material has been recovered from the fields in the vicinity. The prospects of identifying a field-system, possibly of Roman date, close to Silchester is an exciting one. The tracks in L.P.s 0041 and 4563 are both in



(Photo: RCHM (England) Crown Copyright)

PL. XXXVII Cropmarks to north-west of town (L.P.s 0006, 2100, 9169). North to top right (see FIG. 78).

low-lying, damp ground, and the possibility of obtaining waterlogged environmental material should be considered if excavation were to be undertaken.

A possible extension of this system may be represented by the track and linear feature in the southern portion of L.P. 0068 (FIG. 74).

'Three Ashes' crop-mark site (FIG. 80, PL. XL)

This site, located some 800 m E.N.E. of Latchmore Green, was first noted from the air by the National Monuments Record in 1970, and was briefly described by Boon (Boon 1974, 244). The crop-marks, all within L.P. 0080, show a wide track running east-west, which at its eastern end opens into an area devoid of marks. At this end the track is bounded to the north and south by rectangular enclosures (FIG. 80). The northern enclosure measures some 65 m by 36 m, with an entrance visible 13 m from its south-west corner. Within this corner a light spread of flint with occasional *tegula* fragments has been noted.

The southern enclosure is double-ditched, with external dimensions of at least 90 m by 65 m (the southernmost boundary, if it exists, is not visible on the available aerial coverage). The inner enclosure measures 72 m by 47 m, with indications of subdivisions at its southern end.

A smaller enclosure some 20 m by 22 m is situated *c.* 16 m west of the double-ditched enclosure and *c.* 27 m south of the track. In the area between this small enclosure and the track is a rubble scatter of flint and tile, including decorated box-tile, indicating a structure of more than purely agricultural use.

Beyond the western limits of the crop-marks of the track, a slight hollow in the field-surface may indicate a continuation towards Latchmore Green.

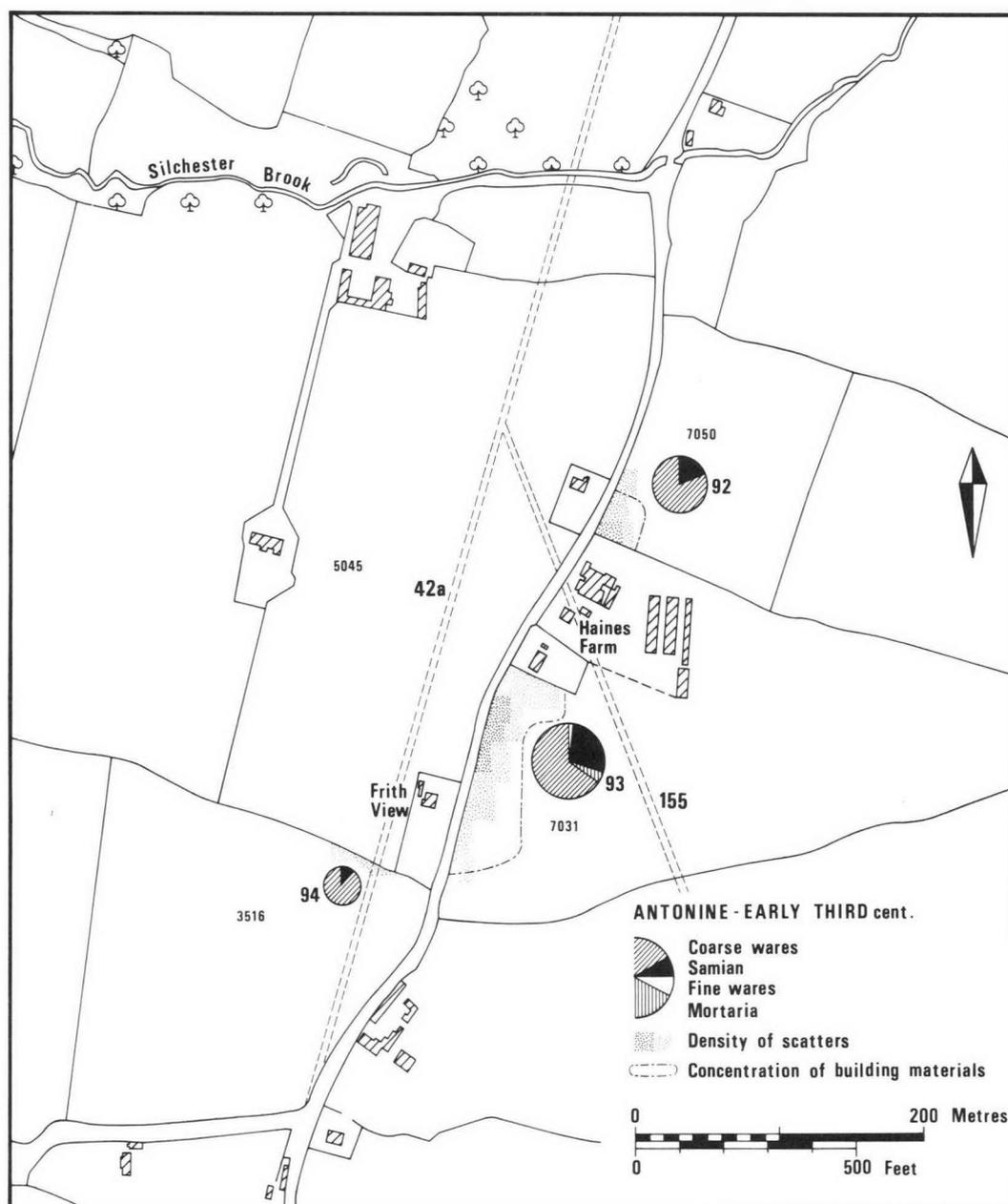


FIG. 82. Latchmore Green: Antonine to early third-century pottery-groups and course of Roman roads (p. 283); for location of this area see FIG. 64.

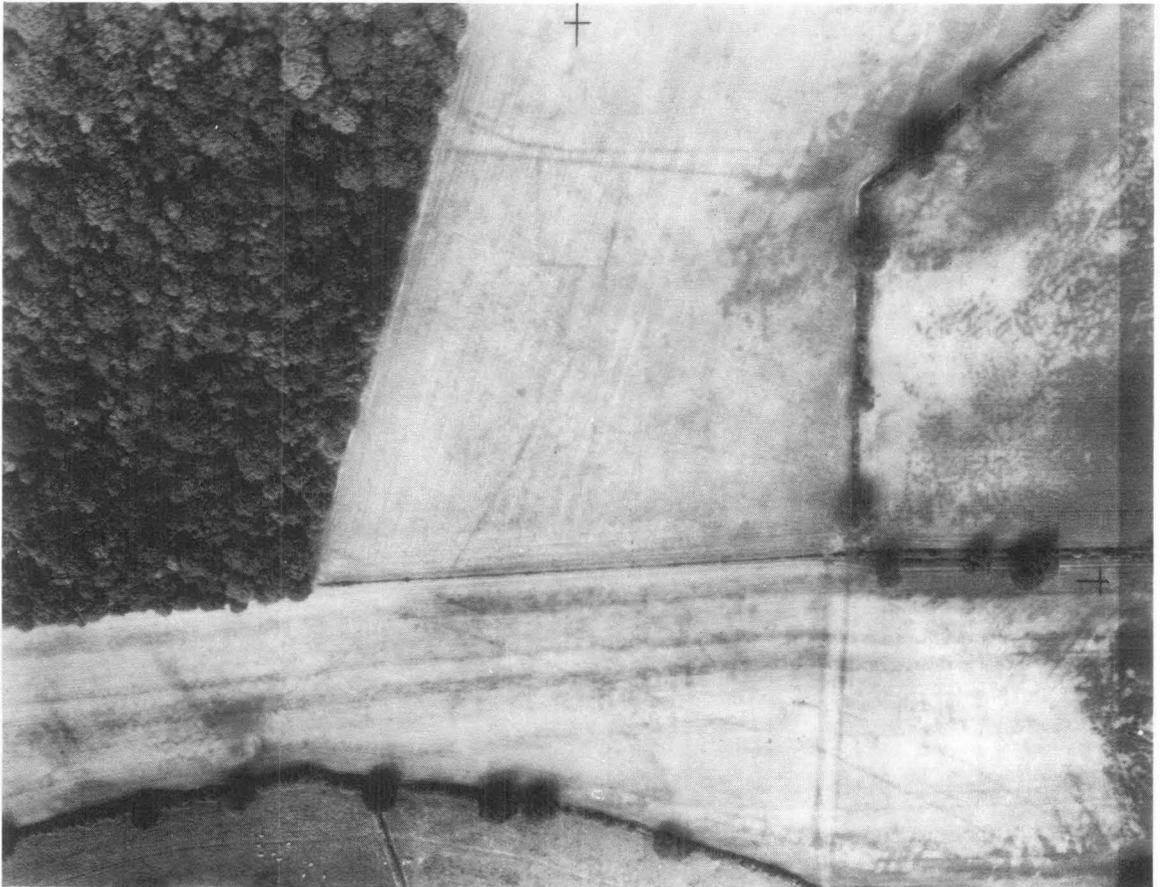
Apart from 0.1 kg of 'Silchester Ware', all the datable pottery belongs to the later third and fourth centuries, all but a small amount of Oxfordshire colour-coated wares being coarse wares with BB1 products and those of the Alice Holt/Farnham industry predominating (Table 40).

