Northamptonshire Archaeology, **38**, *2015, 107–138*

A Roman farmstead at North Lodge, Barnwell: Excavations 1973–1988

by

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Summary

Five seasons of work were undertaken at a Roman site at Barnwell during 1973 and 1985–8 by the Middle Nene Archaeological Group. The site appeared to focus on an aisled building which had undergone several phases of development, including a late bath suite. Surrounding the building was a series of gated yards. Of particular note were three very large pits, up to 1.5m deep, which were dug close to the building, one of which produced a remarkable collection of lead objects and a large, column-like piece of limestone. One pit, which was close to the later bath extension added to the aisled building, had a revetment of timber posts with planking, behind which hard core material had been dumped to provide a walk-way around the extended building. Occupation extended from the late 1st century, through the Hadrianic period and into the late Roman period. A series of four postholes was associated with Saxon occupation. The excavations at the site are crucial for understanding how the exploitation of the clay-lands developed during the Roman period with the animal bone in the later periods suggesting a broad-based animal economy with cattle being exploited for a variety of purposes including traction. In addition, the site provided well dated finds and pottery which help to refine the dating of other Nene Valley assemblages.

Introduction

The discovery of the site at North Lodge, Barnwell (TL 073 837, Fig 1) was initially made by the then farmer, the late Mr Tom Litchfield. For several years stonework had been ploughed to the surface and Mr Litchfield, who was a noted local historian, first reported the finds in 1969 (BNFAS, **3**, 1969, 6) and was concerned that continued ploughing would disturb what appeared to be substantial Roman remains. During the autumn of 1973 and at the request of the farmer, excavations were carried out by the Middle Nene Archaeological Group (MidNAG) and students from Prince William School, Oundle under the direction of John Hadman and Stephen Upex. This work was reported in *Northamptonshire Archaeology* (1974, 86) and also formed the basis for a short note in *Durobrivae: A Review of Nene Valley Archaeology* (Hadman and Upex 1974, 27–29; RCHME 1975, 12). Further work was carried out initially by John Hadman directing Prince William School students and MidNAG members during the autumn seasons of 1985–1986 and then by John Hadman and Prof William Frend during 1987–1988. A preliminary report on lead items recovered from a pit deposit was made in 1994 (Frend and Hadman 1994).

The site is situated at 72m aOD on heavy Boulder Clay soils (Inst of Geological Sciences, 1967) and 450m to the south-east of North Lodge Farm (Fig 1). It appears to be one of several Roman sites known in the area between the villages of Clopton and Lutton (Hadman and Upex 1974, 27; RCHME 1975) and lies 2.5km to the east of the line of a Roman road (Margary 1973, road 570) which ran from the walled Roman town of *Durobrivae* (Upex 2008, chap 3) in the north to the settlement of Titchmarsh to the south (RCHME 1975, 98).

A magnetometer survey, undertaken prior to work in 1973, showed two areas with high magnetic anomalies which were interpreted as pits and other features which were interpreted as ditches. Fieldwalking surveys also plotted the distributions of stonework and Roman tile. During 1973, work focused on one of the heavy magnetic anomalies, which proved to be a large pit and an adjacent area which, the fieldwalking surveys showed, contained large concentrations of limestone: this proved on excavation to have been the site of a small bath-house at the end of an aisled building. In the following seasons, work simply expanded these two areas to reveal two other large pits, the full extent of the aisled building and a series of yards.

Acknowledgements

Particular thanks are due to the late Tom Litchfield who first alerted attention to the site and for his continued enthusiasm for the project once the work had started. Thanks are also due Mr Fred Roughton the present farmer for his continued support and interest in the project.

The original work at the site was undertaken between 1973 and 1988 and a whole host of people helped in various ways with the excavation and initial processing of the finds, including the late Prof William Frend. Most of the work, however, was carried out by students at Prince William School, Oundle and members of the Middle Nene Archaeological Group and all thanks are due to them. The Middle Nene Archaeological Group have also funded the post-excavation work and writing of this report.

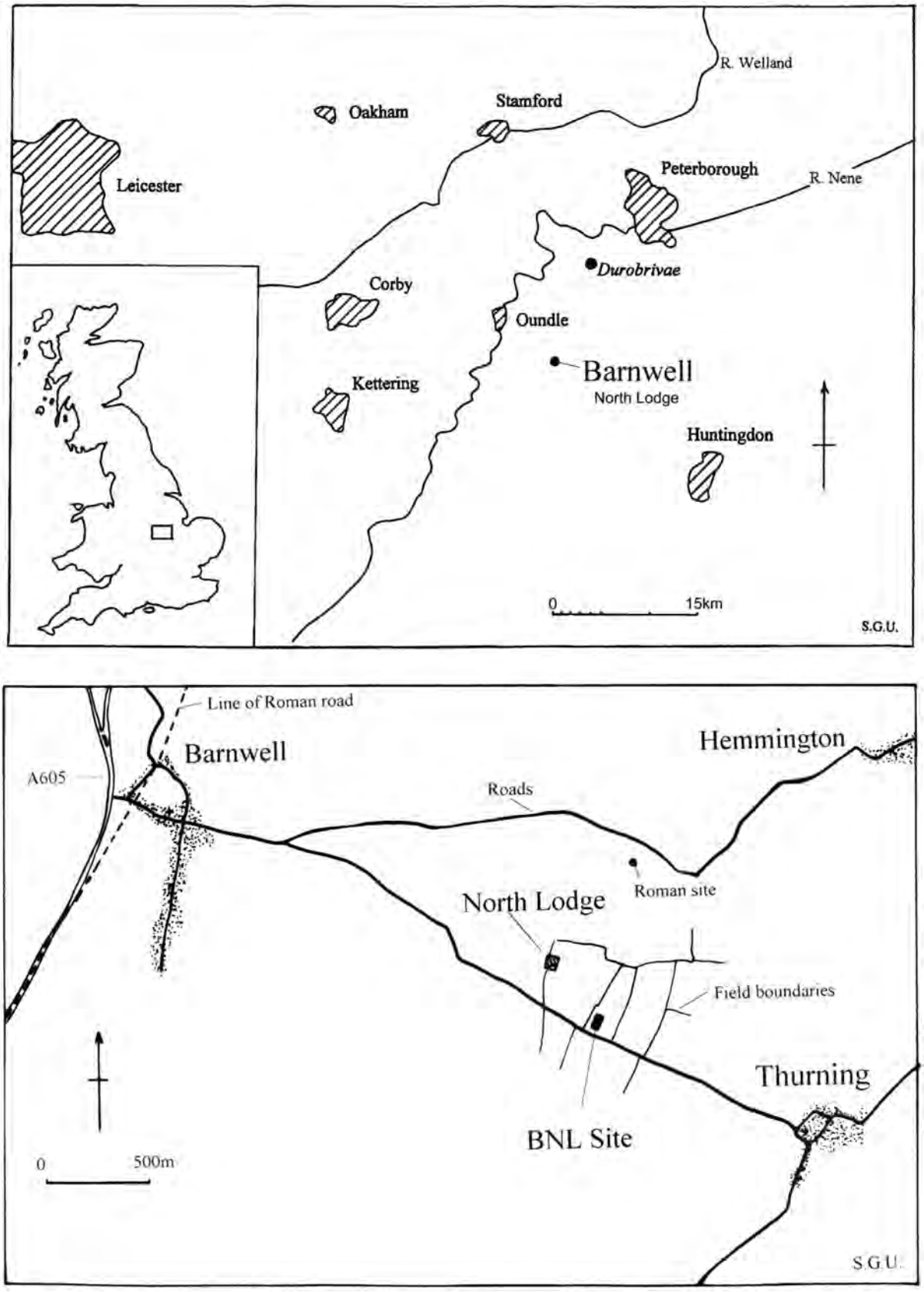

Fig 1 Site location

More recently the present writer is grateful to Sarah Wilson of Peterborough Museum who willingly arranged access to view the lead items from Ashton in the Museum's collection and to Martin Tingle for comments concerning the Rushden lead tank. Dr J P Wild willingly provided comment on the scale armour from Ditch 16. Several people have helped with the recent organisation of the finds from Barnwell including Kate Hadman, Gill Johnston and David Wills.

The writer is particularly grateful for the constant help, encouragement and enthusiasm provided by John Hadman who was responsible for the great bulk of the work on site and of organising the storage of finds in more recent years. John has always been willing to give his time and energies to the understanding and interpretation of local archaeology and this report could not have been written without his support. The Barnwell archive is currently housed at Oundle Museum, Oundle.

Sylvia Upex and Dr J P Wild read earlier drafts of this paper and made many useful and helpful comments regarding improvements. The remaining mistakes and errors are all mine.

Editor's note: Given the length of this report in terms of both text and illustrations, it has been necessary to divide it into two parts, with the site description, selected finds, the discussion of the animal bone assemblage and the overall discussion appearing in the print volume. The full pottery catalogue, the majority of the finds and the animal bone report form Part 2, which is available on an attached CD. Both parts will be included in the digital journal for long-term deposition online.

The Excavation

The overall plan of the excavation is shown in Figure 2 with the location of the illustrated archaeological sections

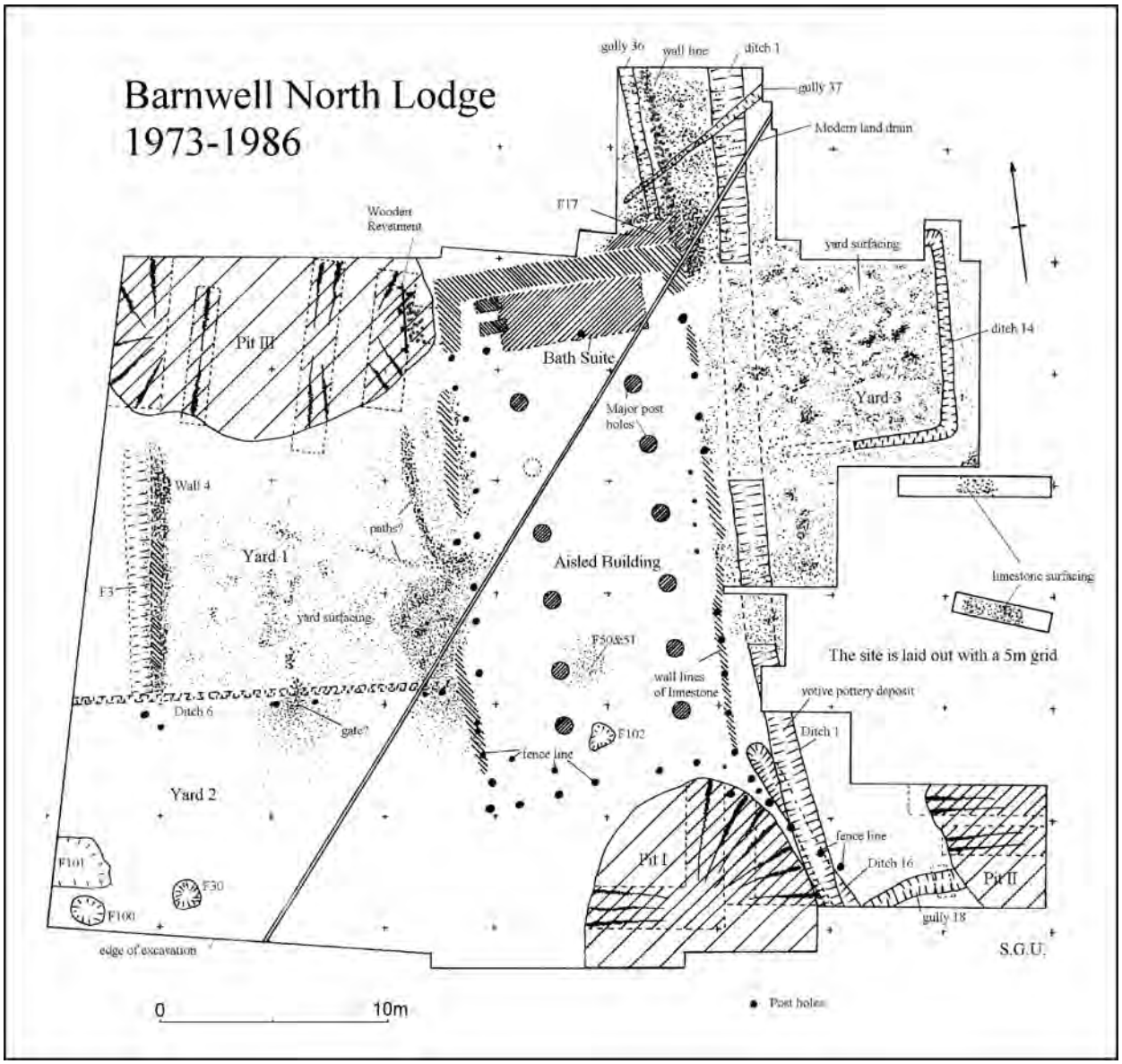

Fig 2 General site plan

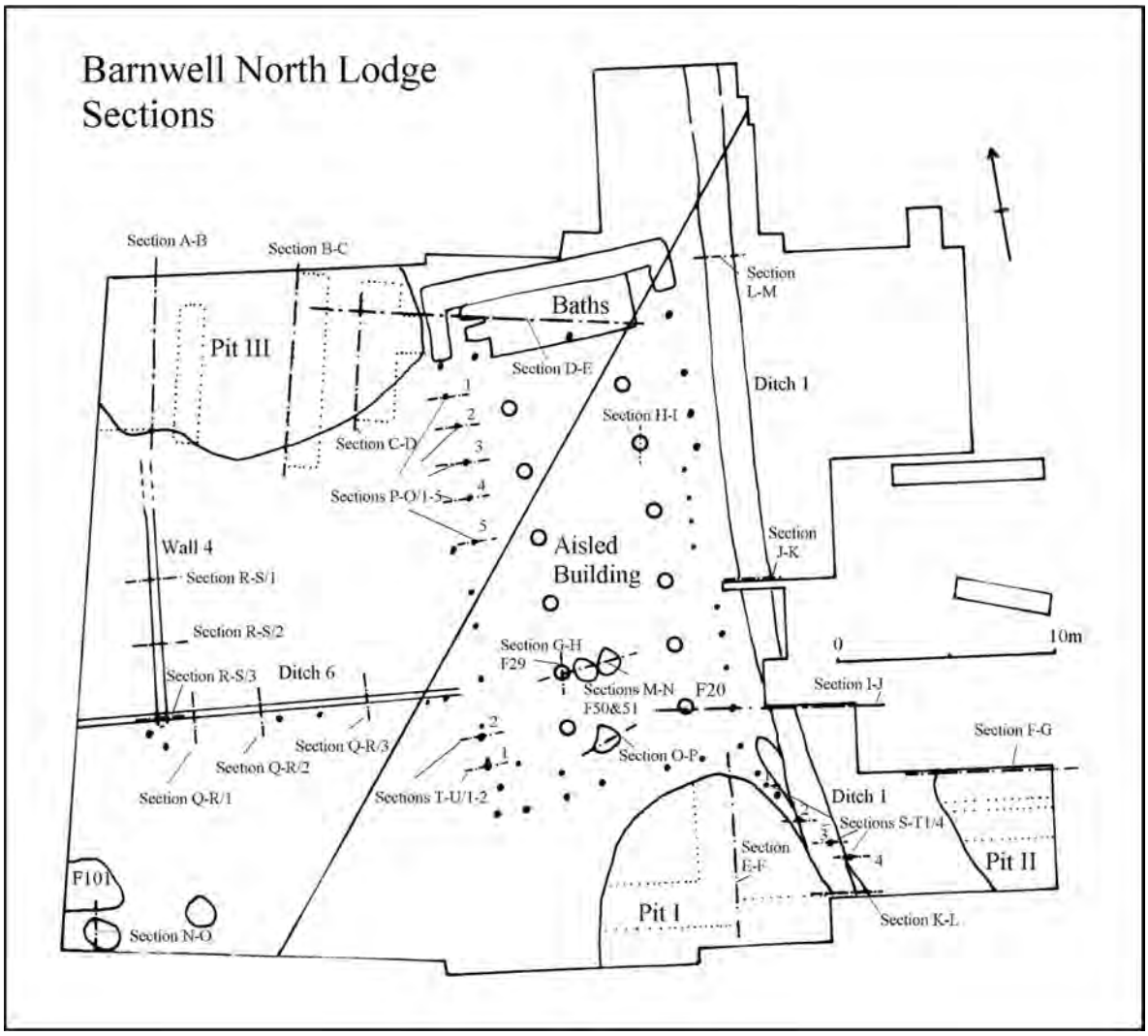

Fig 3 General site plan showing sections

shown in Figure 3. The arrangement of yards and large pits can be seen around the aisled building which, in its latest phase, was 23m long by 11m wide. The overall site chronology is summarised in Figure 4. For a description of the layers of the published sections see Part 2, Appendix 1.

