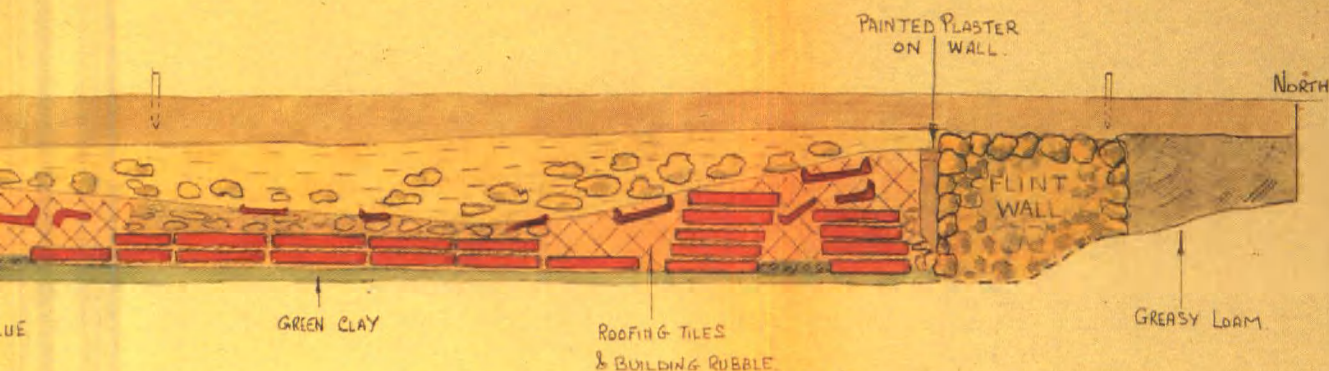
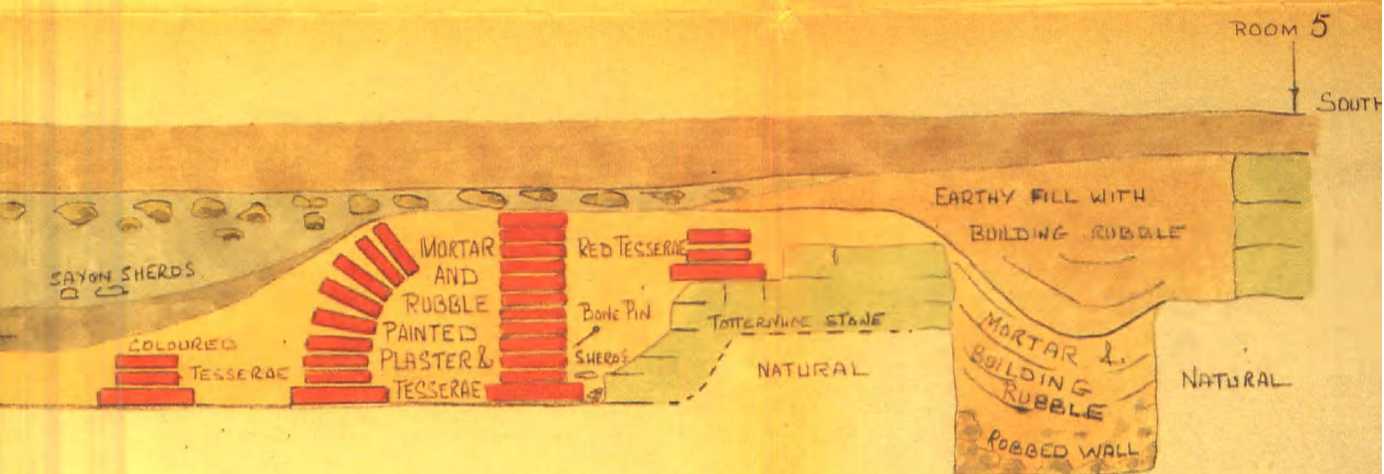


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BEDFORDSHIRE

ARCHÆOLOGY

VOLUME 20 1992

BEDFORDSHIRE ARCHAEOLOGICAL COUNCIL

This volume is a memorial to Les Matthews FSA and a celebration of 40 years of the Manshead Archaeological Society of Dunstable.

edited by Evelyn Baker and Carolyn Wingfield
with the assistance of the Editorial Committee

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Cover: Sections through Hypocausts 1 and 3 of the Totternhoe Roman Villa, drawn and coloured by Les Matthews, 1954

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BARRY HORNE, BSc, AIFA, FRMetS left Luton College with a degree in Chemistry and Botany in 1971. He joined the Manshead Society in 1973 and became a committee member a year later. He specialises in the study of pottery and human and animal bones. He was a leading member in the team which reconstructed an Iron Age-style building in the early 1980s at the Chiltern Open Air Museum. He became Secretary of the Manshead Society in 1987. He has been Bedfordshire representative on CBA South Midlands, and is currently its Treasurer.

LES MATTHEWS, FSA See page 1

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DIANE WALKER, BA graduated from the University College of North Wales, Bangor in 1985 with a joint Honours degree in History and Archaeology. From 1985-88 she received a scholarship to research for a PhD in "The Nature of the Early Medieval Church on Anglesey 400-1100 AD" which she is currently writing up. On leaving university she worked for the Central Excavation Unit of English Heritage as an Archaeological Illustrator and has had work included in various English Heritage publications. She is presently the Education Officer for Hampshire Buildings Preservation Trust.

DAVE WARREN was born in Luton. He served for six years with the 15th/19th Kings Royal Hussars before joining the GPO, and is now with British Telecom, employed at the Dunstable Telephone Exchange. He became interested in archaeology through attending evening classes and excavations and joined the Manshead Archaeological Society in 1977. He was a leading member of the team which constructed the "Iron Age House" at the Chiltern Open Air Museum. He served as Treasurer of the Society for a while before taking over as Site Director in 1985.

Editorial

Love, Forty

EVELYN BAKER

This twentieth volume of *Bedfordshire Archaeology/Bedfordshire Archaeological Journal* is a special edition serving two purposes: it is The Manshead Archaeological Society of Dunstable's fitting tribute to the memory of Les Matthews; it is also a celebration of the major contribution a leading archaeological society has made during four decades, to our greater understanding of the history and pre-history of the County.

Publication is timed for 24 October 1992, the fortieth anniversary of the founding of the Society, and of their work in the Dunstable area. The celebration takes two forms: one is a major conference held in Dunstable which will bring together large numbers of exponents of the art, not just from Bedfordshire, but many parts of Britain; the other is this volume.

Forty years is a long time in the history of scientific archaeology, still a relatively new discipline. Some of the more mature members of the Manshead have the privilege of knowing 'they were there' at the early, tentative, but exciting beginning of the Society's investigations. Others can take pride in being part of a long tradition of archaeological work, carrying the flag, we hope, well into the next century.

Many of the Manshead's skills in the early days were self taught, building upon commonsense, on what they could read, and on what they could glean from contacts in universities and museums, including such luminaries as Sir Mortimer Wheeler. The picture was much the same all over Britain, with many small groups beavering away at weekends or doing seasonal (usually strictly spring/summer season) work. Even the larger, government sponsored 'digs' were reliant upon people who were willing to come along, give of their free time and learn on the job.

I am one of the generation of modern professional archaeological managers who worked alongside, and was part of, such armies of voluntary workers, and who has to confess in these days of increasing commercialism in archaeology that in many ways I miss the unalloyed enthusiasm which comes of doing archaeology purely for private pleasure. Working in a professional archaeological

environment with gant charts, cost estimates and work programmes, I miss the amateurism - the "doing it for love", which was what it was all about.

The seasonal, unpaid "dig" generated an *esprit de corps* rarely found today. Perhaps the secret was in the short time scale of most of the fieldwork, when enormous effort could be safely and generously expended for a few weeks in the certain knowledge that it would come to a natural end, and life return to whatever 'normality' was. Long summer days certainly helped; most developers nowadays expect archaeological clearance to take place during the seasons when they prefer not to be working. Team spirit is certainly stronger when there is an enjoyable social element built into the proceedings, and this seems to have been a major factor in the considerable success of the Society, especially in its early days. It was fortunate enough to have a dedicated and talented core of members, led for many years by the charismatic Les Matthews. A big man, with enormous presence, he was very much the right man in the right place at the right time.

A sense of 'ownership' of the local heritage also played its part. There was little enough archaeological cover anywhere forty years ago. Most discoveries were made principally by local people putting in effort to save the local heritage, salvaging what they could in the teeth of development. It is difficult to appreciate in the time of PPG16, County Archaeologists and Historic Environment Records, how much this rescue work was dependent upon knowledgeable and energetic locals. With few of the archaeological planning controls in place that we have today, there was little idea of what might be at risk through development, and no-one was responsible for monitoring it. Local knowledge was all important.