TABLE 40

THREE ASHES: QUANTIFICATION OF GROUP 98

| GROUP NO. | AREA (m ²) | TOTAL WEIGHT (kg) |
|-----------|------------------------|-------------------|
| 98 | 350 | 1.65 |

No coins were recovered



(Photo: RCHM (England) Crown Copyright)

PL. XXXVIII Cropmarks near Great Scrub Copse (L.P.s 6666, 4563, 0041). North at top (see FIG. 79).



(Photo: RCHM (England) Crown Copyright)

PL. XXXIX Cropmarks south of Great Scrub Copse (L.P.s 4563 and 0041). North at top (see FIG. 79).



(Photo: RCHM (England) Crown Copyright)

PL. XL Cropmarks south of Three Ashes (L.P. 0080). North to top right (see FIG. 80).

Latchmore Green (FIGS. 81–83)

This extensive and intriguing site is situated 1.5 km south of the city on a gentle rise south of Silchester Brook, and is where the Chichester road (Margary 155) leaves the road to Winchester (Margary 42a).

The earliest record of Roman remains was noted by Maclauchlan in 1850, who recorded the ploughing up of what he called a stretch of road and the discovery of other remains in a sawpit (Maclauchlan 1851, 235).

In 1972 the author was told by the then owner of the cottage 'Frith View' that a 'substantial wall' of flint and tile was found just south of the cottage at a depth of 2 feet. Unfortunately, by the time the information had been received, the 'wall' had been covered by a hen house; it remains possible that it is of Roman date.

A glance at FIGS. 81–83 makes it clear that the bulk of this site probably lies under L.P. 5045, which is under pasture. L.P.s 3516, 7031 and 7050 are all under plough, and have been regularly walked. The material recovered belongs to our Periods 3, 4 and 5, and is mixed with extensive spreads of flint, tile and fine gravel.

A total of 0.20 kg of 'Silchester ware' was also recovered from the extreme north-west corner of L.P. 7031 (not illustrated).

The figures and tables show a steady increase in activity on this site, with the pottery indicating occupation running later than 350. Group 98 is predominantly second-century in date and includes possible pottery wasters or seconds, which may indicate a small potting establishment at the southern edge of the settlement. A site of this size (probably in excess of 6 ha) is of some interest, being so close to the town. Its origins may be due to the road-junction, around which the site seems to have grown. The limited aerial coverage of the site shows no archaeological features.

TABLE 41

LATCHMORE GREEN: QUANTIFICATION OF PERIODS 3-5

PERIOD 3: FIG. 81

| GROUP NO. | AREA (m ²) | TOTAL WEIGHT (kg) |
|-----------|------------------------|-------------------|
| 90 | 700 | 0.75 |
| 91 | 1200 | 1.45 |
| TOTALS | 1900 | 2.20 |

PERIOD 4: FIG. 82

| GROUP NO. | AREA (m ²) | TOTAL WEIGHT (kg) |
|-----------|------------------------|-------------------|
| 92 | 950 | 1.35 |
| 93 | 3100 | 2.00 |
| 94 | 300 | 0.35 |
| TOTALS | 4350 | 3.70 |

PERIOD 5: FIG. 83

| GROUP NO. | AREA (m ²) | TOTAL WEIGHT (kg) |
|-----------|------------------------|-------------------|
| 95 | 1800 | 2.55 |
| 96 | 3800 | 2.95 |
| 97 | 1150 | 0.90 |
| TOTALS | 6750 | 6.40 |

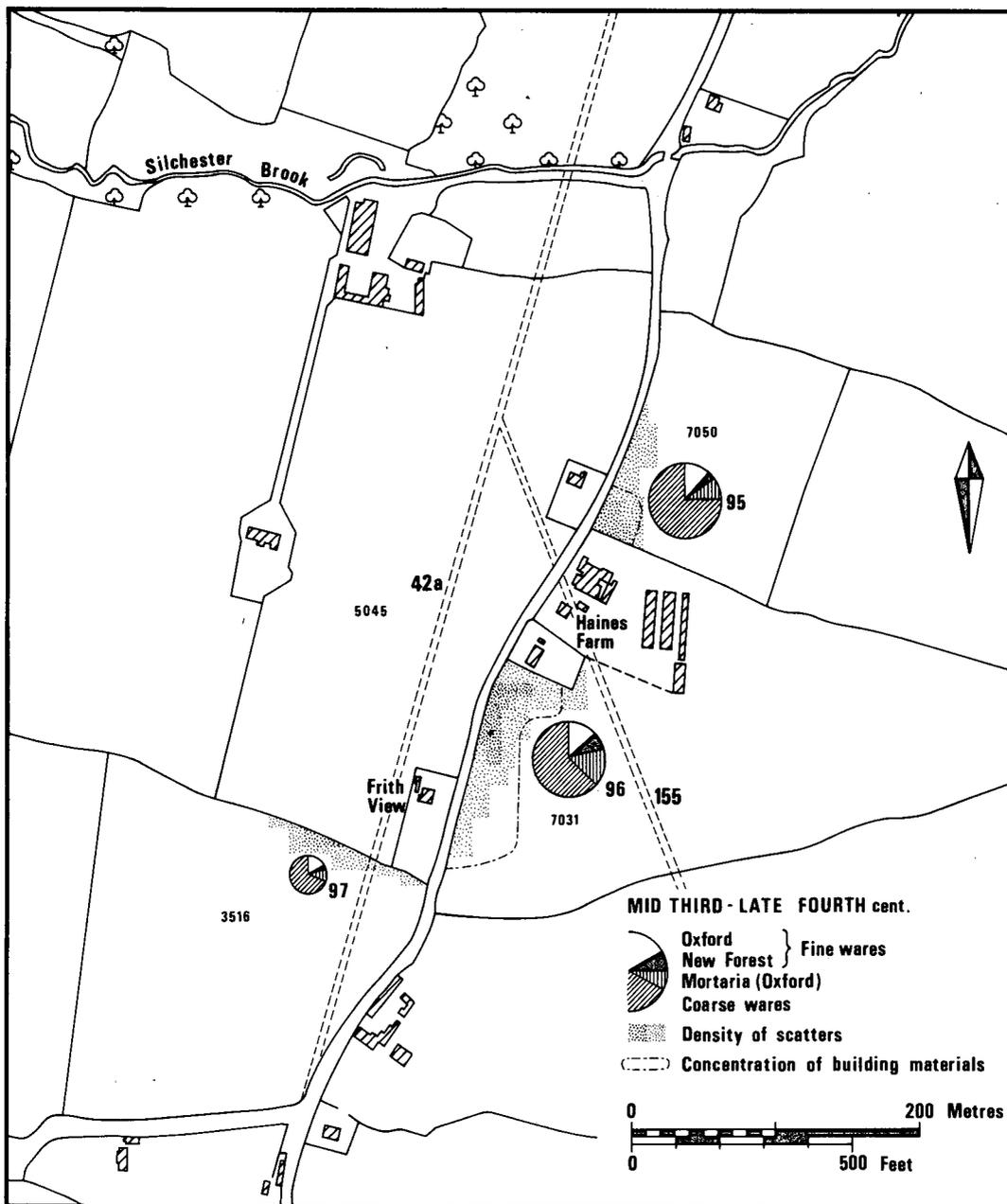


FIG. 83. Latchmore Green: Mid third- to late fourth-century pottery-groups and course of Roman roads. For location of this area see FIG. 64.