Period 1 (late 1st century to early 2nd century AD)

The earliest features were in the south-eastern section of the excavated area and consisted of a short length of gully (Gully 18, Fig 2) which contained a coin of Trajan, a piece of military scale armour, two flagons of late 1st-century form (Fig 2.9, 91 & 92) and amphora fragments. There was no stratigraphical relationship between Gully 18 and Ditch 16, but both produced similar ceramic material which was also matched by the material from a limestone surface to the immediate north of Ditch 16. Ditch 16 terminated 7m into the excavated area and no function could be ascribed to it other than to say that it was later cut by Ditch 1 which was on a slightly different line (Figs 2; 5, Section K–L, and see Fig 22). Equally difficult to interpret was a limestone surface (layer 17, Fig 6) which was only partially explored and did not appear to be associated with any structures.

Period 2 (mid-2nd century AD)

The site seems to have undergone large-scale reorganisation during the mid-2nd century with the construction of Ditch 1, which was laid out roughly north-south and was cut into the already filled-in Ditch 16 (Fig 5, Section K–L). Ditch 1 varied in width from 1.5–2.5m and had a later re-cut (Fig 5, Sections J–K & K–L, layer 7 & section L–M, layer 10).

At approximately the same time, an aisled building was set out to the west of Ditch 1 (Fig 2). The structure, measuring 11.0m by 14.5m, consisted of four pairs of massive aisle posts forming a nave and two side aisles (Fig 7). The holes to receive the timber posts were up to 1.20m deep and 1.50m across and were dug into the underlying natural clay. Each timber post was set into the bottom of a hole and then packed around with limestone rubble and soil to hold it fast. Some of the posts were eventually left

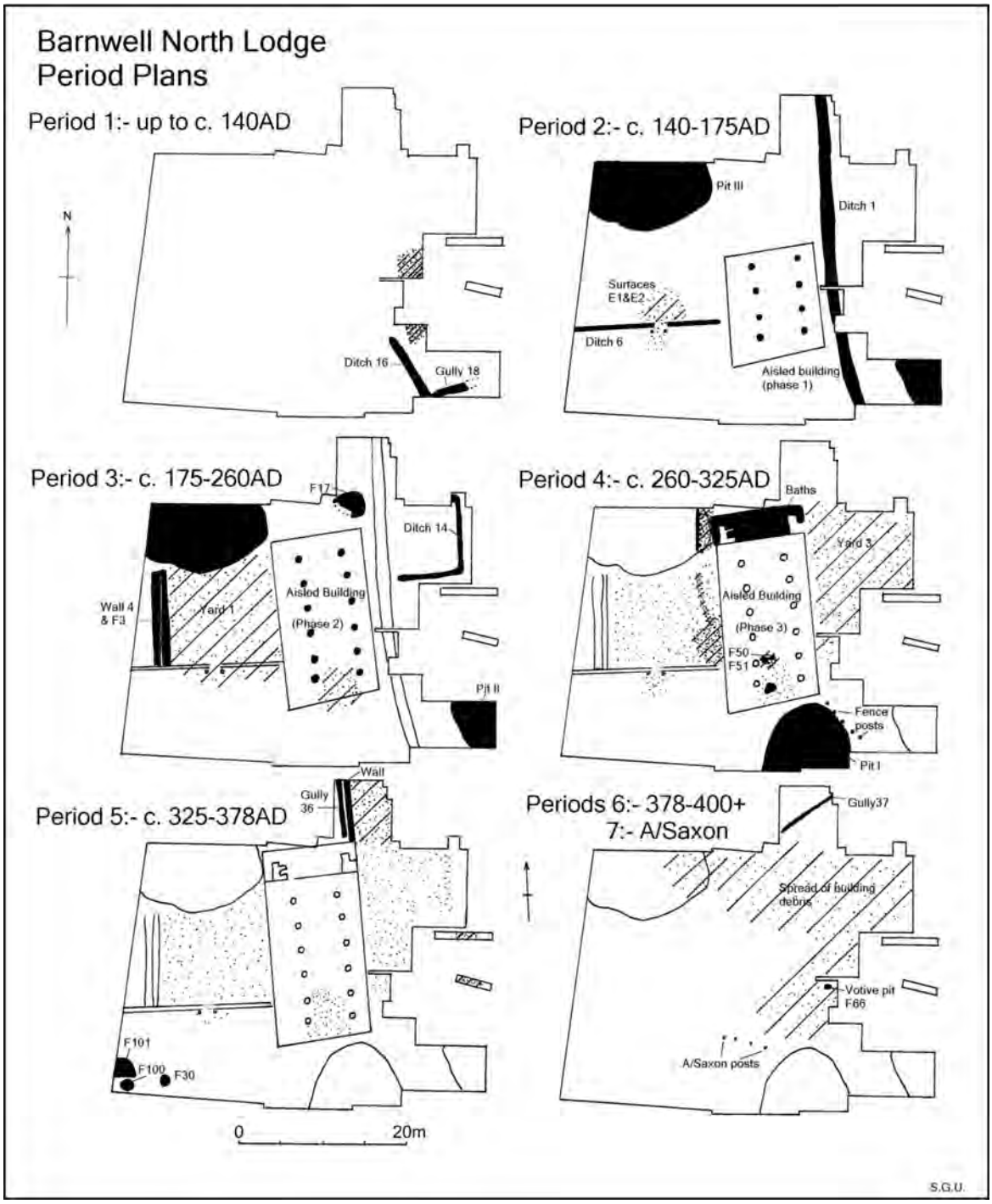

Fig 4 Period plans

to decay *in situ* as the building was abandoned in its final phase and sections through these postholes show not only the 'shadow' of the former timber but also the neat packing set around the post and over the top of the posthole. This can be clearly seen in the section of posthole F29 (Fig 8, Section G–H) which was a post set along the western nave arcading. Other posts appear to have been removed as the building was demolished in its last phase and these excavated postholes contained disturbed material with a less distinct impression of the actual position of the timber post. In several cases posts appear to have been replaced during the life of the building and the slight step at the base of post F35 (Fig 8, Section H–I) may be a result of such replacement. In the case of post F20 (Fig 7) in the south-east corner of the structure there was an even clearer example of a replacement post added to the existing structure (Fig 6, Section I–J).

The side walls of the aisled building were very badly damaged by modern ploughing but appeared to have been formed by a series of earth-fast posts at intervals of roughly 1.5m along both the long axis and short axis walls. Between these side wall posts there appears to have

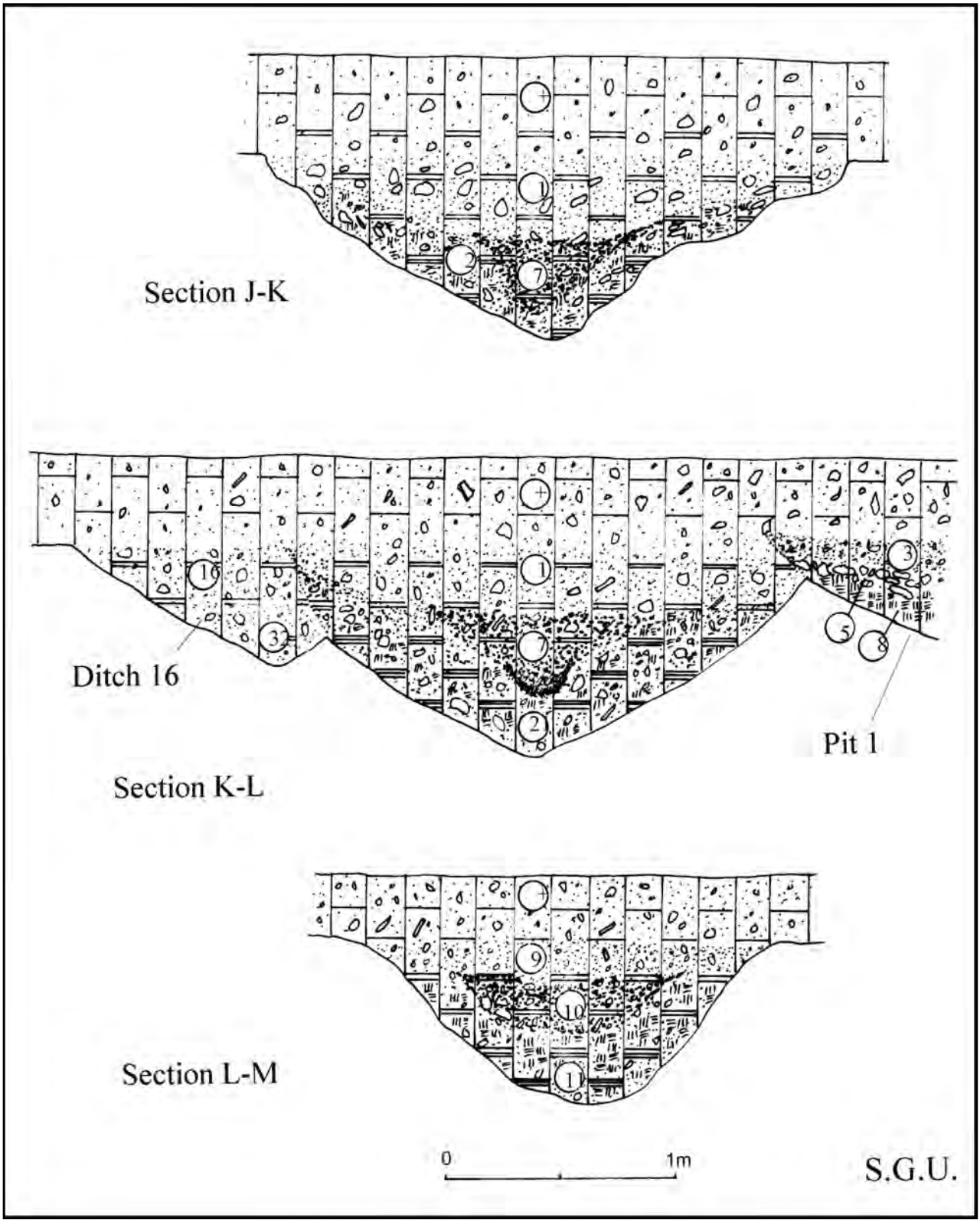

Fig 5 Sections across Ditch 1

been a limestone rubble infill which may have originally formed a shallow foundation for a dwarf wall on which a timber beam could have been set and the side-walls constructed (Fig 9). In some cases where the evidence for these side wall posts was better preserved it was seen that posts were replaced during the life of the building; this can be seen in the case of post F36 (Figs 7 & 6, Section I–J). There was little to indicate any flooring or surfacing within the structure at this early phase, although it may possibly have had gravel or limestone spread around its