The Manshead still has a large and active membership, still does archaeology on a shoe string, and still for the love of the subject. And they continue to sacrifice evenings, weekends, and holidays, so that they can undertake archaeological projects at times when people earning their bread and butter at other things can join in and 'do their bit' for their local heritage. And there is still much for such an enthusiastic body to do. The scene has,

of course, changed beyond recognition, and the Manshead has changed its emphasis to match the times. Everybody recognises, for instance, the crucial importance of field survey on the one hand, and the moral dilemma of digging unthreatened sites in the light of rapid technical and scientific advances on the other. Rapid publication of results is also paramount, and the Manshead are a good example to us all with their record of prompt reporting.

Most large scale archaeological projects are these days conducted by 'the professionals', usually graduates who have full time paid jobs in archaeology. If they are exceptionally talented or lucky, archaeology is their career - not usually very well paid compared with other professions, but nevertheless paid. The huge "plus" in this was of course the imposition of professional standards and discipline, increased use of the benefits of scientific research, and the recognition through the planning system that archaeology has an important role to play in the cultural life of this country. It stands to reason that if a subject can be worked on full time, with continuity of research and better resources, advances can and will be made for everyone to share. The legislative framework has largely caught up with this situation, and there is more archaeological work than ever before, despite the recession. Planning archaeologists, archaeological units and archaeological consultants abound, though they greatly vary in philosophy and form. Archaeology has come of age. Public interest is growing; societies, units and universities are all retrieving more and more archaeological data. This in turn is beginning to have a major effect on our museums, but that is another story.

Because there has been stability in Bedfordshire, strides have been made not just in conducting individual fieldwork projects which produce finds and/or fieldwalking results, but to begin to

understand how these separate pieces fit into local, regional and national frameworks. Deeper and wider understanding comes from long study of an area. Because both "professional" and "amateur" bodies are committed to the archaeology of the county, their activities have a strong public service element. We all do it for the greater understanding of the archaeology of Bedfordshire, and to be able to share and communicate this to the people of Bedfordshire whose archaeology it is.

But further changes are on the way. It saddens me that archaeology is now an activity to make commercial profit from, with developers largely choosing how archaeology is done and who should do it in order to discharge responsibilities to planning legislation. Recording our local archaeology could go to the lowest bidder, and not necessarily to the best designed archaeological scheme. After all, a quality scheme which uses native cumulative knowledge might cost more because it gives back more in the way of contributing to the developing picture of Bedfordshire archaeology.

Proper contribution to the cultural and educational life of this county must be provided by *all* who have the privilege of working with its archaeology; this must be safeguarded by those to whom its history and archaeology are important.

So, a changing world. What will the Manshead Society of Dunstable be doing in another forty years? Another Les Matthews will be difficult. But I am confident that, given its track record over the past four decades, the Manshead will continue to move with the times, and continue to produce quality archaeological results. It will continue to strive, with other complementary organisations that make up the Bedfordshire Archaeological Council, to keep this county the subject of wistful envy by our neighbours.



Charles Leslie Randolph Matthews FSA
With Saxon jewellery found on Puddlehill in 1960, now in Luton Museum.

Les Matthews - an appreciation

RON FOWLER

C L R MATTHEWS, FSA (known universally as 'Les') died on 19th February 1989 at the age of 78. A Yorkshireman by birth he was born on 19th March 1910, moving with his family to Dunstable in 1917. Over the years Les developed into the archetypal Dunstablian steeped in its history and its surroundings and fiercely protective of its position in local affairs.

Like many archaeologists of his generation his initial interest was in the countryside itself, its flora and fauna, and he became a knowledgeable ornithologist.

These interests spread to the historical nature of his surroundings settling finally into practical archaeology and ending with his eventual recognition as an expert in excavating on chalk and for his interpretation of the Iron Age occupation sites in the Dunstable area.

In his youth as a Rover Scout in Dunstable he formed the first archaeological field unit from members of his group before World War II, his personal commitment having been fostered when he met the Wheelers who were excavating the Five Knolls on Dunstable Downs.

After war service in the Royal Navy he returned to work at Vauxhall Motors, where he eventually became a Paint Processing Planning Engineer, and also to pick up his archaeological interests forming the Manshead Field Club in 1951. The principal object of this group was to carry out rescue excavations in Puddle Hill Quarry, Houghton Regis, which work continued unabated until the quarry closed in 1966.

The story of how this club developed into a recognised archaeological force is told elsewhere, but recognition should be given here to the enormous support Les had from his wife Kathleen and their two children, Betty and Peter.

Les became one of the most outstanding field archaeologists of his day and as Site Director of the Manshead Archaeological Society of Dunstable he organised a number of important excavations of national significance - Puddle Hill, which became synonymous with Manshead, the Dominican Friary site which produced the Dunstable Swan Jewel and Dunstable Romano-British cemetery. There were many other headline-making activities which all added to the developing jig-saw of information concerning occupation in the Dunstable area from prehistoric times.

Les must also be remembered for his lectures and his writing. His excavations were written up and published in the Manshead Journal - a yearly production of the Society - with certain important finds being published in various learned journals. Les also made his contribution to Dunstable history by writing *Ancient Dunstable*, a popular 'layman's' book on local prehistory, while his principal work, a monograph *Occupation Sites on a Chiltern Ridge* told the story of Puddle Hill.

Les's contribution to archaeology speaks for itself and his work received national recognition when he was elected a Fellow of the Society of Antiquaries in January 1985. Les himself laid little store on academic recognition though he was deeply committed to the necessity for publication of excavation findings. His pride was in the skills he developed in the ability to 'read' a dig and in his gift of being able to 'see' the people behind the occupation evidence they had left behind.

I feel that Les will be happy to be remembered as a caring, warm-hearted man who was deeply involved with the friends who came to dig with him and as someone who wanted to share with them the sense of value and excitement he experienced in his archaeology.

An Investigation of a Late Iron Age Site at Sewell Lane, near Dunstable, Bedfordshire

DIANE WALKER

SUMMARY

The site of Sewell Lane is a late Belgic settlement site near Dunstable, Bedfordshire. This report deals primarily with the ceramic evidence excavated from one of the ditches located by a resistivity survey. This material was used to both date the site and explain the nature of the occupation which occurred from the middle of the first century BC until the middle of the first century AD.

INTRODUCTION

The site of Sewell Lane (SP 997232) lies 2.25 km to the NW of the Icknield Way, near Dunstable, and 0.8 km to the NE of the earthworks known as Maiden Bower. It is 0.4 km SW of the site of Puddlehill, which has produced Neolithic, Iron Age, Roman and Saxon material in considerable quantities. The Belgic evidence from the site was used as the main reference for Sewell Lane (Fig 1).

CIRCUMSTANCES OF EXCAVATION

The Sewell Lane site was excavated by the Manshead Archaeological Society of Dunstable led by Mr C L Matthews between the spring of 1982 and the summer of 1984. The laying of a slurry pipe from the quarry at Sewell to the cement works in Houghton Regis had revealed two Saxon 'sunken floored huts' so a resistivity survey was carried out. No more huts were found but the main features of the site, which covered an area of approximately 50 m x 70 m, were a series of apparently inter-connecting ditches (Fig 2). The survey also revealed some post holes which were cut into the natural chalk but, due to the nature of the excavation, shallow post holes in the topsoil may have been missed. What was left was a series of chalk cut ditches or gullies and the pottery and bone found in them.

THE SITE

Ditch T

The plan (Fig 2) shows the way in which the ditches or gullies cut across and down the slope of the site (the terms 'ditch' and 'gully' should be regarded as interchangeable). Ditch T was 25 m long. It began

with post hole A which was cut into the chalk at the SW end and ran obliquely across the hillside for 6.5 m to the deepest part of the ditch. The post holes B (36 cm deep), C (26 cm deep) and D (20 cm deep) were below the line of the natural chalk. Opposite these post holes was a depression, E, which was probably cut to receive another post. From this deep area the ditch continued for 18.5 m until it petered out into a shallow groove in the chalk and had another post hole, F, set into one side in the same manner as B, C and D. The narrow slot which bisected the ditch was an earlier feature but the excavators believed it to be of late Iron Age date. The sides of the ditch were steeply angled, leaving a clear trench along the bottom, and the base was cut in such a way as to form a gradient allowing water to drain towards the deep area (Fig 3). No evidence was found to suggest that clay, or hides, or wicker had been used to make a waterproof lining for the ditch, although some kind of lining would have been necessary if water was to be retained (see below).

The fill of Ditch T, as can be seen in the sections (Fig 4), included bones, stones of non-local origin, clay slabs, crucible fragments, pottery and one item of copper alloy. Pottery occurred throughout the fill but in some areas it was found in layered concentrations.

