
Proceedings of the Cambridge Antiquarian Society

(incorporating the Cambs and Hunts Archaeological
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Volume LXXXIII

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EDITORIAL

This volume of the *Proceedings of the Cambridge Antiquarian Society* is the first by a new editor. I would like to thank, both the previous editor, Sarah Bendall, and the present officers and council members for their support and assistance.

Alert readers will observe that the style has been changed somewhat to simplify it and to bring it in line with the more usual modern practice,

This volume is predominantly archaeological. It is my hope that forthcoming volumes will also include papers of wider interest. I encourage our members — and others interested in Cambridgeshire — to submit papers with the kind of material they would like to read.

THE LIBRARY

Members of the C.A.S. are reminded that, by agreement with the University of Cambridge, they are entitled to read in the Haddon Library, Faculty of Archaeology and Anthropology, Downing St. The Library holds a large number of British and foreign serials exchanged for the *Proceedings of the Cambridge Antiquarian Society*, together with a wide range of archaeological and topographical books. Intending readers should apply to the Faculty Librarian, Mr Aidan Baker, and for access to, or information about, specialised collections to the Society's Librarian Dr J.D. Pickles, The Old Schools, Trinity Lane.

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Yorkshire Archaeological Journal, Leeds

The Excavation of a Fourth-century AD Villa and Bath-House at Great Staughton, Cambridgeshire, 1958 and 1959

The late Ernest Greenfield, Jeany Poulsen & Pamela V. Irving

with contributions by R.C. Alvey, the late F.W. Anderson, L. Biek, D. Bramwell, S.A. Butcher, R.A.G. Carson, the late D. Charlesworth, R. Cullen, D.F. Cutler, J.W. Haldane, R. Harcourt, B.R. Hartley, K.F. Hartley, E. Healey, the late J. Liversidge, J. May, G.C. Morgan, P.R. Payne, R. Powers & D.J. Smith

Summary

Two adjacent sites were excavated by Ernest Greenfield in 1958 and 1959 respectively. Site 1 (TL 13486310) was first occupied in the late Iron Age. In the first half of the fourth century AD two contemporary, winged-corridor type buildings were constructed apparently representing a villa, Site 1, and its bath-house, Site 2 (TL 13466304). Both buildings contained mosaics. Site 2 was heated by channelled hypocausts and contained a small bath-suite, the whole building had been adapted from part of an earlier, possibly second-century AD, much larger structure, whose full extent (suggested by earthworks) was not ascertained. The fourth-century occupation appears to have ceased around the AD 360s, and at some unknown date thereafter at least seven inhumation burials were inserted into the demolition rubble covering the Site 1 house.

Preface

This report was compiled in 1985 by Jeany Poulsen, with funding from the Inspectorate of Ancient Monuments as part of the Pre-1972 Backlog Programme, from text and drawings previously prepared by Ernest Greenfield; reports on material not otherwise credited are her work. Her text and artwork have been further revised, edited, amended, and finalised by Pamela V. Irving during 1987-8, and 1993-4. Specialist reports are mostly as provided in the 1970s. Bibliographic references have not been updated since 1985.

Introduction

Sites 1 and 2 are in a 16 acre (6.5 hectare) field known as Rushey Meadow, part of Pastures Farm in the parish of Great Staughton, Cambs. (Fig. 1). It is near the base of a gently falling, north-facing slope on the south side of the Kym Valley. Whitley Brook, a tributary of the River Kym, passes the site approximately 400 ft (122 m) away on the west side. The site lies on the 100 ft contour (30.5 m OD) on Boulder clay over Oxford clay. It is surrounded by 'rises' and streams feeding the River Kym, c. ½ mile (800 m) due north, where *Mill View* indicates a suitable site for a water mill. At St Neots, some 5 miles (8 km) ESE, the Kym reaches the Ouse which in turn flows into the Wash. In such a terrain one would expect a heavy soil, less suited to arable use than for pasture, and with a natural background of woodland. The charcoal remains (p. 124) indicate much hazel which, like oak, would regenerate easily; Rook (1978) has calculated that efficient coppicing might have supplied fuel for a bath-house almost indefinitely. The line of the Roman road (173d), linking Dorchester-on-Thames and Ermine Street at Alconbury probably ran between the site and Whitley Brook, but this has not been ascertained (information from R.W. Bagshawe).

The subsoil is greenish-yellow clay with an overlying topsoil of brown, clayey loam 9-12 in (228-304 mm) thick. The archaeological potential of the site was first recognised by Chris F. Tebbutt in 1949 when the field was still under pasture. Many banks and hollows were then

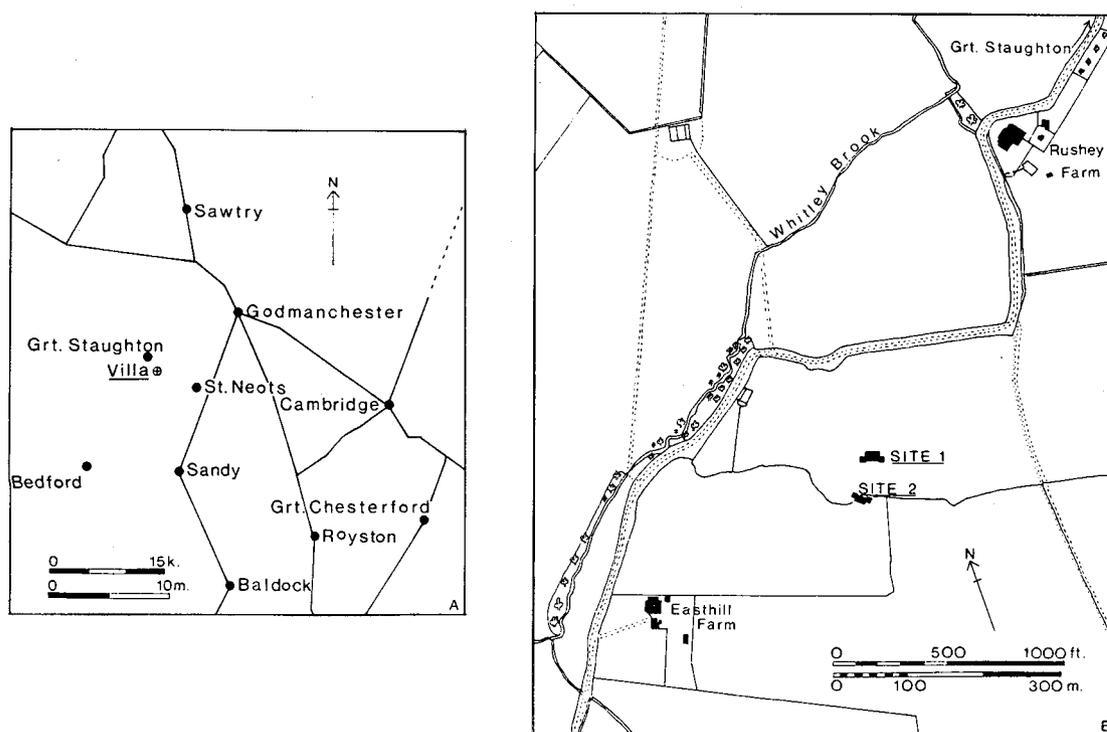


Figure 1. Site location.

visible in the field, as well as two large mounds which were occupied by rabbits and, in the case of Mound 1, by small trees and bushes. After drainage and ploughing in the 1950s Mr Tebbutt notified the Ordnance Survey of a surface scatter of limestone rubble, roof-tile, and pottery, indicative of Romano-British occupation, and the site was subsequently shown on the 1 inch O.S. map. Mound 1 was 150 ft (47.7 m) in length, east to west by 105 ft (34.2 m) north to south, and was sub-rectangular with a roughly flattened top. Mound 2 was smaller, though roughly the same shape, being about 120 ft (36.5 m) east to west, by 90 ft (27.45 m) north to south. An R.A.F. aerial photograph shows the west end of Mound 1 to have been encircled by a bank. On both mounds there was a surface scatter of limestone and mortar rubble, small gravel, roofing tiles, and slates, pottery, painted wall plaster, and tesserae.

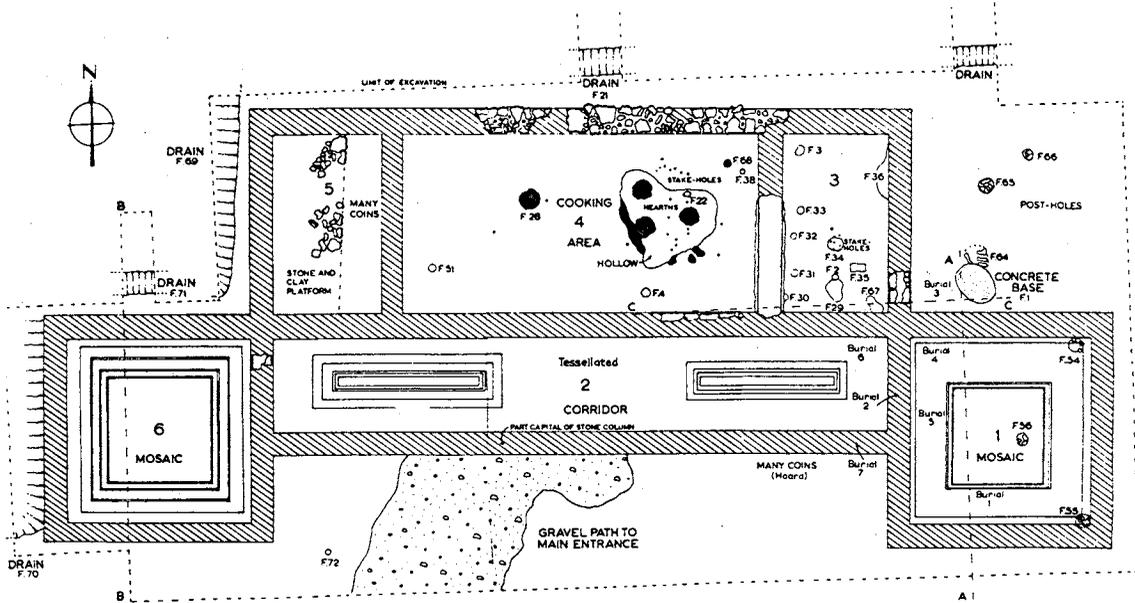
Following a threat of destruction of the mounds by bulldozing the then Ministry of Works arranged for the excavation of Mound 1 between June and August 1958, and of Mound 2 between April and May 1959, by kind permission of the owner, Mr Kidman. Mound 1 was examined by a grid of 16 ft (4.88 m) whole and part squares with trench extensions on the north and south, Mound 2 by a grid of six 20 ft

(6.1 m) whole and part squares with small trench extensions on the south and west sides. Interim reports with plans of both sites were published by the excavator (Greenfield 1959: 118; 1960: 224-5).

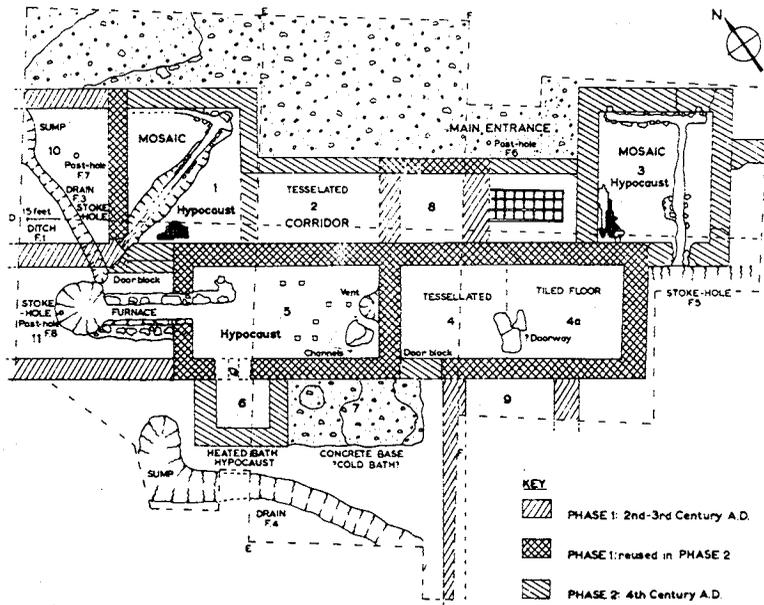
Site 1; Excavated Features

(Figs. 2 & 3, Pls. I, IV, VII & IX)

The surface of the subsoil (green clay, Layer 9) was uneven and had received a certain amount of grit and gravel, clearly in preparation for, or as a result of, occupation. A patch of spread charcoal in the southeast corner of the area examined suggested the close proximity of a hearth. Layer 9 was cut by a small pit/gully which was filled by mixed green-yellow and grey clay. This was sealed by a spread of charcoal-flecked, greyish, gritty loam (Layer 7) containing Iron Age pottery and flints, which was sealed beneath the old ground surface (Layer 5). Layer 7 was found to extend northwards from the limit of the excavation on the south side to where it tailed off below the pavement of Room 6, just beyond the limits of a small depression. Feature 74 was larger, cutting and absorbing a pit (Feature 73). Both features contained Iron Age material, the fill of Feature 74 being the same as, or equivalent to, Layer 7.



SITE 1 1958

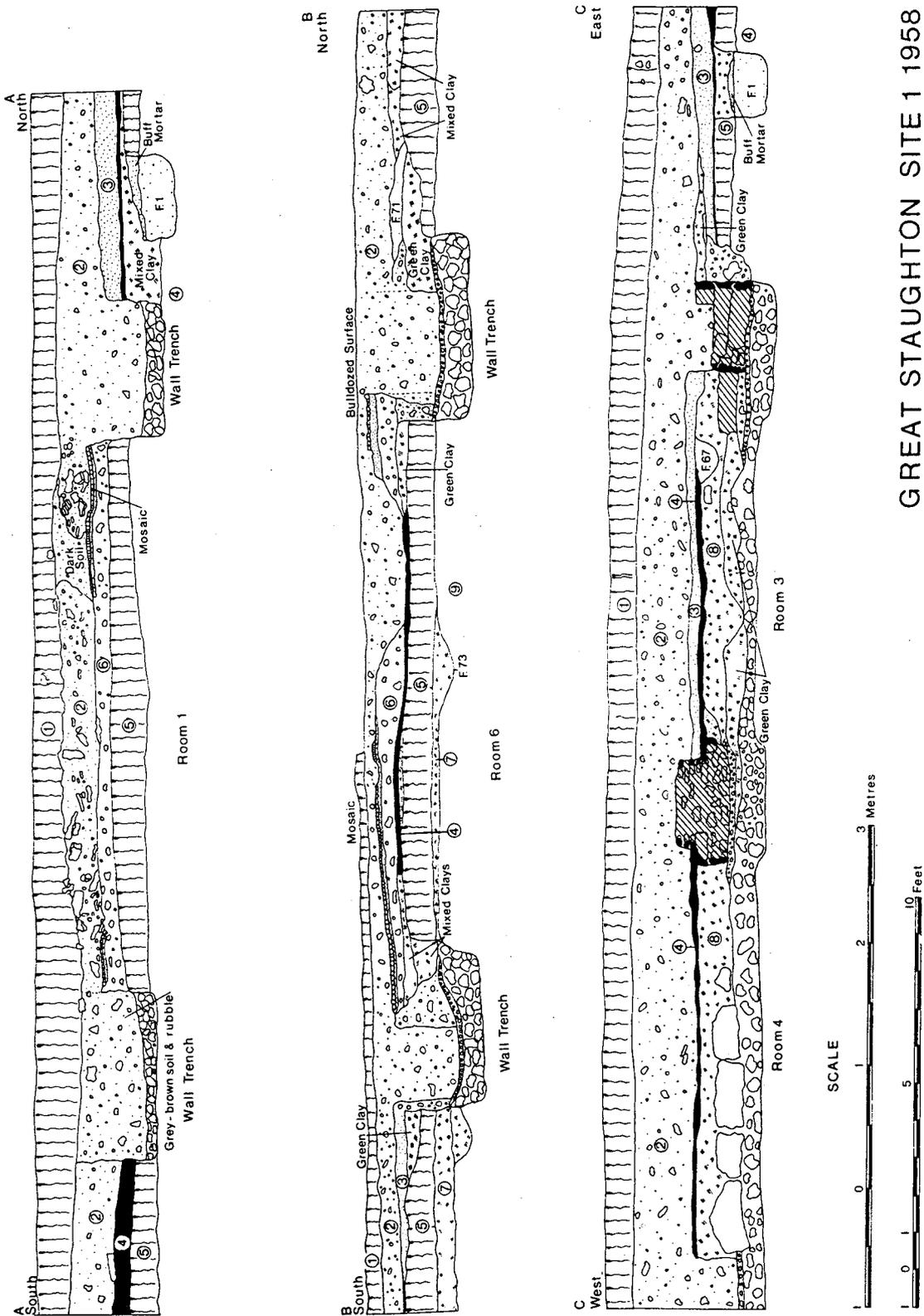


SITE 2 1959

GREAT STAUGHTON, CAMBS.

Figure 2. Plan of Sites 1 and 2.

- KEY
- PHASE 1: 2nd-3rd Century A.D.
 - PHASE 1: reused in PHASE 2
 - PHASE 2: 4th Century A.D.



GREAT STAUGHTON SITE 1 1958

Figure 3. Site 1, sections.

The old ground surface (Layer 5) was composed of dark brown, clayey loam, and where examined, was devoid of artefacts. This level spread throughout the site and was intact except where features had been cut, and where it had been removed in part or entirely during the erection of the villa. Its surface showed indentations and was charcoal-flecked. The whole foundation of the villa was traced throughout (cutting Layers 5, 7 & 9) and was found to be continuous and consistently of the same stratification. Upcast from the foundation trenches had been used in three different ways: 1) to consolidate the glacial stones in the foundation trenches, 2) dumped on the surface of Layer 5 to make up floor levels, and 3) to seal ragged tops and bevelled edges of wall trenches both inside and outside the building, after the erection of the walls. Internally this had been done before the laying down of the floors. In both instances, this 'sealing' most probably served as an effective caulking, to prevent or discourage the percolation of water. Glacial stones with an occasional large flint and loose, green clay had been rammed hard into the foundation trenches. On top of this was spread a thin layer of flint gravel and clay which had also been rammed hard. The two levels formed a very solid and compact foundation on which the walls were constructed. These were badly robbed, but two-thirds of the north-south wall

between Rooms 3 and 4 survived, standing six courses in height above the foundation level. It was constructed of limestone slabs and hard, buff-brown mortar. Other small sections of wall, one, two, and three courses in height survived in Rooms 3, 4, and 6. The wall fragments showed the lowest course to be laid horizontally on the foundation. In Room 4, in both the north and east walls, the second course was laid both herring-bone pitched and horizontally. This wall, which had an average width of between 2 ft 3 in (686 mm) and 2 ft 6 in (762 mm), from the fourth course above the foundation was placed centrally on a much wider base comprising the lowest three courses. This resulted in an offset on both sides. Large and small blocks, and slabs of stone had been used for the wall faces, the interior being filled with ragged pieces of stone and coarse mortar containing a great deal of small flint gravel. All surviving wall fragments and wall trenches showed an average width of between 2 ft 3 in (686 mm) and 2 ft 6 in (762 mm). The plan of the house was recovered by removing the rubble and mortar fillings of the wall trenches (see Fig. 2). The excavations revealed the plan of a small corridor house of simple compact design, comprising six rooms, on an east to west alignment. The front of the house (facing south) consisted of an east room (1) and a west room (6) linked by a corridor (2). The north side



Plate I. Site 1 (1958) looking west across Rooms 3 and 4. (Photo: RFN 26)

contained a large central room (4) flanked by a smaller room (3) on the east side and a similar room (5) on the west. Rooms 1 and 6 form off-set wings.

Room 1

The floor in Room 1 consisted of a floor make-up (Layer 6), an orange-brown, sandy, mortary rubble, containing chalk, tile, and limestone fragments. This overlay Layer 5, and was immediately below the pavement matrix of sandy-brown mortar (Mo 2) and, where the pavement had been robbed out, below Layer 2. The pavement consisted of a central mosaic (Plate IV) with wide inner and outer borders of fired clay and limestone tesserae respectively (see Smith below). The joint between floor and walls was sealed by a quarter-round moulding of pink cement (*cf.* Mo 9 in Room 6) which remained in fragments on all sides of the room. The coarse, tessellated surround to the mosaic showed traces of a pink cement grouting. The pavement was cut by three post-holes (Features 54–6) which were covered by Layer 2.

Feature descriptions:

Feature 54 was in the northeast corner of the room. It comprised a roughly circular group of stones with a core 7 in (177 mm) in diameter with straight sides and rounded base. The fill was of dark grey-brown, silty soil with small rubble above.

Feature 55 was in the southeast corner of the room. The core was 9 in (228 mm) in diameter, and surrounded by large stones. The depth from the top of the stones was 1 ft 7 in (482 mm). After the removal of the stones the sides were found to be vertical and the base flat. The fill of the lower half of the core was brownish-grey, lightly charcoal-flecked soil and rubble.

Feature 56 was on the east side of the mosaic pavement. Roughly rectangular in plan, 1 ft 1 in by 9 in (330 by 228 mm) along the northwest to southeast axis. There was a packing of tile and flat stones standing vertically on the northeast and southwest sides. The depth from the surface was 7 in (177 mm) and the base was flat. The fill was of dark brown-grey soil and rubble.

Room 2

Here, Layer 5 was overlaid by a hard surface of crushed limestone (Layer 4) which provided a base for a layer of gingery-brown sand ('make-up', Mo 5), 1½ in (38 mm) deep, overlain by a pavement matrix (Mo 3) of fairly hard, coarse buff mortar 1 in (25 mm) thick.

The floor itself, which was much disturbed, was of coarse tesserae, large areas having been totally destroyed (see Plate V & Smith below). A thin spread of black silt was seen under the tesserae in the southeast corner of the room but was not examined. A destruction level lay

over the pavement, consisting of blackened silt containing many large pieces of oak and elm charcoal (CH 4 & 5; see similar evidence in Room 6).

Room 3

A group of features (A) cut Layer 5 in Room 3 area, post-holes (Features 3 & 30–33), stake-holes (Features 58–62) plus a patch of rubbish (Feature 29), and a patch of burnt clay (Feature 36) which both overlay Layer 5.

The group of features (A) cutting or above Layer 5 appears to have been overlaid by a floor of crushed limestone (Layer 4), which had a large number of fourth-century coins, pottery (Fig. 14, no. 37), glass (Fig. 7, no. 35), nails, and a fragment of wall plaster embedded in its surface. However, in the part of Room 3 shown by Figure 3, Section CC, Layer 4 overlay brown-green clay Layer 8 (the exact relationship between Layers 5 and 8 was not recorded), which in turn was cut by a shallow pit (Feature 67). Layer 4 lapped over the western edge of the fill of Feature 67, the other edge was sealed by Layer 3 which continued on over Layer 4.

Feature 67 was roughly pear-shaped, with its long axis north-south 1 ft 6 in (457 mm), and with sides sloping to a rounded base. The rubble fill contained five fourth-century coins (nos. 349–59). Layer 4 was cut by a second group of features (B): stake-holes (Features 5–11 & 37) in and around the limits of a small pit (Feature 34), a post-hole (Feature 2), and a small rectangular pit (Feature 35). This group of features (B) was sealed by Layer 3, a heavily charcoal-flecked, greyish, clayey soil, average thickness 3–4 in (76–101 mm) containing fourth-century material.

Feature descriptions:

Group A Post-holes (Features 3 & 30–33): possibly scaffold-pole holes. Feature 3 was oval, with a long axis roughly east to west, 1 ft 2 in by 1 ft (355 by 304 mm) wide. Features 30–33 were circular and 11 in (380 mm) in diameter. The depth of Feature 3 was 10 in (254 mm) with the sides sloping to a rounded base. The fill comprised gravelly rubble containing 19 small chalk fragments. The depths of Features 30–33 were 4–5 in (101–27 mm), and their sides sloped steeply to rounded bases. The fills were grey-brown, gravelly clay containing chalk pieces.

Stake-holes (Features 58–62): These were all circular in plan with sides sloping to pointed bases, and varied in diameter from 1½ to 2½ in (38 to 63 mm) and in depth from 1½ to 3½ in (38 to 78 mm). Fills were of dark grey-green clay, slightly charcoal-flecked.

Feature 29 was a roughly pear-shaped patch of charcoal-flecked soil containing 12 oyster shells. The long axis was northwest to southeast, size 1 ft 9 in by 1 ft 6 in (533 by 457 mm), depth ½ in (12 mm) with the shells pressed into Layer 5.

Group B Stake-holes (Features 5–11 & 37): These were either oval or circular in plan varying in depth from 1½ in to 5½ in (38 to 140 mm). All the sides sloped to pointed bases and the fillings were consistently the same: a grey-brown, greasy, clayey, charcoal-flecked soil, containing a few small stones.