ILLUSTRATED FINDS (FIG. 84)

1. Lower portion of a crucible. Area of Group 70, L.P. 5333. Hand-made, burnt grey clay, external surface encrusted with a grey glassy deposit (p. 276).
2. Lower (?) portion of a crucible. Area of Group 70, L.P. 5333. Hand-made, burnt grey clay, external surface coloured copper green (p. 276). Could alternatively be a prop for keeping crucibles upright (cf Frere 1972, 366, No. 6).
3. Variant of a fibula of Hod Hill type. Group 14, L.P. 0001 (p. 257). Traces of silvering or tinning. Probably pre-Flavian (cf Bushe-Fox 1949, 111, pl. XXVI).
4. Fragment of a pillar-moulded bowl. Group 19, L.P. 0068. First century A.D. (p. 257).
5. Fragment of a coin-mould flan. Group 7, L.P. 6805. Mould unit is 7 mm deep, and 8 mm in diameter (p. 251).
6. Fragment of a coin-mould flan. Group 7, L.P. 6805. Mould unit is 10 mm deep, and 12 mm in diameter (p. 251).

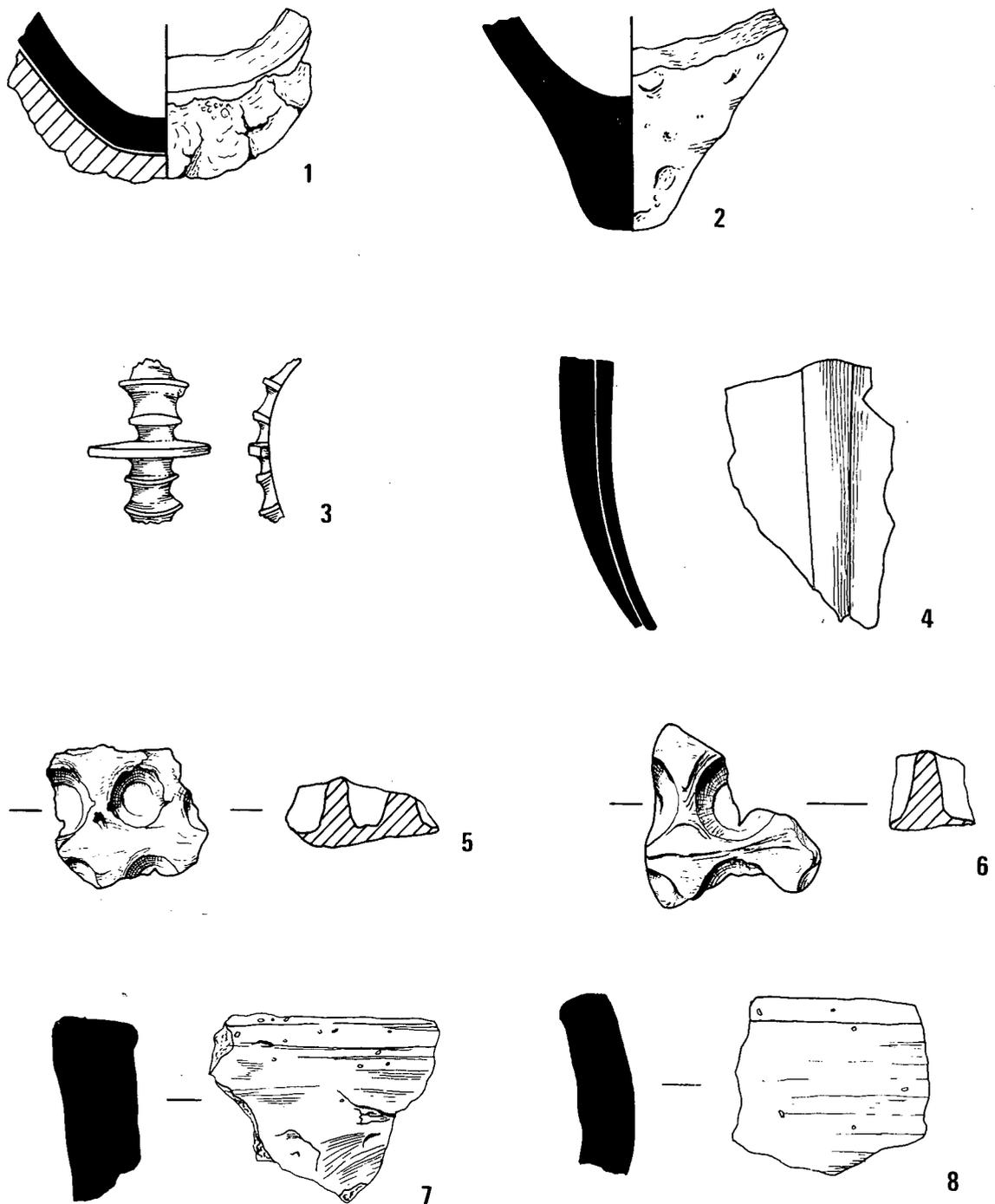


FIG. 84. Selected finds from the extra-mural field survey (Scale 1:1).

7. Rim of Period 1a vessel. Grog-tempered, with brown surface and black core. See p. 249.
 8. Rim of Period 1a vessel. Grog-tempered, light brown fabric. See p. 249.

CONCLUSIONS AND DISCUSSION

1. PRE CONQUEST ACTIVITY AND EARTHWORKS

(i) *Period 1a and the 'Salient Dyke'* (FIGS. 67 and 85)

The earliest material was that from Group 7, L.P. 6805, which is tentatively assigned to the first century B.C. (p. 251). This group spreads across Boon's 'Salient Dyke' line (Boon 1969, pl. 1), the existence of which is still uncertain (see above, pp. 82-3), but within the line of the Rampier Copse earthwork for which a prehistoric date is argued (p. 83). The presence of fired clay flan moulds (so called coin moulds) furthermore point to it being the possible site of specialised metalworking activity. Other moulds have been found elsewhere in and around the town (shown as black dots in FIG. 85). Only those from the pit under the West Wall (above, p. 246) and from the present Basilica excavations could be considered not to be residual in their contexts (the other examples all being of either uncertain provenance or surface finds (Boon 1954).

Apart from the fragments of Dressel 1 amphora from outside the South Gate, the fact that no other material comparable to Group 7 has been found beyond the Outer Earthwork may indicate that this defence was associated with a first-century B.C. *oppidum*. Only excavation could prove this however, and other factors could also account for the lack of such material elsewhere (p. 245).