A fine loam had settled in the bottom of the ditch and appeared to represent primary silt.

Other Features

The 20 fragments of baked clay slabs attested to the presence of ovens on the site. The fragments are thought to be bricks and Pit J (Fig 2) also had ash deposits in it. This oven was probably for domestic purposes rather than the firing of pottery as no wasters were found on site to suggest that pots had been fired.

NON-CERAMIC FINDS

Animal Bone

Mr B Horne investigated the bone material from the ditch. A total of 74 pieces were excavated of which 25 fragments were identified as having come from oxen. Of the remaining identifiable 8 pieces, 5 were

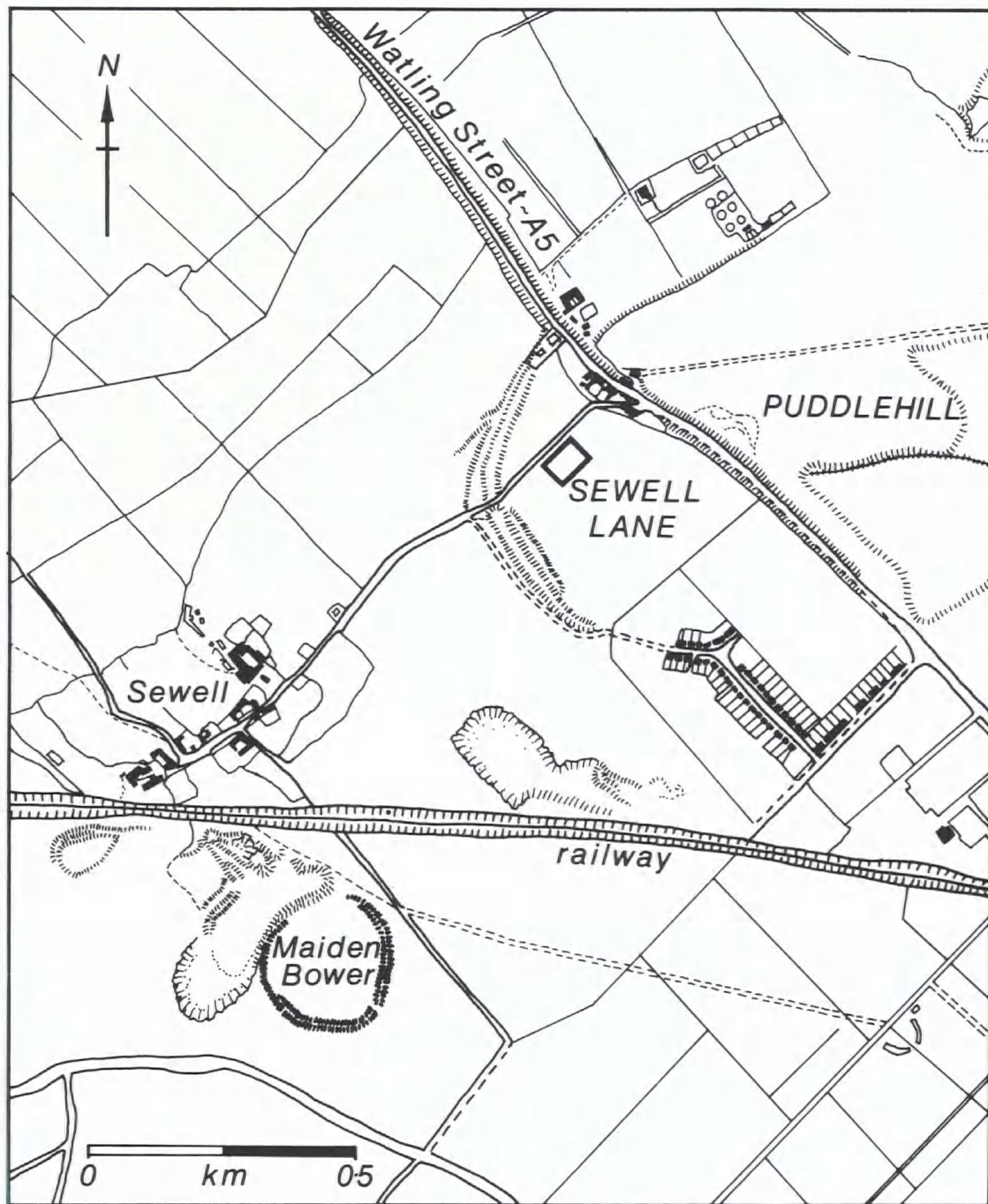
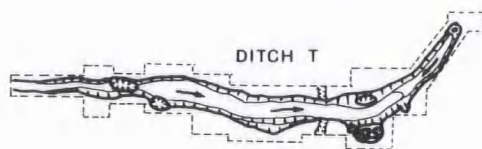


Fig 1 Location plan of the Sewell Lane site.

SEWELL LANE SITE PLAN



•• POSTHOLES

--- LIMIT OF EXCAVATION

0 5 10 15 20

scale : metres

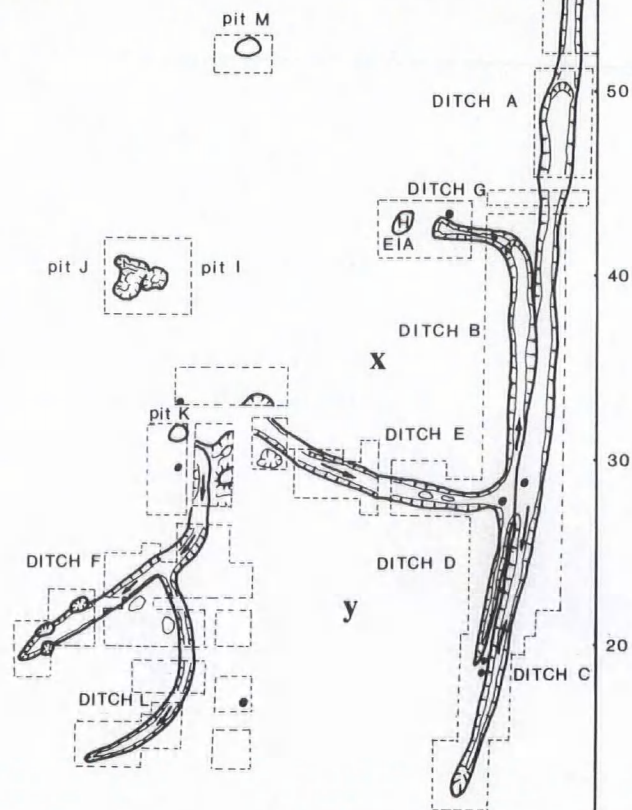


Fig 2 Sewell Lane site plan.

from sheep and 3 were pigs' teeth. From the rest of the site ox, sheep and pig bones are predominant but bone remains from horses, dogs, voles and a frog or toad were also found within the domestic debris deposited in the ditches.

Stone

A total of 72 redeposited stones were excavated of which 6 were flints and 66 were rounded sandstones of non-local origin. The stones showed signs of having been fire cracked and the excavators believed them to be pot-boilers used for heating liquids in vessels too delicate to be placed directly in or over the fire. One of the sandstones, however, showed signs of wear indicating it could have been used as a hammer-stone. Two of the flints had been worked and, along with two flint-gritted sherds, were identified as Neolithic and were probably deposited in the ditch with surface debris.

Crucible Fragments

Two fragments of a crucible were found in area O.1 of the ditch indicating that some small-scale metalworking had taken place.

Metalwork

The only metal object found in Ditch T was a piece of plain, penannular bracelet of copper alloy, the rest of which was found in Ditch F. It is a well made bracelet with a fine patina but is undatable. Other metal objects from the site consist of a fragment of a copper alloy chain from Ditch E, an iron object, possibly part of a brooch, from Pit M, nine nails from Ditch A and from Ditch L a small copper alloy penannular brooch - Collingwood and Richmond (1969) type 115, of approximately Claudian date.

THE POTTERY FROM DITCH T

General Comments

477 sherds of pottery were excavated from Ditch T; of these 2 are Neolithic and the rest are from the Belgic period. No distinctly Roman sherds were found in Ditch T though a small number were found in the upper fill of other ditches and pits on the site, which suggests that Ditch T was closed before Roman wares were introduced onto the site.

The typology established for the Belgic pottery at Puddlehill was used as the basis for cataloguing the pots from Ditch T and in nearly all respects they conform to the original typology. The only differences were that some types from Puddlehill were not represented in Ditch T.