Pit: Feature 34 was roughly oval in plan, 1 ft 8 in east to west by 1 ft 3½ in north to south (508 by 393 mm). The depth was 11 in (280 mm) from the surface of Layer 5, and the sides sloped down to a flat base. The fill was a mixture of brown-green sticky clay, with chalk, mortar and gravel rubble, plus six chalk fragments. There was a large stone mid-way down the centre. Fourth-century coins (nos. 308–29) were found scattered throughout the filling, many standing vertically and at angles (see Site Archive for full coin list).

Post-hole: Feature 2 was roughly circular, 9 in (228 mm) in diameter, the sides vertical, and the base flat, with a depth of 4½ in (114 mm). The fill was a sticky, grey-green clay, with a few small stones and broken oyster shells in the top 2 in (50 mm).

Pit: Feature 35 had a long axis east-west, and was 1 ft 3 in (381 mm) by 8 in (203 mm) wide; the sides were near vertical, and the base roughly rounded, with a depth of 5 in (127 mm). A piece of flat limestone occurred halfway down the fill, which was of mortar rubble.

Room 4

A floor of crushed limestone (Layer 4) overlay Layer 5 and was in turn covered by an occupation level (Layer 3) although Figure 3, Section CC shows that in the southeast corner, the clay (Layer 8) underlay Layer 4. As in Room 3, both the floor (Layer 4) and Layer 3 contained fourth-century occupation debris, but here also slag, and charcoal fragments. Green clay make-up against the north wall interior contained an iron object (Fig. 7, no. 19) and a similar deposit against the east wall in the southeast corner of the room contained 18 white chalk tesserae and mosaic waste. (N.B. The relationship between these last two deposits and Layers 3 and 4 was not recorded.)

Features in the room were mainly confined to a large hollow of irregular shape, which through use was worn through the floor (Layer 4) into Layer 5 below. Within the hollow were three hearths (Features 25–7) and stake-holes (Features 22, 21–49 & 61). Other stake-holes (Features 40, 50 & 62) occurred on the south and east of the hollow, and another group (Features 13–20) between the hollow and the north wall. Post-holes (Features 4, 38 & 51) were possibly scaffold-pole holes. Smaller patches occurred on the fringe of this hollow, and another (Feature 68) in the northeast corner of the room; a separate hearth (Feature 28) with stake-holes (Features 52 & 53) occupied the west side. (N.B. The relationships between these features, their fills and Layer 3 were not recorded. The section shows Layer 4 as being directly overlain by Layer 2 in that part of the room.)

Feature descriptions:

Hearths: Features 25–8 were all of roughly circular plan, slightly concave, and showed as burnt patches. The average width was 2 ft (610 mm).

Patch: Feature 68 was circular in plan, 9 in (228 mm) in diameter. All the stake-holes were either circular or oval in plan, and varied in diameter from 2 to 4 in (50 to 101 mm). Their sides sloped to pointed bases, and depths varied from 2 to 5 in (50 to 127 mm). Fills were consistently the same, dark grey-brown, greasy soil, sometimes charcoal-flecked, but Features 45 and 46 were filled almost entirely with charcoal. Features 13, 15, 16, and 20 each contained a nail.

Feature 17 contained two pieces of charcoal.

Feature 22 had a long axis east to west, was 7 by 5 in (177 by 127 mm) in plan, and 2 in (50 mm) deep, with vertical sides and a flat base. The fill was of dark grey-brown, greasy, charcoal-flecked soil.

Post-holes:

Feature 4 was roughly circular in plan, 8½ in (216 mm) in diameter, depth 5 in (127 mm), with vertical sides, and flat base. The fill was of dark grey-brown, clay soil containing two tesserae and four pieces of chalk.

Feature 38 was roughly circular in plan, 5½ in (140 mm) in diameter, with a depth of 5 in (127 mm). It had vertical sides and a rounded base. The fill was of dark grey-brown, greasy, charcoal-flecked soil.

Feature 51 was circular in plan, 8 in (203 mm) diameter, depth 4 in (101 mm) with vertical sides, and a flat base. The fill was of soil and small rubble.

Drain: Feature 69 was a large drain, containing fourth-century pottery (Fig. 14, nos. 42–4; Fig. 16, no. 66), glass fragments, an iron object (RF664 unpublished), nails, tesserae, wall plaster, animal bone, charcoal, a limpet shell, 4 whelk shells, 4 mussel shells and 715 oyster shells.

Room 5

Layer 5 was overlain by the limestone floor (Layer 4). On the floor was a layer of occupation silt, dark in colour and containing fourth-century material. On the west side of the room was an erection of stones and clay with the edge revetted in mortar. This stood 6 to 9 in (152 to 228 mm) above the floor surface, leaving a floor space of 28 in (711 mm) on the east side. The occupation silt extended under the erection. A large number of fourth-century coins (a scattered hoard?: see supplementary coin list in site archive for details) were found in the occupation layer and in the surface of Layer 4, but no coins were found sealed under the clay and stone erection.

Room 6

(Fig. 3; Section BB)

Layer 5 was overlain by crushed limestone (Layer 4) and green clay (unnumbered layer). Over these was Layer 6, a mortary rubble layer

similar to the make-up material under the floor of Room 1. On this was laid the pavement matrix of sandy-brown mortar (Mo 10), which varied in thickness from 1 in to 4¹/₂ in (25 to 114 mm). As in Room 1 the mosaic itself was centrally placed with a surround of large, red, clay tesserae, and a border of limestone tesserae (see Plate VII). Walls and floor junction were sealed by a quarter round moulding of pink cement (Mo 9) which still survived on the north and south sides. A patch of red brick dust (Mo 11) was found adhering to the pavement in the southeast corner. The surface of the pavement showed evidence of burning, also recorded in the adjacent corridor Room 2 (see above).

The Exterior

The entrance: A cambered pathway about 13 in (330 mm) in width and 6 in (152 mm) in thickness, composed mainly of gravel but including mosaic tesserae and 46 pieces of waste from the manufacture of pavements, fragments of roof slates and tiles, was found mid-way between Rooms 1 and 6, and terminated against the wall of the corridor. A fragment of a capital or stone 'column' or pillar (Fig. 10, no. 42) was found in the rubble filling of the wall trench close to the pathway. The occupation silt overlying the pathway contained fourth-century pottery sherds, glass fragments, copper alloy fragments, wall plaster, and animal bone. The silt on both sides of the pathway, but mainly on the east side, where it was 6 in (152 mm) in depth, contained fourth-century coins, probably representing a scattered hoard (see supplementary coin list in site archive for details). Many were found against the wall of the corridor close to the angle between the corridor and Room 1, together with pottery sherds (e.g. Fig. 14, no. 36), glass fragments (e.g. Fig. 9, no. 36), a piece of blue pigment (which, although not analysed, Justine Bayley suggests is likely to have been a pellet of Egyptian blue), and melted bronze ?coins (see p. 125). A post-hole (Feature 72) was found close to the pathway. South of Room 1, crushed limestone (Fig. 3, Section AA, Layer 4) was found to overlie Layer 5, and this extended westwards on the exterior of the building, to where it petered out close to the east side of the entrance pathway, east of Room 1. A very narrow strip of this was examined superficially. A gritty surface containing two coins (nos. 820 & 821) was found beneath the rubble.

Feature description:

Post-hole: Feature 72 was oval in plan, with a long axis northwest to southeast, 1 ft by 10 in (304 by 254 mm), depth

6 in (152 mm). The sides were vertical, with a rounded base. The fill was grey, charcoal-flecked ash containing two burnt oyster shells, a large blue tessera and a piece of wall plaster.

Northeast of Room 1 and Room 3 stratification showed a layer of occupation silt (Fig. 3, Section AA, Layer 3) overlying crushed limestone (Layer 4) laid on Layer 5. A few fourth-century coins were found in Layer 3, together with pottery sherds, glass fragments, ?fused tesserae (see p. 125), charcoal, animal bone, oyster shells, nails, and wall plaster.

Feature descriptions:

Feature 1 had an oval-shaped base of hard white concrete (Mo 1: see supplement below for analysis) with a capping of soft, buff mortar. It was 4 ft by 3 ft (1.22 by 0.91 m) in plan, with the long axis southeast to northwest. The depth in the centre was 2 ft (0.61 m). [Its content of crushed brick (p. 116) would make it a suitable base for a water tank. L. Biek]

Post-holes: Features 64–6 were all roughly circular in plan, with fills of rubble composed of stone and mortar.

Drain: Feature 21 was an open ditch of small size, 2 ft 6 in (762 mm) wide, with sloping sides and a rounded base. It contained fourth-century pottery, wall plaster, a nail, and an oyster shell.

The area north of Room 4 was examined in a trench extension northward and alongside the north wall. The occupation level here was the gritty surface of Layer 5 which contained a few pottery sherds, with broken and whole roofing tiles of red clay and blue-grey slates (p. 103). These concealed a drain (Feature 21) which took the form of a small, open ditch, here about 4 ft wide (1.22 m).

North of Room 6, Feature 71 was found in a trench extension northwards. The feature had little shape and was little more than a shallow hollow, probably draining into Feature 69. It contained fourth-century pottery, wall plaster, tesserae, animal bone, nails, and 78 oyster shells.

West of Room 6, Feature 70 was a ditch similar to Features 69 and 21. The entire site was eventually covered by rubble (Layer 2), although at some stage, possibly prior to this, the walls were almost completely robbed out (see Fig. 3, Sections AA, BB, CC). Layer 2 was composed mainly of limestone rubble, small flint gravel and fragmentary roofing materials, and was fairly compact and relatively undisturbed except where mole-drainers and other agricultural machinery had penetrated, and where various recent tests had been made. Layer 2 also contained numerous Roman artefacts and was cut by seven human burials (see supplementary report for details); the date of these insertions is unknown. They were concentrated in an area over the west side of Room 1 and the east side

of Room 2. Scattered groups and individual bones were found throughout Layer 2.

Feature description:

Ditch Feature 70: Contained fourth-century pottery (Figs. 14 & 15, nos. 45–52), glass (Fig. 9, no. 37), copper alloy (Fig. 6, no. 5), iron, tesserae, coal (see p. 103), wall plaster, animal bone, hazel, ?willow and ?*Sorbus* sp. charcoal (CH 17, 18: p. 124), 695 oyster shells, a cockle shell, and a mussel shell.

- Burial 1: A female adult, in rubble over the pavement of Room 1, head to west.
- Burial 2: An unsexed adult, laid across the wall trench between Rooms 1 and 2, head to southwest.
- Burial 3: Probably a male adult, on the surface of the occupation level on the northeast exterior of Room 1, head to west, laid on back fully extended.
- Burial 4: Probably a female adult, on the pavement of Room 1, head to southwest.
- Burial 5: Parts of male and female adults, on the pavement of Room 1, orientation east to west.
- Burial 6: A juvenile, on the pavement of Room 2, head to west, laid on back fully extended (Plate IX).
- Burial 7: An unsexed adult, on the occupation level of the south exterior of Room 2, orientation northwest to southeast.

Layer 2 was overlain by Layer 1, the plough soil. This was composed of greyish-brown, clayey loam, fairly evenly mixed with rubble ploughed up from the mound, and contained Roman artefacts.

Discussion

Archaeological techniques and constraints have changed considerably since this excavation was carried out in the late 1950s; it is therefore not surprising that the extent of recording appears, by present standards, somewhat limited (but see p. 91). The site was badly damaged by rodent activity, and as a result of both these factors, there are various anomalies in the site record which it is not now possible to clarify. What follows must therefore be a necessarily brief review of the stratigraphy and the phases of activity suggested by it.

Although Layer 7, Features 73 and 74, clearly represent Iron Age occupation, there is, unfortunately, no structural evidence for this period. This phase was sealed by the old ground surface (Layer 5) perhaps denoting a period of cultivation if not actual abandonment, prior to the construction of the villa.

Since the nature of the villa foundation was consistent throughout, it is most likely that the villa represents a single building phase. However, the relationships between the phases represented by the floor surfaces in the different rooms present serious problems, especially those of the rear rooms (Rooms 3, 4 & 5) to those at the front (Rooms 1, 2 & 6). With the

exception of the Group A features cutting Layer 5 in, or below, Room 3 (which may denote pre-building activity), the one constant factor which may provide links is the presence of the crushed limestone surface (Layer 4). This was seen to overlie Layer 5 in all the rooms (except Room 1) and externally (notably on the north and south exterior of Room 1). Layer 4 also occurred externally to the east of Room 3, where it sealed an enigmatic base of concrete (Mo 1) of unknown function cutting Layer 5. The presence of Layer 4 in Rooms 2 and 6 is of particular interest because both these rooms were subsequently provided with pavements: it is tempting to suggest that this represents the original floor surfaces prior to their insertion. However, in contrast to Room 3 (where there were fourth-century coins), there was no evidence of occupation debris either embedded in or overlying the surfaces of Rooms 2 and 6. It may be of relevance that the mosaic floor in Room 1 was laid (on Mo 2) directly over the rubble make-up of Layer 6, which was directly above Layer 5; clearly, in this instance at least, Layer 4 was not regarded as essential for stabilising or levelling prior to the insertion of the pavements. The exact functions of Layer 4 in Rooms 2 and 6 must therefore remain in question, but stratigraphically, they appear to belong to the same activity phase as Layer 4 in Rooms 3, 4, and 5.

Rooms 1 and 6 were subsequently spread with the rubble make-up of Layer 6, prior to the laying of the mosaic pavements in their matrices of sandy-brown mortar (Mo 2 & Mo 11 respectively). In Room 2, there was no rubble make-up but simply a layer of ginger sand (Mo 5), followed by the pavement matrix of coarse, buff mortar (Mo 3). Despite this difference it is quite possible that all three mosaics were laid at the same time and by the same craftsmen (see Smith below). This is also supported by the analysis of the matrices (see supplement below).

Layer 4 in Rooms 3, 4, and 5 continued in use as the floor surface alongside the new pavements, but it was worn and cut into by various hearths and pits, suggesting domestic and possibly manufacturing activities, particularly in Rooms 3 and 4. An occupation silt, containing fourth-century material, was above Layer 4 in Rooms 3, 4, and 5 but its relationship to the hearths is not entirely clear. The function of Room 5 with its later stone and clay erection (i.e. over Layer 3) is unknown.

The insertion of the three post-holes (Features 54–6) through the pavement in Room 1 may relate to a need to support weakened roof

timbers. The charcoal-bearing destruction level on the pavement of Room 2, and the signs of burning in the adjacent Room 6, show that the corridor had been damaged, if not destroyed by fire at some stage. Apart from these hints, the manner in which the demise of the villa occurred is hard to ascertain. However, the virtual absence of evidence for collapsed roofing; the fact that occupation Layer 3 and the mosaic floors are directly overlain by the rubble (Layer 2) and the thorough robbing of the walls (apparently prior to the demolition resulting in Layer 2), all suggest that the building was deliberately demolished, rather than being left to decay slowly. The dating of the villa is examined more fully in the general discussion below. It is most unfortunate that there was no dating evidence for the human burials inserted into Layer 2.

Site 2: Excavated Features

(Figs. 2 & 4, Pls. II & VIII)

Phase 1

The first activity on Site 2 appears to have been the digging of the Phase 1 foundation trenches through the old ground surface (Layer 12, Layer 5 on Site 1), and into the natural clay (Layer 13) beneath. The foundations (Fig. 4, Section EE, Layer 15, and Section FF, Layer 14) were constructed in exactly the same manner as were those of the Site 1 villa, above. A surviving fragment of the Phase 1 wall (reused in Phase 2) consisted of two courses of horizontally-laid limestone blocks; another fragment was represented by a single course of pitched limestone slab (northeast wall Phase 2, Room 3).

The area excavated on Site 2 only recovered a part of the Phase 1 structure (Rooms 4, 5, 8, 9, 10 & 11: see Fig. 2). A mound some 300 ft (91.5 m) in length east to west, by 50 ft (15.3 m) and c. 150 ft (45.7 m) south of Site 2 probably covered a range of rooms at right angles to Room 9 and parallel with Site 2. It is not clear which layers shown in the sections (Fig. 4) represented floor levels in Phase 1.

Room 4

The series of gritty, green, clay lenses overlying Layer 12 in Room 4 (Layers 7–11) are something of an anomaly. The lower lenses, i.e. Layers 10, 11, and possibly Layer 9 may represent Phase 1 levels (floors?) (cf. Layer 8A, Fig. 4, Section DD, in Room 8). However, the upper lenses, Layers 6, 7, and 8, contain finds (especially Layers 6 & 8, with five coins dated to c.

AD 355: coin nos. 895, 896, 898, 903 & 904) which suggest they may relate more convincingly to the Phase 2 occupation.

Room 8

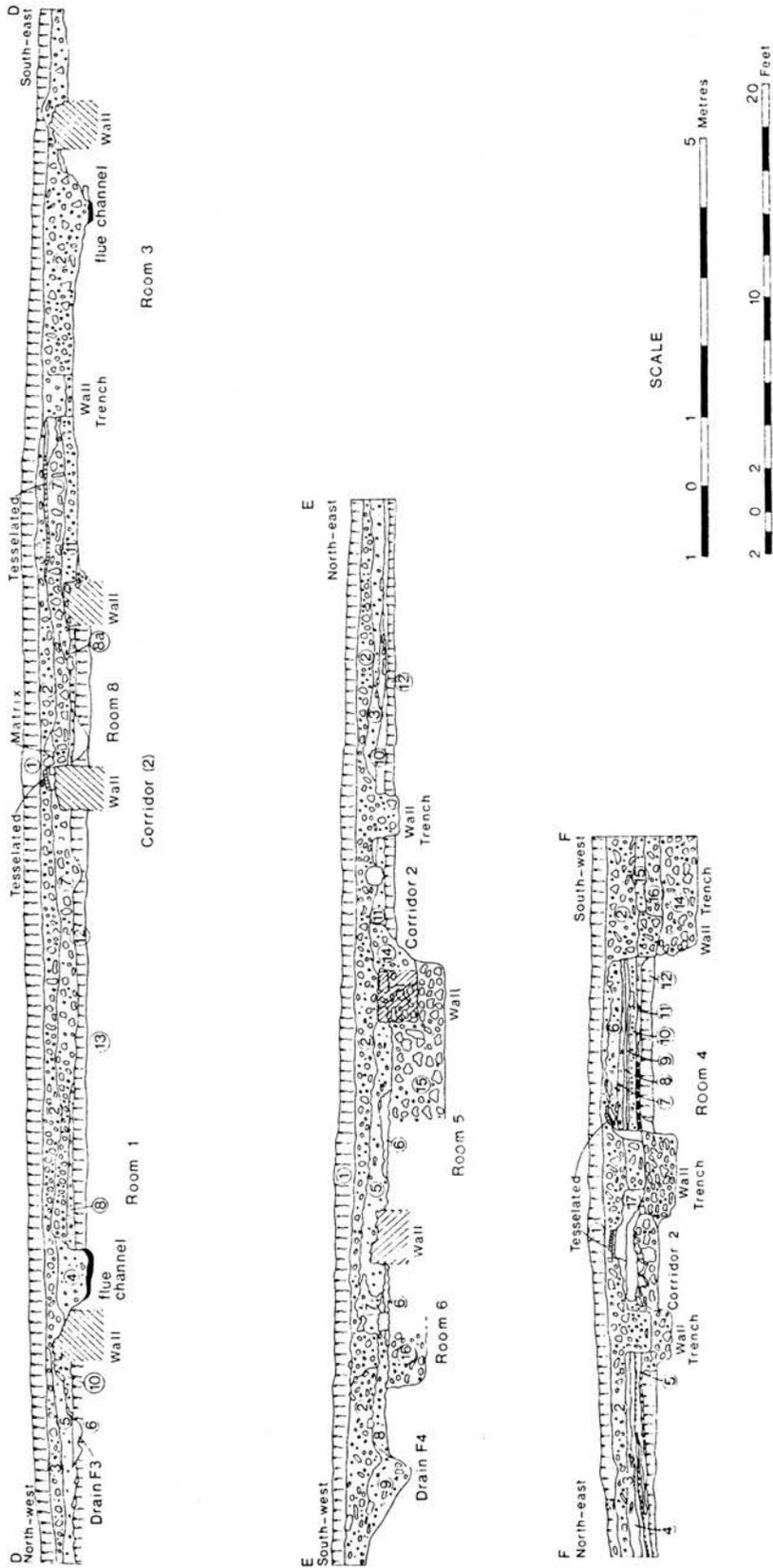
In Room 8, Layer 12 was also cut by a small hollow which was found to contain brick dust (Layer 9, Fig. 4, Section DD). It is not known whether this feature and its fill are earlier or later than the Phase 1 construction; they are sealed by a thin layer of green clay (Layer 8A, Fig. 4, Section DD) which may represent a Phase 1 floor level. (There are no finds from any of these layers.) [However, assuming that brick dust was specially prepared for *opus signinum* work (see p. 116 below), this is unlikely since no evidence of such work can be linked to Phase 1 (cf. hypocaust, p. 88). L. Biek]

Room 9

In Room 9, which had retained two parallel wall foundations, there was no apparent floor level, but gritty rubble levels produced pottery sherds dateable to the late third or early fourth century, a few glass fragments, nails, and a fragment of wall plaster.



Plate II. Site 2 (1959), general view looking southeast. (Photo: RFN 95)



GREAT STAUGHTON SITE 2 1959

Figure 4. Site 2, sections.

Room 10

A trench extension, dug northwest from the west corner of Room 10, failed to locate a northwest wall, but 15 ft (4.57 m) from the limit of the main excavation, a small V-shaped ditch (Feature 1) on a northeast-southwest alignment was found. This was filled with sooty clay and contained two pieces of antler tine.

Behind the northeast side of the furnace wall were the remains of the steps of a Phase 1 doorway into Room 11. The surface of these showed they had been burnt. The lowest step could no doubt have been burnt in tending the furnace stoke-hole to Room 1, but the top step was under the southwest wall of Room 1 during the occupation of the bath-house, so it seems it received its burnt surface before the construction of Phase 2.

Room 11

The floor surface was apparently the surface of Layer 12 as in Room 10. The base of a post-hole (Feature 8), possibly of Phase 1, was found in the slope of the stoking pit.

Feature descriptions:

Post-hole: Feature 8 was rectangular in plan with its long axis east-west, 1 ft 4 in by 1 ft 1 in (0.41 by 0.33 m) with sloping sides and a concave base. The depth was 5½ in (140 mm) and the filling was mixed blackish-green sooty gritty rubble.

The Exterior

It is difficult to establish which of the levels shown on the sections were present in Phase 1. In Figure 4, Sections EE and FF, Layer 12 survived in the northeast exterior, but Layer 12 is not shown on Section DD either underneath, or even to the southeast of, what later became Room 3. In this area the natural (Layer 13) is directly overlain by Layer 2. However Layer 12 survives in Room 8 and was possibly its floor surface.

In Phase 2 the northeast area probably represented the entrance: the northeast exterior showed a number of gritty rubble levels beneath the rubble spread of Layer 2: Layer 3 on Figure 4, Section EE, was a cream-coloured, sandy, gritty, rubble containing four coins (nos. 857 & 905-7), pottery, glass fragments, and wall plaster. Layer 4 on Figure 4, Section EE, was grey, gritty rubble and silt containing three coins (nos. 869-71). In Figure 4, Section FF, Layer 5 was a level, grey, gritty silt with pebbles (in the field report Section FF, it is described as 'pebbled entrance surface Phase 2'

and containing four coins, nos. 897, 899, 900 & 902). There were two gritty levels on the northeast exterior of Room 1. A post-hole (Feature 6), which was possibly a scaffold-pole hole, appeared when Layer 3 was being removed.

Phase 2

All Phase 1 walls and footings not incorporated in the Phase 2 plans were demolished at the time of reconstruction, i.e. the northeast and southwest walls of Room 10, the southwest wall of Room 11 and two parallel walls of Room 9. The Phase 1 walls of Room 8 were intact except for the part reused in Phase 2, and this had been robbed. Where examined, the Phase 2 foundations used glacial stones and sandy gravel. Fragments of walling in Room 3 stood to a height of two courses of horizontally-laid blocks in the south corner, and part of a single course of pitched slab represents the northeast wall. Make-up layers appear to have been put down over the Phase 1 levels as a base for the mosaic floors, e.g. Room 1, Layer 7 (Fig. 4, Section DD), Room 2, Layer 11, and Layer 7 (Fig. 4, Section DD), Room 4, Layers 6-8, and possibly Layers 9-11 (Fig. 4, Section FF).

Room 1

Formed in Phase 2 by the erection of walls on what was formerly an exterior area. The site record does not state which layers the hypocaust channel was cut through — but Figure 4, Section DD suggests that it cuts through the natural clay of Layer 13 and the green clay of Layer 8, as well as the clayey, gritty, mortar rubble of Layer 7 (the floor make-up over which the mosaic was laid), and the southwest wall of Room 1.