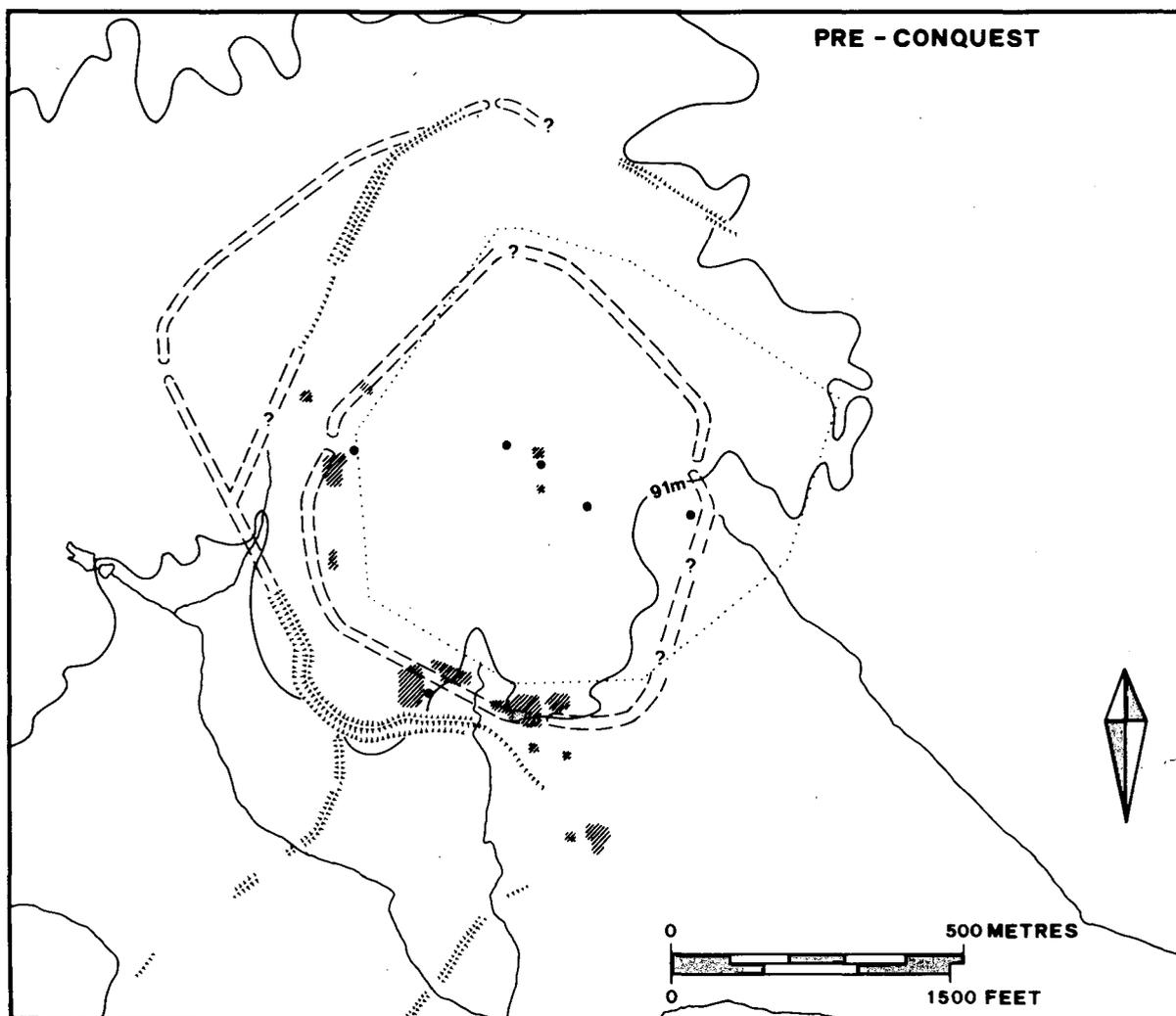


FIG. 85. Summary Map of Extra-mural Survey: pre-Conquest concentrations of contemporary material represented by shading; findspots of fired clay flan moulds (so-called coin-moulds) represented by dots.

(ii) *Period 1b and the Inner Earthwork*

As was noted elsewhere (p. 253) the bulk of the Period 1b material was recovered from areas within the line of the Inner Earthwork. The presence of continental imports with the material gives further substance to the existence of an Atrebatian *oppidum* at Silchester from the very early first century A.D. onwards (Period 1a material shows that this may have originated in the first century B.C.). A possible cemetery associated with this phase may exist in L.P. 0068 (p. 253). The only structural evidence for this phase comes from Boon's work outside the South Gate (1969) and from the current excavations on the site of the Basilica. The context of the material recovered by Boon led him to suggest that the Inner Earthwork was constructed by Cogidubnus after the establishment of a client state shortly after the invasion of A.D. 43 (Boon 1969, 39).

However, material from the Inner Earthwork does not allow a definite statement about which side of A.D. 43 the earthwork really belongs. Equally possibly the defence may be pre-Conquest and built as a response either to the threat of Roman conquest or, perhaps more likely, to the turmoil following the death of Cunobelin, c. A.D. 40.

Although Boon's excavations showed that some occupied areas were abandoned when the Inner Earthwork was constructed, the field-walking results show that very little was excluded from the defended area. It may be suggested, therefore, that the Inner Earthwork marks the extent of the *oppidum* of Calleva on the eve of the Roman invasion.

(iii) *The Outer Earthwork and Dyke Systems*

The dyke systems, mainly south-west of the town, were the subject of extensive interpretation by Boon, who attempted to relate them to the earthwork enclosures at Silchester and Late Iron Age dynastic struggles (Boon 1969, 21–36). None of these dykes has been excavated and, until firm dating evidence is forthcoming, speculation on the date and function of these earthworks should be avoided. The survey-work includes walking areas adjacent to these systems, but unfortunately no material has hitherto been recorded.

To the north of the city it has already been recorded that a possible entrance has been noted from the air (p. 277, FIG. 77). The earthwork possibly continued to the 91-metre contour, where the terrain changes and its continuation might be rendered unnecessary. Only further investigation could answer these points.

2. ROMAN

(i) *Extra-Mural Settlement* (FIGS. 86–89)

The results of the survey have shown that the study of Romano-British towns must not be confined to the area enclosed by defences. The Silchester material allows a much fuller picture of the town's development to be appreciated. This shows that by the end of the second century, when the earthen defences were erected, the 'core' of the town had been established. It is unlikely from the surface evidence that any substantial area of occupation was excluded from the defended area. The only exceptions to this are the areas of ribbon development, mainly east and west of the town, and the substantial building in L.P. 3000, none of which could be easily incorporated without adding an enormous extra burden to the cost of the operation.

Perhaps one of the most significant findings of the survey is the fact that the provision of these defences did nothing to inhibit further extra-mural activity. On the contrary, it is only in the late third and fourth centuries that any real expansion in the study area is seen. Activity of this date may, however, show that the town's population was outgrowing the limits placed on it by the late second-century line of defences. The evidence provided by the limited aerial coverage and that of the field-walking strongly suggests that the western area, flanking road Margary 41a, was a region of closely-spaced buildings for some 400 m out of town.

The arguments given above (p. 269) on the date of the western field-system may also imply a greater use of agricultural resources near to the city in the later Roman period.

The decline of these areas is more difficult to assess on purely surface evidence. Dr. A.S. Esmonde-Cleary has noted that, in the extra-mural areas of Romano-British towns which he

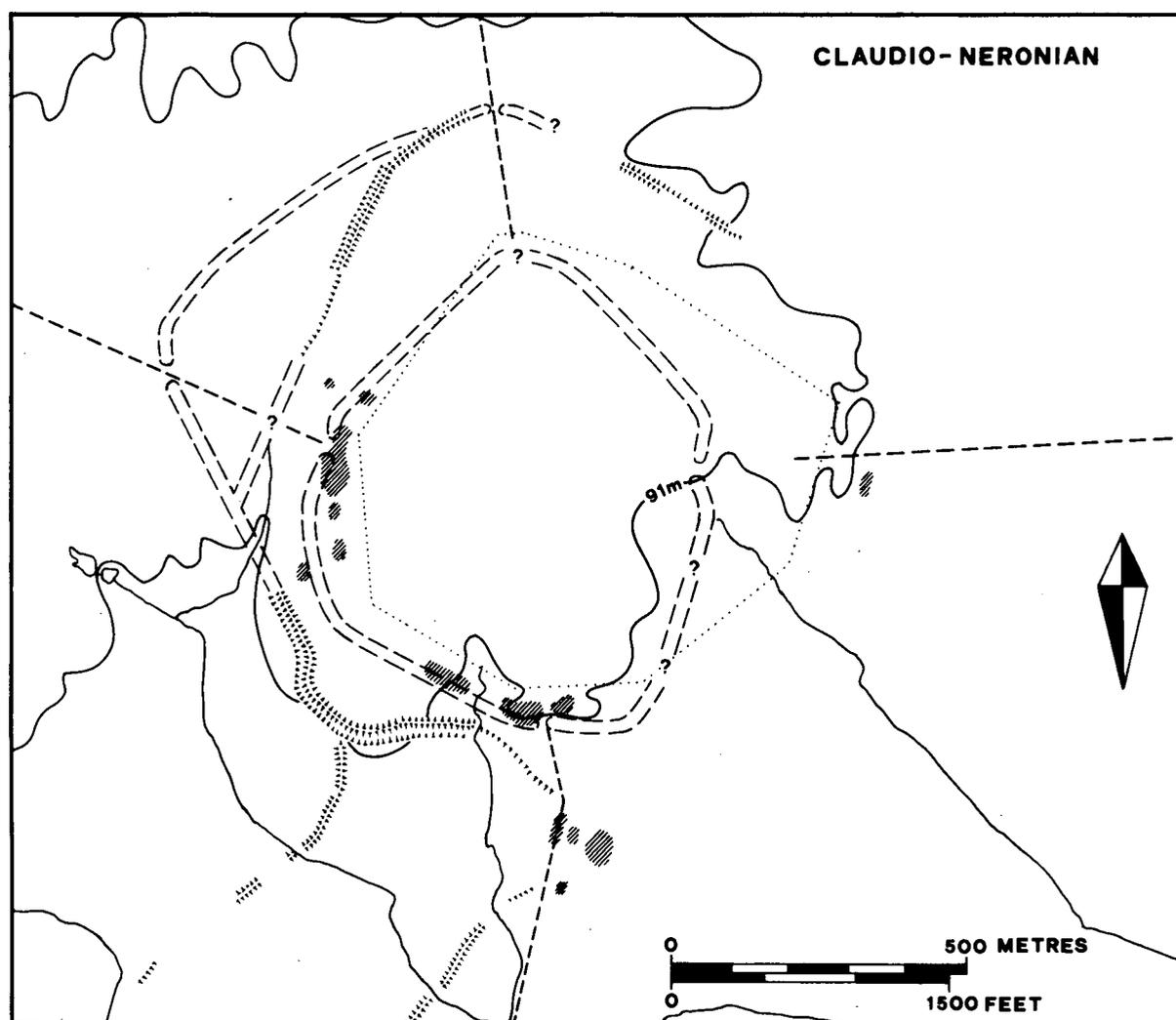


FIG. 86. Summary Map of Extra-mural Survey: Claudio-Neronian concentrations of contemporary material represented by shading.