Whilst studying the material it became clear that

the pottery was in a very fragmentary state. From Ditch T it was only possible to reconstruct one vessel completely - no. 18. Many sherds had clean edges whilst others were distinctly weathered and had obviously been exposed to the elements for some time prior to deposition. As can be seen in Fig 4 distinct layers of pottery are visible. It is possible that the site was tidied up from time to time with broken pots and weathered sherds being thrown into the ditch together. Some of the pots had holes drilled through them and some had been broken whilst the holes were being drilled - nos. 51, 55, 59, 74. One pot, no. 19, had the holes drilled in the base whilst others, nos. 11, 51, 55, 59, 75 have holes in their neck or the body of the pot. At Verulamium Wheeler suggested that the pots with holes in them were used for cheese making or honey straining (Wheeler and Wheeler, 1936, p166). At Puddlehill some of the pots with holes in them had carbonised deposits in them which suggests that they had other uses too. Pot no. 19 from Sewell Lane has three holes in the base and Matthews suggested that similar pots found at Puddlehill could have been used as flower pots (Matthews 1976, p180). Where holes appear in the neck or shoulder it is reasonable to assume that they were for attaching a rope handle or leather thong for carrying the pot.

The different pottery types occurred throughout the ditch with very little distinction of type between layers.

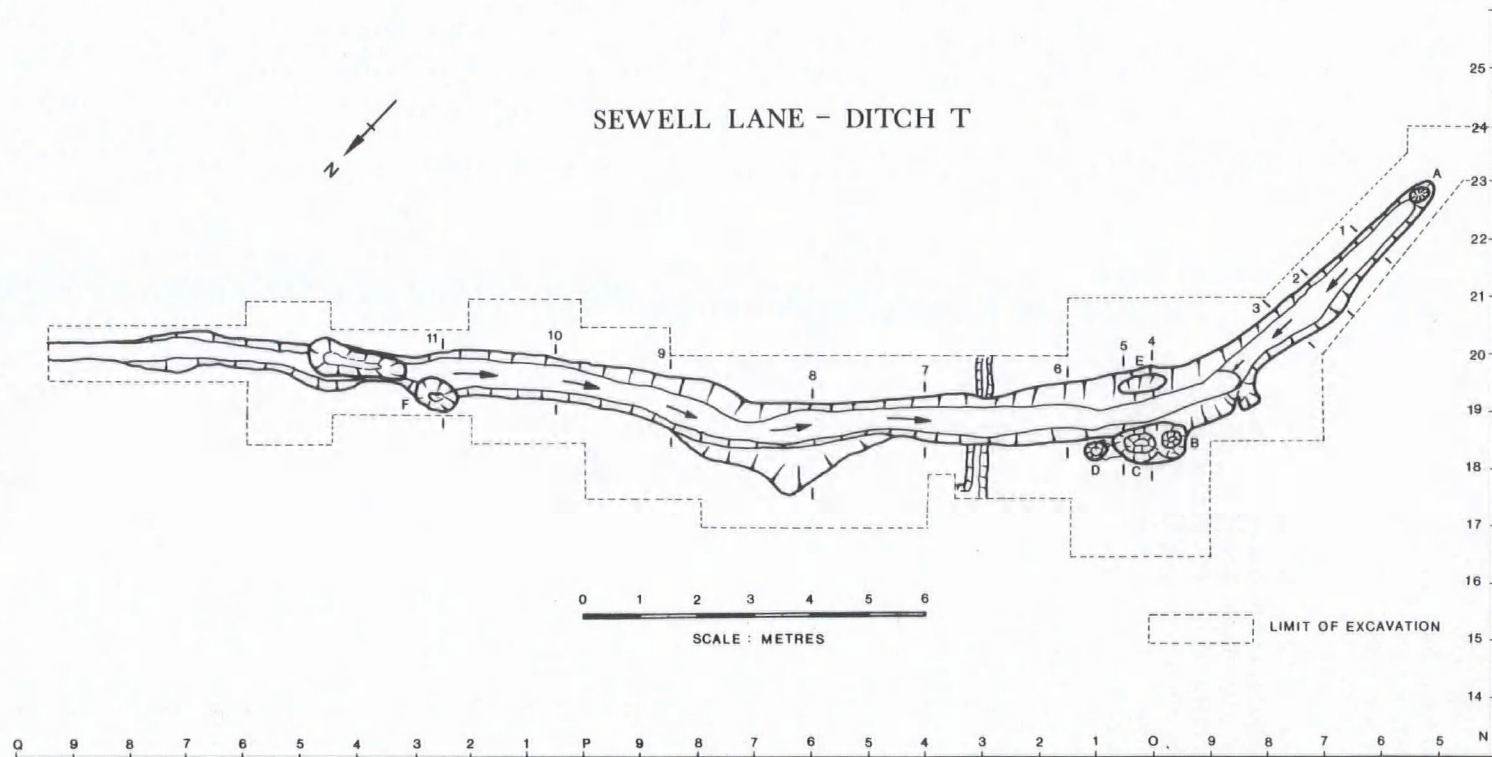
This suggests that the forms of coarse wares were fairly consistent throughout the period when the site was in use. The Gallo-Belgic wares only occurred in the upper fill of the ditch.

Gallo-Belgic Wares

The Belgae appear to have been a group of trans-rhenish Celts who were driven into northern Gaul by Germanic expansion. The main period of settlement is dated to c 100 BC when the majority of the settlers came to Britain. It has been accepted that the pottery and other artefacts from Aylesford and Swarling cemeteries represent the introduction of the Belgic culture into Britain, which spread across SE England. Burials have been found in Hertfordshire and Essex and a small number in the Belgic tradition in Cambridgeshire and Bedfordshire.

Pedestal urns are a characteristic type of the Aylesford-Swarling culture and are found only occasionally in Bedfordshire, and one was found at Puddlehill, which contained a cremation, possibly the head of a family group as the other cremations

Fig 3 Sewell Lane - Ditch T.



were in ordinary vessels. The base of a pedestal urn was found at Sewell Lane in Pit I but this is the only example from this site. Other major Aylesford-Swarling types which were found in Hertfordshire and Essex were not known in Bedfordshire, which suggests that the area covered by present day Bedfordshire was on the periphery of the area influenced by the Aylesford-Swarling culture, especially in the earlier part of Belgic settlement.

In her reassessment of the Aylesford-Swarling material Birchall identified a late group of pottery which is reflected north of the Thames (Birchall, 1965, p241-367). The characteristic types of this later phase are the butt-beakers and the platters. No platters were found at Sewell Lane but there were numerous examples of butt-beakers which are a distinctive barrel shape with zones of patterning separated by grooves or cordons. The introduction of butt-beakers and other Gallo-Belgic forms is generally attributed to the period after 15 BC.

CHRONOLOGY AND PARALLELS

In order to establish a chronology for the pottery from Ditch T it is necessary to identify parallels with other sites and finds.

A: Wheathampstead

The pottery at this site was mostly wheel-turned and varies from thick, coarse, gritty wares to finer grey and black wares. Comparisons can be made with the Sewell Lane Types 1 and 3 and are an example of the coarse wares used for cooking and storage from the early phases at Wheathampstead through to the onset of the Roman period at other sites.

This comparison suggests that the pottery at Sewell Lane can be of an early date but also that these forms remain constant throughout the Belgic period.

B: Verulamium

This Belgic site seems to have developed *c* 15 BC (Hunn, 1980; Allen, 1944). There appears to be some overlap with Wheathampstead; coarse wares excavated at Verulamium are represented in the primary levels. The Belgic levels are the primary levels and pottery groups A, B, C and D, of which A and B are the most relevant. Group A is subsequent to the introduction of the butt-beakers (*c* 15 BC to 5 AD) and consists of native coarse wares as well as new imported wares.

Group B has been dated between *c* 5 - 10 AD and *c* 30 - 35 AD.

Parallels can be drawn with butt-beakers from Sewell Lane and these parallels, especially for nos. 76-80, can assign a date of up to *c* 35 AD to Sewell Lane.

C: Skeleton Green, Puckeridge

This site has four pre-Roman phases which cover the period from *c* 15 BC - *c* 40 AD. Phase I dated to *c* 15 BC - 1 AD had native coarse wares very similar to Sewell Lane Types 1 and 3.

Phase II was dated *c* 10 BC - 20 AD, and Gallo-Belgic wares appear in this phase. Close parallels were made with Sewell Lane butt-beakers and recessed-rimmed vessels.

Phase III was dated *c* 15 - 25 AD. Cooking pots and storage jars changed very little which further confirms their consistency of form. Recessed and beaded rimmed vessels are still in use in this phase. None of the imported wares at this site were found at Sewell Lane and although decorative butt-beakers were found at Sewell Lane these were not as ornate.