The hypocaust channel was laid diagonally across the room from the stoke-hole in the west corner to the east corner, where it joined a narrow channel parallel to the northeast wall. The stoke-hole was originally an aperture approximately 1 ft (306 mm) in width, between the end of the northwest wall of the room and the oblique end of the southwest wall (built on the surface of the top step of the Phase 1 doorway). No evidence was found of a partition wall between the room and the corridor, Room 2. The main mosaic pavement was totally destroyed but 11 fragments were found in the fill of the hypocaust channel (Fig. 4, Section DD) Layer 4, and in Layer 2. A fragment of the coarse, tessellated surround to the mosaic was found in the southwest of the room. This was of 1½ in (35 mm) grey tesserae, with part of a pink cement quarter-round moulding (as seen

elsewhere) to seal the junction between wall and pavement. The matrix under the surround was soft, sandy, brown mortar (Mo 15, see supplement below).

Feature description:

Hypocaust: The main channel was narrow, barely 6 in (152 mm) wide and was originally edged with stone slabs, probably capped with large stone slabbing. Most of the sides were found broken down, with only two courses of limestone edging remaining. There were probably vents in the flue channel similar to those in the flue to the Room 3 hypocaust, but robbing had destroyed their positions.

Room 2

In Phase 2, Room 8, the northwest and southwest walls were demolished to form the long frontal corridor (Room 2). At the northwest end and the area defined by Room 8 (Fig. 4, Section DD), Layers 12 and 8A (the latter probably Phase 1) were overlain by the make-up of Layer 7 (rubble and grey-brown, gritty, clayey soil as elsewhere). At the southeast end, Layer 7 overlay Layer 11, described as 'mixed levels'. In Figure 4, Section EE, Layer 11 overlay Layer 12 but directly underlay Layer 2, whereas in Figure 4, Section DD, the sequence was Layer 2 above the mosaic (see Plate VIII), which was itself above Layer 7, which overlay Layer 11, which was overlying 'unexcavated' layers.

As elsewhere, the pavement matrix (over the rubble make-up Layer 7) was soft, sandy, brown mortar (Mo 13, see supplement below) about 2 in (50 mm) thick. From the three pavement fragments remaining, the basic tesserae were brown in colour, of fairly large size, and the largest patch at the southeast end of the corridor contained a grid design in blue. The original size of this design was at least 7 ft 9 in (2.37 m) by 3 ft (0.91 m).

Room 3

This seems to have been very similar to Room 1, being of Phase 2 construction. Figure 4, Section DD shows only the flue channel (filled by Layer 2) cutting an unexcavated surface, probably Layer 12. The hypocaust channel was cut from the stoke-hole (Feature 5) through the wall footing on a northeast to southwest alignment, across the southeast side of the room to the northeast wall, where it joined the flue channel parallel to the wall.

There was a rubble make-up layer consisting of mortary, clayey, limestone rubble, containing tile and roof slate pieces (probably equivalent to Layer 7, Fig. 4, Section DD in Rooms 1 & 2) underlying the pavement matrix which was, as elsewhere, of soft sandy brown

mortar (Mo 12, see supplement below). A piece of the coarse, tessellated surround of large, blue tesserae with blue stripes survived in the west corner of the room. The mosaic itself was totally destroyed, but 48 pieces were found in the fill of the hypocaust channel, possibly Layer 2. A wall (shown on the plan as Phase 2) protrudes southeastwards from the exterior southeast wall of Room 3. Its full extent and relationship to the overall Phase 2 plan were not ascertained.

Feature description:

Hypocaust and flue channels: Both channels were narrow and stone-lined and varied in width from 6 in to 1 ft (152 mm to 304 mm). Charcoal (CH 22: ?Blackthorn and ?Spindle; p. 124) and soot were found on the base of the main channel. Vents were found at each end of the flue channel. The stoke-hole was examined in part but its whole plan was not obtained. The base sloped from the wall edge to the southwest where it was 3 ft 3 in (0.99 m) wide at the excavation limit. Its length, southeast to northwest, was not ascertained. The filling was of greenish-brown, charcoal-flecked, clayey soil and rubble containing a great deal of wall plaster (see Plate III and Liversidge below) and pottery sherds (e.g. Fig. 16, no. 68) as well as glass fragments, seven oyster shells, and a nail.

Room 4

This was entirely Phase 1 reused. The clay lenses overlying Layer 12 (Fig. 4, Section FF, Layers 9-11) have been discussed above. The upper group of this series (Fig. 4, Section FF, Layers 6-8), to judge by the fourth-century finds, probably relate to Phase 2. Figure 4, Section FF, Layer 6 was of greenish, clayey soil with tile and limestone rubble, and contained six coins (nos. 896, 898, 901, 903-4 & 910). Above Layer 6, Room 4 was divided into two, Rooms 4 and 4A. A doorway between the two rooms was suggested by eight pieces of slabstone, four of which fitted together. The uppermost surfaces were worn smooth and the edges roughly tooled. In Room 4, the pavement matrix was again soft, sandy, brown mortar (cf. Mo 13 and Mo 12 respectively), with medium-sized brown tesserae similar to those used in Rooms 2 and 3. A fragment of this was found on the northeast side of the room where a red clay tile had been inserted into the pavement. Room 4 probably served as a *frigidarium* to the bath suite; both portions were in a very wrecked state. The floor of Room 4A was represented by a few fragments of red clay bricks or tiles, laid originally on a pink cement matrix (Mo 14).

Room 5

[Groups of small tesserae in *opus signinum* (?cf. similar to Mo 4) and a fragment of special 'mor-

tar', tessellated and painted (see Smith below: 'from a vertical surface'), were found here. L. Biek]

The hypocaust systems in Rooms 1 and 3 belong to the Phase 2 build (Rooms 1 & 3 were both Phase 2), but the hypocaust in Room 5 (Phase 1 reused) might be a Phase 1 feature; the section does not clarify this. However, if it is true that in Phase 1 the other floor surfaces were provided by Layer 12, a hypocaust is perhaps unexpectedly sophisticated for this phase, and it is therefore more likely to relate to Phase 2. The layer forming the surface on which the *pilae* were constructed was of hard clay and glacial stones (Fig. 4, Section EE, Layer 15). It was burnt reddish-blue in places, especially through the centre longitudinally from the furnace to the vents at the southeast end. Figure 4, Section EE shows this layer as being of some considerable depth, about 2 ft 8 in (812 mm) and apparently integral with the foundations below the northeast wall of Room 5.

The furnace supplying heat for Rooms 5 and 6 is not shown in section. The furnace was a slightly tapering channel between walls of stone 8 ft (2.44 m) in length, laid through a hole knocked in the northeast wall of Room 5 and, for most of its length, contained in a shallow trough scored in Layer 12 and the subsoil. The stoking pit was a shallow scoop at the northwest end of the channel. There was much evidence of use and the throat of the furnace showed two phases of construction. The southeast end of the northeast side of the furnace extended into the hypocaust for a distance of 4 ft (1.22 m). There was a deposit of soot and charcoal on the base of the furnace channel.

The fill of the furnace (mainly sooty rubble with four pieces of burnt pillar incl. Fig. 10, no. 45, pottery etc.) and the sooty rubble that filled the area between the lowest step and the side of the furnace channel were probably the same as the rubble levels of Figure 4, Section EE, Layers 5 and 7 seen in Rooms 5 and 6. They probably represented post-occupation collapse or demolition.

Feature description:

Furnace: In the original construction the channel was of an average width of 3 ft (0.91 m), but a refacing of the southwest side with large tooled blocks of stone reduced the width to about 2 ft (0.61 m).

The filling was mainly of sooty rubble and contained four pieces of burnt pillar or column shaft, two pieces of millstone, two glass fragments, and a pottery sherd. A quantity of ?Hawthorn charcoal (CH 21: p. 124) lay in a deposit of soot on the base of the furnace channel.

Room 6, the Heated Bath Hypocaust (Pl. IV)

This was attached to the southwest wall of Room 5 at the west corner of worn wall blocks of limestone. Only part of the lowest course remained and this was laid on a foundation of glacial stones and gravel (Fig. 4, Section EE, Layer 16). Isolated blocks of stone in the corners of the hypocaust probably indicated the bases of *pilae* to support the floor of the bath, but this could not be proved. The aperture to admit heat from the hypocaust of Room 5 was about 3 ft (0.91 m) high. A central support in the aperture was indicated by a small patch of rubble. The floor was covered by sooty, charcoal-flecked, gritty soil (Fig. 4, Section EE, Layer 6) also seen in Room 5 overlying Layer 15, the floor surface. Layer 6 was overlain by rubble levels (Fig. 4, Section EE, Layers 5 & 7). Layer 5 contained a rim sherd and a fragment of wall plaster.

Room 7

An area between the southeast wall of Room 6, the southwest wall of Room 5 and just falling short of the northwest wall of Room 9 was occupied by a 'concrete base', of roughly rectangular shape 13 ft by 7 ft (3.96 m by 2.13 m), with a depth on the southwest side of 1 ft 3 in (381 mm). Formed of coarse, greyish-white concrete, it appeared to be more attached to the exterior of Room 5 than to the southeast side of the heated bath space. There was no direct evidence that it formed the base of a cold bath; but its material (?cf. Mo 1 p. 116) makes this quite likely.

The Exterior

In what was formerly Room 10 in Phase 1, a drain (Feature 3) was cut into Layer 12 from the stoke-hole of Room 1 where it terminated in a small sump (see Fig. 4, Section DD, Layer 10) below Layer 5, above Layer 12, with an uncertain relationship to Layer 6. The fill of Feature 3 was sooty clay and rubble piled against the outside of the Room 1 reused wall. Section DD, Layer 5, which overlay the gully and Layer 12, consisted of sooty, clayey soil. Section DD, Layer 3 was the continuation of the general rubble spread (Layer 2 elsewhere), but here it was sooty. A small post-hole (Feature 7) occurred between Feature 3 and the Phase 1 northeast wall.

Feature descriptions:

Drain: Feature 3 was a small 'U'-section gully with a sharply defined 'V'-shaped cut on the west side. The gully varied in width from 9 in to 1 ft 6 in (228 to 457 mm). The filling was black, sooty, charcoal-flecked clayey soil and rubble (Fig. 4, Section DD, Layer 6) containing a piece of wall plaster and six oyster shells.

Post-hole: Feature 6 was roughly circular, 8 in (203 mm) in diameter. The sides were vertical and the base flat. The filling was greenish-brown, gritty silt containing a few small stones.

Post-hole: Feature 7 was a roughly circular patch of blackish clay containing gritty, sooty rubble. Its diameter when cleared was 11 in (280 mm), with a depth of 5 in (127 mm).

Room 6, Southwest Exterior, the Heated Bath

This area was stripped down to the surface of Layer 12. Feature 4, a drain on a northwest to southwest alignment, emptying into an oval-shaped sump, no doubt drained surface water and the bath.

Feature description:

Drain: Feature 4 and sump, this was a 'V'-section, open ditch between 3 in and 4 ft (0.9 to 1.2 m) wide and 2 ft (0.61 m) in depth. The filling of ditch and sump was dark grey, charcoal-flecked, clayey gritty silt and rubble, containing a pottery sherd, glass fragments, wall plaster, and a coin (no. 860) found on the base of the ditch. The filling of the sump contained a number of large stones.

Phase 3

This phase consists of the filling of Feature 4 (Fig. 4, Section EE) and the sump (though this could have taken place during Phase 2).

It is not always easy to distinguish between Phases 3 and 4, i.e. between layers backfilling formerly open ditches etc. (e.g. Feature 4 and the sump, Fig. 4, Section EE, Layer 4, Section DD, flue channel, drain, Section DD, Feature 3 etc.) and those consisting of robber trenches (Fig. 4, Sections DD, EE, FF) and the deposition of Layer 2, the general layer. In some instances (Fig. 4, Section DD, Phase 2 wall, northwest of Room 3; Phase 2 wall, northeast Room 2, Fig. 4, Section EE; and Section FF, Room 2 northeast wall Phase 1 reused), the walls seem to have been completely robbed out and the subsequent gap filled by Layer 2.

Elsewhere (Fig. 4, Section DD, Phase 2, wall, southeast Room 3 and reused walls in Room 5) the upper part of the wall only has been robbed, the stumps being covered either by Layer 2 or, in Section EE, by Layer 5. There also appears to be a trench cut into Layer 2, i.e. a final phase seen in Section EE, in the region where the southwest wall of Room 6 should be.

There are, however, problems in understand-

ing the sections. Figure 4, Section DD shows the wall trench for the northwest wall of Room 3 as both cutting through and as filled by Layer 2. Layer 2 also fills the flue channel in Room 3 (Fig. 4, Section DD) immediately above the thin, sooty deposit, whereas in Room 1, the fill of the flue channel, Layer 4 is overlain by Layer 2 (Fig. 4, Section DD). In Section FF, the tessellated floor of Room 2 has clearly been cut through by the robbing trench for its southwest wall. Layer 2 overlies the tessellated floor and forms the fill of the robbing trench.

Discussion

Allowances must be made for serious rodent damage. In some respects the history of Site 2 is clearer than that of Site 1 because Phases 1 and 2 were (mostly) recognised at the time of excavation, but numerous problems remain, which make a fully detailed interpretation impossible. For example, on the plan (Fig. 2), the northwest wall of Room 1 is indicated as being reused in Phase 2 (i.e. at the same time as the hypocaust channel) whereas Figure 4, Section DD indicates the northwest edge of the hypocaust channel cutting this wall, thereby suggesting that the wall had already gone out of use, or went out of use when this channel was cut. Although Figure 4, Section DD would have cut the suggested Phase 2 wall dividing Rooms 1 and 2 at right angles (see Fig. 2), there is no direct evidence on the section to indicate its presence, or even a robbed-out ghost. The termination of Layer 8 (Fig. 4, Section DD) at the suggested point may, however, be of significance.

As a result of these problems it is not possible to be completely certain of the general relationships between phases in the different rooms or with the exterior levels. It is probably safest to accept only the general phasing (as suggested in the above description) on the understanding that there are probably several sub-phases. For the same reasons as were suggested for the Site 1 building, Site 2 was probably deliberately demolished rather than being left to decay slowly. For dating, etc., see general discussion below.

Painted Wall Plaster

By the late Joan Liversidge

Although the remains of wall-painting found in Site 1 are very worn and fragmentary, they are of interest because, unlike many such finds from Roman Britain, they can be dated. Dated, moreover, to the fourth century, a period to

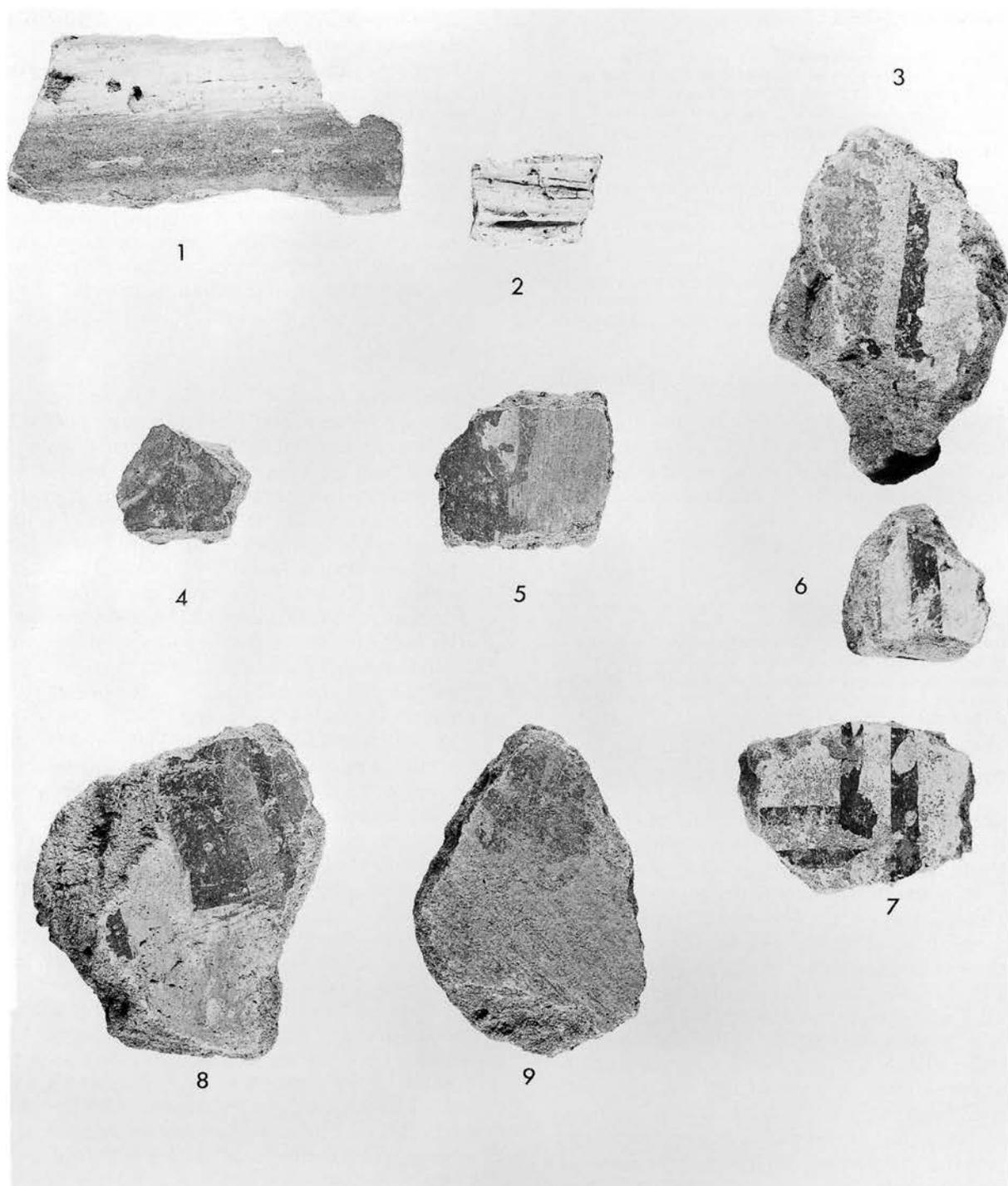


Plate III. Wall plaster (metric scale). (Photo: A 8452/1)

which so far, with the exception of Lullingstone (Meates 1987), and *Verulamium* (Liversidge 1984) we can assign very little material.

The predominant colour is a deep, rich, purple, obviously used as a ground for either panels or a dado, or both. There is no evidence to determine its position on the wall. It also occurs on a few pieces as a framework of two parallel lines c. 2 in (50 mm) wide, meeting at right angles in a bead (Pl. III, nos. 6 & 7) on a white ground, and here we probably have proof of panel decoration. A similar purple line painted on a light-red ground is distant, 3 in (76 mm) from more purple and another piece (Pl. III, no. 3) shows a narrow white line dividing red and purple. Perhaps we have evidence here for red and white panels, the white panel with a framework of purple lines, possibly set in a wider purple border.

We also find one piece with a delicate white floral design surviving faintly on the purple ground (Pl. III, no. 4), another with traces of white, painted over a deep red design on a ground partly light-red and partly purple (Pl. III, no. 5), and another with purple on a yellow ground with traces of red along the right hand edge (Pl. III, no. 8). Plate III, no. 1 has a black line on a white ground. Plate III, no. 2 may be a scrap of moulded white stucco, an unusual find which resembles the stucco from the Roman villa at Gorhambury (Neal *et al.* 1990).

Among the material not illustrated are fragments of plain red, red and yellow, perhaps from bands bordering the panels, greyish blue painted over red, and edged with a black line or stripe, the same blue on a white ground, and a few scraps of bright blue.

The wall-painting from Site 2 must also have belonged to a very colourful scheme of decoration, but again the condition is now too fragmentary for an attempt to be made to restore the designs. Material from both phases of occupation is believed to be present but is so similar in composition that it has proved impossible to discriminate between the two.

The most striking feature consists of swirls or scrolls of purple, mauve, or pink paint, sometimes highlighted with bright blue or bordering an area of bluish green. It is difficult to determine to what type of design these belonged; drapery or the capital of a column came to mind, but with very little evidence for either. With these pieces may, perhaps, be associated a scheme of deep rose and mauve separated by a white line, 0.8 in (203 mm) wide, probably part of a framework of lines and stripes or the edge of a panel. Fragments also occur with plain purple edged with a white line. The same deep rose is found next to a white ground, with a

narrow black line, and in one case, the black line is enlivened with a mauve bud. Elsewhere blue or white grounds are edged by black stripes and one blue fragment has a pattern of small red leaves.

A collection of pieces painted red and pale yellow came from Room 4 and may belong to a splayed window of Phase 1 date. In some cases olive green and white lines c. 0.3 in (76 mm) wide separate the red and yellow. The same design also occurs in the stoke-hole filling (Feature 5) outside Rooms 3 and 4, and with it are pieces of white with an olive green stripe $\frac{1}{4}$ in (7 mm) wide. This may come from the same type of window decoration. One of these fragments also shows traces of a design in yellow and blue. Pieces painted white, from elsewhere on the site, may come from a ceiling. One is noticeably concave, and another shows signs of another layer of white decoration, belonging to an earlier period, underneath.

[Analysis of an unpainted fragment, from Layer 2 (rubble over exterior of the villa, p. 116: Mo 8) showed the plaster to have been carefully prepared and eminently suitable for the purpose: a 1:2 mix (by wt) of lime and very fine sand. The pellet of Egyptian Blue (p. 82) was evidently lost by the artist responsible for the blue decoration. For use of this colour, and others, see Davey & Ling 1982. L. Biek]

Mosaics

By David J. Smith

The excavations brought to light remains of patterned mosaic pavements in the east and west wings of the villa, Site 1, Rooms 1 and 6 respectively, the corridor connecting them (Room 2) and Rooms 3 and 8 of the detached bath-house (Site 2). All were more or less fragmentary, and it is *only thanks to meticulous recording* that five patterns can be described. The descriptions are based on colour transparencies, black and white photographs, actual samples, and detailed notes provided by Mr Ernest Greenfield, and in the case of the mosaics of Rooms 1 and 6 of the villa, on convincing coloured drawings by Mrs E.M. Minter (Rivet 1969: pl. 3.25).

Site 1; The Villa

Room 1, the East Wing
(Pl. IV)

This room measured 17 ft 3 in (5.26 m) east-west by 17 ft 8 in (5.385 m) north-south. Traces of a quarter-round fillet of *opus signinum* (cf. Mo 9 from Room 6, p. 116) which had sealed the junction between walls and pavement were found on the north, south, and west sides. Surrounding the room at the foot of the walls, and partly covered by the fillet, there

had been a band of white, five tesserae wide on the north and east sides, and four tesserae wide on the south and west, formed of cubes $1\frac{1}{2}$ in (25–35 mm) square on the upper surface. Then came a broad band of red 24 tesserae wide (measuring 2 ft $4\frac{1}{2}$ in (0.72 m)), composed of cubes averaging 1 in square on the upper surface.

Within this simple surround the patterned mosaic, 11 ft 5 in (3.48 m) square, had been laid centrally in the room (on a soft matrix Mo 2: p. 116). The pattern was elaborate but regular and symmetrical. Its basic motif, a 'star' formed of eight lozenges, was repeated sixteen times in four rows of four stars, except where four lozenges of each of the four centremost stars were omitted, to make room for a central octagonal panel. Between the stars were small interspaces of square, oblong and triangular shapes. The background was white.

The octagonal centrepiece had been framed with a simple guilloche, but all that survived within the frame was what appears to have been the foot of a cantharus flanked by twigs or sprays of leaves. This panel, and the stars and interspaces were all outlined in grey. In the stars each lozenge contained a smaller lozenge, alternately of solid grey outlined in red and *vice versa*. The four square compartments contiguous with the sides of the central octagon were decorated with a pattern of intersecting circles and semi-circles in grey. Each circle had a small curvilinear lozenge, and each semi-circle, half of a small curvilinear lozenge of red tesserae at its focal point. The segments formed by the intersections were filled with red. Each of the other four square compartments, of the larger size, contained a swastika-*pelta* with a guilloche knot at its centre, the *peltae* being of red with a grey outline. The knots of white were outlined on their outer sides in red and on their inner sides in grey. Six of the smaller interspaces were oblong and decorated with a length of straight-tongued double guilloche. Six others were oblong with a pattern of eighteen squares, bisected diagonally into grey and white triangles. Twenty-two were small squares, eighteen of them poised, each containing a guilloche knot, while sixteen were triangular and each contained a solid grey triangle on a white ground.

The entire pattern was surrounded first by alternating stripes of grey, $\frac{1}{2}$ in (12 mm) (one tessera) wide: red 1 in (25

mm) (two tesserae) wide: and grey 1 in (25 mm) (two tesserae) wide: then by a simple guilloche in red, grey and white 5 in (127 mm) wide: then again by alternating stripes of grey 1 in (25 mm) (two tesserae) wide: red $1\frac{1}{2}$ in (35 mm) (two tesserae) wide and grey $1\frac{1}{2}$ in (35 mm) (two tesserae) wide. Then came the broad red surround already described.