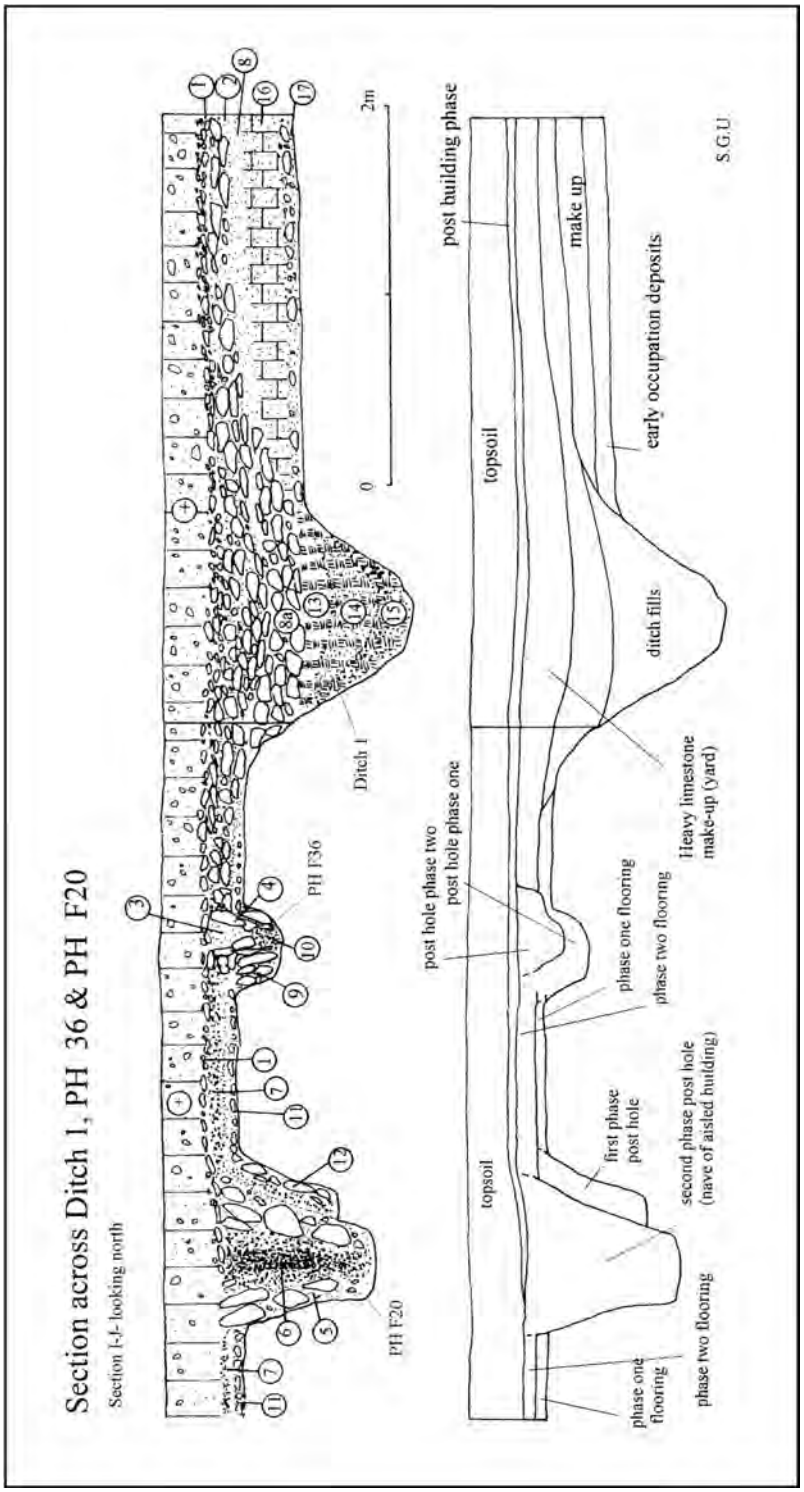

Fig 6 Section across Ditch 1, PH 36 and PH F20

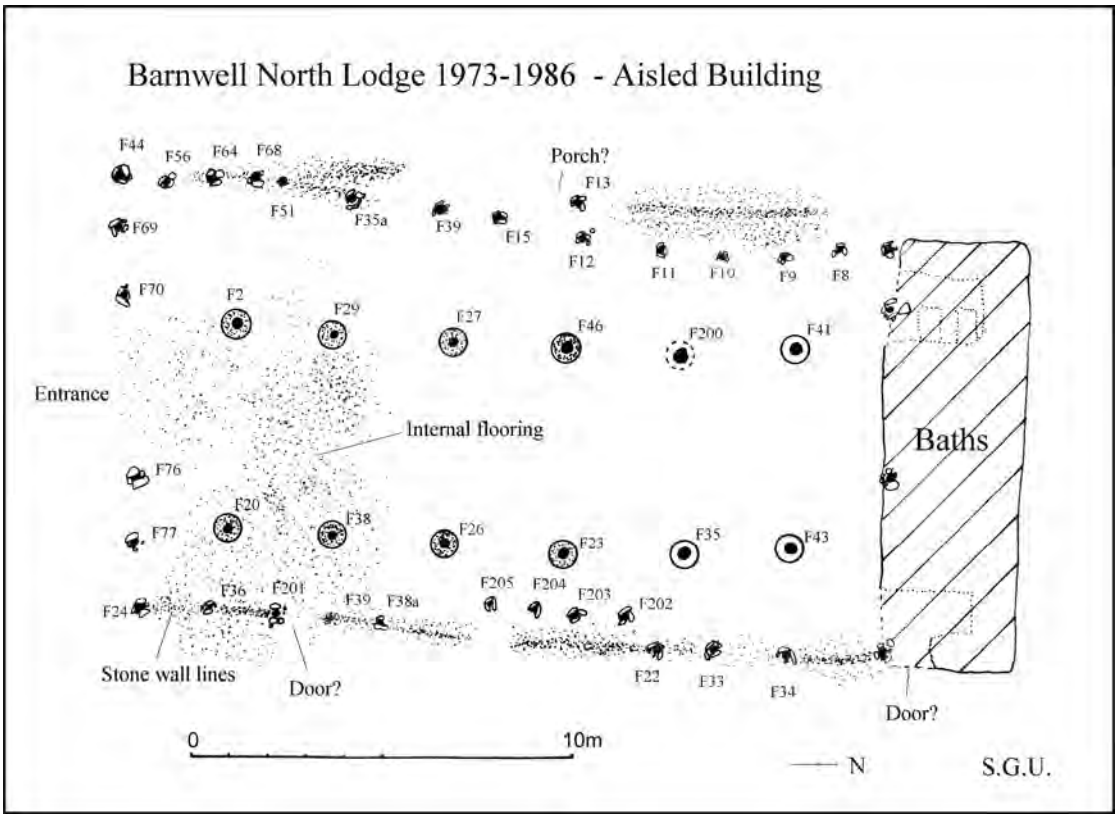

Fig 7 General plan of the aisled building

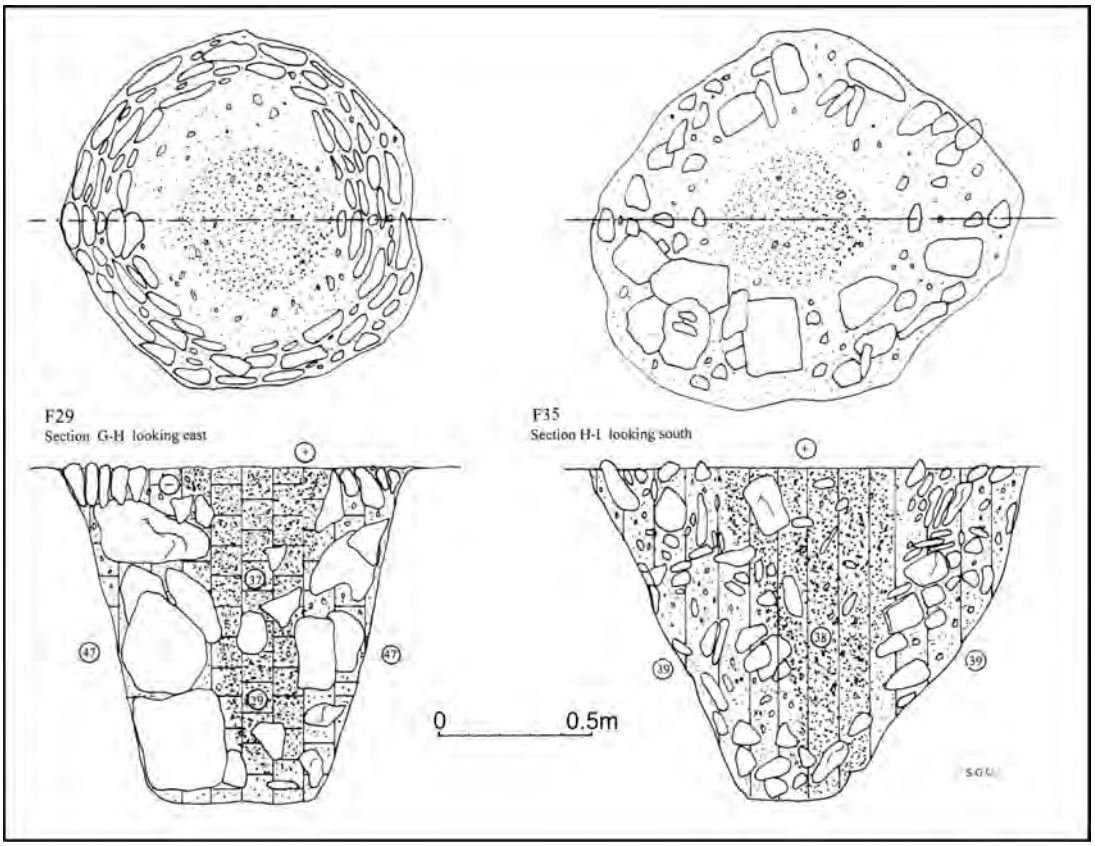

Fig 8 Sections of aisle postholes F29 & F35

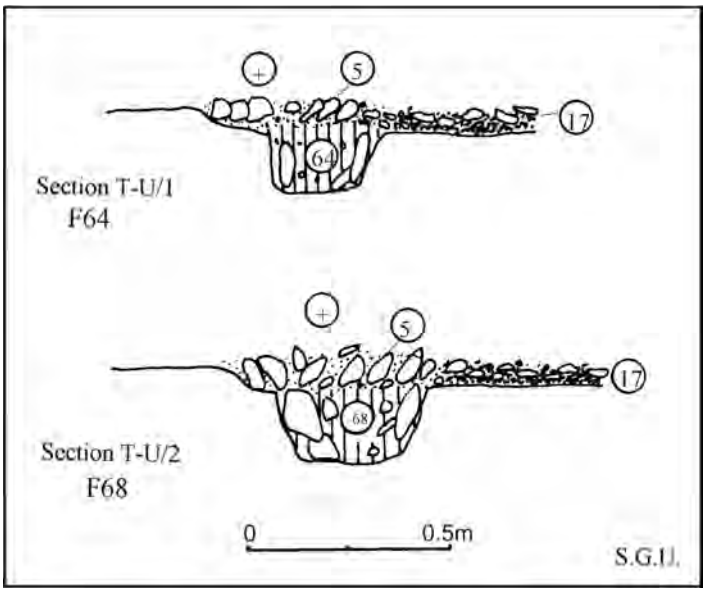

Fig 9 Sections through wall line of the aisled building

southern end, which was incorporated into later, more defined surfacing spreads. Part of the central area of the aisled building, its nave post positions and side-walls is shown in Fig 10.

To the west of the aisled building, there was a V-shaped ditch, aligned east-west, 1.0m wide and 0.5m deep (Ditch 6, Fig 2 and Fig 11, Sections) which may have been fenced on its southern side. Part way along this ditch there was a break associated with a pair of postholes and these seem to have formed a gate or entrance through the new boundary. A spread of limestone, gravel and occupational debris built up around this gateway, acting as a metalled surfacing for carts and animals passing through the entrance. The ditch and fence effectively divided the area to the west of the building into two yards, Yard 1 to the north and Yard 2 to the south (Fig 2).

At this period two large pits were also dug (Fig 2). Pit II was 18m to the south-east of the aisled building and was only partly explored, although its area could be interpreted from the high anomalies recorded on the geophys-

Fig 10 General view of the aisled building, looking north

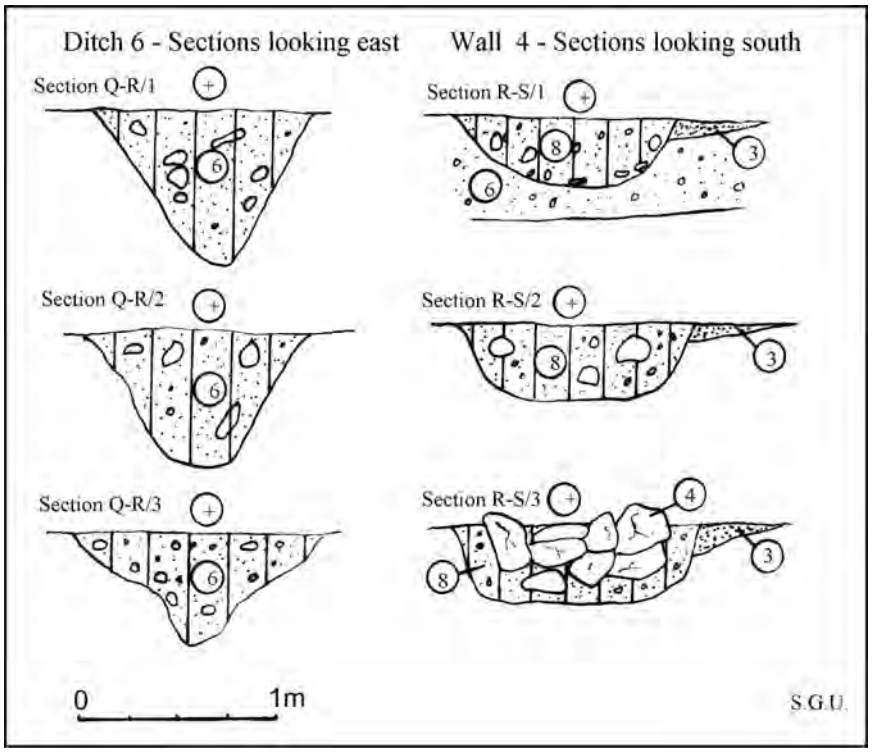

Fig 11 Sections across Ditch 6 and Wall 4

ical survey and showed it to have covered a surface area of approximately 75m^2 (see also section F–G, Fig 12). Pit III, 13m from the north-west corner of the building, was even larger, with an area of 90m^2, including the pit both within the excavation and beyond, as computed from the geophysical survey (Fig 13, Sections A–B, B–C & C–D). Both pits were dug into the underlying clay and would have involved a large labour investment. Pit II was only 0.75m deep (cut from the presumed Roman ground surface) but Pit III was 2.50m deep and would have involved a large amount of effort to dig and would have produced large quantities of material, presumably clay, as it was dug. Why both pits were dug is a matter of debate and this will be returned to below. It is also not clear how both pits functioned once they were dug as both remained open until the middle of the 4th century. Both would have accumulated standing water and may have served as ponds for animals and stock as well as drinking water for the farm occupant (no wells were encountered during the excavations). Equally problematic is the relationship between Pit III and the use of Yard 1. The pit had very steep and deep sides and there was no surviving evidence to suggest that it was fenced against stock in any way.

Period 3 (late 2nd century to mid-3rd century AD)

During the late 2nd century and through the first half of the 3rd century the site continued to be developed. Ditch 1 remained open and was re-cut along various parts of its length, although this ditch cleaning was not encountered along the whole length of the exposed ditch (eg the section shown in Fig 8). To the east of Ditch 1 a section of narrow ditch, Ditch 14 (Fig 2) was constructed with two near right-angled corners. This ditch, which was only partly revealed, was 0.79m wide and V-shaped, and its relationship to Ditch 1 was unclear. It could have acted as some form of boundary to a small yard (Fig 2, Yard 3. Alternatively, the original excavators postulated that it might have formed part of a structure, although the V-shaped profile of the ditch would perhaps limit its use as a foundation trench for a wall, which would have had to have been robbed out, as there was no indication of any stonework within the ditch fills. The best option is to view Ditch 14 as a boundary similar to that created by Ditch 6 to the west of the aisled building, although what its function was and how it related to the Ditch 1 remains problematic.

The aisled building also underwent major structural changes during this period. The original structure consisting of four pairs of posts which formed five bays was extended to the north by the addition of two extra pairs of posts, turning the building into a seven-bay structure, which measured 20.0m by 11.0m, (see Fig 14 for building phases). The new nave posts were slightly different in character: they were less substantial and less well packed with limestone, both within the postholes and at their surface, and they contrast with the neatly packed concentric rings of limestone which the builders of the earlier period of construction had employed (Fig 18, F29, section G–H). The side walls of this extension were similarly set out with rows of posts, and the sections of the posts along the north-west wall line are shown in Fig 15.