examined, post-Valentinianic coins are far less plentiful than those of the preceding periods (Esmonde-Cleary 1979). He notes that this, in part, may be the result of lack of fresh supplies reaching Britain, but he also draws attention to the fact that, unlike what happened in earlier periods of small-change shortage, no large-scale forgery occurred to make up this shortfall. A similar pattern is true for the extra-mural areas of Silchester: only Group 87 (L.P. 4172) has worn AE 4 issues, which *could* be Theodosian in date. Whilst Oxfordshire products post-dating *c.* A.D. 350 are present at Silchester, the lack of late coins should indicate that extra-mural settlement was declining from *c.* 380. There is no reason to doubt that occupation within the walls continued into the fifth century, though on what scale it is impossible to judge (Boon 1974, 73). This may support Dr. Esmonde-Cleary's view that it is only in the late fourth century that '... the defences came into their own and marked a significant boundary. . .' (Esmonde-Cleary 1979, 299).

The causes of such a decline in extra-mural occupation are probably complex, but may include elements such as increased insecurity necessitating a move within the defences, and a decline in Romano-British industry from the later fourth century. Dr. Esmonde-Cleary considers that extra-mural areas were mainly given over to commerce and craft or industry, a suggestion which gains support from the Silchester evidence. The buildings west of the town (FIG. 75, PLS. XXVII-XXX) are of a type usually associated with commercial activity, with living-quarters to the rear. Thus economic decline could also help to account for the abandonment of the extra-mural area. The clustering of extra-mural settlement along the main east-west route in the later third

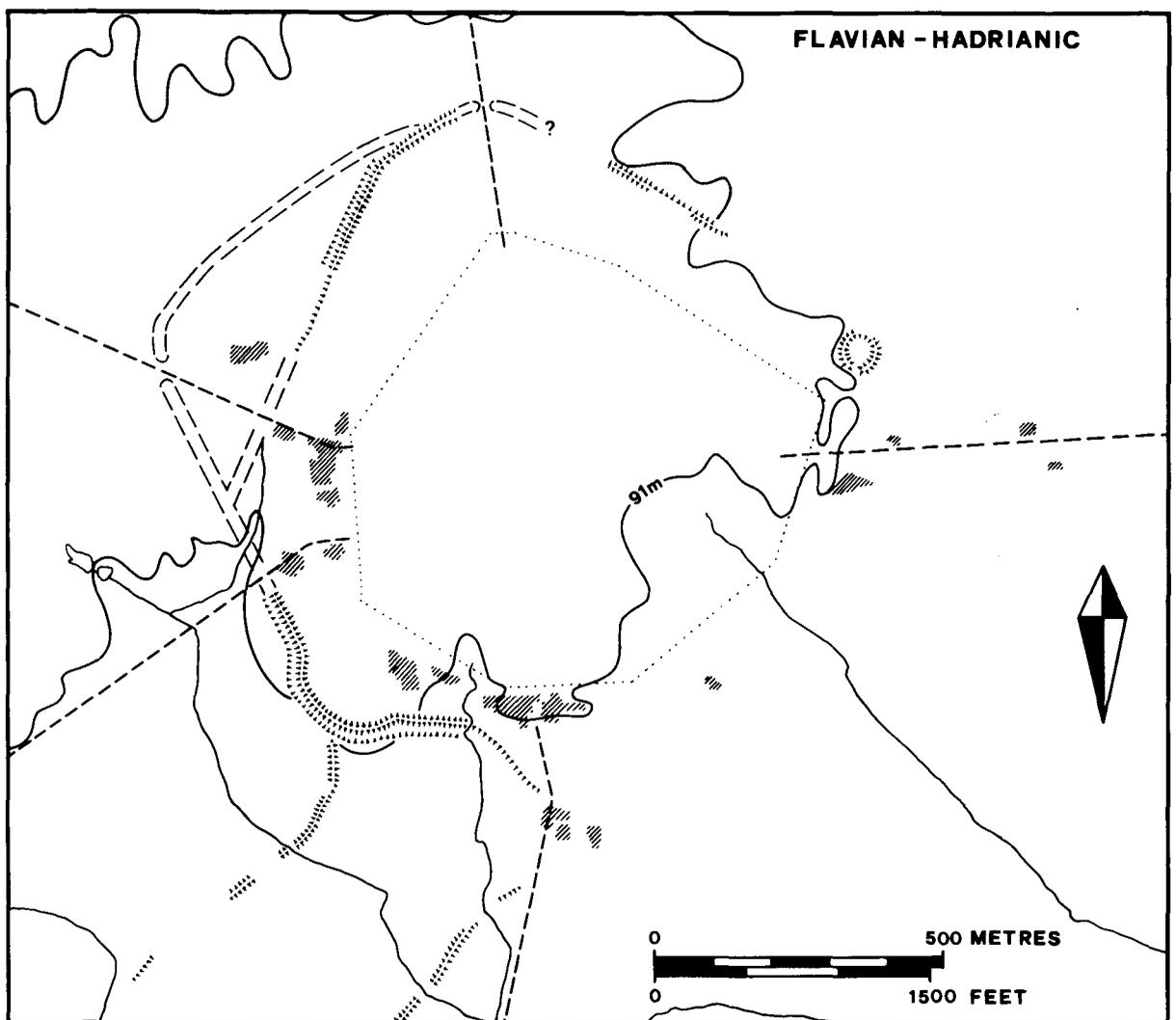


FIG. 87. Summary Map of Extra-mural Survey: Flavian-Hadrianic concentrations of contemporary material represented by shading.

and fourth centuries may also reflect its commercial and industrial character. The route was the most important through the town and thus also, presumably, the busiest in terms of the volume of traffic passing along it. The decline of extra-mural activity could also give a clue to the date when the West Gate's southern carriageway was blocked (Boon 1974, 107).

(ii) *Cemeteries*

Before the survey, the only cemeteries known around Silchester were those in Rampier Copse (p. 79) and in the vicinity of the North Gate (p. 276). Three further locations may now be added as a result of the work reported here.

The earliest is that in L.P. 0068 (p. 253 and FIGS. 67 and 68), which may have had a pre-Conquest origin, and may have continued into the late second or early third century. The small amount of later material may indicate some continuity of use, although this is far from certain.

The cemetery of Flavian-Hadrianic date in L.P. 4172 (FIG. 70, p. 257) is the only one which has been examined in more detail (Appendix 2, p. 293). The fact that this cemetery was probably succeeded by fields in the later Roman period gives further support to the suggestion that Period 5 saw an intensification of settlement and cultivation in the extra-mural area. Such intensification is also hinted at by the apparent later Roman date for the track or drove crossing the 'Primary Outer Earthwork' in L.P.s 3950 and 0749 (p. 269). No other material which could indicate the presence of a late Roman cemetery west of the town has been noted. However, as was mentioned