Room 2, the Corridor
(Pls. V & VI)

The corridor measured 58 ft 10 in (17.93 m) in length and 8 ft 10 in (2.69 m) in width. It was paved throughout in large grey tesserae approximately $1\frac{1}{2}$ in (35 mm) square (on a similar matrix, Mo 3: p. 116), relieved by a very simple pattern at either end. The pattern to the east, at a distance of 4 ft (1.22 m) from the end wall and almost central between the north and south walls, consisted merely of an oblong measuring 15 ft 8 in by 3 ft 10 in (4.77 by 1.17 m) and containing three smaller oblongs, one within the other. The outermost oblong was formed of a band of red $7\frac{1}{2}$ in (19 mm) wide, the next of a band of grey (the background) 6 in (152 mm) wide: the next of a red band 4 in (101 mm) wide: and the innermost of a block of grey (the background) 6 in (152 mm) wide. The pattern to the west, 2 ft $11\frac{1}{2}$ in (0.90 m) from the end wall and almost central between the north and south walls, consisted of an oblong measuring 19 ft by 5 ft (5.79 m by 1.52 m) and containing four smaller oblongs, again one within the other. The outermost was formed of a red band $10\frac{1}{2}$ in (266 mm) wide, the next of a band of grey (the background) 9 in (228 mm) wide, the next of a white band 3 in (76 mm) wide, the next of a red band 3 in (76 mm) wide, and the innermost of a block of grey (the background) 9 in (228 mm) wide. Like the grey tesserae of the background the red and white averaged $1\frac{1}{2}$ in (35 mm) square.

Room 6, the West Wing
(Pl. VII)

Room 6 was 17 ft 4 in (5.28 m) square. As in Room 1 there were remains of a quarter-round fillet of *opus signinum*



Plate IV. Site 1 (1958), Room 1, mosaic. (Photo: RFN 29)



Plate V. Site 1 (1956), Room 2, tessellated pavement. (Photo: RFN 23)



Plate VI. Site 1 (1958), Room 2, tessellated pavement. (Photo: RFN 48)



Plate VII. Site 1 (1958), Room 6, mosaic. (Photo: RFN 62)

(Mo 9: p. 116) at the junction of the walls and pavement which had partly covered the tesserae adjacent to the walls. Again, there had been a band of white at the foot of the walls, seven tesserae wide, average $8\frac{1}{2}$ in (216 mm) wide on the north side, five tesserae (average width 9 in (228 mm)) on the east, ten (average width 12 in (304 mm)) on the south, and eight (average width 14 in (381 mm)) on the west. Next came a broad band of red, eight tesserae 12 in (304 mm) wide on the north, eight 14 in (355 mm) wide on the east, six 9 in (228 mm) wide on the south, and eight $11\frac{1}{2}$ in (292 mm) wide on the west. Then came a grey stripe two tesserae 3 in (76 mm) wide, followed by another broad, red band nine tesserae 12 in (304 mm) wide on the east, eleven 16 in (406 mm) wide on the south, but nowhere surviving to its full width on the north and west.

Within this surround the patterned mosaic, just under 10 ft (3.05 m) square, had been laid centrally in the room (again, on a similar matrix; Mo 10: p. 116). The pattern was much less elaborate than that of Room 1, consisting only of a square, central panel with frame of simple guilloche surrounded by a double row of swastika-*peltae*. It was enclosed first by a white stripe two tesserae 1 in (25 mm) wide, then a single row of grey $\frac{1}{2}$ in (12 mm) wide, then a band of three-strand guilloche in red, grey and white $6\frac{1}{2}$ in (165 mm) wide, and finally by a row of grey $\frac{1}{2}$ in (12 mm) wide, a white stripe two tesserae wide 1 in (25 mm), and another row of grey $\frac{1}{2}$ in (12 mm) wide.

Nothing remained to indicate the content of the central panel. The surrounding swastika-*peltae* were identical with those in the pattern of Room 1, except for the small cross-piece by which most, if not all, were tied together at the tips of the *peltae*. A small, curvilinear lozenge of red tesserae occupied the centre of each space of the same shape formed by each group of four swastika-*peltae*, and a quarter of such a lozenge marked each angle of the pattern within the guilloche border.

Site 2; The Bath-house (Pl. VIII)

In the bath-house the fourth-century corridor (Room 2) had been paved with $1\frac{1}{2}$ in (37 mm) fawn tesserae (on a matrix, Mo 13, different from the ones above: p. 116). At the south-east end, opposite the main entrance, was a simple relieving pattern consisting of a rectangular grid c. 7 ft by 3 ft (2.13 m by 0.91 m) of grey bands two tesserae 3 in (76 mm) wide, enclosing twenty-four squares formed of the fawn background.

This was the only surviving pattern, but patterned pavements in four other rooms were indicated by loose tesserae and fragments of mosaic of several colours, the largest fragment measuring only 3 by $2\frac{3}{4}$ in (76 by 70 mm) (Fig. 5, no. 1). In Room 1 part of a plain surround of $1\frac{1}{2}$ in (35 mm) grey tesserae and $\frac{1}{2}$ in (12 mm) tesserae of red, white, and grey were found (on a matrix, Mo 15, similar to those in the villa: p. 116). Room 3 yielded, again, $\frac{1}{2}$ in (12 mm) tesserae of red, white, and grey (on a matrix, Mo 12, similar to that in Room 2: p. 116), with a fragment from the hypocaust channel comprising tesserae of all three colours in a curving arrangement suggesting part of a guilloche (Fig. 5, no. 2), and also 1 in (25 mm) tesserae of red, while the west angle of this room preserved part of a brown or fawn surround relieved by bands of grey. From Room 4 came $\frac{1}{2}$ in (12 mm) tesserae of white and grey, $\frac{1}{2}$ -1 in (12-25 mm) tesserae of red, grey, and fawn, and 1 in (25 mm) tesserae of red and yellow. Room 5 produced $\frac{1}{2}$ in (12 mm) tesserae of red, white, and grey, $\frac{1}{2}$ in (12 mm) tesserae of grey and brown together in *opus signinum*, and an interesting fragment of mortar $1\frac{1}{2}$ in (35 mm) thick with $\frac{1}{2}$ in (12 mm) grey tesserae and a chamfered edge, slightly convex and painted red, which must have come either from a low step in the pavement or from a vertical surface such as a dado (Fig. 5, no. 3).

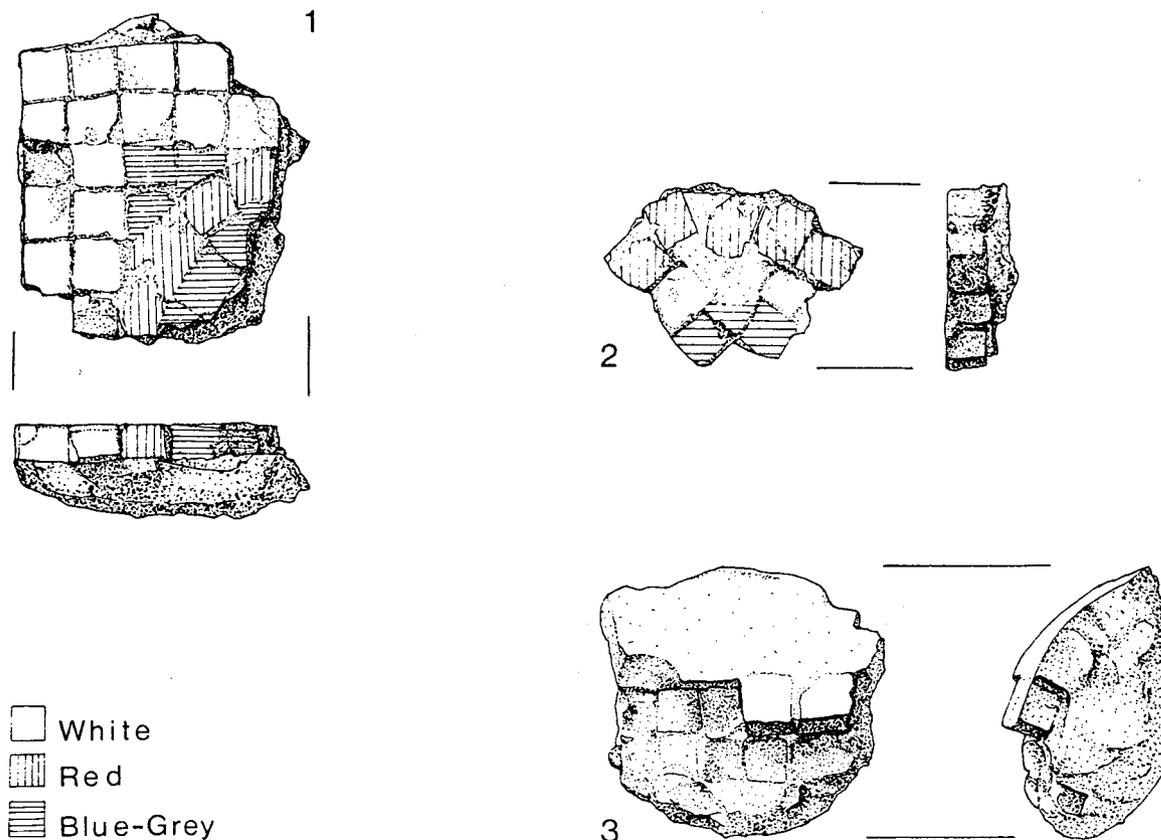


Figure 5. Mosaic fragments.

Discussion

The simple patterns in Room 2 of Site 1 (the villa) hardly merit comment beyond noting that similar patterns were recorded at the Greetwell Fields villa near Lincoln ('plate I' of the drawings by B. Ramsden, in the City and County Museum, Lincoln). That in Room 2 of the Site 2 bath-house is a little more interesting in that essentially identical grid-patterns are known in mosaics of several sites in the Midlands and eastern England, one at Denton (Lincs.) being dated to not earlier than AD 370 (Smith 1964: 86, 92, pl. 7). The mosaics of Rooms 1 and 6 (the wings) of the villa are considerably more important. This need not imply that they differ in date from the others; on the contrary, it is quite possible that all were laid at the same time and by the same craftsmen. Generally speaking, all the patterns are such as one would expect to find in fourth-century mosaics in the Midlands and eastern England.

One can go much further. To consider first the pavement of Room 6, the west wing of the villa. Swastika-*peltae* bordering or forming a frame for rectangular panels have been recorded in other Romano-British mosaics at Woodchester, Glos. (Lysons 1797: pl. XVIII), Medbourne, Leics. (VCH 1907: 214, pl. VII), Roxby, Lincs. (Fowler 1796-1818: no. 3; re-excavated and photographed in 1972 by Mr G.C. Knowles, then Curator of Scunthorpe Museum and Art Gallery, who kindly allowed it to be seen and photographed by this writer), Stonesfield, Oxon. (VCH 1939: 315, pl. XXIV A; Rivet 1969: pl. 3.15 A), and Newton St Loe, Som. (Lloyd Nichols 1838: pl.). At Newton St Loe, however, they bordered only one side of the panel and so cannot be regarded as offering a significant parallel for the pattern at Great Staughton. At Medbourne a single row of swastika-*peltae* bordered two opposite sides of a design comprising two oblong panels, one of which contained a grid-pattern and the other a pattern of eight-lozenge stars, both comparable with mosaics at Great Staughton. At Woodchester, Roxby and Stonesfield the swastika-*peltae* formed a square frame, one row wide, which at Woodchester inclosed a cantharus, at Roxby another type of lozenge-pattern, and at Stonesfield a geometric pattern with affinities in another mosaic at Woodchester. None of these pavements has been dated by excavation but on stylistic grounds all can confidently be assigned to the fourth century (Smith 1969: 95ff.; 1984: 366-74, *passim*).

The eight-lozenge star-pattern of Room 1 of the Villa (Site 1) invites comparison with those of mosaics from the Barton Farm, Cirencester,

Glos. (see Buckman & Newmarch 1850: 32, VIII; Toynbee 1962: 198, no. 185, pl. 221; Rivet 1969: 1. 3.12); Medbourne, Leics. (VCH 1907: 214, pl. VII); Scampton, Lincs. (Fowler 1796-1818: no. 8, reproduced as a frontispiece in Illingworth, 1810, hence Rivet 1969: pl. 3.22); Great Weldon, Northants. (a coloured engraving dated 1739 in the *Topographical Collections, Northamptonshire* volume of the Soc. of Antiqu. of London, inferior copy in Lysons 1813: part IV, pl. VII, hence Rivet 1969: pl. 3.21); Mill Hill, Castor, Northants. (Artis 1828: pl. XIX, hence VCH 1902: 172, fig. 7; Rivet 1969: pl. 3.24); Nether Heyford, Northants. (VCH 1902: 196, fig. 24); Mansfield Woodhouse, Notts. (Fowler 1796-1818: no. 16, hence VCH 1910: 28, fig. 12; Rivet 1969: pl. 3.23); and Great Casterton, Lincs., formerly Rutland (Corder 1944: 36, pls. XIIb, XIIIb). At the Barton Farm the pattern occupied a square or an oblong panel. At Great Casterton and Great Weldon there were rectangular panels with almost identical patterns of eight-lozenge stars, the square interspaces containing alternately a swastika-*pelta* and a guilloche mat. At Nether Heyford and Scampton



Plate VIII. Site 2 (1959), Room 2, tessellated pavement. (Photo: RFN 75)

there were patterns similar to those of Great Casterton and Great Weldon, that at Scampton also includes swastika-*pelta* in square inter-spaces, but it is the mosaics of Mansfield Woodhouse and Mill Hill, Castor, that afford the closest comparisons with the eight-lozenge star-pattern of Great Staughton. At Mansfield Woodhouse there apparently remained half of a square complex lozenge-pattern, including four eight-lozenge stars, with a central octagonal panel containing concentric roundels of simple guilloche and a form of key-pattern. Finally, at Mill Hill, Castor, the cantharus in the octagonal panel with a frame of simple guilloche, set centrally in a lozenge-pattern reminiscent of that at Mansfield Woodhouse, confirms the identification of the largely destroyed centrepiece at Great Staughton, and it may be noted that axially placed in the surrounding chess-board pattern at Mill Hill were four square compartments, two of which contained a guilloche mat and the other two a swastika-*pelta*.

Simpler second-century patterns, formed by the regular repetition of an eight-lozenge star have been recorded in Britain at Caerwent, Colchester, and *Verulamium* (Smith 1975: 270–74). Those of Colchester ('can hardly be earlier than Antonine' on sealed evidence: Hull 1958: 78–79, pl. XVI), and *Verulamium* are probably both of the mid-second century (*Verulamium*, mid to second century: Wheeler 1936: 145, pl. XL; cf. Becatti 1961: no. 143, and especially Blake 1936: 192–3, pl. 23, no. 4 (second half of second century)). That of Caerwent (Ashby 1905: 304, pl. LXVIII; cf. Becatti 1961: no. 261, pl. XXIII, assigned to c. AD 130) could be a decade or two earlier. The mosaic of Colchester in particular, with its square shape and central octagonal panel, can be considered as representative of the type of eight-lozenge star-pattern which developed into, or was revived or copied in, patterns such as those of Mansfield Woodhouse, Mill Hill, and Great Staughton, and it may be recalled that a guilloche-framed cantharus in the central octagon of a lozenge-pattern is known in Romano-British mosaics of the second century (Hull 1958: pl. XXIII; Joyce 1881: 336 pl. XIII, Silchester).

Stylistically, the greater degree of elaboration indicates a much later period for the pavements at Mansfield Woodhouse, Mill Hill, Great Staughton, and the others mentioned above in conjunction with them. In fact, excavation established a *terminus post quem*, c. AD 350–65

for that at Great Casterton, which was not one of the original pavements there (Corder 1954: 37, n. 2; the phase in the history of the villa to which this mosaic was assigned may not have been as late as c. AD 370–80, as presumed in the report). This can reasonably be regarded as evidence for the period of the almost identical mosaic at Great Weldon, only twelve miles distant, and of the more or less similar mosaics at Nether Heyford, Medbourne, and Scampton. It is noteworthy that another pattern at Great Casterton, of large intersecting circles in red on a buff ground (Corder 1951: 15ff., pl. Ib; 1954, 35) was repeated in another mosaic at Mill Hill, Castor (Artis 1828: pl. XX; hence VCH 1902: 72, fig. 7) and as borders on opposite sides of the mosaic at Scampton (Fowler 1796–1818; Rivet 1969: pl. 3.22). Related patterns are recorded from Bancroft at Milton Keynes, Bucks. (Neal 1981: no. 5A, 6, excavation report forthcoming), the Norfolk Street, Cherry Orchard villa, Leicester (VCH 1907: 196–7), and further afield, Withington, Glos. (Lysons 1817: part ii, pl. XIX, F). (I am indebted to Mr David S. Neal for photographs taken by him during the re-excavation of Bancroft, which show the pattern of intersecting circles and also a grid-pattern like that in the bath-house at Great Staughton.)

To sum up, the mosaics of Great Staughton have affinities with those of at least a dozen other villas in the Midlands and eastern England. Two of them in particular, the mosaics of Rooms 1 and 6 in the villa, can be counted with those of most of the other sites which afford evidence for a fourth-century school of mosaicists in this part of Britain (Smith 1964: 86, 92, pl. 7). On the evidence of the dated mosaics of Denton and Great Casterton this school was active in the third quarter of the century, and from their relative complexity the lozenge-patterns of Mill Hill, Mansfield Woodhouse and Great Staughton can perhaps be regarded as amongst its later products.

It remains to observe that the embellishment of the wings and corridor, to which visitors and guests might be admitted, contrasts most strikingly with the workaday standard of the rooms behind the corridor, and also that the sideways as well as forward projection of the wings, presumably intended to make the house appear larger than it actually was, is a feature characteristic of the smaller villas of *Gallia Belgica* and the German provinces but not of those of Britain (Smith 1978: 137–41, esp. 140).

Description of Tessera Materials

By the late Dr F.W. Anderson

White	Chalk, oolitic limestone, shelly limestone
Grey (various shades)	Lias limestone
Pale cream or buff	Oolitic Lincolnshire limestone
Brown (pale and 'fawn' to deep red-brown)	Calcareous sandstone with an increasing ferruginous component
Red	Fired clay, red chalk
A single specimen of Niedermendig basalt (dark purplish grey)	

[The nature of the matrices under the various floors, and their relationships in time, are discussed on pp. 116–19. L. Biek]

Coins

By R.A.G. Carson

(For the full coin list see Site Archive)

The excavation of Site 1 yielded a total of 850 coins of which only 368 were regular issues and the remaining 482 were imitations. The greater proportion of the regular coins was made up of issues of the Constantinian Dynasty between AD 330–48. There was a substantial but much smaller number of the earlier *Fel Temp Reparatio* coins of Constantius II and Constans of around AD 350, and of the issues of Magnetius and Decentius, but only a few coins of the Valentinian and Theodosian Dynasties.

Apart from a very few imitations of the AD 330–35 coinage and of the issues of Magnetius, the imitation coinage copied the *Fel Temp Reparatio* Horseman type. About half of these latter copies came from a hoard found on the south exterior of the house. These copies were all of small module with diameters ranging from 1 to 12 mm. Many other coins were of small module with diameters ranging from 1 to 12 mm. Many of these coins were too tiny or too corroded to show any recognisable type, but wherever a type could be seen it proved to be the *Fel Temp Reparatio* Horseman type. The tiny coins of this hoard are similar to those found at Lydney (Wheeler 1932: 116–31) and more recently at Brean Down (Boon 1962: 191f.), and there is now agreement that these small copies are to be dated not much later than AD 360.

The yield of Site 2 was much smaller — only 58 coins — but the pattern was very similar to that of the coins found in the previous year.

The coins have been listed, where possible, with reference to Carson, Hill & Kent, 1960 *Late Roman Bronze Coinage* (LRBC) or to the appropriate volumes of *Roman Imperial Coinage* (RIC).

Site 1, Regular Issues**Completely Identifiable**

	LRBC I (AD 324–48)	
Mint of Trier:	48, 49 (6), 50, 51 (9), 52 (7), 57 (2), 59, 60 (2), 63, 65 (3), 66 (2), 67, 68 (2), 69, 70 (2), 71 (2), 89, 92 (2), 93 (2), 102, 104 (2), 106, 117, 120 (2), 124 (2), 130/1, 132, 133, 137/8, 138, 140 (3), 143/4, 144, 145 (3), 148 (2), 156, 158 (3), 162, 165/8	78
Mint of Lugdunum:	169, 180 (2), 182, 187, 188, 190, 191 (4), 193, 198 (2), 199, 200 (2), 204, 222, 236, 242	21
Mint of Arelate:	352 (2), 353, 371, 372, 381, 401, 438, 442, 453, 455, 455/7, 459	13
Mint of Rome:	533	1
Mint of Sisacia:	780, 782	2
Mint of Thessalonica:	845	1
	LRBC II (AD 348–490)	
Mint of Amiens:	3, 5, 7 (2), 14, 19, 21, 26	8
Mint of Trier:	41 (2), 46, 49, 56, 64 (2)	7
Mint of Lugdunum:	211, 213, 217, 351	4
Mint of Arelate:	416, 455	2
	Total	137

Emperors and Types Certain, Mints Uncertain

Constantine I	<i>Gloria Exercitus</i> (2 standards)	4
	<i>Gloria Exercitus</i> (1 standard)	2
Constantine II	<i>Beata Tranquillitas</i>	1
	<i>Gloria Exercitus</i> (2 standards)	9
	<i>Gloria Exercitus</i> (1 standard)	3
Constantius II	<i>Gloria Exercitus</i> (2 standards)	1
	<i>Gloria Exercitus</i> (1 standard)	2
	Two Victories	10
	<i>Fel Temp Reparatio</i> (Horseman)	5
	<i>Fel Temp Reparatio</i> (Galley)	1
Constans:	<i>Gloria Exercitus</i> (2 standards)	1
	<i>Gloria Exercitus</i> (1 standard)	1
	Two Victories	8
Constantinopolis:	Victory	19
<i>Urbs Roma</i> :	Wolf and Twins	19
Magnetius:	<i>Felicitas Reipublice</i>	1
	<i>Gloria Romanorum</i>	1
	<i>Salus</i>	1
	Two Victories	10
Decentius:	<i>Salus</i>	1
Valens:	<i>Securitas Reipublicae</i>	1
	Total	102

Types Certain, Emperor and Mint Uncertain

<i>Gloria Exercitus</i> (2 standards)	6
<i>Gloria Exercitus</i> (1 standard)	16
Two Victories (Constantinian)	20
<i>Fel Temp Reparatio</i> (Galley)	3
<i>Fel Temp Reparatio</i> (Horseman)	4
<i>Felicitas Reipublice</i>	5
<i>Salus</i> (Magnentian)	1
Two Victories (Magnentian)	10
<i>Salus Reipublicae</i> (Theodosian)	1
	Total
	66

Uncertain Constantinian	29
Uncertain fourth century	21
Fragments	13
	63
Total regular issues	368

Imitations

<i>Gloria Exercitus</i> (1 standard)	5
Constantinopolis	1
<i>Urbs Roma</i>	1
<i>Fel Temp Reparatio</i> (Horseman)	51
Fourth-century minim	398
Uncertain fourth-century imitation	11
<i>Felicitas Reipublice</i>	5
<i>Salus</i> (Magentian)	1
Two Victories (Magentian)	9
Total imitations	482
Overall total	850

Site 2, Regular Issues**Completely Identifiable**

Gallienus:	RIC VI, p. 146, no. 177	1
	LRBC 1 (AD 324-48)	
Mint of Trier:	48, 52 (3), 139/40	5
Mint of <i>Lugdunium</i> :	185, 191	2
	LRBC II (AD 348-490)	
Mint of <i>Arelate</i> :	516	1
Valentinian II	RIC IX, Aquileia 27	1
		Total 10

Emperors and Types Certain: Mint Uncertain

Constantine II	<i>Gloria Exercitus</i> (2 standards)	2
	<i>Gloria Exercitus</i> (1 standard)	1
Constans:	<i>Fel Temp Reparatio</i> (Phoenix-globe)	1
	Two Victories	1
<i>Urbs Roma</i> :	Wolf and Twins	1
Magentius	<i>Salus</i>	2
Decentius	Two Victories	1
		Total 9

Type Certain: Emperor and Mint Uncertain

<i>Securitas Reipublicae</i>	1
<i>Salus Reipublicae</i>	1
Uncertain Constantinian	1
Uncertain fourth century	3
	Total 6
Total regular issues	25

Imitations

Radiate (third century)	1
<i>Gloria Exercitus</i> (2 standards)	2
<i>Gloria Exercitus</i> (1 standard)	4
Two Victories (Constantinian)	7
<i>Fel Temp Reparatio</i> (Horseman)	5
Uncertain fourth century	3
Fourth-century minims	11
Total imitations	33
Overall total	58

Copper Alloy Objects

(Fig. 6)

Site 1, Layer 2

1. Shaft of a pin with horizontal parallel grooves.
2. Piece of thin, shaped plate with two diverging grooves and two hooks. Possibly part of a votive plaque (see also no. 8 below).
3. Fragment of a bracelet or bangle composed of three strips or thin rods twisted flat.