D: Camulodunum

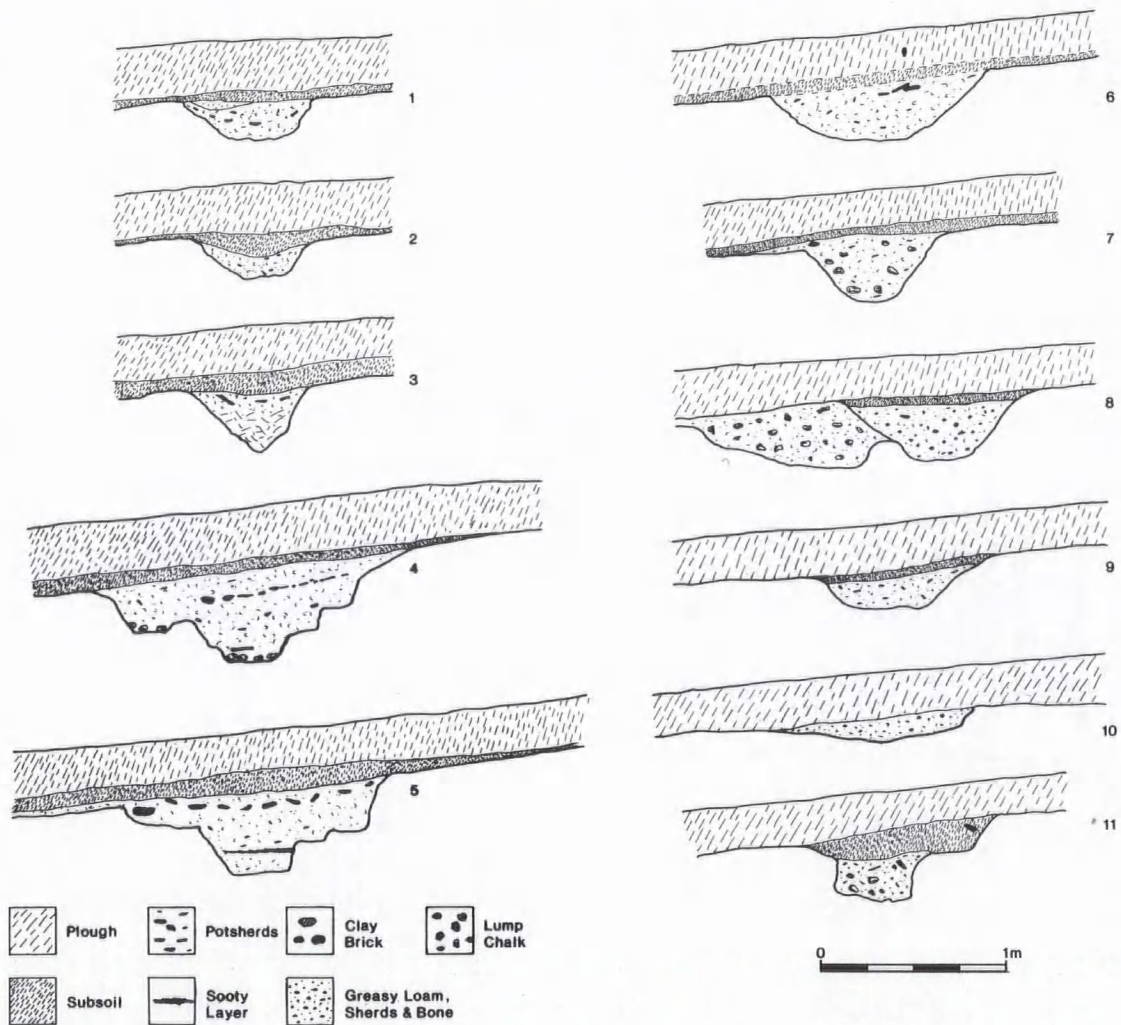
This was the main centre of the Trinovantes in Essex.

Parallels for some of the Sewell Lane types can be identified but by and large the forms of Gallo-Belgic wares are of a more sophisticated, decorated and Romanised nature than the examples from Sewell Lane. The only exception to this appears to be the Gallo-Belgic wares catalogued as nos. 76-80 from Ditch T. There are parallels with these cups which are of a form produced until the Boudiccan attack on Colchester in 61 AD. The vessels from Ditch T do not need to be as late as this, but their manufacture may be dated to between 10 and 61 AD. It is only the Gallo-Belgic wares which can be given such a clear date because the coarse wares, as on all the other sites mentioned, do not change in form or style for well over 100 years.

E: Minor Sites

Sites at Bromham, Beds., (Tilson, 1973) and Dellfield, Herts., (Thompson and Holland, 1974-6) also have parallel pottery types. The Bromham site manufactured pottery from *c* 50 BC to the third century AD, although it is thought to have been a seasonal activity during the period of Belgic occupation. Native coarse wares such as Sewell Lane Types 1 and 2 occur throughout the fill of the ditches. However, Gallo-Belgic wares similar in form to those from Sewell Lane do not occur in

Fig 4 Sections across Ditch T.



contexts which can be dated to the post-conquest period.

The Dellfield site has parallels for Sewell Lane no. 75; Dellfield nos. 27 and 29 are similar in form and all have holes between the neck and shoulder. The site is dated to between *c* 50 BC and *c* 50 AD.

Conclusion

Therefore it can be seen that coarse wares occur throughout the Belgic period without changing their form and therefore cannot be used to closely date the site. The Gallo-Belgic wares, however, make it possible to assign a final date of occupation to the Sewell Lane site around the middle of the first century AD, but no later.

Brief Description of Pottery Types

The characteristics of the Puddlehill type series into which the Sewell Lane material fitted are comprehensively covered by C L Matthews in his report on Puddlehill, (Matthews, 1976), so only a brief description of the types is necessary here. A catalogue of the individual pots is provided below. Pottery types classified on form, not fabric.

Type 1 (Verulamium Type 61)

18 separate rims of cooking pots were identified. They display slight variations of form around the neck which is a feature noted at Puddlehill. The rim diameters range from 9 cm (no. 5) up to 23 cm (no. 3). There was no noticeable difference in form or fabric from the lowest Belgic levels to the latest deposits. At Verulamium these pots occur until the Claudian period when Roman coarse wares were introduced and replaced them.

Type 2 (Verulamium Type 64)

20 rims, 2 bases and a separate body sherd were identified. The characteristic features of this type are the pear-shaped body and recessed rims for lids. No pottery lids were found in Ditch T and only 2 were found in Pit K. It is likely that wooden lids were predominantly used. The decoration is mainly in the form of external combing or pie-crusting on the rims. Nos. 30, 34 and 38 are included in this group because the decoration corresponds to more obvious examples which match the type requirements. When a study of the rest of the material from Sewell Lane is completed these vessels may become a distinct sub-group. Type 2 vessels occur throughout the fill of the ditches.

Type 3 (Wheathampstead Types 14, 15, 18 and 19)

13 rims and 53 body sherds of these cooking pots were identified. There are slight variations in the profiles of the shoulders. These vessels occur throughout the ditch. At Wheathampstead the form appears to be consistent from the middle of the first century BC to the middle of the first century AD.

Type 4 (Verulamium Type 46)

Only 1 rim of this type was identified although body sherds from another possible 17 vessels were excavated. The corresponding rims may finally be identified from other ditches on site. The vessels are pear-shaped with pronounced cordons.

Type 5 (Verulamium Type 55)

No examples were identified from Ditch T, but the form is exceptional at Puddlehill and Verulamium.

Type 6 (Verulamium Type 60)

Only 1 rim of these large roll-rimmed vessels was excavated from Ditch T (no. 56) although another possible 53 body sherds were identified. The sherds occurred at all levels of the fill.

Type 7 (Verulamium Type 66)

6 beaded-rim vessels were identified. They range in rim diameter from 15-20 cm and all were located in the top 20 cm of the ditch.

Type 8 (Verulamium Type 69)

4 examples were identified; at Verulamium and Puddlehill it is a somewhat ill-defined form.

Type 9 (Gallo-Belgic Wares)

The examples of Gallo-Belgic wares from Ditch T are all of a very distinct quality in comparison with the coarse wares. 7 rims of butt-beakers were identified (nos. 76-81) and 9 examples of what are better described as cups because of their size (nos. 67-75).

The decoration on the butt-beakers from Ditch T is fairly plain in comparison with examples from other Belgic sites, which suggests that Sewell Lane was either on the periphery of Belgic influence or that its inhabitants could not either afford more exotic vessels or indeed their contents.

Type 10 (Verulamium Type 35)

No examples of these carinated and cordoned vessels were found in Ditch T though 2 were found in Ditches A and B.

Type 11

These lids occur at Verulamium in either a pseudo-metallic finish or as coarse wares. No examples were found in Ditch T but 2 coarse-ware lids were found in Pit K.

Type 12 (Verulamium Type 42)

These vessels are thought to derive from Wheathampstead bowls for which metal prototypes have been suggested. None were found in Ditch T but 1 was found in Ditch L and 1 in Ditch F.