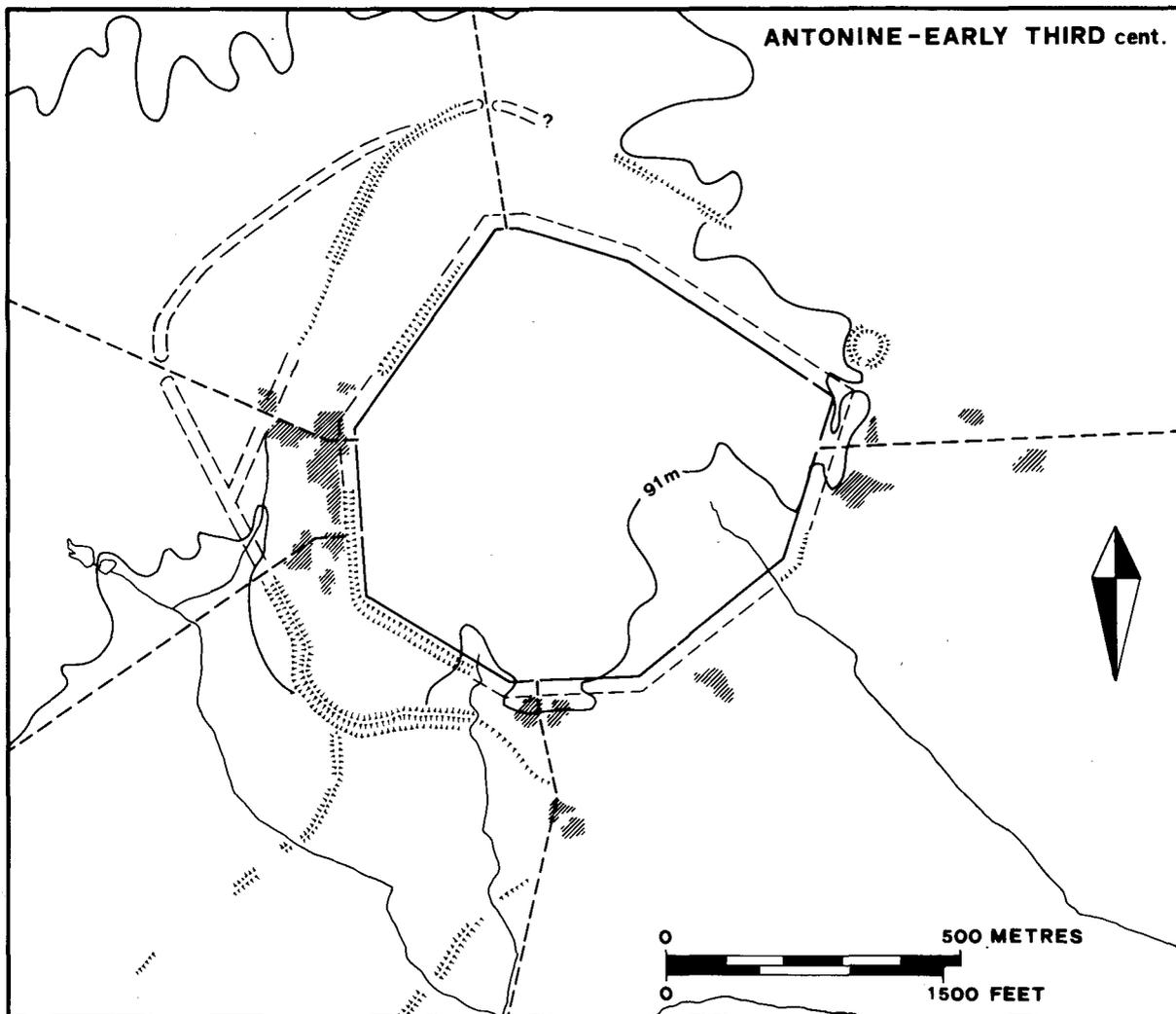


FIG. 88. Summary Map of Extra-mural Survey: Antonine to early third-century concentrations of contemporary material represented by shading.

elsewhere (p. 263), absence of evidence could be explained by the change in burial-rite to inhumation, which would not be so recognisable by field-survey.

The final cemetery found during the survey is that outside the East Gate in L.P. 6346 (p. 263 and FIG. 73). Only one group of pottery could be said beyond all reasonable doubt to have been derived from a burial (Group 60). However, it is quite apparent that from the Flavian period onwards very little material has been recovered from a point immediately east of the East Gate to a point some 300 m from it. Aerial photographs show a few buildings in this space which may be mausolea. Dr. Esmonde-Cleary has noted a tendency for major cemeteries to develop adjacent to the main roads serving a town, especially one which leads to or from London (Esmonde-Cleary 1979, 252). Although this practice is not invariable, it would be a possible explanation for the general lack of settlement-evidence from the western 300 metres or so of L.P. 6346, through which the London road (Margary 4a) runs. As the area is the only one where the aerial coverage shows what may be mausolea, this could indicate its pre-eminence amongst the Callevan cemeteries.

(iii) Rural Settlement

There can be little doubt that much still awaits investigation and discovery in the Callevan hinterland. This survey only located two sites away from the town, Latchmore Green (FIGS. 81-83, p. 283) and south-east of Three Ashes (PL XL, p. 280). Latchmore Green most likely developed around the junction of the Winchester and Chichester roads towards the end of the

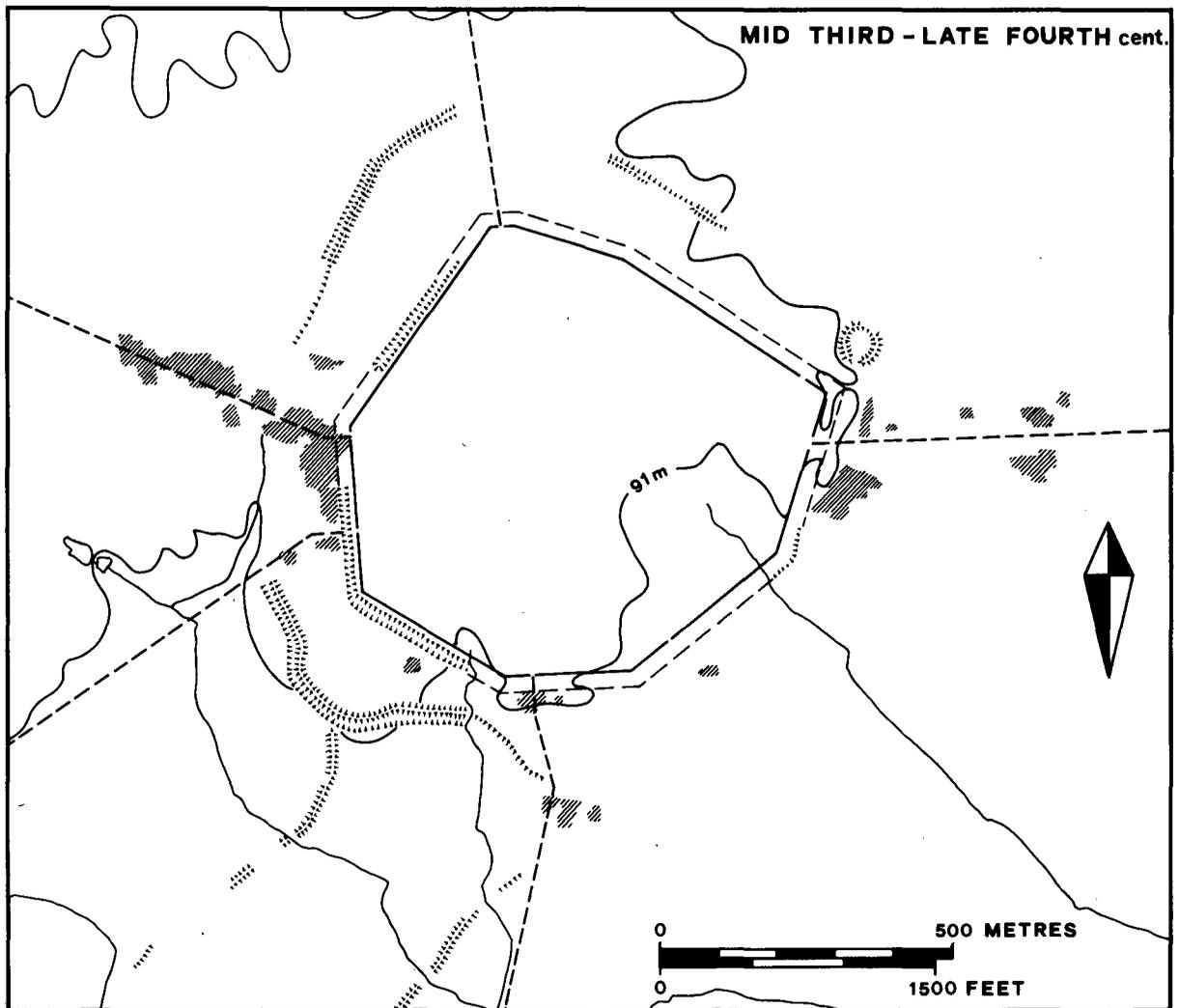


FIG. 89. Summary Map of Extra-mural Survey: Mid third to late fourth century; concentrations of contemporary material represented by shading.

first century. There is a strong possibility that some substantial buildings stood on the site, although the purpose of the settlement (and its full extent) will have to await elucidation by excavation.