At the same time as the building was being extended to the north there was some evidence for the side-walls in various parts of the original phase of the building being replaced by new posts along with the re-building of the dwarf wall which appears to have existed between these posts. Much of the evidence for the side walls was

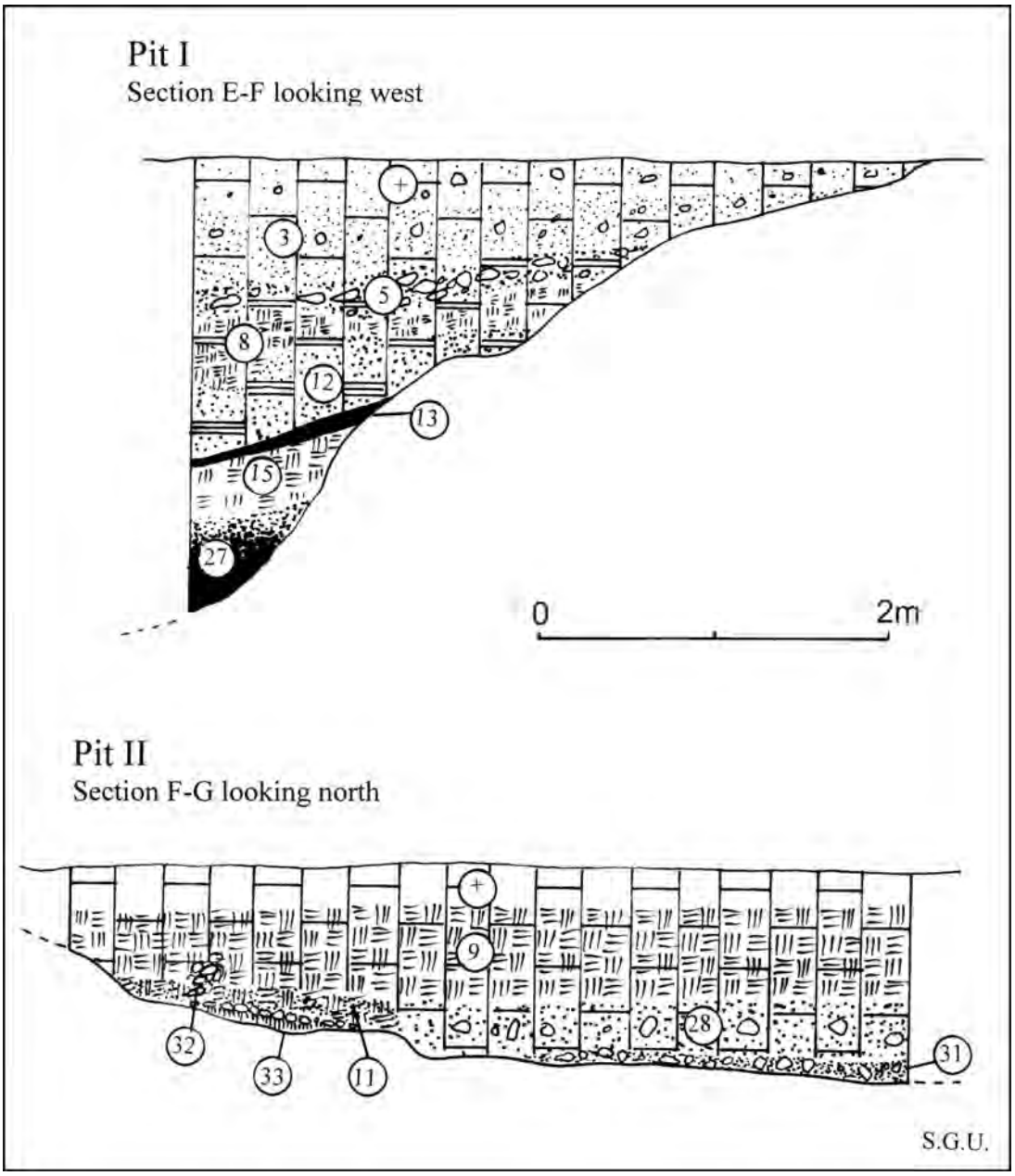

Fig 12 Sections across Pits I & II

severely damaged by later ploughing, especially by the confused spread of limestone just outside the north-western sector of the building (Fig 14). This may have been structural and either related to the second phase of the building (perhaps some narrow feature built against the north wall) or alternatively a feature built to the north of the Phase 1 building; perhaps a yard wall or boundary of some kind.

Again there was little indication of what the internal arrangements of the building were at this period. A spread of limestone and gravel was found at the southern end of the building and this may have been linked with a wide entrance in the short-axis wall at this point, which the settings of side-wall posts suggests.

What is clear is that in this second phase of the building's expansion the builders appear to have set the extension line out on a slightly different alignment; the centres through the nave-posts of Phase 1 do not line up with the centres through the posts in Phase 2. Thus the building would have had a slight angular break in its plan part way down its length.

At the same time as the building was being re-organised a large pit, 4m by 3m, was constructed to the north of the building (Fig 2, F17). The function of this feature is unclear.

During Period 3, Yard 1, to the west of the building, was also being re-organised with the laying down of limestone rubble to form a surface within the yard and then, shortly after, there followed the construction of a narrow foundation for a wall (Fig 2, wall 4 & Fig 11). Thus the area of Yard 1 appears to have become bounded on the east by the aisled building, on the south by Ditch 6 (and fence?), on

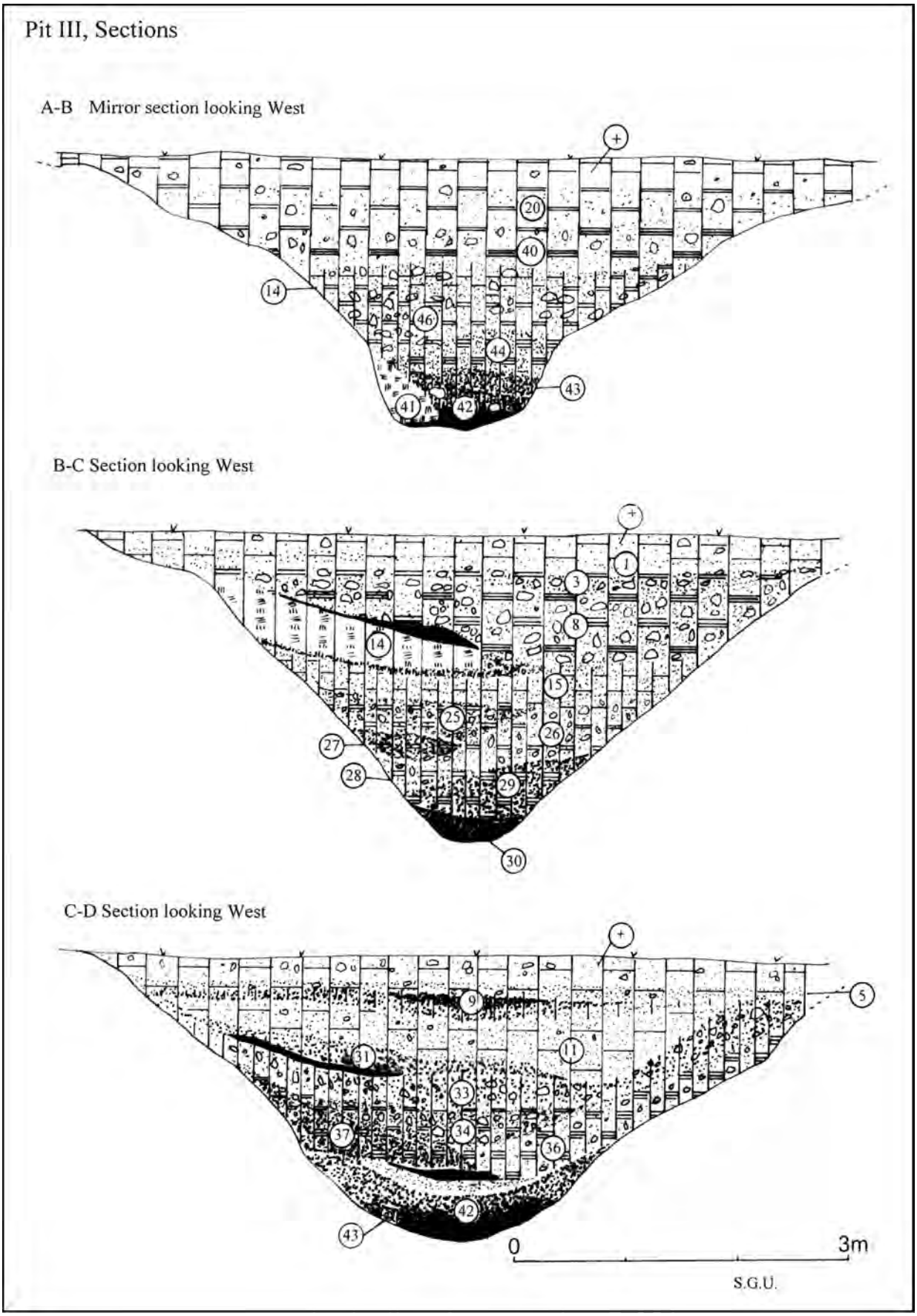

Fig 13 Sections across Pit III

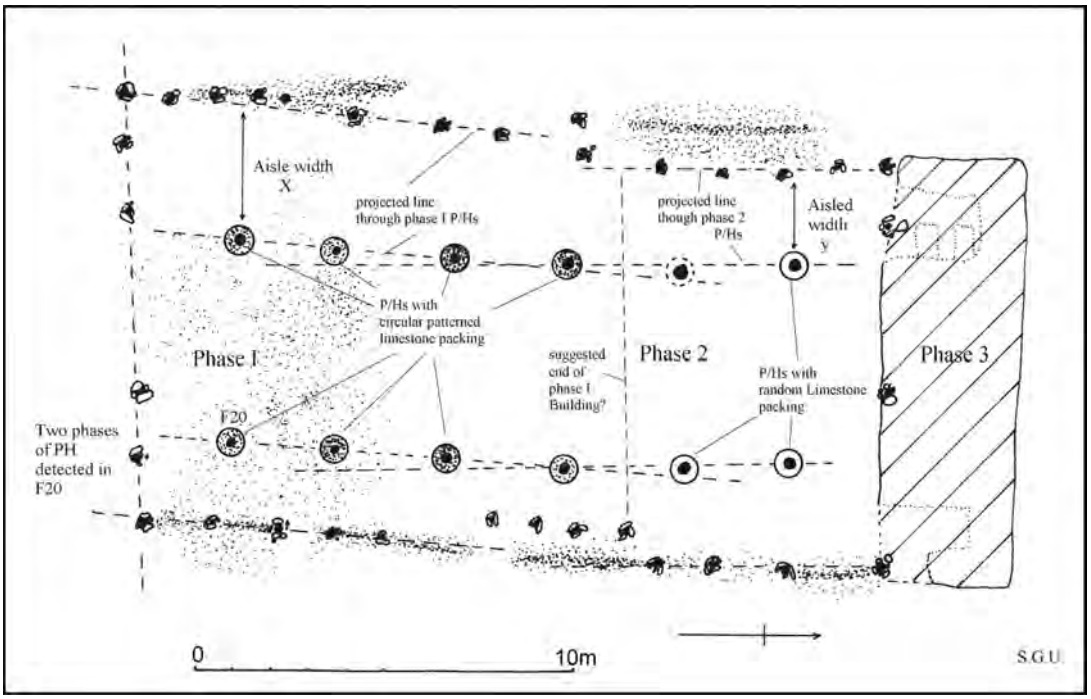

Fig 14 Suggested phasing for the aisled building

the west by Wall 4 while on its northern side it appears to have opened onto the edge of Pit III.

Re-surfacing within Yard 1 seems to have continued periodically for the next 200 years or so, with large and small spreads of limestone rubble mixed in with pottery and domestic rubbish. This must represent cart loads of material being dumped within this area to fill hollows or wet areas. Most of this material appeared in a single and very mixed layer (BNL87 E29) which was perhaps caused by cattle trampling the whole of the yard and mixing things together. Seven coins from this deposit range in date from the earliest of Postumus (260–269 AD) up to the latest in the series, one of Gratian (367–378 AD).

Period 4 (mid-3rd century to early 4th century AD)

The expansion and re-organisation of the building appears to continue into this period, with a small and (by comparison to the earlier building phases of the aisled structure) well-built bath suite, 11.0m × 3.5m, added to the northern, short-axis wall (Figs 2, 7, 14 & 16). To fit this bath extension onto the north wall of the existing building, the builders first had to fill in Pit F17, dug in the previous period, with large, dressed limestone blocks, which could have come from some other demolished building in the area. The stone foundations of the bath suite, which contained a coin of Gallienus (260–268 AD), were then were laid out over F17 and in some sections extended down into the former feature to combat any later subsidence (Fig 17). Away from F17 the mason's trench (Layer 20 in Fig 16) of the bath was much more modest in depth, 0.25m, and the wall here was of limestone rubble set in a herringbone fashion.

Figure 16 shows a plan of the bath arrangements. Along the south side of the new bath extension a series of four posts were located which must have formed the original northern, short axis, wall of the Period 2 building (Fig 16). Within the area of the wall lines of the bath a sub-flooring layer, 2.50m by 6.50m, of limestone rubble was laid, upon which was poured a coarse layer of *opus signinum*. On this concrete floor, tiles were set, although only their impressions in the concrete floor remained. At one end a flue arrangement was built consisting of two stacks of tiles forming flue cheeks, of which one remained in a well preserved state; the other appears to have been robbed out (Fig 18). The flue channel appears to have led into a single duct under what must have been a suspended floor and the length of the flue, at least 1.50m, suggests that there could have even been some arrangement for a water-boiler set over the flue cheeks.

It was impossible to work out, due to plough damage, how big the rooms of the bath were or how far the warm air was ducted into these rooms. There was no set of tile impressions on the *opus signinum* flooring in the north-eastern section of the bath to suggest that the whole structure was heated or of how the hot gases were vented out of the building. There may have been two separate rooms within the bath (Fig 19), one heated and one not, and the two surviving areas of *opus signinum* concrete may indicate this division.

The area to the west of the flue, 2.0m by 2.5m, although small, may have been used to store wood for firing the furnace. At the eastern end of the bath there was an even smaller space, 2.50m by 1.20m, which is difficult to interpret, but may have been a changing area.

How the bath suite originally 'fitted' into the existing north end of the aisled building is difficult to understand. There was clearly some attempt at herringbone walling along the junction between the bath and the existing short axis wall of the building (Fig 19). However, it remains unclear if the form and pitch of the roof-line of the aisled

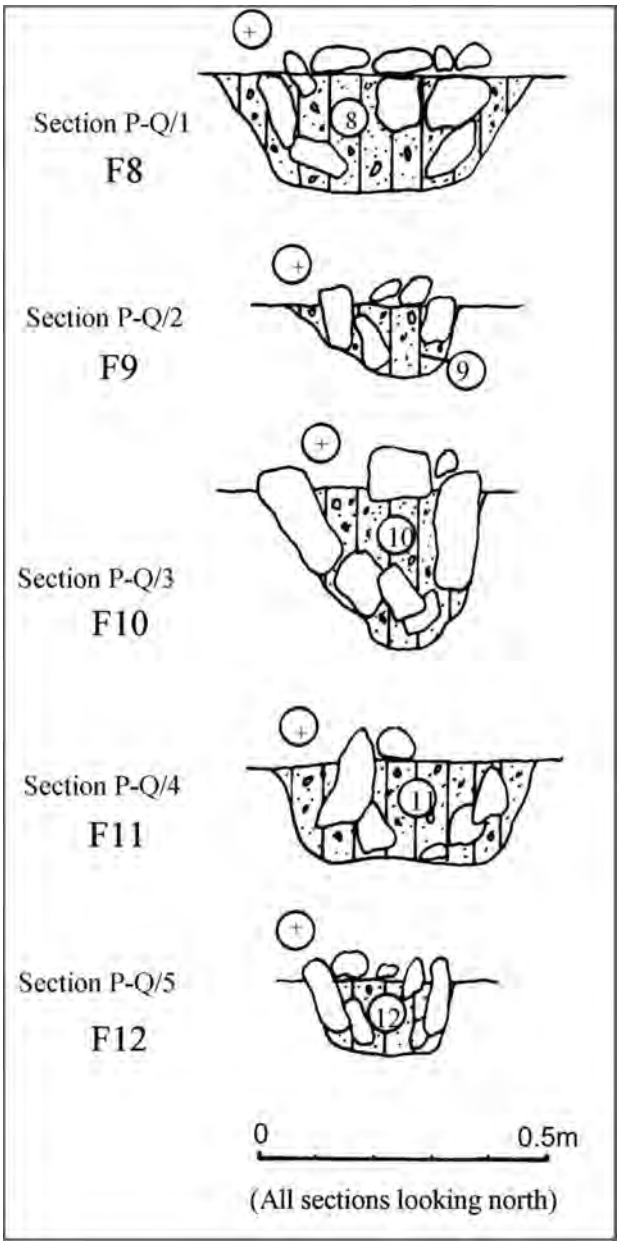

Fig 15 Sections across postholes along north-west wall of the aisled building

building continued over the bath extension or if the baths formed some lean-to arrangement against the short wall of the existing building.

The builders of the bath encountered other problems in making their extension to the north end of the aisled building; for they encroached onto the eastern edge of Pit III, to such an extent that they had to both underpin the new building extension to prevent it from subsidising into the pit and to allow pedestrian access between the pit and the building. To cope with this problem the builders constructed a wooden revetment across the eastern end of the pit which consisted of four wooden piles which were driven into the side of the pit. Wood planks were laid behind the posts and the area behind the planking filled with first clay and then packed with limestone, gravel and building and occupational debris to form a hard walkway. The tops of the wooden piles were each sawn into a point once driven into the pit side, presumably to shed rain water. Through time the weight of the material behind the planking seems to have pushed the whole revetment slightly out of vertical and toward the pit (Figs 16, section D–E and Fig 20).