Site 1, Room 4, Layer 3

4. Finger ring. Thin strip with three parallel grooves externally.

Site 1, Exterior Drain, Feature 70

5. Rim fragment of a cauldron with soot adhering to the exterior.

Unstratified

6. Bracelet. Circular section with one end flattened and perforated to receive a hook fastener.
7. Finger ring. Thin strip with flattened ends which are decorated with incised grooves. This is a home-made version of a common third-century type, with triangular shoulders.
8. Thin, folded sheet decorated with incised 'feather' or 'leaf' pattern. This is part of a votive plaque or leaf used for religious purposes, other examples, made in copper alloy, silver or even gold (Johns 1981: fig. 10.1, pl. VIB) are known from Britain and elsewhere in the northern and western Roman provinces. They are generally dated to the second and third centuries, but a fourth-century date is not ruled out. It is most unfortunate that this example is unstratified (see Wheeler 1932: 90, pl. XXIX; Toynbee 1978: 129-47, especially the Godmanchester example; Johns 1981: 101-4). (See also no. 2 above.)

Not illustrated: Various fragments of bent strip, plate or thin rod.

Site 2, Room 4, Layer 8

9. Fragment of plate with a serrated edge.
10. Coiled spring of a brooch.

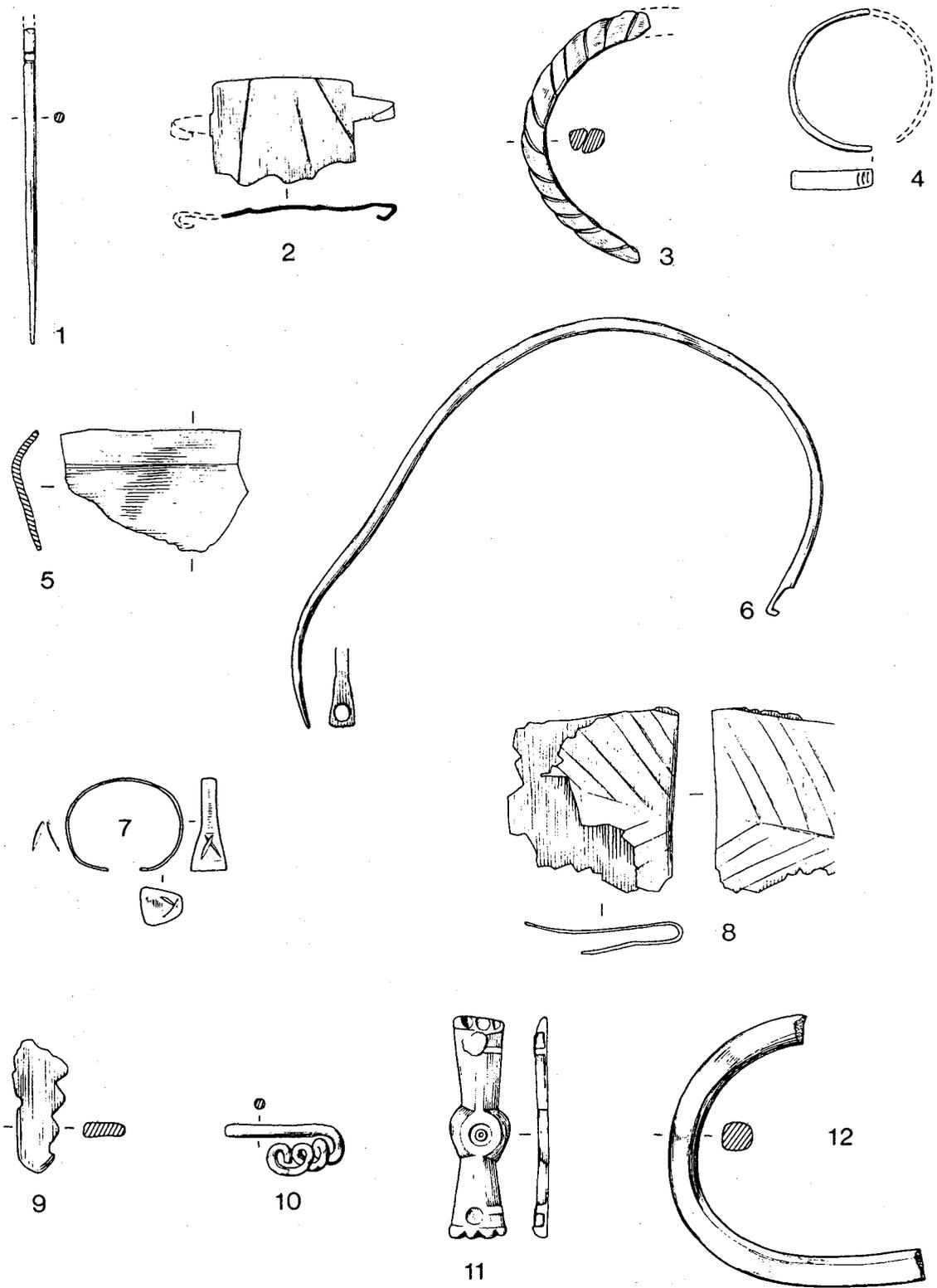


Figure 6. Copper alloy objects.

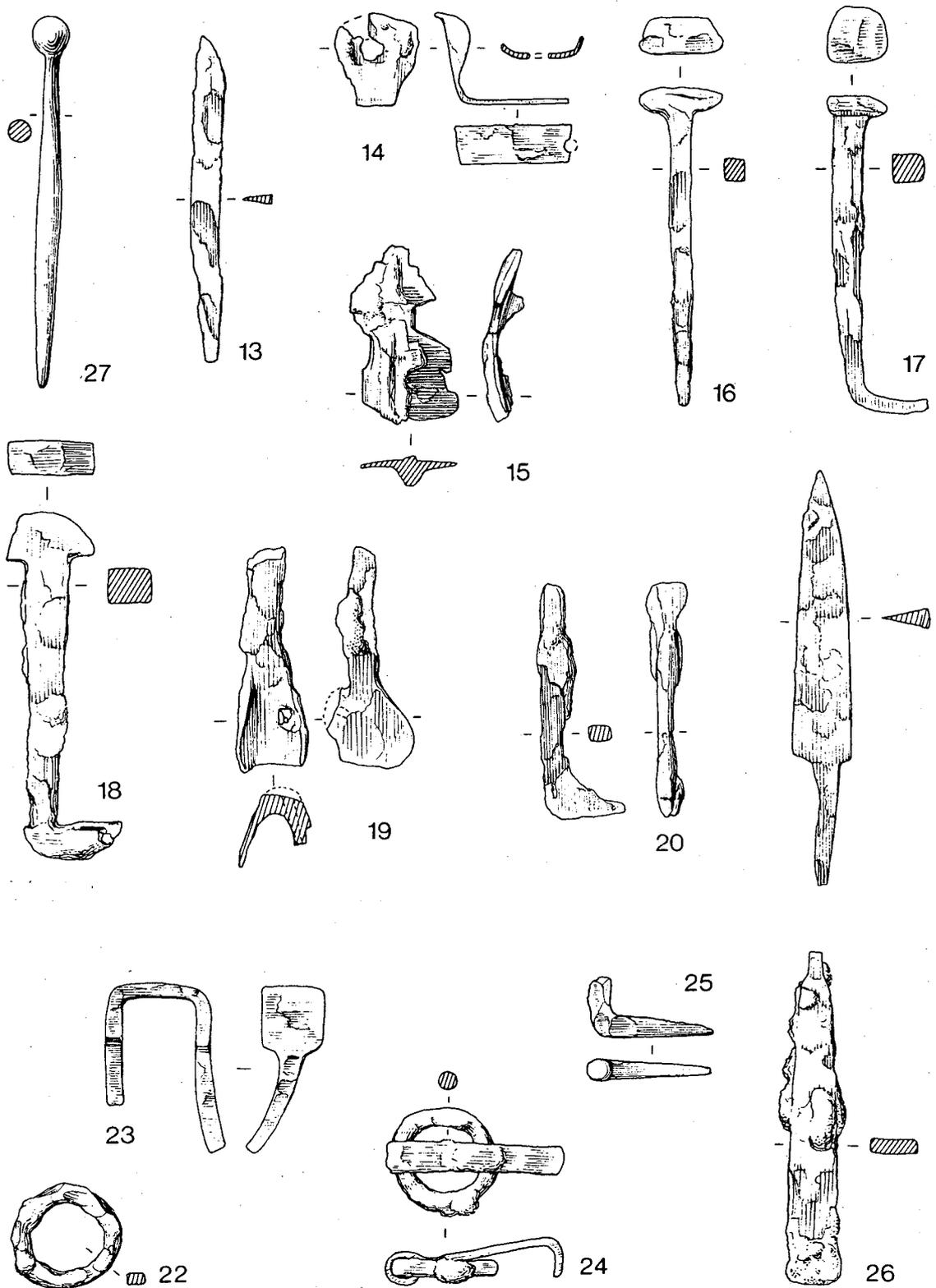


Figure 7. Iron objects and bone pin.

Unstratified

11. Shaped ornamental attachment. Notched ends with perforations containing the remains of two copper alloy rivets. The centre is decorated with an incised dot and circle design. This is possibly a late Roman belt-fitting (see Bushe-Fox 1949: pl. LIII, no. 209).
12. Probably a terret ring, broken and expanded.

Iron Objects

(Fig. 7)

Site 1, Layer 2

13. Knife, probably with a broken tang (see Manning 1976, Type 10).
14. Piece of binding with one end flattened into a circular shape and perforated with a roughly circular hole, the other end is broken through the perforation, probably used for binding a wooden object.
15. Part of a collar (with traces of wood adhering) for joining wooden water-pipes.
16. Large T-head nail (Manning 1976, Type 3).
17. Large nail with roughly rounded flat head (Manning 1976, Type 1).
18. Large nail with diamond-shaped head (Manning 1976, Type 2).

Site 1, Room 4, Green Clay Make-up

19. Part of a socketed implement with a broken shaft. The socket has a nail for fastening the haft.

Site 1, Room 4, Layer 4

20. Piece of binding, bent at a right-angle at one end, the other end flattened and perforated but broken through the perforation.

Unstratified

21. Complete knife, the commonest of Romano-British knife types (Manning 1976, Type 15).
22. Complete ring.
23. Large, broad staple.

Site 2, Layer 3, Exterior

24. Ring with loose piece of flat strip which is bent over at one end, the other being attached to the ring.

25. Small door hanger.

Site 2, Room 4, Layer 6

26. Chisel blade with the tang broken off, probably a mortice chisel.

Not illustrated: Several unidentified fragments and part of a stylus? from Site 2, Layer 2. Discarded by excavator, 167 complete and part nails ranging in length from 2½ in (73 mm) to 3½ in (99 mm) found on both sites.

Worked Bone

(Fig. 7)

Site 1, Room 3, Layer 4

27. Complete pin with a circular head, bulbous shaft 2¾ in (70 mm) long.

Jet

(Confirmed by Dr Anderson)

Not illustrated: Two joining pieces of flat jet, ¾ in (19 mm) by ⅝ in (15 mm), ⅛ in (3 mm) thick, with one side polished.

Glass

By the late D. Charlesworth
(Figs. 8 & 9)

This group of over a hundred fragments is particularly interesting as it dates to the first half of the fourth century. The vessel fragments are nearly all in poor quality glass with striations and bubbles. Some of the glass is colourless, the rest a faint greenish colour and on many pieces is a brown film of weathering. In no case has enough of any vessel survived for its shape to be reconstructed and most of the fragments are quite featureless. The only piece which might be a third-century survival (no. 28) is a small fragment of cut glass. All the glass is probably Rhenish.

Site 1, Layer 2

28. Part of the 'cage' in good, colourless glass from a cage cup decorated with a circular grille (see Harden & Toynbee 1959: 179ff.).
29. Three pieces of greenish glass from the same vessel on which a cutting wheel appears to have been used only for the faint, intersecting, straight lines. The rest of the pattern is made up of short lines which have been cut free-hand with a flint or diamond point. Even the line outlining the

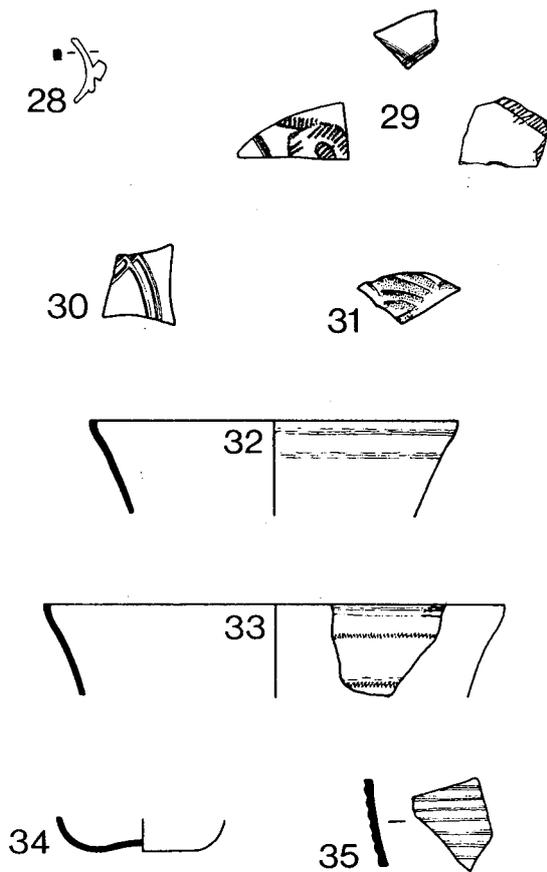


Figure 8. Glass.

- circle, which at first glance appears continuous, is made up of a series of short lines and peckings (see Harden 1960: 45ff. & 64, fig. 29).
30. Small fragment of colourless glass with part of a wheel-cut design of intersecting lines on it, from either a flask or a bowl. In metal and firmness of cutting it resembles the rim fragment no. 32. Third or fourth century (see Fremersdorf 1939: 17, fig. 3).
31. Fragment of colourless glass with shallow, unpolished facets. Probably fourth century (see Meates *et al.* 1950: 26; also Meates 1987: 127-9).
32. Beaker rim fragment, unworked rim with faint wheel-cut lines below. Probably fourth century, conical shaped beaker (see Charlesworth 1959: pl. III, no. 1; Webster 1950: 73).
33. Beaker rim fragment, unworked rim with series of faint wheel-cut lines below. Below this is a line made up of a series of incisions, and a similar double line lower down, with a faint wheel-cut line above it. These lines have the appearance of the rouletting found on some colour-coated

pottery (see Charlesworth 1959: pl. III, no. 1; Webster 1950: 73).

34. Base of a beaker in poor quality greenish glass (see Charlesworth 1959: pl. III, no. 1; Webster 1950: 73).

Site 1, Room 3, Layer 4

35. Fragment of colourless glass, outer surface fluted, inner surface smooth.

Site 1, South Exterior, Layer 4

36. Part of a rim in greenish glass with bubbles and striations, rounded in the flame.

Site 1, Exterior Drain, Feature 70

37. Part of the neck of a flask in greenish glass with a collar of dark blue round it. Flasks with a collar round the neck are frequently found in the later-Roman period, usually in a two-handled globular form but there is no sign of handles having been attached to the collar in this example.

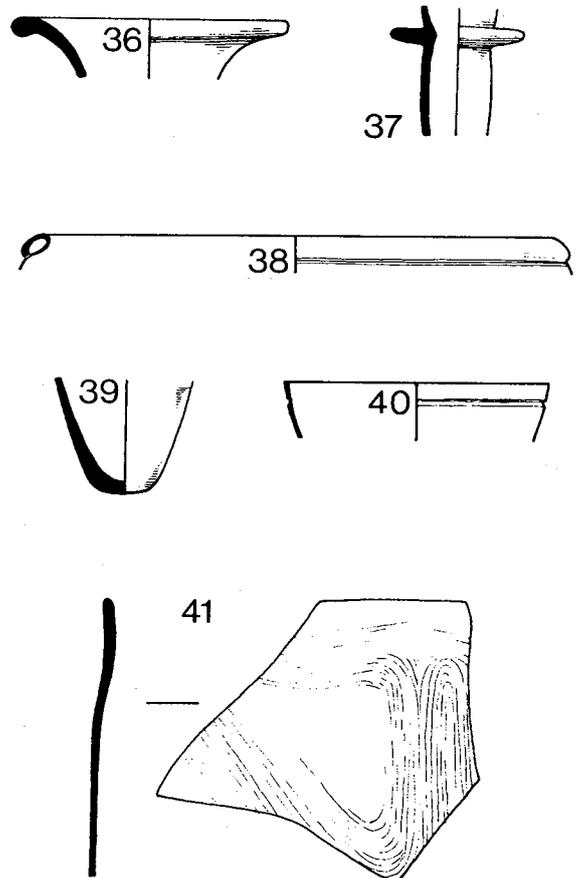


Figure 9. Glass.

Site 2, Room 4, Layer 8

38. Outfolded hollow tubular rim, probably from a bowl, in blue-greenish glass, a type which is found throughout the Roman period.

Site 2, Exterior, Layer 3

39. Base of a beaker or small flask in bluish-green glass, probably first to second century.

Unstratified

40. Beaker rim fragment in good colourless glass with wheel-cut line below rim, polished. Pre-fourth century.

Window Glass

41. A quantity of free-blown, 'crown', window glass was found. This is all in green or yellowish-green metal with small bubbles elongated in the spinning of the glass. The illustrated example is from Site 1, Layer 2.

Geology of Worked and Utilised Stones

By the late Dr F.W. Anderson

Altogether 50 specimens were described and, where possible, given proximate identifications such as appear below and on pp. 97, 101 and 105. Most of the building stone is an oolitic limestone, apparently one of the Lincolnshire Limestone Group and probably from Barnack (c. 25 m/40 km due north), except for Figure 10, no. 43 which resembles a fine-grained variety of Weldon (c. 20 m/32 km NW). There were also fragments of tufa (?bath lining: ?from the Hitchin area: c. 20 m/32 km SSE) as well as Cornbrash, Greensand, shelly ragstone, coarse shelly oolitic limestone and carstone, all from outside the immediate area, or (some) possibly from boulders in the Drift which also provided the 'glacial stones' for the foundations, and pebbles seemingly used as 'polishers'. One fragment of roofing tile was Collyweston Slate (from c. 35 m/56 km WNW), others included Swithland Slate, from Charnwood Forest: an example from the Roman villa at Mountsorrel (50 m/80 km NW: VCH 1907 (Leicester 1), 215) is in the Sedgwick Museum, Cambridge. In addition all the available mosaic cubes and waste material were examined: 177 tesserae and 46 groups of worked waste from Site 1, and 206 individual tesserae, 11 pieces of multicoloured mosaic and 48 larger fragments of surviving pavements from Site 2. The results are tabulated

on p. 97. The millstones are of Millstone Grit — probably from Yorkshire, like the hard white chalk — and of Hertfordshire pudding-stone. [The single piece of coal may not seem significant but it is clearly from a domestic 'coal bunker' excavated at Waternewton, part of a Roman 'ribbon development' some 20 m/32 km due N (Greenfield *et al.* forthcoming), that coal was normally used in this way and area, and easily obtainable, probably from East Midlands outcrops. L. Biek]

Architectural and Sculptural Fragments

Nos. 42–4 & 46–7 by Sarnia Butcher (1966) (Fig. 10)

Site 1, Layer 2

42. Part of base of a small column, mouldings unorthodox. Maximum diameter 12¹/₂ in (310 mm). Shelly oolite.

Not illustrated

Site 1, Layer 3

Fragment of column shaft similar to the previous example. Shelly oolite, burnt.

Site 1, Layer 2

Complete roof slate with a pierced nail hole, dark grey calcareous shale (Carboniferous).

Unstratified

Two complete triangular roof slates with pierced nail holes, of dark grey calcareous shale.

A fragment of a roof tile with a pierced nail hole. Collyweston Slate.

Three slate fragments: blue, pale green, and a hard, purple micaceous sandstone (?Swithland).

Site 2, Layer 2

43. 9 in (228 mm) wide, 10¹/₂ in (266 mm) deep, 2¹/₂ in (63 mm) thick. Roughly rectangular slab, crudely worked on all sides but one, presumably the only one meant to be seen. This has a *cavetto* moulding, and is also curved laterally. The rectangular piece cut out of one side is probably due to its reuse for a different purpose. Oolitic limestone (Lincolnshire Limestone). One of two similar slabs, (see also no. 44).
44. 6¹/₂ in (158 mm) wide, 10³/₄ in (273 mm) deep, 3¹/₂ in (89 mm) thick. Similar to no.

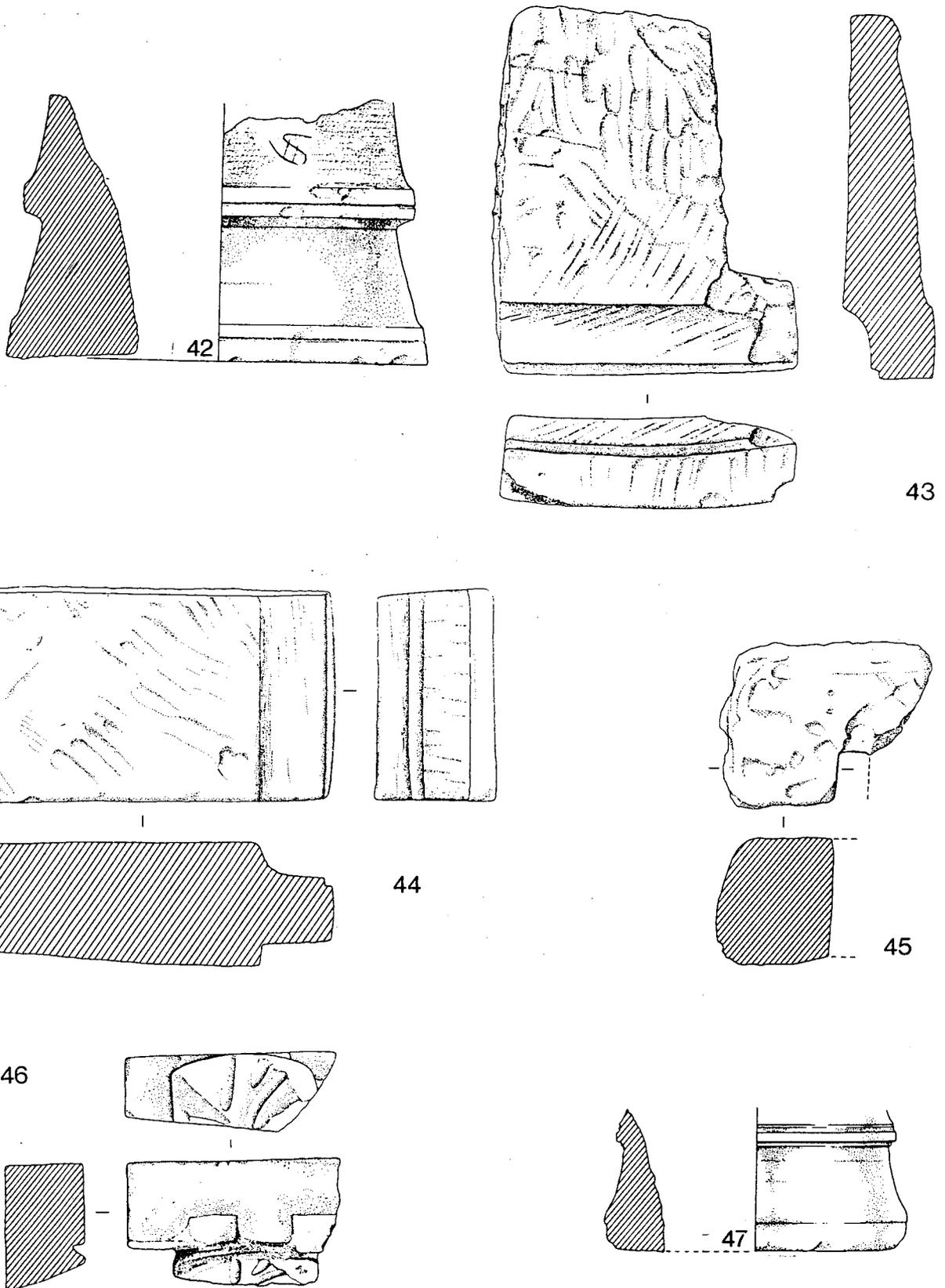


Figure 10. Architectural and sculptural stonework.

43 above but thicker, narrower and lacking the lateral curve; the moulding is almost identical. Shelly oolite (Lincolnshire Limestone).