The Three Ashes site is perhaps one of the most interesting of those located from the air in the Silchester region. It is unlikely to be the only settlement in the area, and an increase in aerial work in the region will, doubtless, bring others to light.

It is hoped that the work begun by the survey can continue, using new and refined methods, in order to incorporate new areas and attempt to extend the picture to an area of some 5-km radius around the town. In addition, excavation is now desirable in some of the areas which have been examined over the years, for field-survey alone cannot give the precise details required to allow a fuller understanding of the nature and development of settlement in the environs of a Romano-British *civitas* capital. A well-conceived long-term programme incorporating additional field-work and excavation in such an area is long overdue, and the Silchester area is an ideal candidate for such a project.

APPENDIX 1

LIST OF AERIAL PHOTOGRAPHS USED (*all N.M.R.*)*Western area*

SU 6462/53/262 (PL. XXIX)
 SU 6463/53/263 (PL. XXVIII)
 SU 6462/53/264
 SU 6462/57/285 (PL. XXVII)
 SU 6462/50/42
 SU 6462/18/207
 SU 6362/25
 SU 6362/18/211 (PL. XXX)
 SU 6362/65/240 (PL. XXVII)

Eastern area

SU 6362/28/213
 SU 6362/33/23
 SU 6362/36/24
 SU 6362/36/26
 SU 6362/37/34
 SU 6462/53/273 (PL. XXXI)
 SU 6462/53/274
 SU 6462/53/275 (PL. XXXIII)
 SU 6462/56/277
 SU 6462/57/298 (PL. XXXII)
 SU 6462/71/393 (PL. XXXIV)

Southern area

SU 6361/8/201
 SU 6362/29/7

'Great Scrub Copse'

SU 6461/12 (PL. XXXIX)
 SU 6461/13 (PL. XXXVIII)
 SU 6461/18

'Three Ashes'

SU 6460/10
 SU 6460/4/227
 SU 6460/16/218 (PL. XL)

Northern area

SU 6362/58/188 (PL. XXXV)
 SU 6363/2
 SU 6363/3 (PL. XXXVI)
 SU 6363/4

APPENDIX 2

THE EXCAVATION OF FOUR CREMATION BURIALS IN SAWYER'S LANDS (L.P. 4172)

The position of the burials was noticed while walking in L.P. 4172 in August 1979, shortly after that field had been ploughed (FIG. 70). Most of the material recovered in the area consisted of pottery, and in one area it displayed fresh breaks and was mixed with calcined bone, suggestive of a recently-disturbed cremation. It was decided to open a small area before the field was harrowed before drilling. This excavation lasted one day.

Two areas were opened, corresponding with the concentrations of pottery and bone (FIG. 90). Area A contained six burials, three of which were excavated and removed (FIG. 91, Nos. 2, 3 and 4). Burials 5, 6 and 7 were left *in situ*, as they were seen to be below the limit of the plough and therefore not in any immediate danger. Area B contained one burial, extensively damaged by the plough. Only the bottom third of the vessel remained *in situ*, the rest being spread in the ploughsoil.

Burial 1 (FIG. 91, 1.1)

A single grey-ware vessel set in a shallow pit, 5 cm deep, roughly circular in shape and some 80 cm in diameter. The vessel contained a cremation, most of which had been dispersed by the plough. No other pottery was recovered from the ploughsoil in the vicinity.

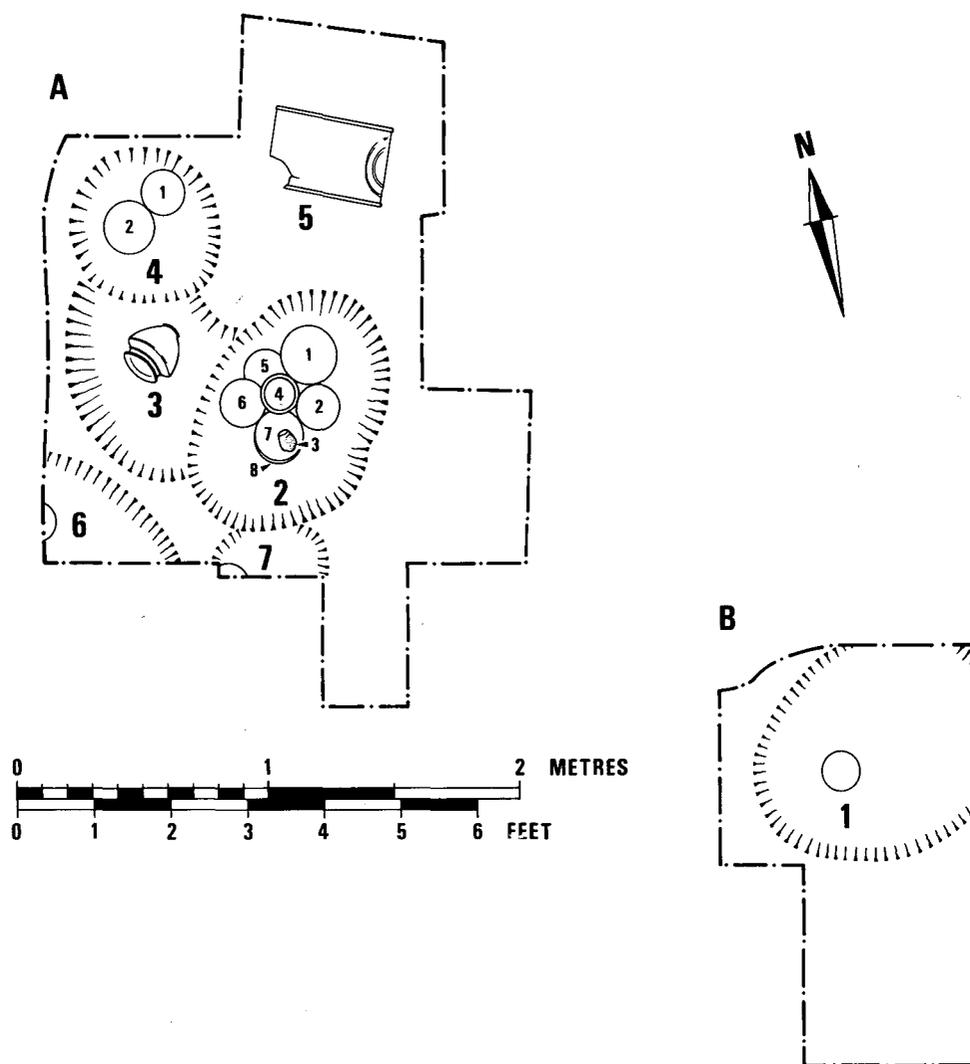


FIG. 90. Plan of cremations found north-west of the walled area (L.P. 4172).

Burial 2 (FIG. 91, 2.1–2.8)

This was the largest group recovered, consisting of eight vessels. The burial was placed in an oval pit 90 cm by 60 cm and 10 cm deep. Vessels 2.3–2.8 were just below the plough depth, whilst vessels 2.1 and 2.2, which contained cremated bone, had both lost their top two-thirds. Numerous sherds of these two vessels were found in the ploughsoil although unfortunately no rim pieces were recognised.

Burial 3 (FIG. 91, 3.1)

This was a single vessel in a pit 8 cm deep. The pit was cut by the adjacent Burials 2 and 4 (FIG. 90). The vessel had escaped serious damage as it appeared to have fallen on its side, possibly when the burial was filled in. The cremated bone within the vessel had not spilt out, and this suggests that it was originally covered, perhaps by an organic material which has not survived.

Burial 4 (FIG. 91, 4.1 and 4.2)

Placed in a circular pit 60 cm in diameter and 10 cm deep. It contained two coarse-ware vessels, both badly damaged by the plough, although most of 4.1 was found in the ploughsoil allowing almost total restoration of the vessel. This vessel is of some interest as it is obviously a 'second' and may be the product of a local kiln. Remains of a cremation were found in vessel 4.1.

Burials 5, 6 and 7

These were not excavated for the reason outlined above. Burial 5 is a square pit covered by a

near-intact *tegula*; the cut of the burial-pit could be seen where the corner of the tile was missing.