One of the uprights was removed for analysis and was found to be 1.48m long and with a sharpened point at the lower end, which had aided it being driven into the pit side. One of the planks was also removed and showed that it had been tangentially split from an oak log and then fashioned still further by the use of an adze, the marks of which were clearly seen (Fig 21). Samples were taken for dendrochronological analysis, but unfortunately the timbers were not able to be matched with a calibrated date.

Within the aisled building three small pits were dug (Pits 50, 51 & 102, Fig 2) which are shown in section in Fig 23 and around this area further spreads of limestone appear to have been added to the existing hard-standing surfaces which were started in the previous period.

To the east of the bath and the aisled building, Ditch 14 was filled in and the area was covered in limestone rubble which must have formed a hard standing for, perhaps, an expanded Yard 3 area. A coin of Tetricus (275–285 AD) was sealed beneath this yard surfacing. To the west of the building, limestone and occupational material were still being spread in patches in the area of Yard 1. Running away from a projected entrance into the building on this side there appears to have been a series of pathways laid out, again formed from limestone rubble (Fig 2).

At the south end of the building, and only 1.5m away from the south, short-axis wall a third large pit (Pit I) was dug partly cutting into the side of the former Ditch 1 (Fig 5). The pit was only partly explored but was at least 2.60m deep (Fig 12, section E–F) and its surface area was computed from the geophysical survey as being approximately 85m^2 and therefore similar in area and depth to Pit III. The pit was dug, like Pit III, into the underlying clay and must have quickly filled with water once finished and left open.

A line of six postholes was set out from the south-east corner of the aisled building and along the north-eastern edge of the pit and may have acted as some form of fencing against stock falling into the pit (Fig 22).

Period 5 (mid-4th century AD)

Material in the form of limestone rubble and occupational debris was continually being added to the yard areas and the area of hard standing within the southern end of the building throughout this period. In addition an area of hard standing was located in two narrow excavation trenches to the south of Yard 3 and which may be extensions to this yard area.

To the north of the building a wall was also constructed which ran from the north-eastern corner of the bath suite to the north and out of the excavated area. On the west side of this wall was a shallow gully which ran parallel to and seems to have been contemporary with it: three

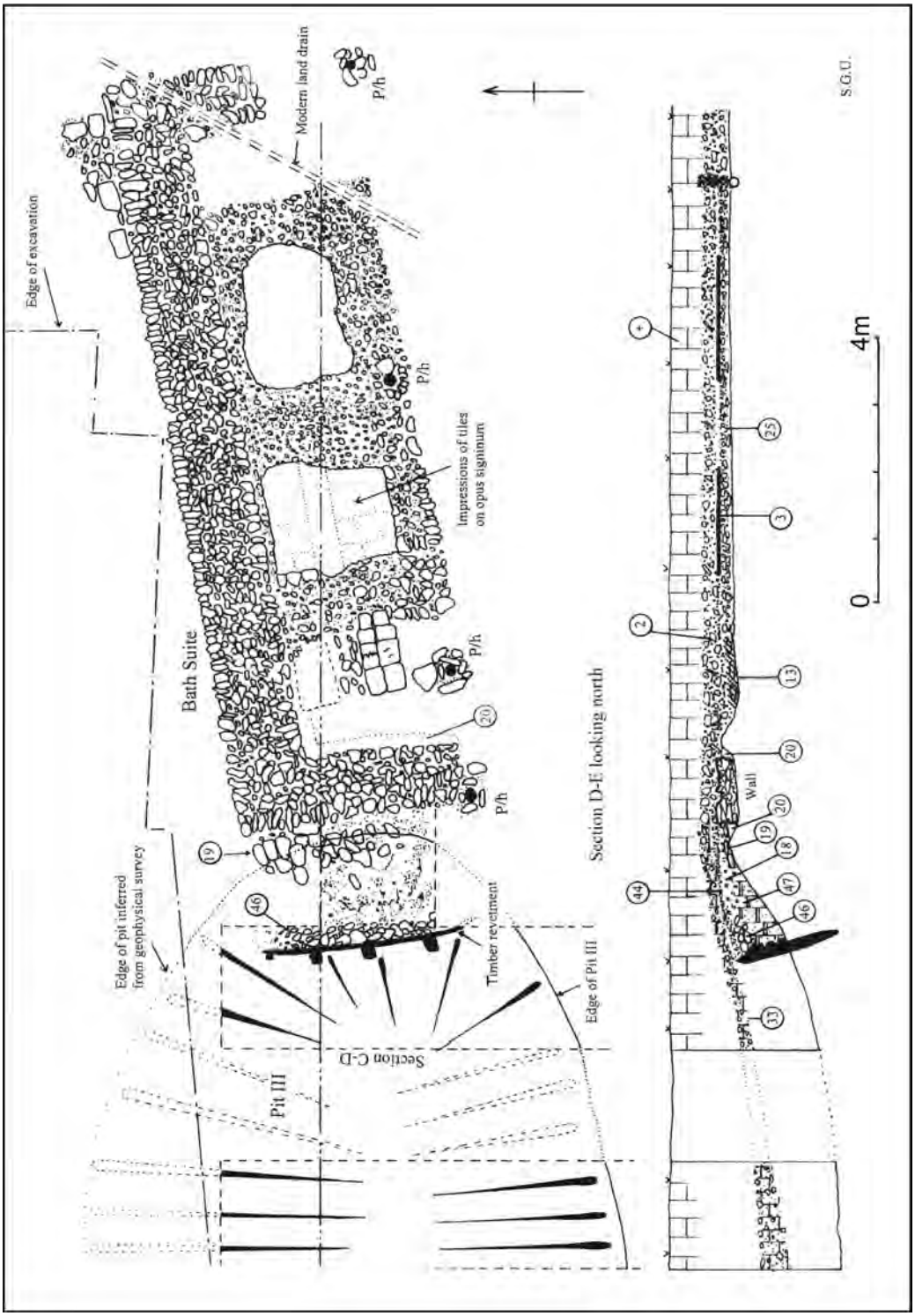

Fig 16 Plan and section of the bath suite

Fig 17 Section through the *opus signinum* floor and the underlying packing of the mason's trench against the inside wall of the bath suite, looking west

Fig 18 The blocked flue and the remaining flue cheek of the bath suite, looking south-east

Fig 19 General view of the baths under excavation, looking west

Fig 20 The wooden revetment in Pit III, looking north

coins, including one of Theodora (337–341 AD) and one of the House of Constantine (330–348 AD) came from the wall foundation trench and two other coins, one of Constantius (335–337 AD) and the other from the House of Valentinian (364–378 AD) came from the gully. To the east of the wall the area was surfaced with limestone and appears to have become part of the extended area of Yard 3.

Two pits, F100 (containing a worn coin of the House of Constantine, 330–335 AD) and F30 (Fig 23, section N–O) were also dug in the south-west of the excavated area and contained general building debris along with a shallow scrape F101 (close to F100) which was filled with ash and burnt material.

It is at this period also that Pit II and Pit III start to be filled with domestic rubbish, general building debris and burnt material in the form of ashy layers, which may be derived from some industrial process, and charcoal. The coin evidence from the pits is poor considering that they were largely filled with domestic rubbish. Only one coin from the House of Constantine (330–348 AD) was recovered from the middle fills of Pit III.

Period 6 (late 4th/early 5th century AD)

The aisled building and its bath suite appears to have been demolished at some time during the late 4th or very early 5th century. Some of the nave posts were removed, perhaps for re-use, whilst others were left to rot *in situ*. It is at this period that the robbing occurred in the area of the flue of the bath house, with tiles removed from one side of the flue cheek. Stonework was also robbed out of the wall lines of the baths and the tile sub-flooring from the primitive hypocaust was also taken. The robbers left a mass of building debris consisting of limestone rubble, broken tiles and blocks of the concrete flooring in a thick layer over the top of the former bath house area (Fig 16, section D–E, layer 2) and this spread down into the already partly filled Pit III. Debris and soil infilling also continued in all of the other deep features on the site.

Over the area both within and to the east and north-east of the aisled building a large area of demolition debris was spread, but not before a small pit or stone-lined cist, F66, was dug into the existing earlier surfaces into which were placed four complete vessels, perhaps as some form of votive offering (Figs 24 & see Fig 2.5).

Other late Roman occupation comprised the digging of a shallow gully (gully 37, Fig 2) in the extreme northern

Fig 21 Plank from the wooden revetment, showing adze marks

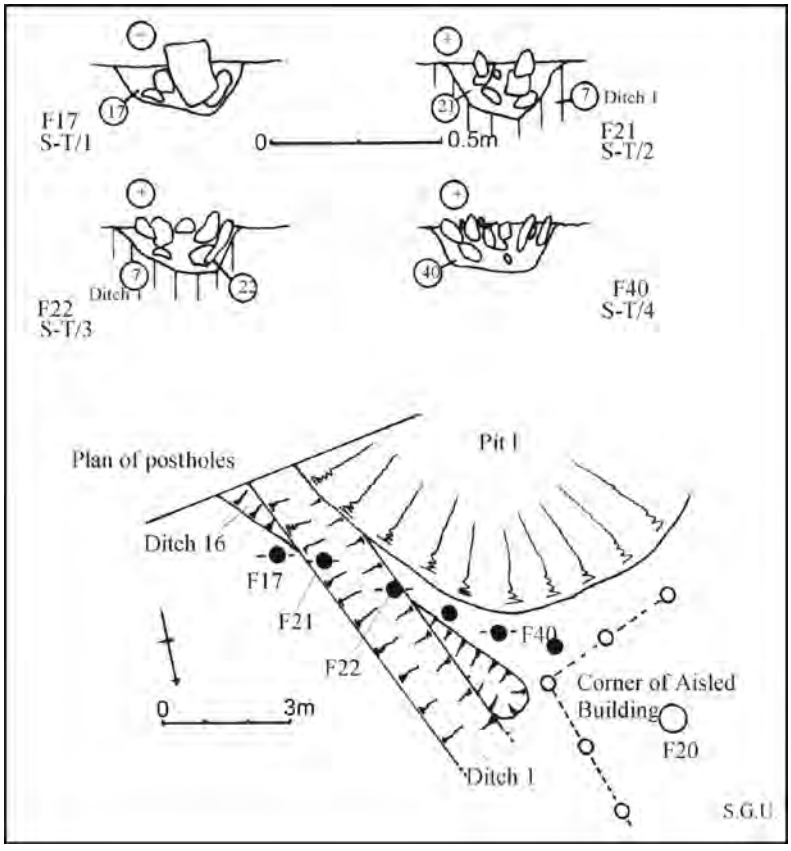

Fig 22 Fence line postholes to the east of Pit I

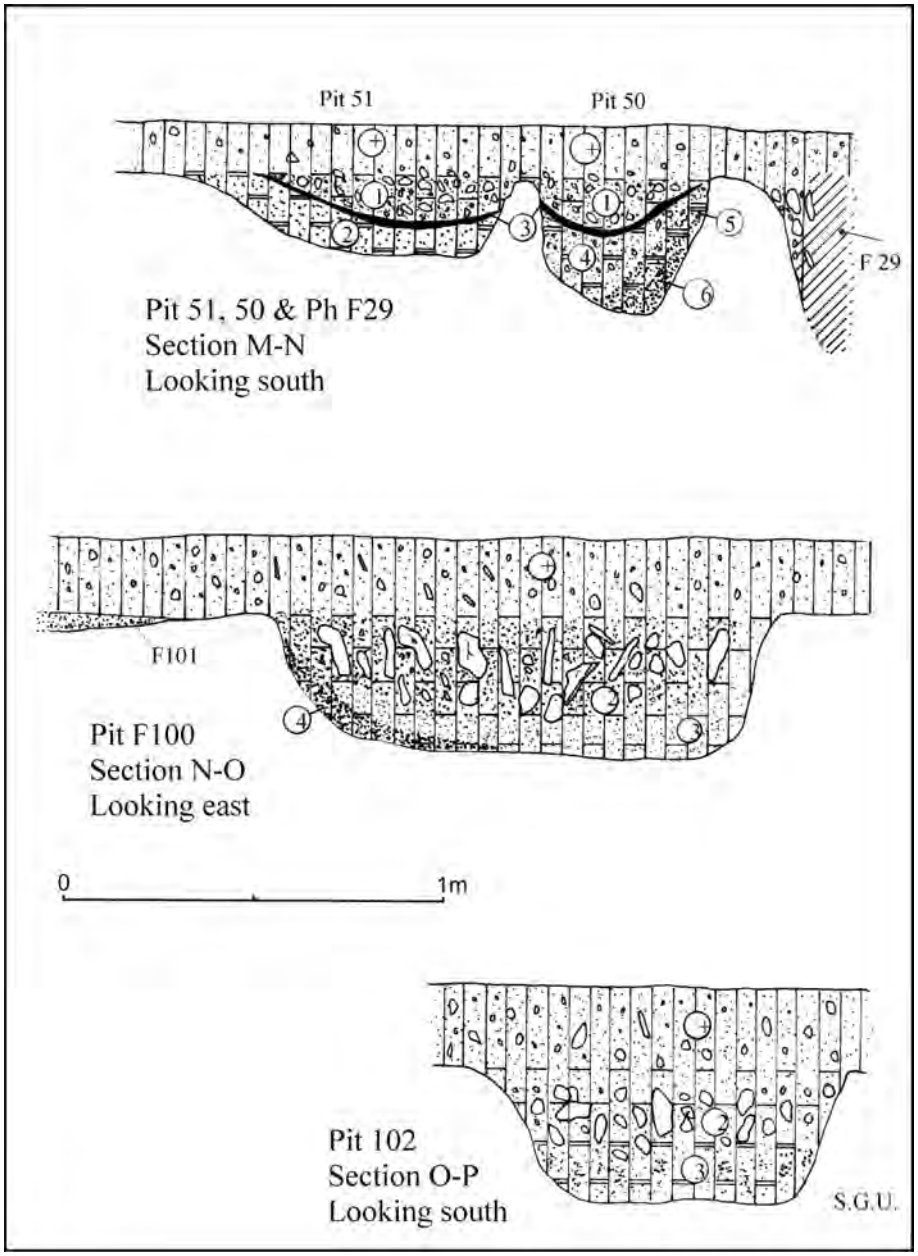

Fig 23 Sections of small pits, 50, 51, 100 and 102

extension of the excavated area; cut into the Period 5 surfacing.

Period 7 (5th–6th centuries AD and after)

There was slight evidence for a Saxon presence at the site with the discovery of four postholes set within the former south-western corner of the aisled building. The finds consisted of very abraded body sherds recovered from three of these postholes. What these features represent is difficult to say with confidence. The posts may have formed part of a fence line over this part of the site (Figs 2 & 4) or alternatively they may have been structural.

After the period when these posts were erected the site seems to have been totally levelled and the area was set out as ridge and furrow in the medieval open arable fields of the parish of Barnwell and then later formed part of the enclosed landscape of the seventeen century (Bridges 1791, 213; Hall 1995, 190–191). It is into this enclosed field landscape that the modern land drain was dug which partly cuts across the site (Fig 2).