These two pieces are probably from the same feature, possibly from a segmented pediment over a door or window. The radius of the curve of no. 43 gives the width of the opening as about 5 ft 4 in (1.63 m) (information from Dr D.S. Neal). The use of separate blocks of freestone for the mouldings seems to imply that the wall face in which they were set was of rubble or brick.

45. Fragment of a socketed base. Original width 7¹/₂ in (190 mm), depth 2³/₄ in (70 mm). Shelly oolite (Lincolnshire Limestone).

Site 2, Room 4, Layer 6

46. 6 in (152 mm) wide, 2¹/₄ in (57 mm) deep, 3¹/₂ in (89 mm) high. Perhaps a part of a small niche sculpture or a tombstone. Shallow dentils are partly obscured by a curving feature which is sharply recessed: this might be the top of a canopy over a figure. Oolite (Lincolnshire Limestone).

Unstratified

47. Part of a base of a small column. Maximum diameter 9 in (228 mm). Both this and no. 42 are likely to have been used on half-walls. Shelly oolite (Lincolnshire Limestone).

Not Illustrated

Site 2, Layer 2

Three fragments of column shaft that do not join together, though they all probably belonged originally to the same shaft. Original diameter of shaft about 9 in (228 mm). All are burnt pink. Shelly oolite (Lincolnshire Limestone).

Millstones

(Fig. 11)

Site 2, Layer 3

48. Two fragments of upper millstone. Original diameter 2 ft 8 in (812 mm) which suggests a mechanical type, with concentric grooves 1¹/₂ in (35 mm) in from the edge on both upper and lower surfaces. Coarse grit, red (burnt?).

Surface Finds

49. Fragment of upper millstone. Coarse, pebbly sandstone.
50. Fragment of upper millstone. Coarse, pebbly grit.

51. Fragment of upper millstone, of 'beehive' type. Hertfordshire Pudding-stone.

Not illustrated

Site 1, Layer 2

Fragments of two millstones. Millstone Grit and Hertfordshire Pudding-stone.

Site 1, Room 5, Layer 3

Fragment of millstone. ?Millstone Grit.

Site 2, Layer 2

Fragment of millstone. Coarse quartz grit, red, possibly burnt.

Site 2, Exterior, Layer 3

Fragment as previous example.

Surface Finds

Fragments of two millstones. Millstone Grit? and Hertfordshire Pudding-stone.

Flint

By Elizabeth Healey
(Fig. 12)

The four flint artefacts recovered from Site 1 were found in Layer 7 (*cf.* the Iron Age pottery below), beneath the old ground surface (Layer 5) in Room 6, sealed by a fourth-century Roman deposit. They comprise three flakes and one struck nodule, made of good quality flint. Further details are available in the site archive.

None of the artefacts is diagnostic and their date is uncertain. The scarring on two (nos. 53 & 55) truncates corticated scars which may indicate the reuse of older artefacts lying around, this may suggest that these particular artefacts are contemporary with the Iron Age deposits into which they are incorporated. Flint is of course quite commonly found on Iron Age sites and its contemporaneity is discussed by Saville (1981). However, it may be observed that in general parameters (e.g. squat shape and obtuse, striking platforms) these three flakes do conform to those described from West Harling, Norfolk (Clark & Fell 1953: 34f.).

Site 1, Layer 7

52. Flake (1.41 mm long by 29 mm broad and 8 mm thick) Scarring on dorsal face: two scars from same platform. Termination: slight hinge.
Butt end: diffuse bulb.
Raw material: dark grey flint, inclusions, translucent.
Cortex: c. 25% distal end, unrolled.

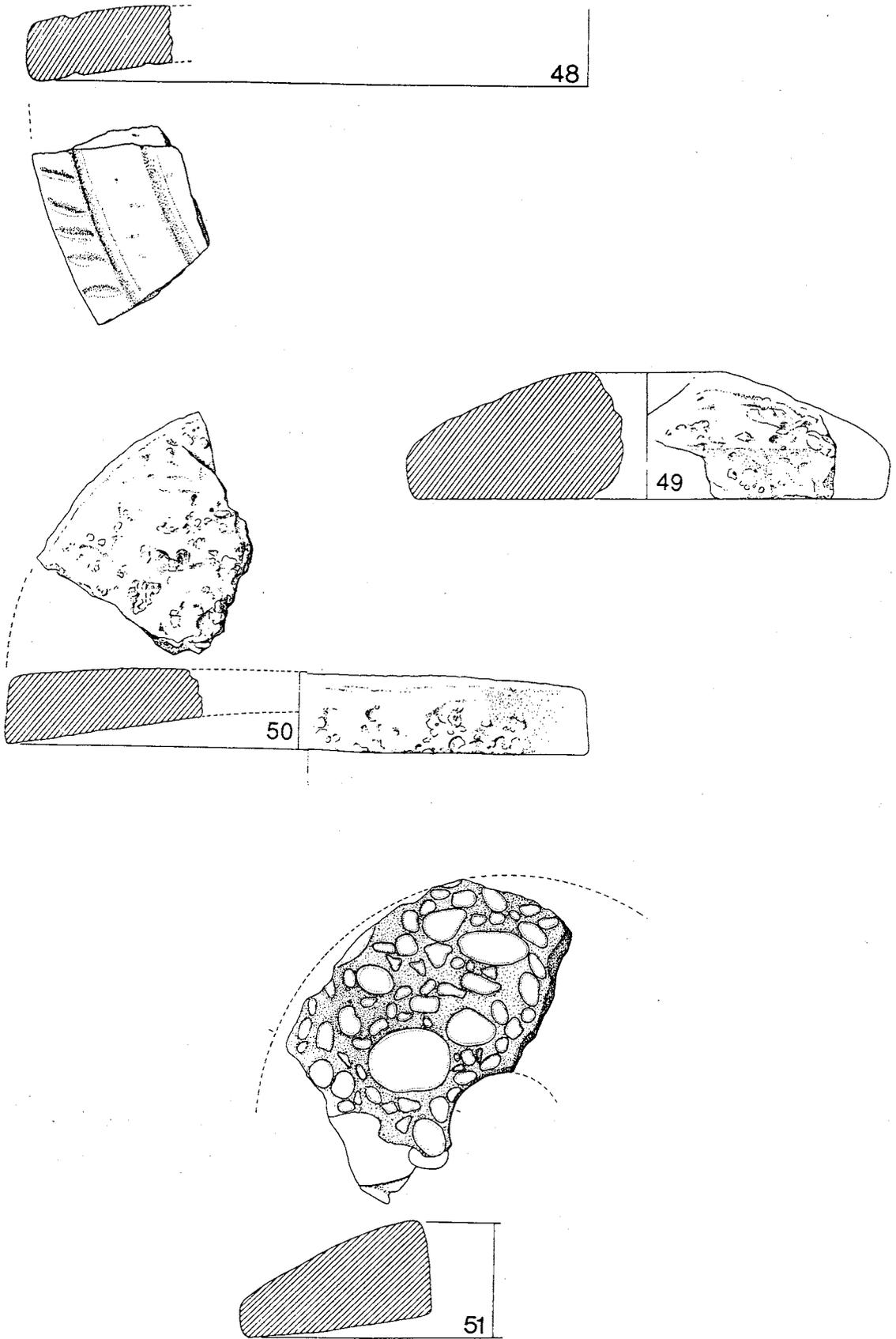
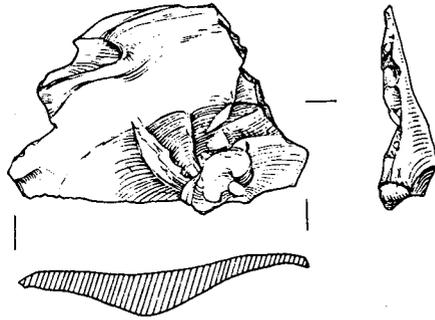
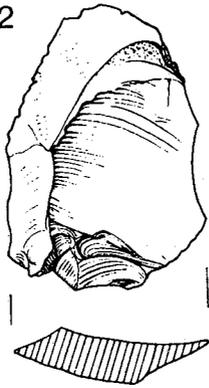
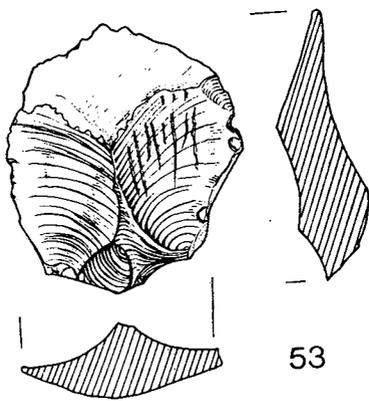


Figure 11. Millstones.

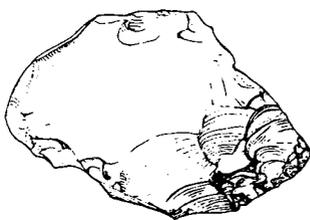
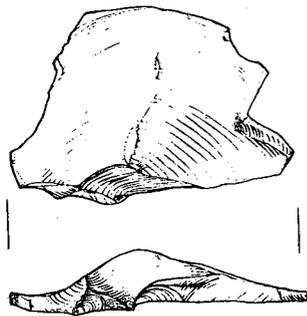
52



54



53



55

Figure 12. Flint.

53. Flake (1.38 mm long by 35 mm broad and 6 mm thick)
Scarring on dorsal face: three scars from same platform and one from platform at angle.
Termination: thin.
Butt end: striking platform plain (14 by 8 mm), angle obtuse, two ring cracks.
Edge damage: right side.
Raw material: dark grey flint, translucent. One old (i.e. truncated) corticated scar.
Cortex: c. 25% distal end, fresh.
54. Flake (1.28 mm long by 41 mm broad and 8 mm thick)
Scarring on dorsal face: one scar, probably from same platform.
Termination: hinge (cortical).
Butt end: striking platform three, crude facets, with some 'retouch' (probably damage) 28 by 9 mm, angle markedly obtuse, prominent bulb of percussion.
Raw material: mid-dark brown flint, inclusions, translucent.
Cortex: trace on right side near butt and on hinge termination.
55. Struck nodule (52 mm long by 40 mm broad and 27 mm thick, weight c. 50 gm)
Irregularly struck nodule with battering in concave edges, possibly plough damage or from use as a 'strike a light'.
Raw material: dark brown-black flint, translucent, flaked through corticated scars.
Cortex: 30%, unrolled.

Pottery

Iron Age Pottery

By Dr Jeffrey May
(Fig. 13)

The quantity of pottery is too small to be certain that it is a representative sample. The 79 sherds all come from the same level on the site, and despite minor variations in fabric and form, give an impression of being a homogeneous group. It seems reasonable to suppose that the pottery is of broadly similar date.

Forms

Most if not all of the vessels were jars. Three rims (nos. 2-4) were thickened and decorated with fingertip impressions on top. Four other rims (nos. 5-8) were flattened on top as well, giving the appearance of a slight bead. The thickness of the coarsest wares ranges from 6-16 mm, two sherds of finer ware are 4 mm and 8 mm thick.



Figure 13. Iron Age pottery.

Fabrics

The pottery was all hand-made, and the fabrics are fairly hard to the touch. Several fillers are discernible by eye, including quartzite, shell, and calcite (including chalk, presumably from the Chilterns some 30 km to the south).

Decoration

In addition to the three finger-printed rims (nos. 2–4), one sherd (no. 11) has horizontal, incised grooves. Three of the body sherds have slight scoring, but none has the deep scoring of the Ancaster-Breedon type, to be seen over a wide area of eastern-central England in the third to second centuries BC, and which characterises as much as 25% of the pottery from Breedon-on-the-Hill in Leicestershire (Kenyon 1950: 26).

Grain Impressions

By Mr R.C. Alvey

Sherd RF 849 has an impression of the ventral side of a grain of *Bromus* sp. (length 5 mm, width 1.8 mm), and three impressions of spikelet parts of possibly *Triticum spelta* L.

Sherd RF 862 has part of a similar spikelet.

Sherd RF 861 has two indistinct impressions, possibly of *Triticum spelta* L. (one 4.5 mm long and 2.2 mm wide, the other is not measurable).

Discussion

Thickened and finger-printed rim tops on simple rounded jar forms are common in the middle and later first millennium BC in eastern-central England. Much new information has been obtained in recent years about these periods by Dennis Jackson in the middle Nene Valley, 20 miles north of Great Staughton, and by Frances Pryor at Fengate, 25 miles north of this site. Both areas have yielded radiocarbon dates which, although few in number and giving rise to some problems, nevertheless provide us with some independent insights into chronology to compare with assessments based on notions of topological development.

The chronological limits of the Great Staughton pottery can be defined at both ends of the range by contrasting it with pottery now fairly convincingly placed in the later Bronze Age, and with the wheel-turned wares of the late La Tène period. At Great Oakley, Northants. (Jackson 1982: fig. 9), thin-walled jars quite unlike those

from Great Staughton were associated with radiocarbon dates of 2630±90 BP (HAR-4494, cal BC 890–785, or 985–530 at 1 and 2 standard deviations*) and 2500±80 BP (HAR-4064, cal BC 796–420, or 820–400 at 1 and 2 standard deviations*). Pryor's Group 1 'pre-scored ware' pottery from Fengate may encompass a lengthy period of time and represent perhaps more than one phase, in which case an early radiocarbon date from Newark Road of 2740±80 BP (HAR-773, cal BC 995–820 or 1090–800 at 1 and 2 standard deviations*) need not be discounted on the strength of two later dates from Vicarage Farm of 2290±125 BP (UB-822, cal BC 470–200, or 790–50, at 1 and 2 standard deviations*) and Cat's Water of 2310±60 BP (HAR-3196, cal BC 405–375, or 520–210, at 1 and 2 standard deviations*), particularly since the latter was associated with only one vessel, a foot-ring bowl, of a form unlike others of a tentatively later Bronze Age date. Further afield, the date of 2253±80 BP at Washingborough (Q-1163, cal BC 400–200, or 465–110 at 1 and 2 standard deviations*, *pace* Coles *et al.* 1979) was associated with pottery which had been redeposited, as the excavation report makes clear, and Washingborough is not a strong argument for the longevity of later Bronze Age ceramic styles in eastern England (*pace* Pryor 1984: 143).

The lower chronological limit can be judged by the appearance of wheel-turned wares in the Fen basin in the mid-first century BC for example at Aldwincle (Jackson 1977) and at Fengate (Group 3, Pryor 1984, and microfiche). Although a small proportion of rough-looking hand-made wares are to be found on most sites during the final phase of the Iron Age, the total absence of wheel-turned wares from these 79 sherds may be significant.

We are left with a date range which could run from about the fifth century to c. 100 BC, and it is to the Northamptonshire sites that we might chiefly look for comparisons with our material. Twywell (Jackson 1975) provides the closest match with Great Staughton, and although the pottery from that site is not published explicitly in groups related to the suggested stratigraphical development of the site, the rarity of Ancaster-Breedon style scoring, and the presence of finger-tipping along rim-tops, suggests contemporaneity with Twywell's earlier material. A radiocarbon date of 2230±90 BP (NPL-225, cal BC 395–185, or 410–90

(*Standard deviations calculated using Stuiver & Pearson 1986, or Pearson & Stuiver 1986, radiocarbon date citation updated by Alex Bayliss of AM Lab, 1994.)

at 1 and 2 standard deviations*) from a pit apparently among the earlier features at Twywell, suggests a fourth- to third-century BC range for such pottery, although it should be noted that no pottery of significance was actually associated with the Twywell date. A similar date would also be appropriate for comparable pottery from the hill-fort of Wandlebury (Hartley 1957) where, although undated by radiocarbon, similar pottery was found with finer wares echoing early La Tène style wares (Hartley 1958: fig. 7, 16).

Site 1, Layer 7

1. Rim of a jar or bowl in relatively fine grey ware with sparse quartzite filler, rim diameter c. 180 mm.
2. Rim of a large jar, ware grey in the core with brick-red surfaces, sparse quartzite filler. Rim upright or slightly everted, with delicate finger-tipping round the top.
3. Rim of a jar in coarse grey ware with orange-brown surfaces, everted as shown, or possibly more upright, shallow finger impressions round the top.
4. Rim of a large jar in coarse red brick ware, with finger-tip (or possibly bone) impressions on the flattened everted top.
5. Rim of a jar, ware grey in core with red-brown surfaces. Rim thickened and flattened on top to a squarish bead, diameter c. 160 mm.
6. Rim of a jar in dark grey ware with partly-eroded filler, smoothed externally; rim slightly thickened at the top.
7. Rim of a jar in black flaky ware with the filler partly eroded leaving vesicular surfaces. Rim thickened and flattened on top, diameter c. 150 mm.
8. Rim of a jar in coarse grey ware with red-buff surfaces, fine chalk filler. Rim top thickened and rounded.
9. Rim from a large jar in grey ware with grey or buff surfaces, calcite filler up to 8 mm across, together with other stone.
10. Rim of a bowl in coarse grey ware, red-buff on the outside, with liberal filler including calcite and shell.
11. Wall sherd from jar in grey-brown ware smoothed externally. Two horizontal grooves, three slight scratches above may be accidental.
12. Base of a jar in grey ware, red-brown externally. Base flat and very slightly pinched out at the base angle.
13. Base of a jar in dark grey ware, gritty with quartzite filler. Angle and underside damaged but clearly pinched out.

Not illustrated

14. 66 formless body sherds in fabrics comparable with nos. 1-13. Most, if not all, may have come from jars and very few show curvature. Three sherds show slight traces of scoring.

Samian

By B.R. Hartley
(Not illustrated)

Site 1, Room 4, Layer 3

Form 37 base, Central Gaulish. The only decoration surviving is part of a beaded rosette (at the bottom of a vertical bead-row?). This strongly suggests a pre-Antonine date for the sherd, AD 100-130 probably. The fractures are scarcely worn.

Site 1, Exterior, Layer 3

Form 37, rim fragment. Central Gaulish Ware, and so second century. Perhaps from the same vessel as the previous example.

Site 2, Room 4, Layer 6

Form 31 or 31r, probably the former. Probably Central Gaulish though the fabric is rather pink. Presumably Antonine.

Site 2, Room 4, Layer 9

Form 33. Central Gaulish. Antonine.

All the Samian is probably residual.

Coarse Wares

(Figs. 14 & 15)

The illustrated pottery is a selection from a type series originally chosen by the excavator. Sadly the remainder of the pottery was then discarded, so it has not been possible to comment upon the relative proportions of fabrics and types of variants through time. However, since the fine wares, Nene Valley and Oxford colour-coats, correlate well with the dating of the coins, (c. AD 330-60), the illustrated series will stand as a reasonably well-dated selection for reference purposes. With the exception of no. 60 the illustrated pottery is very typical and common on sites of this period in the area.

Fabric types

Fabric 1 (Nene Valley)

Hard, dense fine ware, greyish-white with dark brown or dark grey colour-coat on both surfaces. Fig. 14, nos. 1-4, 17, 21-4, 26, 29, 30, 42, 43, 45-7; Fig. 15, nos. 53, 61.

Fabric 2 (Oxford)

Softish, orange micaceous fine ware, quite dense, fractures frequently rounded, feel smooth, sometimes slightly powdery. Orange-brown colour-coat on both surfaces. Fig. 14, nos. 5-7, 25, 38, 44; Fig. 15, nos. 55-6, 62.

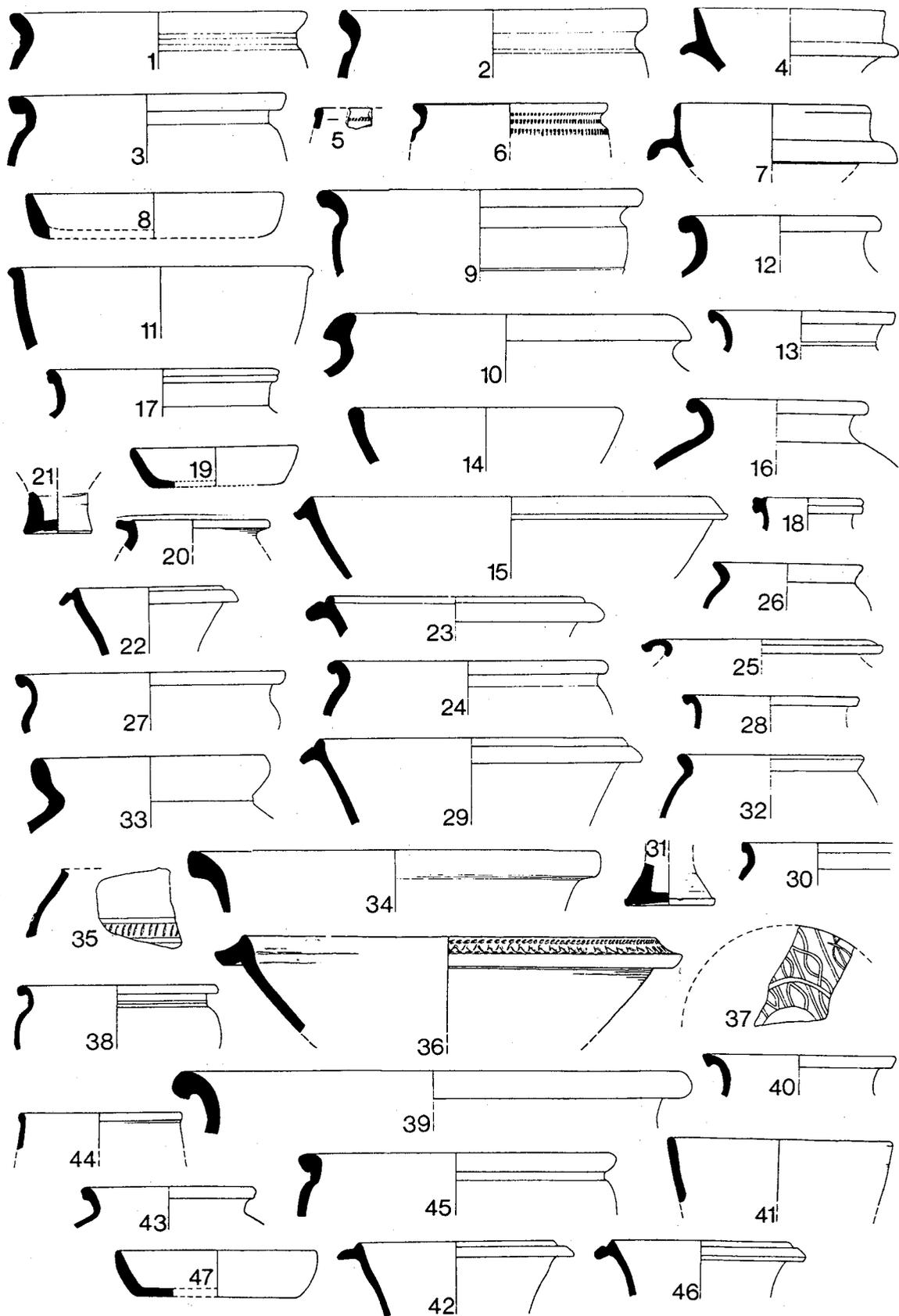


Figure 14. Romano-British pottery.

The grey wares, fabrics 3-5 quite possibly originate in the Nene Valley, where they were made alongside the fine wares. Fabric 5 may have come from a kiln excavated at Godmanchester, c. 9 miles to the northwest. Another kiln was found in the late 1950s c. 2½ miles to the northeast but there is no evidence of what was being produced (information from Mr G. Rudd).

Fabric 3

Grey ware, softish, quite dense, slightly micaceous, powdery feel, mid-grey throughout. Fig. 14, nos. 8, 31-2; Fig. 15, no. 48.

Fabric 4

Greyware, hard, dense micaceous, grey core with dark grey

margins (core sometimes orangey-buff), feel quite smooth. Fig. 14, nos. 9-11, 18, 19, 37; Fig. 15, no. 49.

Fabric 5

Greyware, as Fabric 3 but harder, almost no mica inclusions, smooth feel. Fig. 14, nos. 12, 33, 39; Fig. 15, nos. 54, 60.

Fabric 6

Softish, pale orangey-brown often with a dark grey core. Frequent shell inclusions ranging from very fine to coarse (2 mm), feel soapy. This is a well-known fabric in the Midlands and East Anglia. Fig. 14, nos. 13-15, 16, 20, 27-8, 34-6, 40, 41; Fig. 15, nos. 51-3.