Type 13 (Verulamium Type 44)

2 examples were identified. They are thought to be related to Type 12 which are also black burnished wares. No. 88 was found at the bottom of the ditch and no. 89 was 20 cm below the line of natural chalk, suggesting a relatively long period of use for these wares.

Type 14 (Verulamium Type 67)

Only 1 example of these vessels was identified with straight sides and slightly indented neck and an internally sloping rim.

Puddlehill - Other Types

In the Puddlehill report vessels of Italian origin and those with a Romanised influence as well as less common Belgic forms were classified under 'Other Types'. No imported wares of this nature have been found in Ditch T or elsewhere on the site.

CHARACTER AND NATURE OF THE SITE

A: Industrial Processes

Matthews envisaged that the gullies with their 'deep areas' at Sewell Lane might have been used for washing and tanning hides. The post-holes were thought to be part of a frame for hanging the hides over whilst scraping the hair off. Thomson (1981) identified three methods of tanning in the prehistoric period, which changed very little up until the eighteenth century.

Two of these methods of tanning would not have required a water system such as those found at the Sewell Lane and Puddlehill sites. The third method, which involved soaking the hides for up to a year, would not be possible in the deep areas at Sewell Lane. It is also doubtful whether this site would have been suitable for the pre-tanning processes which involved large quantities of water - far more than could have been collected in the Sewell Lane ditch system.

It can also be argued that these ditches are not of the correct size or shape to take cattle hides which would be at least 2 m in length and about 2 m in width. Medieval tanning pits excavated at Northampton (Thomson, 1981) were either circular (diameters were between 1.3 m and 3.3 m) or rectangular (between 2 m and 3.3 m in length and 1.3 m and 2 m in width.). If tanning processes changed very little between the prehistoric period and the eighteenth century then it would appear that the Belgic tannery would have required similar sized pits and that tanning processes would not have been possible at Sewell Lane.

It was also suggested that the ditches could have been used for 'liming' hides. They would have been laid hair downwards in the ditches so that the water soaking through the hides would react with the chalk and have the same effect as soaking the hides in a solution of lime. This theory was also rejected by Roy Thomson in conversation with C L Matthews.

Another suggestion was that the ditches were used for removing excess dye from wool. Certainly the occupants of the site kept sheep and, since a spindle whorl and a loom weight were found on the site, they must have spun the wool and used it for weaving. It was suggested that the dyed wool was left in the deep areas of the ditches system and water flowed through these areas rinsing out the excess dye. It was further suggested that dye stuffs could have been imported to the site in the Type 9 Gallo-Belgic fine wares.

It is probable that wool was dyed but on a smaller, more domestic level than the ditch system at Sewell Lane would suggest. This system would have been too large for the amount of wool dyed and would have entailed more work than was necessary.

B: A Domestic Site

The theory of Sewell Lane as an industrial site, therefore, is unsubstantiated. There is evidence of basic metal-working, spinning and weaving and stock keeping, in fact all the elements of a domestic site except for clear evidence of huts or houses. Ordinarily ditches are associated with houses or huts and are used either to carry away domestic slops or catch eaves-drips or to hold the timbers of the outer walls. For the ditches at Sewell Lane to have functioned as eaves-drips the houses would have needed to be polygonal, nor do they appear to run out of a house to carry away slops. However, hut structures could be envisaged with timbers set into the topsoil and not into the chalk in areas X and Y (Fig 2). The ditches would then serve to drain the

topsoil in the vicinity of the huts. To test this theory would require further excavation of the site.

The position of the post holes may also provide a clue to the ditches' function. It is possible, since Ditch T had a trench along the bottom, that the ditches acted as a foundation trench to hold fence-like structures. Such structures could have operated as a wind break.

This theory can be taken a stage further: 'complex ditch settlements' (Ritchie in Jesson and Hill, 1971) in the Wessex area have been thought to be for delineation, stock-penning or agricultural activities. All the Wessex examples lie between 90 m and 240 m above sea level (Sewell Lane 130 m above sea level) are mainly between 4-8 ha in area (Sewell Lane and Puddlehill together would cover 4-8 ha of the hilltop). All of the Wessex enclosures were linked with 'banjo enclosures' which are interpreted as cattle pens, and whilst no banjo enclosures have been recognised in the Dunstable area, it is interesting to note that three of the sites are situated within 0.8 km of a hillfort.⁽¹⁾

The 'complex ditch enclosures' have been assigned a date of first century BC - first century AD by the artefacts excavated from the sites which are distinctly Belgic in character. It is not beyond the bounds of possibility that the ditches at Sewell Lane were associated with cattle-penning, which would account for their irregular pattern. Their actual function, however, in this case, cannot be conclusively proved.

The evidence would appear to favour Sewell Lane as a domestic site. The non-ceramic artefacts show that not only spinning and weaving took place but also small-scale metalworking. There was also an oven on site, possibly for firing small numbers of pots but mainly for ordinary domestic use and there was also a large quantity of bone indicating that people were eating on the site. All these are obvious elements of an ordinary domestic habitation site.

The similarity between the two sites of Puddlehill and Sewell Lane cannot be ignored. It is possible that Sewell Lane was part of the larger Puddlehill site - a satellite settlement in the same way that Puddlehill Site 2 is situated just over 0.5 km from the main hilltop site.

To conclude, the Sewell Lane site was part of a settlement which spread along the top of the ridge from Puddlehill. It was a domestic site with insubstantial dwellings where a number of crafts took place but no industrial processes.

The ditches were used, primarily, for the drainage of excess surface water from the topsoil. An analysis

of the pottery from Ditch T dates the site from the middle of the first century BC to the beginnings of Roman activity in the areas, but no later than c 45-50 AD.

Pottery Catalogue

Measurements in cm indicate depth below surface of natural chalk; 'Nat' is level with surface of natural chalk.

Type 1

- 1 (N6-7/21-22) 40 cm Sandy paste, black exterior, narrow cordon.
- 2 (N7-8/20-21) 20 cm Hard fired sandy paste, dark grey colour, narrow cordon.
- 3 (O2-3/19-19.5) 10 cm Sandy paste, dark brown-black colour, horizontal combing.
- 4 (O0-0.5/18.75-20) Nat. Sandy paste, black exterior and orange brown interior.
- 5 (O0-0.5/18.75-20) Nat. Soapy textured fabric, some shell gritting, black burnished surface.
- 6 (O0-0.5/18.75-20) 30 cm Coarse sandy fabric, shell-gritted, lightly burnished black surface.
- 7 (O2-3.5/19-20) Nat. Sandy fabric, black in natural colour, internal markings on the rim.
- 8 (O0-0.5/19-20) 20 cm below surface. Soapy fabric, black-brown surface colour, combing on body of vessel and burnished on rim (10 sherds).
- 9 (O0.5-1.5/18.5-19.5) 10 cm Very fine sandy paste, orange brown colour, some gritty inclusions.
- 10 (O0.5-1.5/18.5-19.5) Coarse sandy paste, gritty inclusions in fabric, black exterior, brown interior, slight burnishing on rim (15 sherds).
- 11 (N7-8/20-21) 15 cm Soapy fabric, slight gritting, black-brown exterior, brown interior, burnishing on the rim, perforated in the neck.
- 12 (O5.5-6/18-19) 10 cm Hard sandy paste, brick red colour, horizontal striations on body of pot, finely mica-dusted.
- 13 (P4.5-5.5/19-20) 10 cm below surface. Sandy paste, orange-red ware, some fire-blackening.
- 14 (O1.5/18.5-19.5) 10 cm Hard sandy ware, black fabric with orange core, mica-dusted.
- 15 (O1.5/18.5-19.5) 10 cm Coarsely made, heavily sand-gritted fabric, grey colour.
- 16 (O1.5/18.5-19.5) 10 cm Hard sandy paste, grog filling, dark brown-black colour with grey core, mica-dusted.
- 17 (O6-8/18-20) 10 cm Sandy fabric with distinct sandy particles, brown with grey core, burnished exterior.
- 18 (N0.5-1.5/18.5-19.5) 10 cm Complete pot, sandy fabric with grog filler, mica-dusted, pitted inner surface with calcite inclusions dissolving. Orange-brown colour with fire-darkening from base upwards, burnishing on the neck and shoulder.

Type 2

- 19 (N6-7/21-22) 40 cm below surface. Sandy fabric, 4 base sherds, brown internal surface and grey external surface. 3 holes drilled through base in triangular formation, patterned inside near the base.
- 20 (N7-8/20-21) 20 cm Coarse sandy fabric, brown internal surface, grey exterior surface, combing at base.
- 21 (J28.5-29) 40 cm Sandy fabric, orange colour with soot on the outside, some combed decoration, rim recessed for a lid.
- 22 (N8-8.5/18.75) Nat. to 33 cm below nat. Sandy paste, orange-buff colour, recessed rim, diameter 22 cm.
- 23 (N8-8.5/18.75-20) Nat. to 33 cm Sandy paste, shell-gritted, black exterior, orange interior, slashes on rim.
- 24 (O2-3/19-19.5) 10 cm Sandy paste, orange colour, slashed horizontal markings on rim and shoulder.