Fig 24 The four colour-coat vessels from stone-lined cist F66

The Roman pottery

Samian pottery *by Felicity C Wild*

One hundred and nine sherds of samian ware were examined, from a maximum of about 85 vessels. While the vast majority were Central Gaulish and predominantly dating to the late 2nd century, five sherds (4.5%) were South Gaulish and Flavian or Trajanic, three sherds (2.7%) were from Les Martres-de-Veyre (M de V), Trajanic-early Antonine, and two sherds (1.8%) from East Gaul. Where identifiable, the forms are listed, by origin (Table 1).

While the sherds from South Gaul and Les Martres-de-Veyre suggest occupation as early as the late 1st-early 2nd centuries AD, only four of the eight sherds appear to be significantly stratified. Two came from the fill of Ditch 16 (D16) and two from the bottom of Pit III (A23). The other four were all clearly residual, in Period 4–6 contexts.

Only seven sherds (6.4%) were from decorated forms, from a total of five bowls. Such a low proportion is perhaps only to be expected from a rural site, particularly from one occupied predominantly from the late 2nd century, when decorated ware tends to be scarcer than at earlier periods. It is noteworthy that one of the bowls here is from South Gaul (1) and a rim sherd, probably from form 37, is from Les Martres-de-Veyre.

The material from contexts in Periods 1–3 is summarised briefly below. The samian ware from Periods 4–6 is all likely to have lasted long in use or been residual in context.

Period 1
From the fill of Ditch 16 (D16):
Form 27 and 36, both SG, Flavian or Trajanic.
Form 27, CG. Four joining sherds of a typologically late example. Hadrianic or early Antonine.

Table 1: Samian forms

Form	South Gaul	Central Gaul (M de V)	Central Gaul (Lezoux)	East Gaul	Total
30	–	–	1	–	1
37	1	1?	2	–	4
27	1	–	1	–	2
33	1?	–	9	–	10
18/31	–	1	7	–	8
18/31 or 31	–	–	2	–	2
31	–	–	7	–	7
18/31R	–	–	2	–	2
18/31R or 31R	–	–	5	–	5
31R	–	–	5	–	5
18/31, 31 or R	–	–	2	–	2
35	–	–	1	–	1
35 or 36	–	–	2	–	2
36	1	–	1	–	2
38	–	–	2	1	3
46	–	–	1	–	1
79	–	–	1	–	1
Curle 23	–	1	1	–	2
Bowl	1	–	5	–	6
Dish	–	–	2	–	2
Total	**5**	**3**	**59**	**1**	**68**

Period 2
From the fill of Ditch 1 (D14):
A CG, late 2nd-century group including two sherds from different bowls, probably both of form 31R, *c* AD 160–200, and a third bowl sherd with a dove-tailed rivet-groove and traces of lead rivet.
The surfacing of Yard 1 (E1, E2) produced a CG group of Antonine date, including forms 33 (three examples, including S2 below, stamped by Iullinus ii, *c* AD 160–200), 46, 38 and 31R.
The fill of Ditch 6 (E6) produced a further example of form 33, CG, Antonine.

Period 2/3
From the bottom fill of Pit III (A23):
Bowl sherd of uncertain form, probably SG and Flavian or Trajanic.
Rim sherd, probably of form 37 with the ovolo entirely obliterated, CG, in the fabric of Les Martres-de-Veyre. Trajanic–early Antonine.

Period 3
From the make-up of Yard 1 area (E29):
Form 18/31, CG, Hadrianic-early Antonine. Forms 31 (with the end of a stamp, S5) and 18/31R or 31R, both CG and Antonine.
The material from the various fills of Ditch 1 (C2, C6, D1, D2, D7) is all CG and Antonine, including sherds of late 2nd-century date. The middle fill (D2) contained form 37 in the style of Doeccus i (no. 3 below), *c* AD 170–200.
That from the fill of Ditch 14 was equally late, including form 33 with the stamp of Quintus v (S3), *c* AD 160–200, and the late 2nd-century forms 31R and 79.

The decorated ware (Fig 25)
Figure types are quoted from Oswald 1936–37 (O.) and Rogers 1999 (R.), Central Gaulish decorative motifs from Rogers 1974 (Rogers) and parallels from Stanfield and Simpson 1958 (S&S). Lower case numbers after a potter's name denote homonyms in the system used by Hartley and Dickinson (2008–12).

1. Form 37, South Gaulish, with a horizontal wreath of chevrons over a zone of triple festoons containing a bird. The festoons with the same pendent leaf tuft occur on bowls with the characteristic trident-tongued ovolo used by M Crestio. A bowl in the Museum of London (RGZM website no. 2001212) shows an identical zone of festoons containing the same bird. *c* AD 85–110. (Period 5, D20)
2. Form 30, Central Gaulish. Two non-joining rim sherds, one showing the ovolo (Rogers B176) used by Casurius ii (S&S, plate 133, 7), who occasionally made this form. One of his stamps has been recorded on a form 30 mould from Lezoux (Hartley and Dickinson 2008, **2**, 283). *c* AD 155–190. (Period 4, B20)
3. Form 37, Central Gaulish. Two joining sherds, including the complete base of a small bowl, footring diameter 74mm. Decoration shows a freestyle hunting scene, with a stag to left (O.1784), small stag to right (O.1732) and hound (O.2022), with the acanthus (Rogers K22) and leaf tips as space fillers. The associations are with the style of Do(v)eccus i, who used the small stag, hound and acanthus, though the larger stag, used by Paternus v, is not attested on his signed work. The two stags occur together on a bowl with the rim stamp of Mascellio (S&S, plate

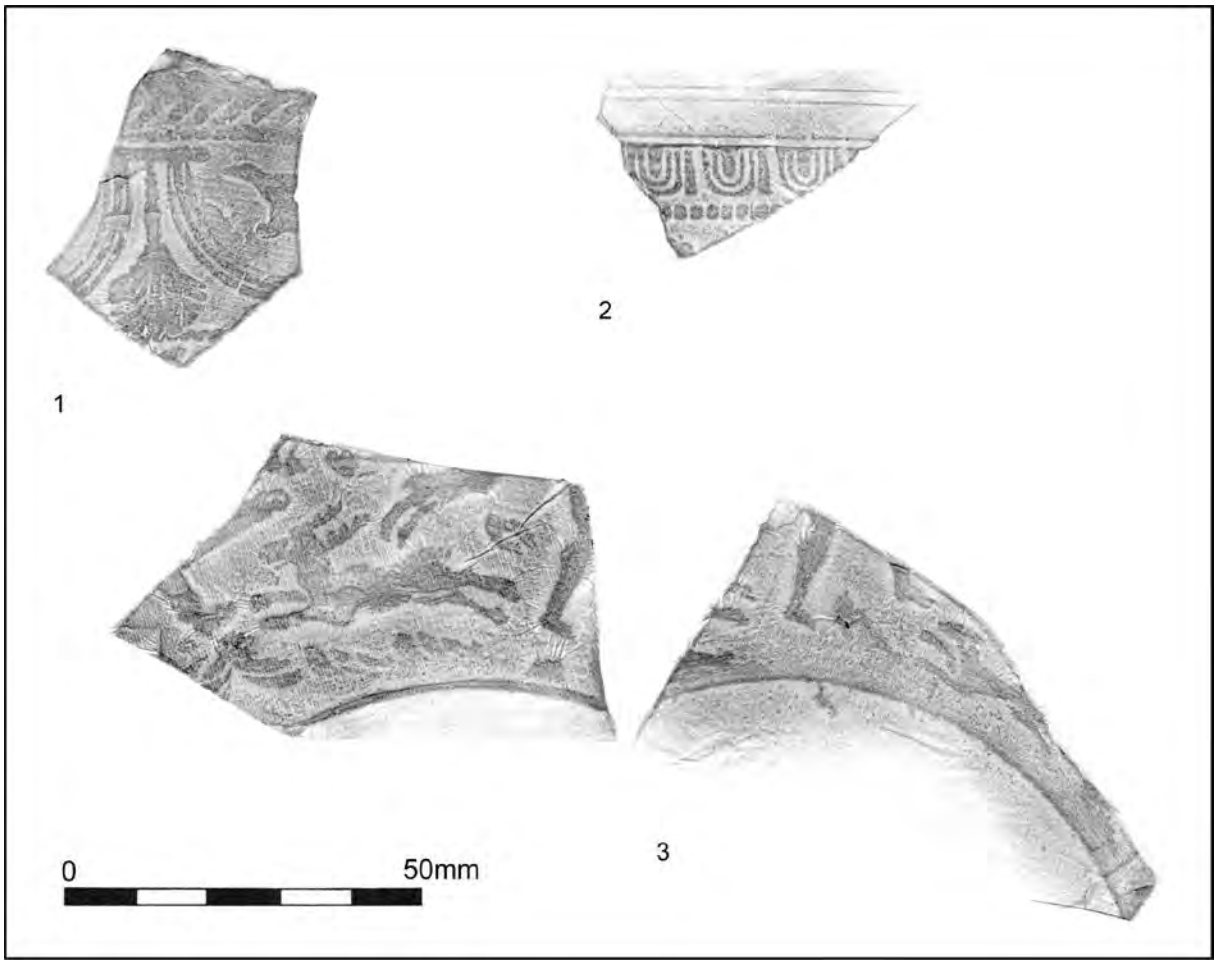

Fig 25 The decorated samian

146, 13), who appears to have worked for Doeccus. The legs are probably those of the man (R.3080) who appears on a bowl with Doeccus' stamp (S&S, pl. 150, 39). The rectangular mark in front of the figure's front leg may possibly have been part of a tab stamp in the mould, but if so, it is not legible, *c* AD 170–200. (Period 3, D2)

The Samian stamps

I should like to thank Miss B M Dickinson for identifying S3, as yet unpublished (Hartley and Dickinson 2008–12). Underlining denotes ligatures.

S1 [CEL]SIANI.OF Form 31R, Central Gaulish, showing die 1a of Celsianus of Lezoux. *c* AD 160–200. (Period 4. C24)

S2 IVLL[INI.OF] Form 33, Central Gaulish, showing die 1a of Iullinus ii of Lezoux. *c* AD 160–200. (Period 2. E2)

S3 QVINTIM Form 33, Central Gaulish, showing die 5a of Quintus v of Lezoux. *c* AD 160–200. (Period 3. C27)

Incomplete and unidentified:

S4]INVS Form 31, Central Gaulish. Antonine. (Period 4. C3)

S5]M Form 31, Central Gaulish. Antonine. (Period 3. E29)

Amphorae *by R M Friendship-Taylor*

Nine body sherds (one of which had a handle stem) were present in the assemblage, representing some five vessels, of which at least three are recognised as probably of Dressel 20 type. These had originated from the banks of the river Guadalquivir in southern Spain between Seville and Cordoba and would have contained olive oil. They probably all date from the later 1st-early 2nd centuries.

There were also two sherds from context F29, 1988, which may have come from a CAM 185A/Haltern 70 type from Baetica, of probable mid-1st century date. As these are body sherds, it is very difficult to be absolutely certain of the actual form (see Peacock and Williams 1986).

The coarse pottery

A total of 183kg of pottery was recovered from the excavations. Most of the pottery came from the three large pits, from yard areas and from the destruction layer over the bath suite. There has been no attempt to provide a statistical breakdown of the various forms of the vessels

or to link such detail with the chronological development of the site. However, a basic breakdown by weight of the various types of vessels and chronological periods is given below in Table 2. The assemblage is significant as it does provide well stratified and dateable vessels which add considerably to our understanding of the chronology of lower Nene Valley pottery sequences.

LNVGW = Lower Nene Valley Grey Ware; LNVCC = Lower Nene Valley Colour Coated Ware; LNVCW = Lower Nene Valley Cream Ware; LVPIRP = Nene Valley Post-Industrial Roman Pottery; RSGW = Roman Shell Gritted Ware; O&UN = Oxford and Upper Nene imports

The catalogue of pottery

The full catalogue of the pottery, with illustrations, is within Part 2 of the report, available in digital format on the attached CD.

Selected other finds

Fragment of a lead tank from Pit III (Figs 26 & 27)

An irregularly-shaped fragment of sheet lead (115 × 60 × 5mm) which appears have been folded over and welded together and which has then had a lead rim added to it so that it formed the upper edge of a tank or cistern. The rim is of uneven thickness (varying from 10–14mm) and has been roughly cut at one end, level with the end of the surviving fragment whilst the other end of the rim, which extends for another 110mm beyond the edge of the surviving fragment, has been turned upwards and twisted around 4–5 times (Fig 26). This configuration of the rim must have been done as the object was being cut up and would have required considerable force. Weight 0.75kg (BNL87, SF147, E14)

The fragment must come from a cistern or tank and still retains the slight curvature of its original shape, which if extrapolated to an original form, would have been of the order of 700–800mm in diameter. This raises the question as to what the object was that the fragment was cut from. Lead tanks in Roman Britain could have formed features related to wells or water features (Guy 1981, 274) and may have been used as water troughs.

Several of the tanks from Britain have Chi-Rho monographs on them, indicating some link with Christianity although how these tanks were used remains unclear. It may be that they were merely decorated water tanks which were owned by Christians rather than having a specific liturgical function such as for ritual ablution (Guy 1981, 275). The Barnwell fragment does appear to have been formed in a rather different way to most of the other known lead tanks from within the province in the sense that most seem to have been constructed from sheets of lead welded together, whereas the Barnwell fragment seems to have been formed from a folded sheet of lead. This may imply that the Barnwell fragment was in fact a repaired section of a tank and this may fit with the 'thinning' of the lead at the edges of the surviving fragment; as if it were cast onto the side of a damaged but larger object, in a similar way to the repairs made to the base of the tank from Oxborough, Norfolk, (Guy 1989, 235).

The form of the Barnwell rim (Fig 27) which is rectangular and measures 10 by 14 mm, is similar in size and form to the rim of a complete tank which had a Chi-Rho on it and also the rim of a second, but incomplete tank, which lacked a Chi-Rho (Upex 2008, colour plate 16) both found at Ashton, near Oundle in 1976 (Guy 1977,

Table 2: Samian forms

Form	South Gaul	Central Gaul (M de V)	Central Gaul (Lezoux)	East Gaul	Total
30	–	–	1	–	1
37	1	1?	2	–	4
27	1	–	1	–	2
33	1?	–	9	–	10
18/31	–	1	7	–	8
18/31 or 31	–	–	2	–	2
31	–	–	7	–	7
18/31R	–	–	2	–	2
18/31R or 31R	–	–	5	–	5
31R	–	–	5	–	5
18/31, 31 or R	–	–	2	–	2
35	–	–	1	–	1
35 or 36	–	–	2	–	2
36	1	–	1	–	2
38	–	–	2	1	3
46	–	–	1	–	1
79	–	–	1	–	1
Curle 23	–	1	1	–	2
Bowl	1	–	5	–	6
Dish	–	–	2	–	2
Total	5	3	59	1	68

10–11 and fig 5; Hadman and Upex 1977, fig 4). The Christian tank from Rushden near Kettering, was smaller in size (diameter 480mm) than the diameter postulated for the tank from Barnwell, and had a twisted-cable decorated rim (Looker 1998, 163).

The Barnwell lead rim fragment, whether the original complete tank carried a Chi-Rho symbol or not, is significant in that it marks yet another find spot in the East Midlands/East Anglian area where large lead cisterns seem common. As a group of objects their links with Christianity are interesting and it raises questions regarding the possible Christian beliefs of the 4th-century occupiers of the Barnwell site and if they were in any way linked to the ever stronger focus of Christian worship which was centred on the Roman town of Durobrivae, some 20km to the north-east.