This small sample of what is probably an extensive cemetery (above, p. 257) falls within a date-range of *c.* A.D. 80–130, which is in full accord with the larger group of material recovered in the vicinity (FIG. 70, Group 86). The additional evidence provided by aerial coverage (p. 259) suggests that this was a major cemetery of the earlier Roman town. As a result of this discovery the field was scheduled under the Ancient Monuments Act.

Pottery from the Cremations (FIG. 91)

Eight fabric-types were recognised from a total of twelve vessels.

- Fabric A Hard, fine oxidised orange fabric, with a darker core. No visible inclusions. Mica-dusted on all external surfaces, including the base.
- Fabric B Hard, medium to fine oxidised orange fabric with some coloured surfaces. No visible inclusions.
- Fabric C Hard, fine orange-brown oxidised fabric with brown colour-coat. No visible inclusions.
- Fabric D Soft, fine sandy grey fabric with darker grey smears on surfaces. No visible inclusions.
- Fabric E Hard, dark grey fabric with light brown core. Occasional rounded translucent inclusions (less than 0.5 mm).
- Fabric F Soft, light grey coarse fabric with rounded and sub-angular translucent inclusions (less than 0.5 mm – 1.00 mm).
- Fabric G Soft, light brown fabric with no visible inclusions.
- Fabric H Hard, dark brown fabric with lighter red-brown core, well-sorted rounded translucent inclusions (less than 0.5 mm).

BURIAL 1

- 1.1 Fabric D. Cordoned jar with neatly moulded foot-rim. A common form current during the first and early second century A.D. Contained cremated bone.

BURIAL 2

- 2.1 Fabric E. Cordoned jar, rim missing through plough-action. Contained cremated bone.
- 2.2 Fabric G. Jar of indeterminate form. Upper third removed by plough action.
- 2.3 Fabric C. Roughcast bag-shaped beaker with cornice rim. Beakers with this rim-form were recently discussed by Anderson, who believes them to be a predominantly pre-Antonine type assignable to the Trajanic-Hadrianic period (Anderson 1978, 382–3). Sherds of similar vessels occurred in Mrs. Cotton's excavations in her Period II, *c.* A.D. 100–120 (Cotton 1947, 160, fig. 13, no. 32).
- 2.4 Fabric B. An unusual vessel resembling a samian Drag. 33 with an upright rim and flange added. No parallel has been found for this vessel; despite the 'late' appearance with the flange, it is securely associated with Burial 2 and is, therefore, dated *c.* A.D. 100–130.
- 2.5–2.8 Fabric A. Simple platters with a slightly raised base. Such platters were recently discussed by Marsh in connection with fine wares found in London" (Marsh 1978, 119–210). Marsh noted that the London vessels tend to group around diameters of 14 cm, 18 cm and 24 cm. The Silchester vessels bear out two of these figures: 2.5 = 17.6 cm; 2.6, 2.7 and 2.8 = 24.8 cm, 24.8 cm and 25.2 cm respectively. The Silchester examples are not from the same source as the London material, however, whose fabric is quite coarse in comparison, with many inclusions (Marsh 1978, 154).
The type is widespread in the early second century:
Verulamium (Wilson 1972, fig. 114, No. 527; A.D. 105–30); London (Marsh 1978, *c.*

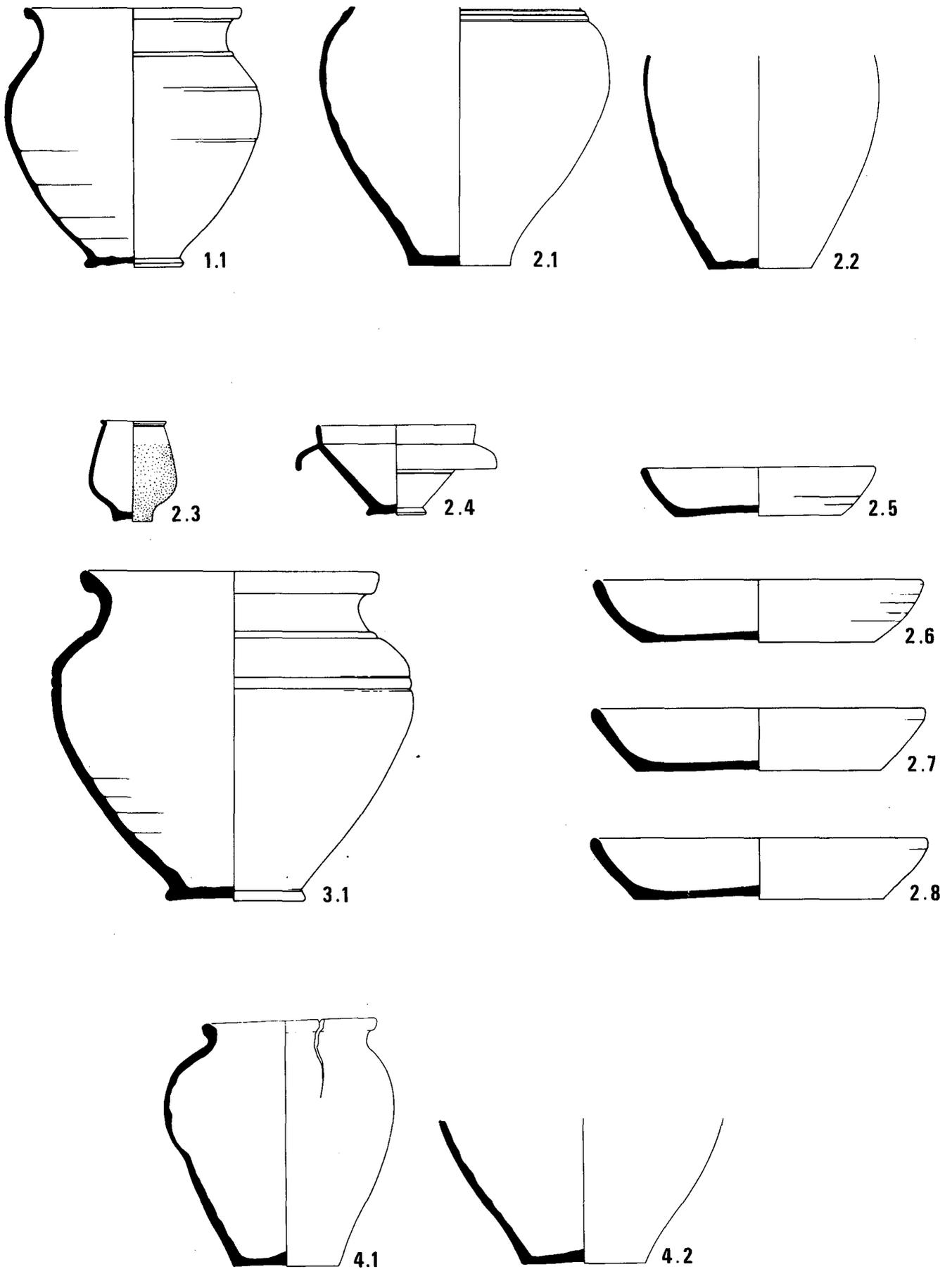


FIG. 91. Pottery associated with the cremations found north-west of the walled area (L.P. 4172) (Scale: $\frac{1}{4}$).

A.D. 90–130); Staines (K. Crouch, pers, comm.); Silchester (May 1916, 116, pl. XCVIII, No. 59).

These four vessels, taken with the beaker 2.3 leave little doubt that this burial was deposited some time in the period *c.* A.D. 100–130.

BURIAL 3

3.1 Fabric E. Cordoned jar, with additional cordon around widest part of vessel. This is a typologically well-developed form of the cordoned-jar type and probably falls within a late first- to early second-century date-range. Contained cremated bone.

BURIAL 4

4.1 Fabric F. Plain necked jar, severely cracked and distorted during firing, a 'second' or waster. Contained cremated bone.

4.2 Fabric H. Lower portion of a jar of indeterminate form. Upper part of vessel removed by plough action.

Burial 2 provides the only closely datable group of all those recovered. This burial cut the pit of Burial 3 and is therefore later than that interment. How great a gap separates the burials is difficult to gauge, but the other coarse types from the burials would not be out of place in a range of *c.* A.D. 80–130. The close spacing of the burials in Area A suggests that this cemetery was intensively used for some time. Larger-scale and more detailed excavation would be desirable to gain additional information on the population of Silchester during this period.

INDEX

- alder: used at S.E. Gate, 51, 213; from outer earthwork, 81; *see also* wood
- Aldermaston Wharf, Berks.: late Iron Age pottery from, 149
- Alice Holt, *see under* pottery
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