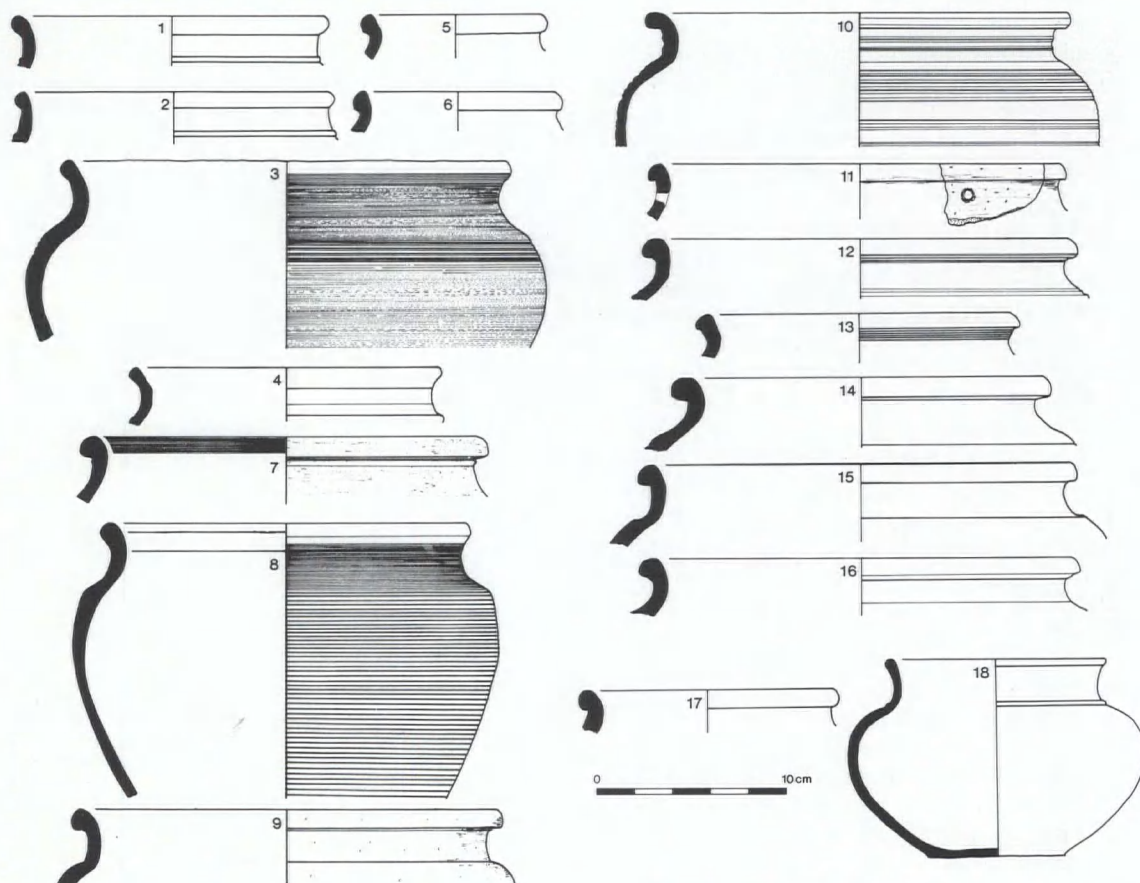


Fig 5 Pottery - Type 1.

- 25 (O2-3/19-19.5) 10 cm Sandy paste, dark orange, slashed markings only on the rim.
- 26 (O2-3/19-19.5) 10 cm Soapy fabric, brown colour, slashes on the inside.
- 27 (O2-3/19-19.5) 10 cm Sandy paste, brick red-brown, slashes on inside.
- 28 (O2-3/19-19.5) 10 cm Sandy paste, brown exterior, brick-red inside pie-crust rim with heavy and deep incisions.
- 29 (O1.5-2/18.5-19.5) 10 cm Hard fired sandy paste, thumb impressions and horizontal decorations, orange coloured, fire-blackened.
- 30 (O6-9/18-19) 10 cm below surface. Sandy fabric, pie-crust rim, no recess for lid, red-brown colour, fire-blackened.
- 31 (O6-8/18-20) 10 cm Sandy fabric, pie-crust rim, orange fabric with grey core, fire-blackened.
- 32 (O6-8/18-19) 10 cm below surface. Thick sandy ware, grog filler, red-brown fabric.
- 33 (N0-0.5/19-20) Bottom of ditch. Smooth, soft fabric, pie-crust rim, orange beige interior, red-brown exterior, fire-blackening.
- 34 (P4-4.5/19-20) Nat. Soapy fabric, recessed and pie-crust rim, black colour.
- 35 (O5.5-6/18-19) Nat. to 10cm above. Sandy fabric, slight gritting, recessed rim, brown-brick red colour, fire-blackening.
- 36 (N9-O/19-20) 20 cm Well-fired hard sandy fabric, orange and grey speckled surface with grey core, rim diameter 36cm.
- 37 (O6-8/18-20) 10 cm Hard sandy ware, recessed rim, orange colour, heavily weathered (21 sherds).
- 38 (N8/20) Just below Nat. Soapy fabric, slashed pie-crust rim, black and burnished.
- 39 (O1.5-2/18.5) 10 cm below Nat. Hard sandy paste, some grog filler, orange colour.
- 40 (N9-O/19-20) Surface to 45 cm below nat. Well-fired soapy fabric with shell-gritting, dark orange-brown colour.
- 41 (O1.5/18.5-19.5) 10 cm Sandy, slightly gritted fabric, fine horizontal striations, orange interior, brown exterior with mica-dusting.

Type 3

- 42 (N8/20) Just below nat. Sandy paste, dark brown with fire-blackening. Combed from shoulder downwards.
- 43 (O5.5-6/18-19) Nat. to 10 cm above. Sandy fabric, coarse striations, black ware with burnishing on rim and neck.
- 44 (O6-8/18-20) 10-20 cm below Nat. Soapy fabric, slight shell-gritting, black and highly burnished exterior.
- 45 (N6-8/21-22) 40 cm Hard sandy paste, grey-black exterior and brown interior.
- 46 (N6-7/21-22) 40 cm Hard sandy paste, black burnished exterior, brown interior.
- 47 (N7-8/20-21) 15 cm Sandy paste, beige-grey colour, combed, fire-blackened.