Limestone (column-like) pillar from Pit III

During 1986 an additional part of Pit III was excavated in the north-western corner of the excavation area (Fig 2). The section line of this trench is shown in Figure 4 and the section in Figure 13 (Section A–B). A large column like pillar of limestone (Fig 28), was recovered from layer 14 (Period 6). This is the same layer in which the lead objects, reported above, were found and raises even more the question about why such objects were being deposited in the pit at this time.

The object is 1.40m long has a maximum diameter of 460mm. and weighs 231kg. It was found with its smoothed surface uppermost, the other side being partly dressed to form an irregular surface which also shows signs of wear on top of this dressing. There are also angular cut marks caused by chiselling on this part of the stone which indicated that it had additional working to this part of its surfaces. One end of the stone is rounded, the other end cut at an angle and either worn or modified from its perhaps original smooth exterior?

The stone appears to be from the Barnack quarries to the west of modern Peterborough and it is unusual to find a stone of this size and shape on a Roman site. The worked surfaces indicate that it could have had various functions at different times. It could well have started out as a circular column of stone over 1.40m long, and

Fig 26 Fragment of lead tank from Pit III

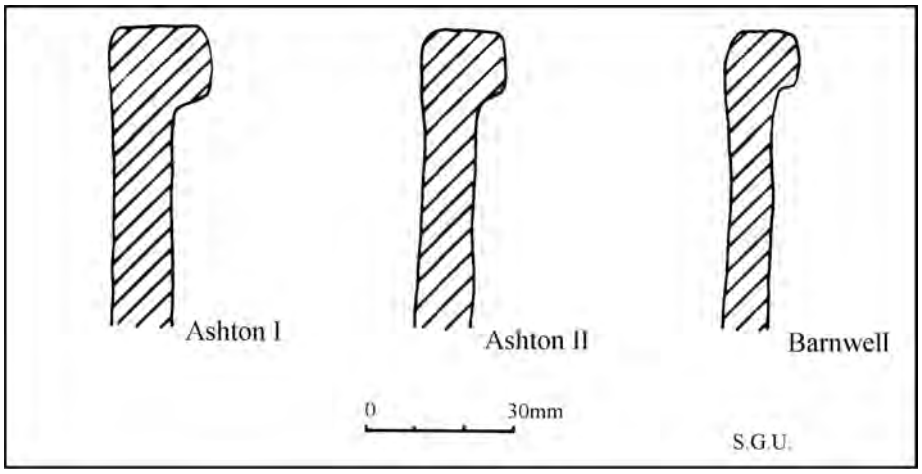

Fig 27 Comparison of rims from three lead tanks

tooling on the curved surfaces of the object shows that it was carefully rounded. Cut marks and additional and perhaps later tooling made down one side of the object appear to have cut across the grain or trend of this original tooling and this could mark a change in function or use of the object. This secondary working appears to have cut into the stone and formed a flattened surface to one part of the former column, with additional cut marks and a wear pattern which may be consistent with it being used as some form of setting for a door threshold.

However, the actual function (or functions) of the stone remains a problem. It has been suggested that it may have either been intended or was even used as a milestone, although there is no trace of any cut lettering or inscription on the stone to confirm this (although original lettering may have been painted). If the stone were ever used as a milestone then it may have been positioned along the line of the nearest Roman road which ran some 2.4km to the west of the North Lodge site (Fig 1). This road which ran between *Durobrivae* and Irchester via the un-walled settlement at Titchmarsh, may well have been furnished with milestones at some point in its history, although no milestones are known from along its line at present. *Durobrivae* seems to have been important enough to have had milestones set up along roads leading from its centre, one found in 1785 recorded that it was originally set up 1000 paces from the town and was erected during the short reign of Florianus in AD 276 (Upex 2008, 54–55; Collingwood and Wright 1965, 235). Mattingley (2007, 457–8) makes the point that a basic division exists between cylindrical milestones which are common from the northern and western parts of Britain and quadranglular milestones which are more common in the south of the province. The stone set up in AD 276 and now in Trinity College Cambridge is circular and was illustrated by Edmund Artis in 1828 (Artis 1828, plate XV).The other known milestone from the area is in the Museum at Peterborough, is quadrangular and was set up during the reign of Victorinus (AD 269–271).

Alternatively, the stone may have acted as a marker or boundary stone similar to those known from Thrapston and Sawtry which appear to have marked out the edge (?) of public land (RCHM 1975, 99, plate 22; Collingwood and Wright 1965, 230).

It is certainly possible that the stone may have had some other or secondary function and had been used for perhaps an agricultural purpose, or as a lintel within a structure or even as part of some form of funeral monument. Neither of these suggestions are in any way satisfactory and at present the purpose of the object remains a complete mystery. Perhaps the deposition of the stone within the top fills of Pit III at some point towards the very end of the 4th century (Period 6) and in the same deposit as the items of lead described above, are all part of some general clearance and tidying up of the site, although the lead would have been a valuable commodity to discard in such quantities. The description of a possible scenario for the deposition of the lead and with it the stone object proposed by Frend and Hadman (1994) is worth consideration. The stone has been taken to the Museum at Oundle where it remains on display.

Fig 28 Limestone pillar in the course of excavation

The animal bone: discussion
by Bethan R Upex

The study of the bone assemblages from Barnwell has provided an insight into the agricultural practices of the later Roman periods in the region and a chance to investigate the socio-economic situation of the site. The Roman agricultural economy of the Nene Valley in the 3rd and 4th centuries, as with most Roman areas, appears to be based largely on cattle husbandry. The preponderance of cattle bones from Barnwell fits well with other sites in the region, all indicating cattle as the dominant species. This may well be due to environmental factors as well as cultural ones, with the heavy clay soils favoring cattle over sheep due to the increased risk of parasitic infections (such as fluke) in sheep on wetter pastures. The focus on an arable economy in the later periods of Roman occupation is reflected in the age profiles from Barnwell suggesting a broad-based animal economy with cattle being exploited for a variety of purposes including traction. This is in direct contrast to early sites from the region where the majority of animals were slaughtered young, potentially to supply veal to the military forts located nearby.

The high proportion of arthropathies from Barnwell suggests that some of the animals may have been used for traction, although care must be taken with this interpretation given the large body size, long life span and heavy clay soils of the region and the impact of these factors on joint degeneration. The large size of the cattle from Barnwell fits with the idea that a new, larger species may have been imported into the region in the 3rd or 4th centuries, with subsequent interbreeding between native and imported species then leading to a slight reduction in size. This has been tentatively suggested for other sites in East Anglia, specifically Great Holts Farm, Essex. An increase in cattle size is also noted from Lincoln and Elms Farm.

Numbers of pig and sheep remains are also consistent with other sites in the region. Pigs are often regarded as being indicative of a high degree of Romanisation as they were highly regarded in the Roman diet. The low numbers present from Barnwell fit with the rural context of the site. Sheep from the site appear to have been mainly utilised for meat, with most individuals being slaughtered at around two to three years, but the presence of a few older animals suggests that other secondary products, such as wool and milk, were also utilised to their full potential. Again this is consistent with the pattern from other sites and fits with the broad based animal economy of the region. The presence of horse bones in a ratio of 1:8 with cattle again indicates the rural status of Barnwell. Relatively high numbers of horses are present at many sites in the region in the later periods and it has been suggested that this may due to an increase in ranching in the region. The large size of the animals may also indicate that they were ex-military mounts.

Discussion

The site at North Lodge, Barnwell opens up a window on the way that the Roman exploitation of the landscape was achieved. It had been earlier thought that the Roman occupation of the clay uplands between the River Nene and the fenland basin was of a comparatively late date and the site at Barnwell had started in the late 2nd century (Hadman and Upex 1974, 27). However, close inspection and analysis of the finds from Barnwell clearly indicate that there was Hadrianic, if not earlier occupation at the site which now fits with the general picture of the expansion which was taking place in the rest of the Nene Valley area and especially on those sites at a lower relief and on better soils (Upex 2008, 116–154). Thus the concept that population and settlement expansion moved through time from the better quality agricultural soils in the lower parts of the valley and up to the heavier clay-land soils is simply not now an argument that matches the available evidence. Agricultural populations were clearly exploiting the clay-land areas in the early 2nd century in the same way that the rest of the lower Nene Valley was being exploited (Mackreth 1996a, 232–239).

There still remain several major questions which the excavations at the site did not answer. The function(s) of the three large pits are difficult to explain. It may be that they were originally dug for clay extraction and could have been linked with tile production. Spectrographic analysis of the clays showed that the clay from the pits matched the clay used in the tiles on the site, although there was no indication of a tile kiln or clamp within the area which was intensively fieldwalked during the 1970s. The quantity of tiles used in the bath house was minimal compared with the clay output from the pits; moreover two of the pits appear to have been dug prior to the bath suite being constructed. An option here it to see any initial tile production exported to other local sites and the bath suite tiles being produced from clay from Pit I which appears to be contemporary with the bath's construction. It is also possible that the extracted clay was used for the construction of cob-type walls, although the walls examined during the seasons of excavation did not support this hypothesis; alternatively it may have been sent to other, more distant structures or sites which have yet to be located.

Once dug, the accumulation of primary silting indicates (Fig 12 for Pit I, layer 27 and Fig 13 for Pit III, layers 30 and 42) that the pits were kept open for some time and would have quickly filled with water: Pit III for example appears to have been started in the mid-2nd century and remained open until the middle of the 4th century when it was progressively filled with rubbish and the demolition debris from the aisled building. The proximity of Pit III to the bath suite extension at the north end of the building may have allowed water to be taken for use within the baths; but the baths are comparatively small and would not have used vast quantities of water and certainly not the volume that the pits would have made available.

The obvious additional use is to see the pits, once dug, as forming large pond-like features used for the watering of stock. There is a suggestion from the geophysical survey that the steep sides encountered within the excavated areas were not present all around the pit edges and the possibility of a shallower side, certainly around Pit III may have allowed animals to be watered here (Hadman and Upex 1974, 27). However, the need for two very deep (Pits II & III) and one shallow (Pit I) pond-like features

for stock watering, all open at the same time during Period 4 (Fig 4) and very close to the building, remains a problem. For example, it is difficult to see how the use of the southern end of the aisled building was maintained once Pit I had been dug. The edge of the pit came within 1.5m of the end wall of the structure at this point and would have made access through the entrance in this end wall difficult to say the least. The implication has to be that by the time Pit I was dug and open the entrance at this end of the building was no longer in use.

The aisled building at Barnwell is one of many that are now known within the Nene Valley area and they seem to have had a variety of uses and provided a very flexible or adaptable architectural function. At Normangate Field, Castor, and Lynch Farm, Orton Waterville, both Cambs, the aisled buildings appear to have been linked with industrial practices (Dannell 1974; Wild 1973). At Wakerley, Northants, Haddon, and Orton Longueville, both Cambs, buildings had dominantly agricultural functions (Jackson & Ambrose 1978, Hinman 2003, Mackreth 1996a), while at Helpston and Cotterstock they appear to have formed integrated elements within much larger villa complexes (Challands 1975, Upex 2001 & 2008, 132). Aisled buildings were also flexible in that they could vary in the number of 'bays' that were constructed, providing additional space with each bay that was added to the overall plan. Thus at Castor (Wild 1976) a small four-bay structure of three pairs of posts compares with the larger eight-bay structure with seven pairs of posts excavated at Orton Waterville (Wild 1973).

At several sites in the Nene Valley there are indications that parts of aisled buildings used for either agricultural or industrial purposes also had part of their areas set aside for domestic occupation. At Orton Waterville there were traces of an internal division running between posts and across the central area of the structure, which could have acted as a partition between the living space and the industrial processes being carried out at the other end of the building (Wild 1973). At other sites both in Britain and on the continent, living space areas were indicated not just by partitions but by the addition of baths, mosaics and decoratively plastered rooms (Smith 1997, 36–42).

Many of the flexible characteristics of this form of architecture and the adoption of part of the structure for domestic use can be seen at Barnwell where the initial structure of five bays (four pairs of posts) was later first enlarged to seven bays (six pairs of posts) and then enlarged still further by the addition of the bath suite. As the baths were at the northern end of the structure it must be assumed that the 'domestic' end was here, certainly in period five, although there was little evidence to suggest the extent of occupation in this part of the building. Wall plaster was recovered from various levels on the site, including in Period I contexts (BNL 85, D16) indicating that there was an early building on the site which had plastered walls. However, most of the plaster recovered appears to relate to the bath suite and the later periods of occupation at the site.

At the southern end of the aisled building there was a build-up of limestone rubble between the nave posts which extended into the east aisle and this could be seen as a possible under-flooring layer for surfacing within an area of domestic occupation. However, there is little to suggest how the internal use of the building functioned or was even divided up. It could be that the whole structure was for living space, or alternatively the limestone rubble could have formed a hard standing area inside the building for either carts or some agricultural practice such as a threshing floor, which has been largely obliterated by the plough. The only other internal feature of note was a series of four posts set along the eastern wall of the building (Fig 14). These were un-dated but if they were from the earlier period of the building's construction they would have fitted into its north-eastern corner and could perhaps have supported shelving or cribs for feeding cattle.

What is clear is that the building evolved through a period of over two hundred years. Its first phase appears to have been started *c* 140 AD and conforms with the general expansion of settlement which is known to have been going on in the Hadrianic period in the lower Nene valley. Again, the surviving evidence provided no clues as to what the five-bay structure was used for at this period, other than to say that it was associated with the development of yards to its west and the digging of Pits II and III.

The extension to the north, by the addition of two more sets of posts, turning the structure into a seven-bay building obviously would have provided more space but again, how this space was utilised remains uncertain. What is clear is that the builders set out the Phase II extension at a slightly different angle which was five degrees out of line with the first phase of the building and this could be seen clearly during the excavation if one sighted through the centres of the major aisle posts (Fig 14). There were several other aspects of the Phase II building which were different from its earlier phase. First the central nave posts were packed in a very different way. Those at the southern end (and the earlier of the series) were packed with limestone in a circular, patterned style (Figs 8 & 14) compared to those at the later northern end which were packed in a much more haphazard way. Because the main nave posts of the second phase building were set on a different alignment from the earlier structure, it followed that the later side walls were also out of line when compared to the earlier side walls. This is especially apparent along the western side wall where there is an offset of about a metre. An additional post here and an odd spacing of wall posts may indicate that there was a porch-like entrance which linked with outside paths across Yard I (Figs 2 & 7).

Other entrance ways are suggested through the east aisle wall between posts F201 and F39 (Fig 7) where the associated side walling material was absent. There was a similar lack of walling on the east side of the bath extension and this may have allowed access into the baths from outside at this point (Figs 7 & 16).

The wide gap between posts F70 and F76 along the south, short axis wall must also indicate access at this point and its width might suggest that this entrance was for bring carts or stock into the building. There are indications that at various times during the life of the building limestone was spread in this area and across the threshold, which may have given easier access for carts and provided a firmer surface within the building.

Entrances are known at other aisled structures within the area. A porch-like feature, similar to that found at Barnwell, was excavated on the east wall of a building at Haddon, Cambs (Hinman 2003) whilst larger entrance ways along the long-axis walls of buildings at Castor (Dannell 1974) and Orton Waterville (Wild 1973) are also known. The wide entrance through the short-axis wall at Barnwell seems, at present, to be without parallel.

The later phase of the building's history is concerned with the erection of the bath suite which gave it an entirely different character from the two earlier phases. The side walls had well-laid stone foundations, compared to the jumbled stonework that survived as foundations for the side walls of the earlier two phases of the building. It may be that the baths had stone walls up to eaves height as some protection against fire and this contrasts with the impression one gets from the rest of the structure where dwarf walls may have been less than 0.50m high and used to take a wooden sill beam into which the superstructure of the building was pegged.