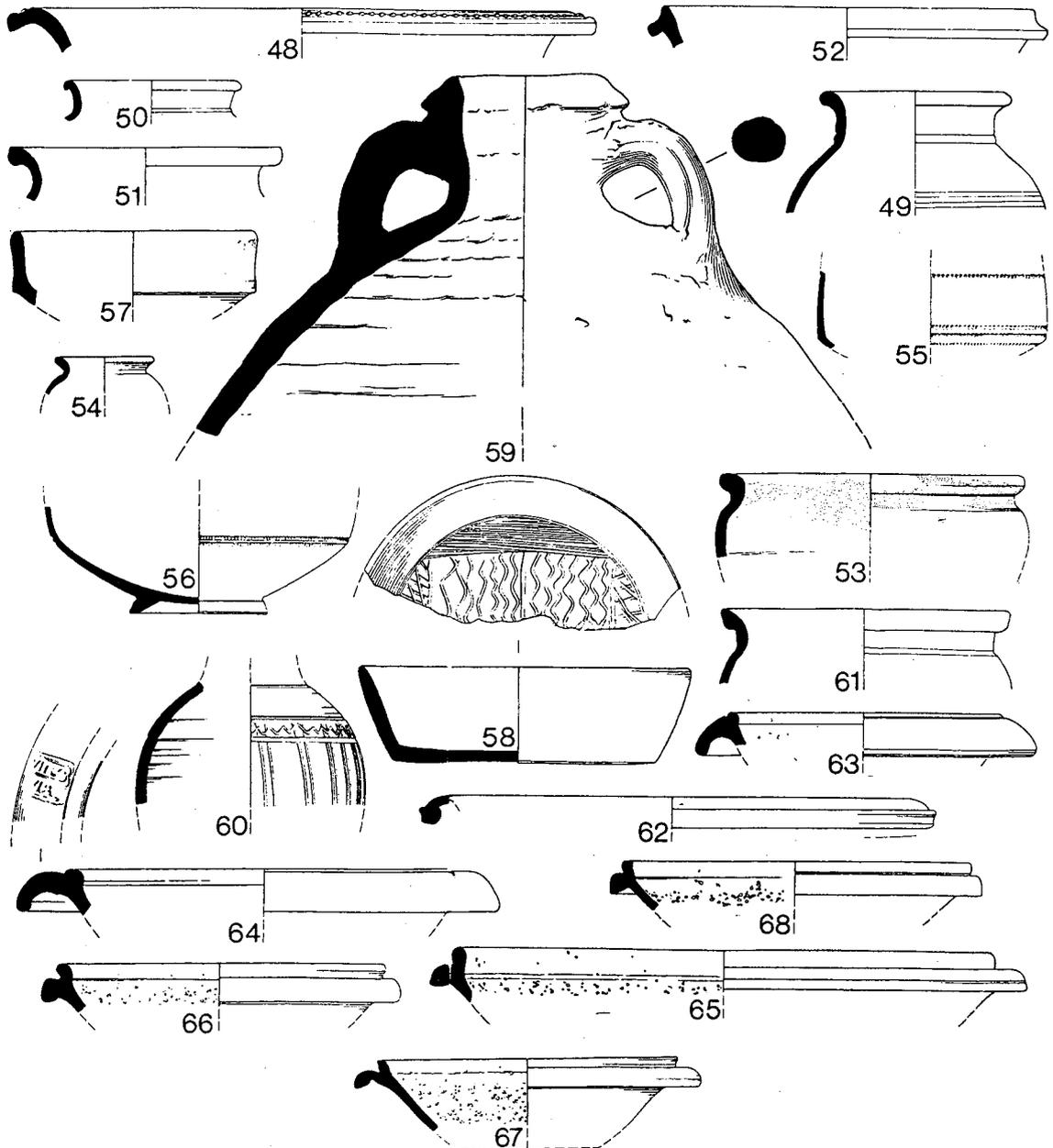


Figure 15. Romano-British pottery and mortaria.

Fabric 7

Rather soft, orange, quite dense fabric but with frequent, fine sub-rounded quartz(?) inclusions and vesicles, plus fine, occasional sub-rounded, chalk inclusions. Grey-brown colour-coat on both surfaces but pimply feel where colour-coat is missing. Fig. 14, nos. 16, 57.

Fabric 8

Quite hard, dense fabric, very micaceous, frequent very fine quartz(?) inclusions, frequent very fine to fine calcite inclusions, quite smooth feel, very dark brownish-grey. Resembles Black-Burnished Ware 1. Fig. 15, no. 58.

Fabric 9

Amphora, hard, dense well-fired orange-buff fabric, greyish core, probably South Gaulish. Fig. 15, no. 59.

Form Type Series**Site 1, Layer 2**

1. Wide-mouthed bowl with grooves on neck, Fabric 1. Mauve-brown colour-coat (see Howe *et al.* 1980: 13, fig. 1, no. 7). Third century. This sherd is possibly residual or the form may have survived longer than is suggested by the dating of this parallel.
 2. Large wide-mouthed bowl, Fabric 1. Mauve-brown colour-coat (Howe *et al.* 1980: 12, fig. 1, no. 7).
 3. Wide-mouthed bowl, Fabric 1. Mauve-brown colour-coat on interior of rim and neck. Red-brown colour-coat on interior and exterior (similar to Howe *et al.* 1980: 24, fig. 7, nos. 75 & 76). Fourth century.
 4. Flanged bowl. Imitation samian form 38, Fabric 1. Worn mauve-brown colour-coat (Howe *et al.* 1980: 24, fig. 7, no. 83). Late third to fourth century).
 5. Bead rim bowl with single line of rouletting beneath bead, Fabric 2. Red colour-coat (see Young 1977: 162, fig. 61, C68). AD 300–400+.
 6. Bowl with roll rim and carination on shoulder. Three lines of rouletting on neck and shoulder, Fabric 2. Red colour-coat. (Young 1977: 164, fig. 62, C75). AD 325–400+.
 7. Flanged bowl, Fabric 2. Red colour-coat. Imitation Samian form 38. Joins sherds from Room 4, Layer 3 (see no. 25 below) (Young 1977: 160, fig. 59, C51). AD 240–400+.
 8. Shallow dish, Fabric 3.
 9. Wide-mouthed bowl, Fabric 4.
 10. Large wide-mouthed bowl, Fabric 4.
 11. Dish or bowl, Fabric 4.
 12. Jar or bowl, Fabric 5.
 13. Jar/bowl, Fabric 6.
 14. Dish, Fabric 6.
 15. Flanged bowl, Fabric 6.
 16. Jar, Fabric 7.
- Site 1, Room 3, Layer 3**
17. Jar/bowl, Fabric 1, but softer and paler than other
- examples. Light red colour-coat (see Howe *et al.* 1980: 22, fig. 6, no. 70). Fourth century.
18. Jar, Fabric 4.
 19. Small shallow dish, Fabric 4.
 20. Jar or bowl, Fabric 6.
- Site 1, Room 4, Layer 3**
21. Base of beaker, Fabric 1. Mauve-brown colour-coat. Burnt.
 22. Flanged bowl, Fabric 1. Dark grey colour-coat (Howe *et al.* 1980: 14, fig. 2, no. 21). Third to fourth century.
 23. Large flanged bowl, Fabric 1. Mauve-brown colour-coat (Howe *et al.* 1980: 24, fig. 7, no. 76). Fourth century.
 24. Wide-mouthed jar/bowl, Fabric 1. Mauve-brown colour-coat (Howe *et al.* 1980: 24, fig. 7, no. 76). Fourth century.
 25. Flanged bowl or dish, Fabric 2. Red-brown colour-coat (see Young 1977, 160, fig. 59, C50). AD 325–400+. Joins sherds from Site 1, Layer 2, see no. 7 above.
- Site 1, Room 5, Layer 3**
26. Everted rim jar, Fabric 1. Dark grey colour-coat.
 27. Bowl, Fabric 6.
 28. Jar/bowl, Fabric 6.
- Site 1, Room 1, North Exterior, Layer 3**
29. Flanged bowl, Fabric 1. Mauve-brown colour-coat (a variant of Howe *et al.* 1980: 24, fig. 7, no. 79). Fourth century.
 30. Jar/bowl, Fabric 1. Mauve-brown colour-coat on exterior and red-brown on interior (a smaller version of Howe *et al.* 1980: 24, fig. 7, no. 75). Fourth century.
 31. Pedestal base of jar or beaker, Fabric 3.
 32. Bowl, Fabric 3.
 33. Large jar, Fabric 5. Probably recessed for a lid.
 34. Large jar/bowl, Fabric 6.
 35. Wall sherd of jar or bowl, Fabric 6. Band of impressed? finger-nail incisions between parallel horizontal grooves.
- Site 1, Room 2, South Exterior, Layer 3**
36. Flanged bowl, Fabric 6. Slope of rim decorated with scored wavy line between parallel rows of stab marks.
- Site 1, Room 3, Layer 4**
37. Dish base, Fabric 4. Interior of base shows burnished decoration. These fourth-century dishes with burnished decoration are very common in these fabrics in the area, although this example and no. 58, have a more elaborate decoration than the usual wavy lines. Quite a large number of these dishes have been found in the area bearing scratched graffiti underneath, often a number, and occasionally a name (information from Mr G. Rudd).

Site 1, Room 4, Layer 4

38. Jar/bowl, Fabric 2. Brown-red colour-coat (see Young 1977: 164, fig. 62, C75). AD 325–400+.
39. Large wide-mouthed jar/bowl, Fabric 5. Tooling on top of rim to inside of vessel. This is overlaid with pinkish-white 'paint'.

Site 1, Exterior Drain, Feature 21

40. Jar or bowl, Fabric 6.
41. Bowl, Fabric 6.

Site 1, Room 4 Drain, Feature 69

42. Flanged bowl, Fabric 1. Mauve-red colour-coat (see Howe *et al.* 1980: 24, fig. 7, no. 79). Fourth century.
43. Jar, Fabric 1 (Howe *et al.* 1980: fig. 7, no. 76). Fourth century.
44. Bead rim bowl or beaker, Fabric 2. Red colour-coat.

Site 1, Exterior Drain, Feature 70

45. Large wide-mouthed bowl, Fabric 1. Mauve-brown colour-coat (Howe *et al.* 1980: 24, fig. 7, nos. 75, 76). Fourth century.
46. Flanged bowl, Fabric 1. Mauve-brown colour-coat (Howe *et al.* 1980: 24, fig. 7, no. 79). Fourth century.
47. Shallow dish, Fabric 1. Mauve-brown colour-coat (Howe *et al.* 1980: 24, fig. 7, no. 87). Fourth century.
48. Flanged bowl or dish, Fabric 3. Single band of oval-shaped depressions between grooves on top of rim.
49. Jar, Fabric 4.
50. Cooking bowl or jar, Fabric 6.
51. Cooking jar, Fabric 6.
52. Flanged bowl, Fabric 6.

Site 2, Layer 2

53. Wide-mouthed bowl, Fabric 1. Grey colour-coat, patches of brown 'paint' on rim (Howe *et al.* 1980: 24, fig. 7, no. 75). Fourth century.

Site 2, Exterior, Feature 3, Layer 3

54. Poppyhead beaker, Fabric 5.

Site 2, Room 4, South Exterior, Layer 3

55. Carinated bowl. Fabric 2. Imitation Samian. Lines of rouletting below neck and on carination. Red colour-coat (see Young 1977: 166, fig. 64, C81). AD 300–400.

Site 2, Northeast Exterior, Layer 3

56. Bowl, Fabric 2. Double line of rouletting with traces of white paint decoration over red colour-coat (Young 1977: 160, fig. 60, C55). AD 240–400+.

Site 2, Room 4, Layer 6

57. Bowl. Imitation Samian form 45, Fabric 7.

Site 2, Room 4, Layer 8

58. Dish, Fabric 8. Interior of base has burnished decoration. See no. 37 above.

Site 2, Room 4, Layer 9

59. Amphora, Globular type. Dressel 30(?). South Gaulish?

Site 2, Exterior, Feature 5, Stoke-hole

60. Jar, Fabric 5. Scored decoration on shoulder.

Unstratified

61. Wide-mouthed jar/bowl, Fabric 1. Grey-brown colour-coat (a variant of Howe *et al.* 1980: 24, fig. 7, nos. 75 & 76). Fourth century.
62. Flanged bowl or dish, Fabric 2. Red colour-coat. Faint traces of white 'paint' decoration on top of rim (Young 1977: 161, fig. 59, C50). AD 325–400+.

Mortaria

By Katherine F. Harley
(Fig. 15)

Site 1, Layer 2

63. Mancetter-Hartshill potteries, c. AD 140–80.

Site 1, Room 4, Layer 3

64. This mortarium has a fragmentary stamp of Cattanus, whose work can be attributable to the Mancetter-Hartshill potteries in Warwickshire. Other stamps of his are known from Aldborough, Haringworth, Northants, Little Chester and the pottery-making sites at Hartshill and Mancetter (*Manduessedum*). His rim-profiles point to a date c. AD 150–80.

Site 1, Room 4, Layer 3

65. Oxford potteries (Young 1977: 76, fig. 23, type M22). AD 240–400.

Site 1, Room 4, Fill of Feature 69

66. Oxford potteries (Young 1977: 76, fig. 23, type M22). AD 240–400.

Site 2, Layer 2

67. Oxford potteries (Young 1977: 75, fig. 21, type M18). AD 250–300.

Site 2, Room 3, Fill of Feature 2

68. Oxford potteries (Young 1977: 76, fig. 23, type M22). AD 240–400.

General Discussion

It is unfortunate that only a small part of the Iron Age occupation could be examined as this site could perhaps have provided some ideas about the Iron Age to Romano-British transition in the East Midland area. The partial examination of the Site 2, Phase 1 structure above is equally tantalising, especially since the adjacent mounds suggested that this phase was considerably more extensive than the second phase occupation.

The presence of a total of 908 coins from the two later phases is significant. Such a large number might have implications other than for dating. The coin evidence from the two sites is very similar, suggesting a beginning in the 330s AD with a life in the AD 330–60 range, the latest coins found embedded in the floor levels of Site 1 are of Magnentius and Decentius. Later coins from the covering rubble (of Valens, Gratian, and Theodosius) are all unstratified and therefore not useful for dating the villa occupation. Occupation levels in Site 2, Room 4, contained seven coins from c. AD 330–35. Later coins from the exterior occupation levels are of Valens and Valentinian II, but these could have been dropped after the house was abandoned.

The Site 1 total of 850 coins is most unusual for a site of this size, and presents a problem which is not easy to solve. The great majority of the coins (excluding those found unstratified throughout the covering rubble), were found in three main groups, in Room 3, Room 5, and on the south exterior. In these rooms the coins were found in the occupation silt, on the surface of the floors, in the fillings of features (Room 3), and embedded in the floor make-ups, suggesting that they had been deposited over a period of time during the occupation of the rooms and not as components of a single deposit which had subsequently become scattered. The deposit on the south exterior does suggest a scattered hoard as the concentration was confined to a small area about 2 ft (0.61 m) in diameter. Richard Reece (pers. comm.) has suggested that the bulk of the coins, which have the same composition as those lost individually on site, may have reached their place of rest after the life of the Site 1 building, e.g. during squatting or robbing or something similar.

It is tempting to suggest a religious or votive connotation for the large quantity of coins, particularly in view of the presence of the votive 'leaf' (Fig. 6, no. 8), but the leaf was found in a rabbit hole, and anyway the plan of the building does not suggest a religious function. With regard to the plan, Dr D.J. Smith has drawn

attention to the sideways as well as forwards projection of the wings. This feature is 'uncharacteristic of Romano-British villas but typical of farmhouses in *Gallia Belgica*' (Smith 1978: 117–47). It is possible that Great Staughton belongs to a group of fourth-century Romano-British farmhouses which represent 'modifications of the winged-corridor villa as it evolved in Britain, to suit the way of life of people accustomed to farmhouses of Belgo-German type' (Smith 1978).

Another unusual aspect of this site is the presence of the peacocks (apparently one of the earliest examples from Roman Britain) and the first records of quail and merganser. Although the peacock has important religious/mythological significance, both it and the quail are more likely to represent food; whereas the merganser's own (fish-)eating habits probably render it unpalatable. This, coupled with the large number of oyster shells (considering the distance from the Roman coastline), contrasts with the relatively modest size of the building.

Access to the site would appear to be from the Roman road (173d) which starts at Dorchester-on-Thames and joins the Ermine Street at Alconbury. The road should run between the site and Whitley Brook but there was no trace on the surface nor was any indication found during the excavation (information from Mr R.W. Bagshawe).

The dating of the pottery and other artefacts, and the mosaics, tie in well with the coin dating. The only exceptions are three of the mortaria (nos. 63, 64 & 67) and the Samian; these are probably residual and if so, suggest a possible second- to third-century date for Phase 1. Mr G. Rudd has also noted (pers. comm.) that the proportion of Samian represented in the plough soil over the site is much greater than the proportion of excavated samian to coarse wares. This lends further support to the suggested presence of an earlier establishment on the site.

Sadly, the human burials on Site 1 are undateable, though they must be late Roman or slightly earlier.

The main phases of Great Staughton may be summarised as follows:-

- I. Iron Age activity
- II. Period of abandonment(?)
- III. Construction and use of second to (?)third-century phase
- IV. Destruction/adaptation of same into fourth-century construction, probable construction of Site 1 (c. 330s), hypocaust systems(?) and insertion of mosaics (but in the case

- of the Site 1 mosaics possibly a little later than the construction phase)
- V. Period of use c. 330s–c. 360s, including domestic and possibly small-scale metalworking activities (Site 1), partial fire damage (Site 1) and possible strengthening of ?weakened roof timbers.
 - VI. Destruction/robbing of the buildings on Sites 1 and 2
 - VII. Insertion of human burials into the rubble layer covering Site 1.

SUPPLEMENTARY SPECIALIST REPORTS

Mortars and Plasters

By P.R. Payne, J.W. Haldane & L. Biek

Analysis of Material

Fifteen samples of various lime-based bedding, jointing and surfacing materials from Sites 1 and 2 were submitted for examination. They were digested in the usual way in hydrochloric acid, and the washed and dried insoluble residue was passed through a sieve train to determine the grading of the aggregate (Biek 1963: 233). The results are listed in Table 1.

Analysis of Results

The materials were divided into three groups depending on the nature of their acid-soluble aggregate:

- a. those with essentially natural aggregate;
- b. those with an aggregate consisting of a mixture of natural material and fired clay;
- c. those with an aggregate consisting almost entirely of fired clay.

Within each of these three groups comparison was made between the amounts and particle size distributions of the acid-insoluble aggregate of each material. The results of these comparisons (given as Similarity Values (SV) — where an SV of '0' indicates an identical particle size distribution) were subjected to a Complete Linkage Cluster Analysis, from which was produced a dendrogram (Fig. 16), demonstrating the degree of similarity between the materials and groups of materials in terms of their aggregate particle size distribution.

From this dendrogram can be derived the groups shown in Table 2. The limiting SVs used are 50 and 30 as these seemed to give the most useful results. This table shows the relationship between the groups and material type.

A less obvious relationship seems to exist

Table 1. Mortars and plasters: grading of aggregates.

Site Ref	AM	Lab no.	Context	Total weight of insoluble material*	Wt % insoluble material in sieve train (mesh per inch) retained on..... passed by						
					5	10	18	36	72	72	
Site 1											
RF491	Mo	1	590292	F1	32.10	0.2	4.1	3.8	5.37	10.4	78.2
RF492	Mo	2	590293	Room 1	52.60	1.8	0.5	2.0	7.3	71.8	16.6
RF552	Mo	3	590294	Room 2	79.53	2.0	1.9	1.7	12.3	64.8	17.3
RF553	Mo	4	590295	Room 2	44.38*	24.0	23.0	12.8	11.0	9.3	21.0
RF554	Mo	5	590296	Room 2	71.80	6.7	11.4	10.1	17.4	22.1	33.0
RF555	Mo	6	590297	Room 3	76.82	42.4	9.9	9.5	17.6	11.4	9.2
RF556	Mo	7	590298	U/S	60.35	35.0	20.2	14.0	11.1	7.9	11.8
RF704	Mo	8	590299	Grid 17 L2	66.63	1.0	0.6	0.7	1.2	83.5	13.0
RF811	Mo	9	590300	Room 6	63.82	18.2	11.3	8.8	13.8	35.4	12.5
RF812	Mo	10	590301	Room 6	69.79	9.4	3.4	3.2	15.0	50.0	19.0
RF813	Mo	11	590302	Room 6	81.99	21.4	21.0	14.5	11.0	8.6	23.5
Site 2											
RF1061	Mo	12	590303	Room 3	70.60*	0.4	0.3	0.5	2.4	43.8	52.5
RF1169	Mo	13	590304	Room 2	63.06	11.6	0.8	0.7	1.4	41.0	44.5
RF1170	Mo	14	590305	Room 4	73.68	28.0	18.2	12.1	11.0	10.7	20.0
RF1216	Mo	15	590306	Room 1	62.32	10.2	0.2	0.2	3.5	44.0	42.1

*The initial weight of each sample, 100 g, makes the figures percentages except for samples Mo 4 and Mo 12 where only 72 g was available.

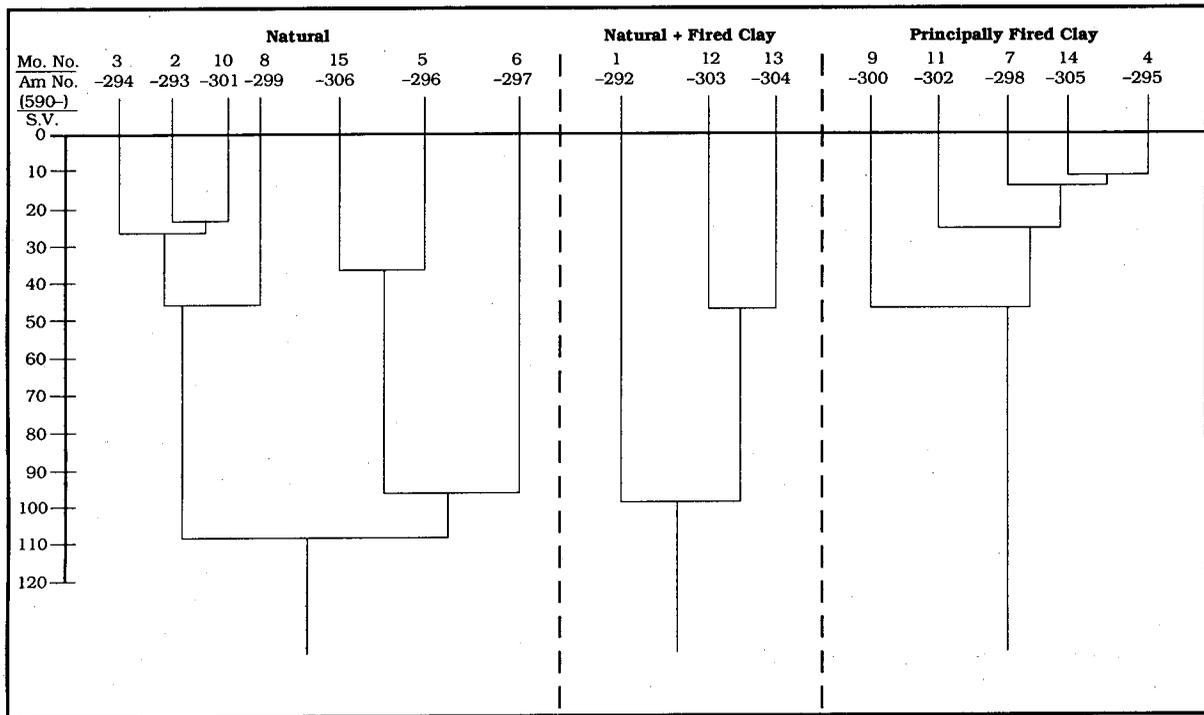


Figure 16. Mortars and plasters dendrogram showing similarities in grading.

Table 2. Mortars and plasters: groups formed at similarity values of (SV) 50 or less.

Site	Context	No.	AM lab no.	Material type*	Aggregate type
1	Room 2	Mo 3	590294	Matrix	A
1	Room 1	Mo 2	590293	Matrix	
1	Room 6	Mo 10	590301	Matrix	
1	Exterior, rubble	Mo 8	590299	Wall plaster	NATURAL
2	Room 1	Mo 15	590306	Matrix	B
1	Room 2	Mo 5	590296	Make-up under matrix Mo 3	
1	Room 3	Mo 6	590297	West wall, mortar	
1	Feature 1	Mo 1	590292	White concrete	MIXED (natural, with fired clay)
2	Room 3	Mo 12	590303	Matrix	
2	Room 2	Mo 13	590304	Matrix	
1	Room 6	Mo 9	590300	<i>Opus signinum</i> fillet	FIRED CLAY
1	On Room 6 surround	Mo 11	590302	Pile brick dust	
1	U/S	Mo 7	590298	<i>Opus signinum</i>	
2	Room 4 under patch of tiled floor	Mo 14	590305	<i>Opus signinum</i> matrix	
1	Room 2, base of wall trench, in and below gravel foundation	Mo 4	590295	<i>Opus signinum</i>	

(Groups with SV≤30 shown closely spaced.)

between the groups and the provenance of the materials. For example, Mo 2, Mo 3, and Mo 10 all come from Site 1 (the villa) where they are matrices under mosaics. This would suggest that the mosaics in Rooms 1, 2 and 6 are probably contemporary, that is, that when they were being laid the same source of aggregate was being used.