The baths seemed to just butt onto the existing north end of the second phase of the building with four of the existing short axis wall posts forming the southern side of the baths. How the buildings linked at roof level is uncertain; the pitch of the original structure may have been continued or, the baths may have formed a lean-to onto the existing north wall of the building.

The operation of the baths is also unclear (Fig 16). It may be that access was gained through the east wall between the former corner post of the phase two building and the break in the foundation walling of the Phase III addition. Access here would have then allowed the area within the northern part of the baths to be used as a changing area which could have opened through into the first of potentially two compartments. The first could have acted as a warm room, from which bathers moved into the second compartment, closest to the furnace, which would have been a hot room. The furnace on the western side of the building could have been entered from within the aisled building through a door in the north-western corner. However, the baths were very badly damaged by recent ploughing and their precise arrangements are uncertain. An alternative is to see, apart from the suggested changing area, just one larger heated room within the complex. It is also difficult to be clear about how the actual passage of hot air was ducted around the area of the baths. The assemblage of tiles from the area of the baths and the site generally include both roofing tiles (*tegulae & imbreices*), box tiles for wall heating systems, as well as several different types of flooring tiles (*bessales, sesquipedales & lydia*).

Small baths of this type seem to be fairly common on rural sites although few have been excavated in recent years in the lower part of the Nene Valley. One at Haddon (Upex 1993) measured only 6m by 3m and consisted of two small chambers, one of which originally had a suspended hypocaust floor. Baths at villa sites at Weldon, Orton Longueville and Apethorpe (Smith *et al* 1988; Dakin 1961 and RCHM 1975) are all slightly larger but still are tiny when compared to villa sites elsewhere within the province or at military sites (Upex 2008, for a discussion and comparison of baths in the lower Nene Valley).

One aspect of the Barnwell aisled building which is worthy of note is not only the rather haphazard way in which the various phases were linked together, with no adherence to an exact building line, but the way in which the builders erected the structure, certainly in its first two phases, with little regard to any spacing regularity of the main nave posts or the side aisle posts. The spacing between the posts across the nave is standard, at around 5.3m between centres but the spacing between the sets of aisle posts (which formed the bays) varies between 2.60m and 3.10m. The variation between the widths of the side aisles is even more marked. The aisle on the west has a width of 3.90m against the south short axis wall of the building which is reduced to 3.40m opposite nave post F27. This section of the building relates to its first-phase of development but the second-phase extension to the building saw a reduction in the western aisle width even further to 2.90m. It may be of course that the building at this point and especially on this western side was completely remodelled during its third-phase when the bath suite was added and the line of an earlier (second phase) wall is that marked by the linear spread of rubble 1.10m to the west of the line of posts (F8–F12). If this were the original second-phase wall line then it would be more in line with the side aisle wall at its southern end and make more sense of how the building was laid out. However, the plough damage over this area was significant and little can now be made of what the actual arrangements were, other than to say that the posts (F8–F12) appear to form the latest wall line in this part of the building; they line up with the end of the walling of the baths extension and clearly at this phase of the building formed a much narrower side aisle to that which existed at the southern end.

There are similar discrepancies in the width (2.10m next to post F20 and 2.85m next to post F43) of the side aisle on the eastern side of the building, although not as marked as those on the western side.

All of this rather haphazard construction of the building through its various phases suggests that the builders were not too concerned with any standardisation of the structure. This would have allowed them greater freedom in the use of available timber lengths that they had to hand, rather than trying to standardise timber lengths where one assumes they would have been limited by the shortest lengths of wood. There have been suggestions that aisled buildings were set out using a standardised formula where there was a mathematical relationship between nave and side aisle widths (Mackreth 1996, 67–70). However, the details which have emerged from the analysis of the Barnwell structure and a review of other Nene valley aisled buildings (Upex 2008, 134) now suggests that although they were clearly a 'unit' type of building, where the lengths could be simply extended by the addition of an extra 'unit' of posts, they also had tremendous flexibility in the way that they were set out and built. It now looks as if their design was more in keeping with the use (or re-use) of available timber rather than timber which was specifically cut to an exact size and which conformed to the requirements of any standard planning.

If there is any standardisation in the way that the building at Barnwell was laid out it is in its long axis,

which is orientated north–south. The majority of aisled buildings found in the lower Nene Valley are set out with their long-axis walls orientated either north-south or east-west (Upex 2008, fig 47). The north-south orientation at Barnwell may have allowed light into the southern end of the building through the wide entrance, set in the southern short axis wall. Apart from this point, little advantage can be otherwise seen for the way the structure was orientated.

Little can be said with certainty about the yard areas which appear to have been laid out around the aisled building, other than they clearly respect it and their orientations seem to have been governed by the orientation of the building. There appears to have been a gated entrance way between Yards 1 and 2, while the western side of Yard 1 has the very badly damaged remains of a wall (Wall 4) running parallel to the long axis of the aisled building (Fig 2). Whether Wall 4 was ever structural and formed the back of a lean-to shelter for storage or stock is purely speculative, although yard shelters with protection from the dominantly westerly wind would be sensible. If Wall 4 were at any point in its history structural then it looks as if F3, a shallow gully-like feature, formed a slightly earlier feature along this line which may have acted, once Wall 4 was constructed, as an eaves drip.

On the eastern side of the aisled building the surfaced area of Yard 3 is later in date than those on the west side and this surfacing covers an earlier gully like feature (Ditch 14) over which the excavators debated, being undecided if it was originally structural and had been robbed out or if it were just a drainage gully encircling some feature on the site which had left little trace, perhaps an area for stacking corn or other crops.

What is significant in this area is that the building and Ditch 1, which runs across the entire site, are set out at roughly the same time and must indicate by the way that Ditch 1 cuts over the top of the earlier Ditch 16 that there was some re-organisation of the site in the middle years of the 2nd century. Ditch 1 and the area around Ditch 14 were then later covered by limestone surfacing in a further re-organisation of this part of the site but the lack of excavation over these areas cannot allow much more to be said about how the site developed.

The demolition of the building in the late 4th century seems to have been fairly systematic with some of the main nave posts being removed and a spread of building debris laid out over the bath area, part of the former Yard 3 area and over parts of the main building itself. Some of this material (Fig 16, layer 2) also contained slag and debris from iron working and in other parts of the site burnt grain was found (Pit I, layer 13 and in the upper fills of Pits 50 & 51). It is possible that at some point after the building had been demolished metalworking and some processing of crops were still going on. At some Nene valley sites the later phases of occupation are characterised by similar spreads of demolition material which formed new working surfaces and obliterated all former features and such surfaces may have been used well into the 5th or even 6th centuries (eg Upex 2008, fig 80, 240–257).

At Barnwell the occupation seems to have carried on into the very late Roman and post-Roman periods. Increased research has shown that the repertoire of fumed black wares (Fig 2.9, 84–90) using basic Roman forms of dishes and bowls but made from very inferior clays and with much sand added as an inclusion are good indicators of the very late occupation of sites. Such wares extend well beyond the available limits where deposits can be dated by coins and they are best seen as being produced well into the 5th century. At Haddon such wares were termed 'Post-industrial Roman pottery' and were found in contexts with Migration Period pottery where the forms had changed, but the fabrics were exactly similar (Upex 1993). The implication for the Barnwell site is that late and post-Roman occupation continued for some time and the remains of either part of a fence line or a possible structure (Fig 22) which produced body sherds of 5th or 6th century date shows a link with incoming migrants from the continent.

Surface indications in the field at North Lodge show two other scatters of Roman pottery that could indicate other occupation centres. The lack of building rubble over these two areas would indicate that if there were buildings here, they did not have stone foundations and could possibly have had cob or timber walls. This then raises the question of whether the excavated aisled building was part of a much larger complex of rural buildings: a question only further research at the site can answer.

Certainly groups of aisled buildings, clustered together and forming farmsteads or even loose knit minor settlements, are now better understood. At Haddon, two aisled buildings and two other possible barns were identified, and were set within a series of paddock-like enclosures bounded by trackways (Hinman 2003). At Orton Hall Farm, Orton Longueville a similar arrangement was found where four aisled buildings and two other structures were set out around an open courtyard surrounded by paddocks and trackways (Mackreth 1996a). A third site at Lynch Farm in Orton Waterville parish (Upex forthcoming; also Wild 1973), appears to have had a very similar but even larger collection of aisled buildings. The aerial photographs show what could be up to eight independent structures, with some possibly conforming to dimensions indicating that they could be aisled. In addition to the eight buildings shown on the aerial photographs can be added two aisled buildings known already from excavation. These ten structures are very loosely set around yard type areas, again linked by trackways but without any major focal building which could be described as a villa.

These three sites were clearly agricultural and the Lynch Farm site also had clear links with metal working and salt production. All three operated throughout the Roman period, but had Iron Age origins. It would be entirely probable that the Barnwell site, if it does have other structures close by, functioned in a similar way, with buildings surrounded by paddocks and with trackways leading out into a broader landscape of fields. The evidence from Barnwell suggests a dominantly agricultural economy which may have been geared to the exploitation of the clay soils in this part of Northamptonshire. Cattle and sheep dominated the bone assemblage and it is a pity that the excavation did not reveal more dated pit deposits relating to all of the periods of occupation on the site rather than just the later deposits, which were dominated

by the material from the large pits. Such additional data would have allowed a comparison to be made between (for example) the economy of the 2nd and 4th centuries. What is significant is the large size of cattle and horses that were being reared and used at the site and the suggestion (B Upex this report) that the cattle represent an imported breeding stock raises questions about the overall management of the site and who was importing them and why.

Missing from the excavation record are any details related to the palaeo-botanical record from any of the deep and waterlogged deposits on the site. Samples were taken and sent for analysis to local institutions, but unfortunately the results were never returned and this gap in our knowledge remains critical if we are to understand how the Roman exploitation of the heavy clay soils was being carried out. It would be tempting to see the landscape of these clay-land areas which run between the Nene and the fen edge as carrying a higher percentage of woodland than some of the lower slopes along the Nene valley. Hazel, birch and oak were clearly identifiable by the excavators from surviving leaves and twigs found in the 3rd and 4th-century waterlogged fills of the large pits, and one might assume that the preservation of both seeds and pollen would have been very good. Questions over the broader landscape and its environmental register could well form the basis for yet more research on the site.

How the site at Barnwell functioned within this broader landscape is of course difficult to ascertain. It may represent a single small farmstead where agricultural products were partly consumed on site, but where markets would have provided an outlet for the majority of the production capacity. Where these markets were, is unclear, but the site is only 2.5km from the nearest recognised Roman road (Fig 1) and once here, exports from the site could have gone south to the Roman settlement at Titchmarsh, or further south to Irchester. To the north the main markets presumably lay at Ashton where an extensive settlement existed, or further afield to the area in and around the walled town of *Durobrivae.* Once at *Durobrivae* cattle or other stock could have been driven up or down Ermine Street to even more distant markets.

The majority of the coarse pottery from the site was being imported from the lower Nene Valley but the pottery assemblage also includes possible imports from the upper Nene area (Figs 2.6, 63 & 2.8,74) and two wasters (Figs 2.1, 9 & 2.2,15) which could imply local production. Imports from the Oxford kilns are also represented in the later periods of occupation at the site and this matches the situation at other lower Nene Valley rural sites.

Tantalising questions remain about the ownership of land both in the area of the site at Barnwell and indeed the site itself. It would be perfectly acceptable to see the site developing in the late 1st and the beginning of the 2nd century and being farmed by an indigenous family who moved onto the heavier clay soils in response to a growing burden of increased economic output demanded by the Roman tax system. There is no indication from any of the early deposits on the site of Iron Age occupation, so the idea of the continuity of settlement on the site can be ruled out even if the continuity of landscape exploitation may be conceded.

One aspect of the site which becomes ever more intriguing is the repertoire of luxury imports to the site, especially during the first two periods of its occupation, although the coin evidence does not suggest anything special about the site. These imports at Barnwell are impressive and contrast with other similarly dated rural sites, most of which are on better soils and where one might expect agricultural returns to have been better, but which have limited luxury finds. The samian from the site is interesting with some Flavian pieces but perhaps most interesting are the amphorae fragments from the Period I ditches. Finds of amphorae occur at the Longthorpe Fortress (Frere and St Joseph 1974) and its associated works-depot (Dannell and Wild 1987) but at very few rural sites in the lower Nene Valley (Bedford Purlieus, Ashton and Normangate Field, Castor (all un-published) and at Castor *Praetorium*, (Upex 2011)) and at even fewer sites in the fenland area such as at Stonea (Jackson and Potter 1996). Thus the fragments of amphorae dated to the mid-1st century, reported by Friendship-Taylor (above), from North Lodge can only add to the questions which relate to the site at this period of why and how this early occupation was established. Recent work at Stanion some 16km to the west of the North Lodge site has produced evidence for 23 vessels imported from southern Spain of late 1st and early 2nd century date (Friendship-Taylor and Powell 2008), but most sites in the area seem to lack such imports.

Equally impressive is the range of glass ware from the Barnwell site, some of which appears to be of late 1st and early 2nd century date and contrasts with other rural sites where very little glass has been recovered; see for example the site at Werrington, Cambridgeshire where only two fragments were recovered (Sheppard 1988). The presence of window glass is also interesting and although not taking the status of the site into that of a sophisticated villa, clearly implies that some recognition of living comforts had been made and was affordable and this is highlighted by the construction of the baths during the late 3rd and early 4th centuries.

The finds of lead dumped into the late fills of Pit III also present problems of interpretation and must either represent a hoard (although the finds context suggest that it was rather haphazardly dumped), or some period of careless clearance when a valuable commodity was simple thrown away. However, the very fact that quantities of lead come from the site is of interest. The lead piping may have been associated with the baths, but the fragment of lead which arguably comes from the wall of a large circular tank begs the question as to whether it is from a tank similar to the larger of the two tanks recovered from a well at the Roman town of Ashton. This tank had a Christian symbol cast into its decorative design. Certainly the profile of the Barnwell fragment matches the profiles of the two known lead tanks from Ashton, although there is no evidence to suggest that the Barnwell item had any association with Christianity.

Curiosity surrounds the find of the single piece of scale armour (*lorica squamata)* (Fig 2.17, 3) which comes from the fill of Ditch 16. Other than a fragment of armour from the fort at Longthorpe (Frere and St Joseph 1974) there have been no recorded finds of military armour in the area of the lower Nene Valley.

All the discussion of the finds highlights the fact that the Barnwell site seems to be in some way or other slightly different from other rural sites. Admittedly it could have similarities in its layout with the sites at Orton Longueville, Lynch Farm and Haddon (see above), but the early establishment of the site and the early samian, amphorae, and (presumably) armour, plus the finds of lead could all point to the site being somehow differently occupied, managed or controlled in a different way. Upex pointed out that the main concentration of large villas in the lower Nene Valley is to the west of the river while there appears to be a lack of high class villas to the east of the river system. This has then led into the discussion of whether the east side of the Nene was in fact under some form of State or public control, which restricted villa development and was operated as part of the *ager publicus* or even under some form of Imperial estate control (Upex 2008, chapter VII, but especially 200–202; also Mattingley 2007, 353–453).

At present the best that can be said is that the Barnwell site is the only site to have been extensively excavated on the heavy clay soils in the area of the lower Nene valley and as such offers through its layout and material finds a vital insight and window into the growing number of similar upland settlements which modern archaeology is revealing. These all deserve more attention and interpretation if the overall occupation and management of this clay land landscape is to be better understood.

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