Particle size distribution is a less reliable method of comparison for materials with artificial aggregates (e.g. crushed brick or tile) as the composition of the aggregate is liable to be variable. It is, therefore, very surprising to find that the brick-dust (Mo 11) and the aggregates from the examples of *opus signinum* all originate from the same source, i.e. that they were prepared at the same time.

On this basis, the 'Natural' and 'Mixed' groupings are seen as follows:

- (1) Sub-group Natural A becomes a separate group: containing aggregates that are almost entirely sand passing 36 mesh. The Mixed Group matrices are similar but show substantially equal proportions of sand grade material and fines. The 'concrete' (field description) mix contained a similar sand grade but seems to have been left with a major amount of fines: some of this material consists of *grey* (reduced-fired) crushed brick, perhaps specially selected to control the colour of the concrete.
- (2) In Sub-group A, the same sand could be common to different purpose-made mixes requiring fine-grained texture — like the plaster and the matrices. Conversely, Sub-group B cannot survive as a unit; indeed, the make-up aggregate (Mo 5) is taken as the (only) basic natural silty sand present.
- (3) Starting from this (Mo 5), the aggregate for the wall mortar (Mo 6) could have been obtained by thorough washing and addition of suitable gravel, as in modern practice.

Group A aggregates could have been derived only by means of a sieve. The same goes for the other matrices. Both sand and crushed tile were clearly available at the same time, and as they went through the same sieve together, by accident or design, so they inevitably produced a mixed material of the same fine sand grade. In two cases (Mo 10, Mo 13), (identical) additions of a little gravel, only, are evident; a third (Mo 9: see below) may have come to contain some coarser material. Apart from that, the only difference between Group A and other matrices is easily explained by washing. All these aggregates

must have gone through the sieve, but in addition those in Group A were thoroughly washed.

All Group A matrices come from the villa and the others from the bath-house. In all cases, the presence of fines and/or fired clay may well indicate an attempt to confer at least semi-hydraulic properties, for better performance under hot, humid, and even plain wet conditions. *Opus signinum* is generally just such an attempt, yet the (single) sample from the bath-house is identical to the group from the villa. It is therefore its decorative rather than hydraulic qualities which probably determined its use here.

The exceptional closeness of the *opus signinum* group firmly links in time (at least this part of) the decorations of the villa and the bath-house. Oddly enough the matrix from Room 4 (Mo 14), alone among the matrices in the bath-house, shows no signs of sieving; possibly material left over from some ordinary *opus signinum* work (for example the fillet moulding) was used up on this.

Conversely, the fillet moulding (Mo 9) shows slight but definite deviation from group norm, such as might result from fewer blows in crushing the tile; it could be a special mix used up on some ordinary *opus signinum*. The suggested period of occupation is between AD 330–60, within a unified plan. There is nothing in the evidence described above to contradict this.

If the differences between aggregate groups are taken to be significant, they could indicate a time interval between two phases of decoration or redecoration. In that case the earlier phase involved floors in Rooms 1, 2 and 6, and a wall in Room 3, of the villa (Site 1), and the later phase would include the laying of the floor in Room 4 of the bath house (Site 2), and most of the *opus signinum* work at the villa (Site 1), except for the fillet moulding in Room 6. It could also embrace the laying of the other Site 2 floors in Rooms 1, 2, and 3, and of the concrete base to Feature 1 in Site 1. The difference in time need only have been slight, and might be ignored but for the intriguing pile of brick dust (Mo 11), sitting on the mosaic floor previously laid on matrix Mo 10 in Room 6, Site 1. Its presence implies that the room was either never used, or went out of use soon after construction. If one accepts the latter as more likely, and takes it as an indication of general abandonment, this lends support to a small time interval.

Discussion

In the present context, three general aspects are worth comment:

(1) The closeness of the main groups. This is most marked in the *opus signinum* group, but if one considers only the matrices, the other two main groups show remarkably little internal variation (i.e. SVs of less than 30).

(2) The similarities within some of these groups, at least, irrespective of (apparent) functions. In Natural sub-group A, one of the matrices (Mo 3) is matched more closely by the wallplaster (Mo 8), than by the other matrices (Mo 2 & Mo 10); and in Natural sub-group B, the cluster analysis suggests a basic similarity between the matrix Mo 15 and the make-up Mo 5 under Mo 3, a different matrix from another building.

(3) Certain masked affinities of samples exist outside groups, both as between themselves and in relation to the groups. Among the natural aggregates the wall mortar and the make-up under a matrix show middle fractions which are identical, the mortar having a much higher gravel content, and the make-up being correspondingly richer in fines. Most striking of all, matrix samples Mo 15 and Mo 13 are virtually identical although they belong to different groups. This is because initial division was based on 'natural' and 'artificial' groups.

Close examination of the results strongly suggests, however, that the 'natural' aggregates are in fact also artificial — in a different sense from the fired clay; except for one, only, they probably result from selective preparation such as simple sieving, washing and addition.

For a full discussion of contemporary lime production at Weekley, some 15 m (25 km) to the northwest, see Jackson *et al.* 1972. A deposit of sand is marked in the stream valley $\frac{1}{2}$ m/800 m SW of the site; major river gravel and sand workings operate to this day in the St Ives area (12 m/20 km NE).

Human Skeletal Remains

By R. Cullen & R. Powers

The bones of possibly 24 individuals were examined including 7 burials and a quantity of scattered bone, all from Site 1. This comprised:

Female Adult	4
Male Adult	4
Indeterminate Adult	8
Juvenile	4
Infant	1
Indeterminate	<u>2</u>
Total	24

Full details of these can be found in microfiche. The remains of two further individuals were ex-

tracted from the faunal remains.

Room 1, Layer 2

Burial 1: a female adult plus another individual, represented probably only by one right femur. The calvarium is complete, if somewhat eroded, but the facial regions are represented only by the maxilla. This calvarium is composed of noticeably thick, dense, bone, which makes the skull heavy; a centrally placed drilled hole on the right parietal allowed measurement of the thickness, which both there and on an approximate mid-point along the frontal arc proved to be 10 mm. While this is not outside the normal range of European skull thicknesses, which at a mid-parietal point can vary from 4 mm to 11.2 mm (Singer 1958), nevertheless it is so close to an extreme of the distribution that there is some possibility of abnormality.

The post-cranial bones present comprised: two right femora, one probably male, one left femur; right and left tibiae; right humerus; right radius; right ulna lacking distal end; the shaft of one fibula lacking both ends; two incomplete ilia; part of a sacrum; bones of the hand and foot; ribs.

For the standard biometric measurements, which could be taken on the skull of this individual see Site Archive.

Burial 2: adult; owing to fragmentary condition, age and sex are indeterminate. The bones present are: right and left tibiae, both lacking their distal ends; one fragment of a tibia distal end; and part of the shaft of a radius lacking both ends.

Burial 4: probably a female adult; the skull bones present include parts of occipital, temporal, and frontal bones, as well as other small fragments of calvarium.

The post-cranial bones are: the proximal part of one femur, lacking the greater trochanter; one tibia lacking a proximal end; part of one tibia shaft lacking both ends.

Burial 5: the bones of more than one individual are present, they comprise: the distal portion of a probably male femur; part of the shaft of a humerus also probably male; part of the shaft of one radius; one rib fragment.

Parts of three ilia are represented by fragments; out of these, one appears to be female.

HB 1: part of left clavicle, adult.

HB 11: ?female adult.

Room 2, Layer 2, in Rubble over Pavement

Burial 6: juvenile (Pl. IX); the only skull bones present are a few fragments of calvarium.

The post-cranial bones present are: two femora, one lacking a distal end; two tibiae, one lacking a distal end; one fibula; one radius lacking a distal end; bones of the hand and foot; part of one scapula; fragments of pelvis; ribs; vertebrae.

None of the long-bones have fused epiphyses, and also present are a number of loose epiphyses.

	max l. (mm)	max mid-shaft w. (mm)
femur	331	20
tibia	254	20
fibula	247	10.5

HB 2: (i) skull, immature on evidence of skull thickness, incomplete. The occipital bone is very ridged.

(ii) skull, represented only by part of the occipital, including the lambdoid suture, which is visible on the exterior, obliterated on the interior. Ribs.

HB 3: right humerus, lacking proximal end.



Plate IX. Site 1 (1958), Room 2, Burial 6.
(Photo: RFN 12)

Rooms 2 and 3, Wall Trench, U/S

HB 9: femur, male adult, lacking distal end.

HB 10: part of male ?adult sacrum.

Room 3, Layer 2

HB 6: portion of tibia shaft, adult, from near the distal end.

Room 3, Layer 3

HB 7: tibia, adult, with part of the proximal end eroded away.

Ti D1	23.5
Ti D2	31

Room 4, Layer 2

HB 4: part of calvarium, adult, consisting of a portion of occipital extending up to the lambdoid suture, which seems open.

HB 13: head of immature femur (epiphyses unjoined).

Fe D1	21.5
Fe D2	27.5

Room 5, Layer 2

HB 14: infant skeleton: birth size. Greater wing of sphenoid.

	max l. (mm)	max mid-shaft w. (mm)
two tibiae	66	6.5

HB 15: one femur, eroded, male adult. Head of humerus, male.

Room 1, North Exterior, Layer 2

Burial 3: probably a male adult; the bones present comprise: one right femur lacking a distal end; part of the shaft of a left femur; right humerus; right ulna; right and left radii; two phalanges; and small fragments of pelvis.

Room 2, South Exterior, Layer 2

HB 5: juvenile skeleton, incomplete. There is only one small fragment of calvarium. The post-cranial bones present are: one femur nearly complete, part of a femur shaft; right and left tibiae lacking distal ends; one humerus; part of one scapula; ribs.

	max l. (mm)	max mid-shaft w. (mm)
femur	141	11
humerus	117	9.5

Exterior of Wall Trench (to Rooms 2 and 3?)

Burial 7: adult; the very fragmentary bones present comprise: proximal fragments of two femur shafts, and part of one femur head; part of one metatarsal; other unidentifiable fragments of long-bone shaft.

North Exterior, Layer 6

HB 8: adult, two fibula shafts, lacking both ends; small portion of tibia shaft.

Unstratified

HB 12: part of adult parietal.

Animal Bone

By R.A. Harcourt

This was a small collection of just on a hundred identified specimens. The domestic species present were cattle, sheep, pig, horse, and dog. Wild fauna were represented by a few specimens of roe deer, fox, and hare. Human bones, of at least two individuals, were included. There are not enough specimens to permit the determination of the age structure or relative numbers of each species. All measurements are given to the nearest millimetre and those of long bone extremities are of articular surfaces only.

Domestic Animals

The proportion of 'waste' bones (heads and feet) is so low in the food animals that it seems likely that the majority of carcasses were brought to the site already butchered, but the collection is so small that this may be due to chance. The

measurements of the four complete long bones are shown in Table 3.

Dog

The long bones of very large dogs cannot be distinguished with certainty from those of some wolves. Although the femur found here was very large, a yet larger one definitely from a dog, is known to the writer from another Roman site. This was 229 mm in length and the presence of teeth from the same animal confirmed its identity. Both these animals would have stood about 680 mm (27 in) at the shoulder, while Pitt Rivers (1887: 223) records a femur of 234 mm from Rotherley.

The remaining specimens of cattle, sheep, pig, and horse do not merit special mention.

Bird Bones

By D. Bramwell

There were remains from four peacocks, four geese (including merganser), six domestic fowl, two stock doves, one wigeon, one quail, one partridge, one crow, one blackbird or similar, one golden plover, two mallards, and one duck.

All from Site 1

Room 2, Layer 2

AB 6: Crow (*Corvus* sp.), one bone.

Room 2, Layer 3

AB 9: Peacock (*Pavo* sp.), one bone.

Room 2, Entrance, Layer 3

AB 53: Partridge (*Perdix perdix*), one bone.

Room 3, Layer 2

AB 21: Domestic Fowl (*Gallus* sp.), one bone.

Table 3. Stature of animals.

	Total length	Long Bone Measurements			Estimated Height (Fock 1966)	
		Proximal width	Mid-shaft diam.	Distal width	metres	in
<i>Cattle</i>						
Metatarsal	202	41	22	47	1.09	43
	219	44	28	53	1.17	46
<i>Sheep</i>						
Radius	142	28	17	27		
<i>Dog</i>						
Femur	227	-	16	-		

Room 3, Layer 3	Domestic Fowl (<i>Gallus</i> sp.), two or three birds.
AB 26: ?Blackbird or similar (<i>Turdus</i> sp.), one bone.	Red-breasted Merganser (<i>Mergus serrator</i>), breast bone.
Room 4, Layer 2	Exterior, Drain F.70
AB 29: Goose (<i>Anser</i> sp.), one bone.	AB 59: Golden Plover (<i>Pluvialis apricaria</i>), one bone.
Room 4, Layer 4	Domestic Fowl (<i>Gallus</i> sp.), remains of three birds.
AB 40: Mallard (<i>Anas platyrhynchos</i>), one bone.	Goose (<i>Anser</i> sp.), one bone.
Room 5, Layer 2	Mallard (<i>Anas platyrhynchos</i>), one bone.
AB 42: Domestic Fowl (<i>Gallus</i> sp.), one bird represented.	Peacock (<i>Pavo</i> sp.). A considerable variety of bones, which, with those from other areas, make up a good part of the skeleton of one peacock, i.e. male.
Widgeon (<i>Anas penelope</i>), one bone.	Room 6, Exterior, Layer 2
Quail (<i>Coturnix coturnix</i>), one bone.	AB 52: Domestic Fowl (<i>Gallus</i> sp.), one bone.
Room 1, Exterior, Layer 2	North Exterior, Layer 3
AB 2: Peacock (<i>Pavo</i> sp.), one bone.	AB 17: Goose (<i>Anser</i> sp.), a smallish metatarsus, impossible to define.
Room 5, Exterior, Drain F.69	AB 18: Stock Dove (<i>Columba oenas</i>), one bone.
AB 51: Mallard (<i>Anas platyrhynchos</i>), one bone.	AB 20: Goose (<i>Anser</i> sp.), this seems to be a robust Grey Lag type.
Duck, a smaller species, perhaps Garganey (<i>Anas querquedula</i>).	Peacock (<i>Pavo</i> sp.), leg bone bearing a spur.
Stock Dove (<i>Columba oenas</i>), bones of one adult.	North-South Baulk Grids 4 & 5, Layer 2
Domestic Fowl (<i>Gallus</i> sp.), one bone.	AB 38: Domestic Fowl (<i>Gallus</i> sp.), one bone.
Room 5, Exterior, Drain F.71	Two of the above, quail and merganser, seem to be the first records for Roman sites in Britain (i.e. not listed by Fisher 1966), while the
AB 54: Duck, domestic (<i>Anas</i> sp.), one bone.	
Grouse (<i>Lagopus</i> sp.), one bone.	

Table 4.

Site Ref.	Specimens Examined					
	Oyster <i>Ostrea edulis</i> L.	Whelk <i>Buccinum undatum</i> L.	Mussel <i>Mytilus edulis</i> L.	Limpet <i>Patella</i> sp.	Cockle <i>Cerastoderma edule</i> C.	Other
SH 1	4	-	-	-	-	-
SH 2	1	-	-	-	-	-
SH 3	-	-	1	-	-	-
SH 4	3	-	-	-	-	-
SH 5	-	1	-	-	-	-
SH 6	1	-	-	-	-	-
SH 7	3	-	-	-	-	-
SH 8	1	-	-	-	-	-
SH 9	-	-	-	1	-	-
SH 10	-	4	-	-	-	-
SH 11	7	-	-	-	-	-
SH 12	-	-	-	-	-	1 ¹
SH 13	-	-	4	-	-	-
SH 14	6	-	-	-	-	-
SH 15	2	-	-	-	-	-
SH 16	6	-	-	-	-	-
SH 17	-	-	-	-	1	-
SH 18	-	-	1	-	-	-
SH 19	-	-	-	-	-	1 ²
SH 20	6	-	-	-	-	-
SH 21	-	-	1	-	-	-
SH 22	7	-	-	-	-	-
Total	47	5	7	1	1	2 = 63 Overall

¹*Gryphaea* sp. (fossil)²*Cepaea nemoralis*

Table 5. *Distribution of oyster shells.*

Type of deposit	Total number recorded	Density (number/cu. ft)	Approximate estimated total in deposit	type of deposit	all deposits	Approx. total minimum no. of individuals
<i>Occupation levels</i>						
interior	4					
exterior	13			(17)		
<i>Drainage ditches</i>						
Site 1 F 21	1					
F 69	715	27	1630			
F 70	695	19	1240			
F 71	78	15	440	3310		
Site 2 F 3	6					
F 5	7			(13)		
<i>Rubble levels</i>	19			(19)		
<i>Other</i>	6			(6)	3365	1680

peacock seems to be one of only two records for these sites, the second being four peacock bones from fourth-century levels at Portchester Castle (Eastham 1975: 409–15). The peacock is the most important as it appears in Roman art, e.g. on mosaics, and in Roman mythology. The scarcity of peacock remains on other Roman sites might indicate that Great Staughton Villa was a place of some special significance.

The wild birds in this collection are all well-known game. Quail is a summer migrant to this country but the plover and ducks are more likely to have been taken in autumn or winter when they come together in large flocks.

Shells

By P.R. Payne & L. Biek

A large number of specimens (1560) was recovered by the excavator. Nearly all of them, 1544, were oyster shells: 1497 of these, i.e. nearly 97%, were discarded on site, the rest being submitted as a sample for identification and examination, along with a total of 16 recovered specimens of other species.

The main interest lies in the quantities and distribution of oyster shells. As might be expected, almost all of them were found in the ditches. Only 17 came from occupation levels and 25 from rubble layers; the rest were recovered from specific layers in ditch fillings, as shown below. The two major deposits, from Features 69 and 70 show shell densities of the same order over the volumes of ditch excavated, and a similar density is also encountered in the short excavated stretch of a smaller ditch (Feature 71) that apparently connected the two larger ones. Between them these three drainage ditches served the whole of the west frontage of the villa. A comparable stretch of small

ditch (Feature 21, to the north) produced one shell, and only four others were found in occupation levels outside the north frontage.

All these features had to remain unexcavated to some extent for varying reasons, but their approximate total volumes of significant deposit can be assessed with some confidence. From these data their total probable shell content has been estimated as well over 3000, more than 98% of these being concentrated in the western drainage ditches. Even when halved to allow for the bivalve factor this still leaves a minimum total of nearly 1700 oysters in a very short-lived deposit.

About half the available shells gave significant measurements of maximum length and the distribution for this (very small) sample is shown in Figure 17. No small shells were found

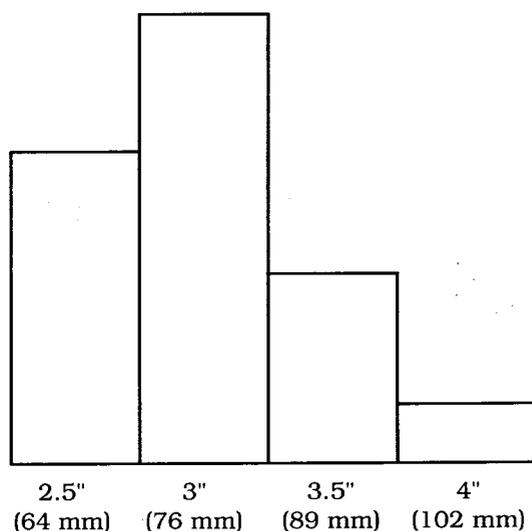


Figure 17. *Oyster shells: distribution of maximum length.*

and the single largest one was 4 in (100 mm) long. The nearest sea shore to the site is some 100 miles away along a tortuous river course. To deliver, however rarely, the estimated quantities of oyster in a fresh enough condition (possibly in barrels containing sea water) must have been a considerable undertaking. The fact that it was evidently carried out lends further support to the other evidence from the finds (e.g. the peacock and coins) which suggests that this was in some way an unusual important establishment.

Charcoal

Identification by G.C. Morgan
Supplementary data* by F. Richardson & Dr C.R. Metcalfe, Royal Botanic Gardens, Kew
Figures in brackets indicate multiple sample;
Q = 'a quantity'

Site 1

Room 2, Layer 3

CH 4: (4) Oak, *Quercus* sp..
CH 5: (20) Elm, *Ulmus* sp., Hazel, *Corylus avellana*.

Room 3, Layer 3

CH 3: Hazel, *Corylus avellana*.
CH 9: Oak, *Quercus* sp..
CH 10: (5) Hazel, *Corylus avellana*.

Room 4, Layer 3

CH 11: (4) Hazel, *Corylus avellana*.

Room 4, Layer 4, Stake-hole 6

CH 12: Unidentifiable, possibly Willow.

Room 4, Stake-hole 17

CH 13: Oak, *Quercus* sp..

Room 5, West Exterior, Drain F.69

CH 15: (4) Hazel, *Corylus avellana*.

Room 6, West Exterior, Drain F.70

CH 17: Hazel, *Corylus avellana*, Willow, *Salix* sp..
CH 18*: Probably *Sorbus* sp..

Room 6, F.73 (?Iron Age)

CH 19: (6) Hawthorn, *Crataegus* sp..

Room 1, Exterior, Layer 2

CH 1: Oak, *Quercus* sp..

North Exterior, Layer 3

CH 6: (4) Hazel, *Corylus avellana*.
CH 7: Hazel, *Corylus avellana*.
CH 8*: *Acer* sp., probably 'Field Maple'.

Grid 2, Layer 2

CH 2: Hazel, *Corylus avellana*.

North-South Baulk, Layer 3

CH 14: Willow, *Salix* sp..

Site 2

Room 3, Fill of Hypocaust Flue Channel

CH 22: (Q)
a)* Probably a species of *Prunus*, such as *P. domestica* (Blackthorn).
b)* Probably 'Spindle' (*Euonymus europaeus*).
c) Oak, *Quercus* sp..
d) Hazel, *Corylus avellana*.

Room 11, Fill of Furnace Flue

CH 21: (Q)* Probably Hawthorn (*Crataegus* sp.).

Northwest Exterior, Layer 3

CH 20: (7)* Probably a species of *Sorbus*.

Discussion

By Dr D.F. Cutler

All these specimens came from small twigs or branches of diameter up to 2 in (50 mm), except for CH 1, 4, 5, 8 and the oak from CH 22. It seems that the oak may well have formed structural members, probably the roof. Spindle and *Sorbus* wood were both native before the Roman period. Spindle (very hard) was used for pegs and spindles and made good charcoal. *Sorbus* spp. include whitebeam and mountain ash. Both are decorative trees. The former's leaves appear 'white' on the underside, giving distinctive effects when windblown; the wood is also 'white' and could be employed decoratively though similar woods are more easily available.

Slags

Residues from High-temperature Events

By L. Biek & P.R. Payne

Thirteen groups (24 specimens) were examined under the microscope with the results shown below. All the material has passed through fires at elevated temperatures (c. 1000°C or more). Group 1 represents residues from specific ironworking operations. All were found, with charcoal, in the same area, but there is too lit-

Table 6. *The slags (all from Site 1).*

Site Ref.	Context	Group	Description	Interpretation
SL 1 SL 6 SL 8 SL 9	Grid 2, L2 Ext., North, L3 Ext., North, L3 Ext., North, L3	1	Heavy brown, slightly porous, part-cindery masses, once in fluid state, non-magnetic, except SL 9.	Various forms of iron smithing residue.
SL 2 SL 5 SL 12	Room 3, L2 Ext., North, L3 U/S	2	Light, part-calcareous lumps containing sand, fluxed on at least one surface to pale green transparent glassy coating.	Mixture of sand and (at least in one case) lime, possibly a fluxed mortar; exposed to high temperature in contact with wood ash/fire.
SL 7 SL 10 SL 11	Ext., North, L3 Room 4, L3 Room 4, L3	3	Greyish-white clinkery fragments overall, with more or less grey and black opaque glassy areas, vesicular with white calcareous and 'cracked flint' inclusions.	Calcareous sandstone fragments and/or similar, exposed to fire as Group 2. SL 10 & 11 identical. Probably fused tesserae.
SL 3 SL 4	Room 2, L2 Room 2, Ext., L2	4	More or less distorted and corroded copper-green coloured fragments of metal, mostly showing signs of having been cooled quickly from the molten (softened) state.	All of these, but especially SL 4, found with coin hoard, could represent effects of a fire on some coins.

tile material, and no hearth to permit further deductions. A major iron smelting complex has been excavated at Wakerley (c. 25 m/40 km NNW: Pacitto *et al.* 1978) and there are several others in the area (Jackson 1979; 1982; Jackson & Tylecote 1988). The supply of local good-quality wrought iron would have been no problem; but the smithing operations indicated were most likely repairs or alterations to existing objects, rather than production of anything more elaborate than nails. Groups 2 and 3 are related to each other. Both could have been formed incidentally during a fire. Alternatively the necessary temperatures would have been reached in a hypocaust stoke-hole rather than in a cooking fire. The most likely interpretations are suggested in Table 6.

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