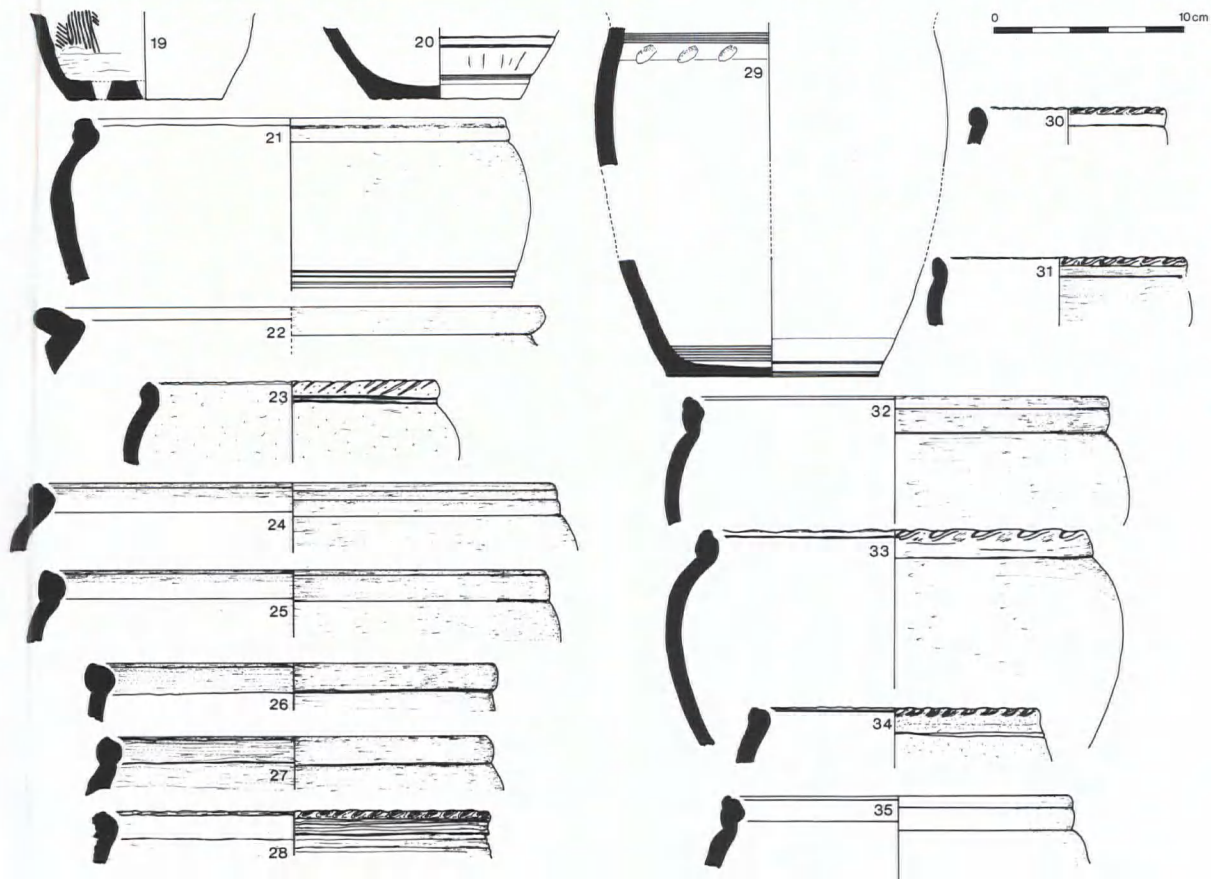


Fig 6 Pottery - Type 2.

- 48 (O6-8/18-19) 10 cm below surface. Smooth soapy fabric with some shell grog, brown interior, black burnished exterior.
 49 (O3.7-4/18-19) Soft soapy fabric, coarsely made, brown in colour, combed, fire-blackened.
 50 (O1.5/18.5) 10 cm Sandy paste, beige-brown, some fire-blackening.
 51 (O6.5-7/21) 15 cm Coarse sandy fabric, shell-gritted, horizontal grooves. Pot probably broken whilst the hole was being drilled.
 52 (O6-8/18-20) 10-20 cm Soapy fabric, dark brown with external burnishing. Whipped cord or cockle shell(?) marks randomly impressed on inside of neck.
 53 (N6-7/21-22) Bottom of ditch. Sandy paste, dark brown, combed on inside.
 54 Soapy fabric, coarsely made, grit inclusions, slashes on rim, dark-brown colour.

Type 4

- 55 (N7-8/20-21) 15 cm Sandy fabric, beige-brown colour, burnished bands on neck and shoulder, random slash marks on exterior. Perforation in body of pot.

Type 6

- 56 10 cm Sandy paste, grit inclusions, rough exterior, pale

orange-brown colour, burnished cordon. Rim diam 36cm.

Type 7

- 57 Nat. Sandy rough fabric with shell-gritting, orange colour with fire-darkening.
 58 (O1.5/18.5-19.5) 10 cm Soft, soapy fabric, red-brown with black burnishing on neck.
 59 (O1.5/18.5-19.5) 10 cm Sandy fabric, brown interior, dark brown exterior with fire-blackening, remains of a perforation - reason for breakage?
 60 (O8.5-P/18-19) Top of ditch. Sandy fabric, red-brown surface but dark brown gritted core, burnished on rim.
 61 (N7-O/20-21) 30 cm below surface. Rough sandy paste, slight shell-gritting, orange brown colour.
 62 (N9-O/19-20/) 10 cm. Coarse sandy paste, orange brown colour.

Type 8

- 63 (O3.5-4/18-19) 20 cm. Coarse sandy ware, orange-brown, horizontal slashed markings.
 64 (O0.5-1.5/18.5-19.5) 10 cm Sandy paste with grit inclusions, buff-beige colour.
 65 (N7-O/20-21) 30 cm below surface. Fine sandy paste, slight gritting, pale brown colour, damaged rim.
 66 (N9-O/20-21) 10 cm Fine sandy paste, orange colour.

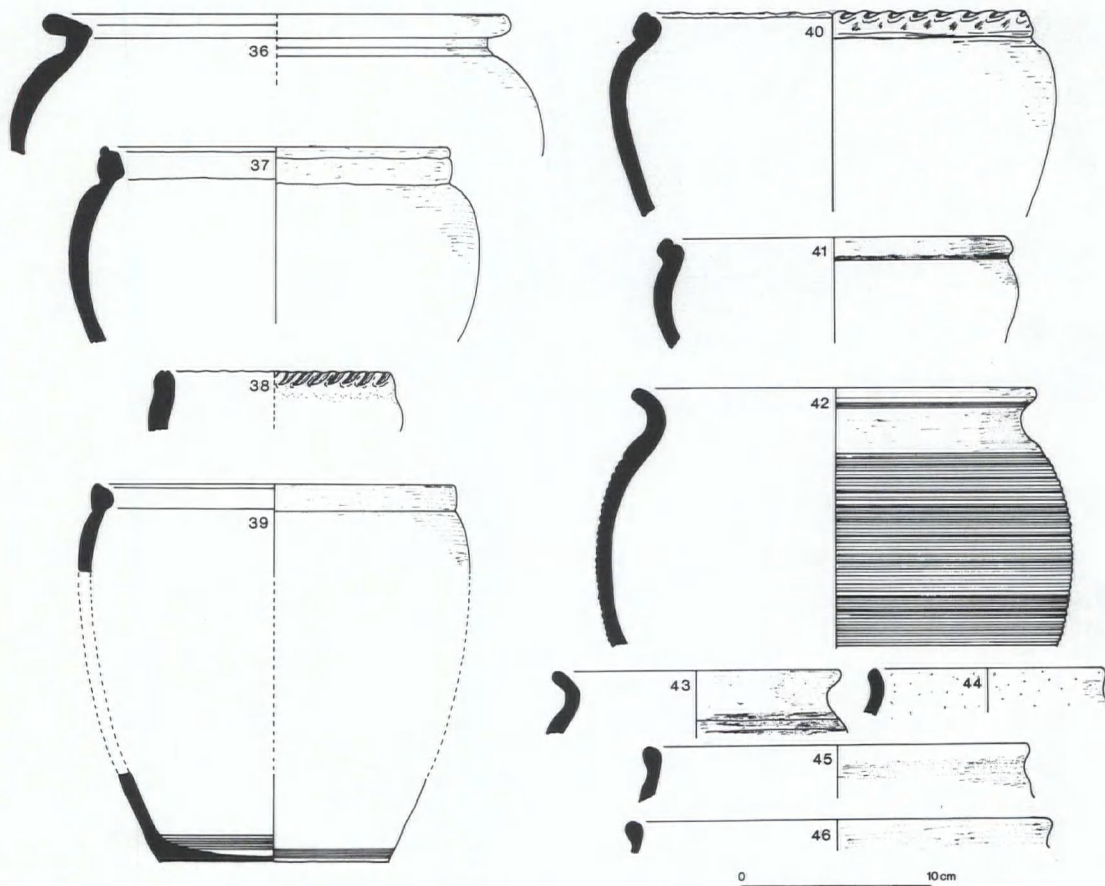


Fig 7 Pottery - Type 2 (36 - 41) & Type 3 (42 - 46).

Type 9

- 67 (O5-5.5/18-19) Nat. Finely fired sandy paste, no inclusions, orange colour.
- 68 (O2-4/18-20) 15 cm Soapy soft fabric, biscuit brown-orange colour.
- 69 (O5.5-6/18-19) Nat. to 10 cm above. Finely fired soft paste, orange colour, weathered edges on sherds.
- 70 (O6-8/18-19) 10 cm into ditch. Sandy paste, dark brown-red exterior, grey beige interior, mica-dusted and burnished on the neck.
- 71 (N8/20) Just below nat. Well-fired orange fine ware, sandy paste, no inclusions, burnished surface.
- 72 (O5.5-6/18-19) Nat. to 10 cm above. Sandy paste, mid-brown colour, smooth highly-burnished surface.
- 73 (O5.5-6/19-20) Just above nat. Smooth, soft fabric, biscuit-fired, orange colour, badly weathered sherds.
- 74 (P4-4.4/19-20) Nat. Very fine sandy paste, orange colour, highly-burnished smooth surface, perforation in vessel.
- 75 (O/18.5-20) 23 cm Hard-fired sandy paste, orange interior, orange-brown exterior, perforation in vessel.
- 76 (O8-8.5/18.5-19.5) 20 cm Fine sandy paste, orange colour, burnished zone of vertical impressions imprinting into surface.
- 77 (O6-8/18-20) 10 cm Smooth paste, no inclusions, orange colour.
- 78 (O6-8/18-19) 10 cm into ditch. Well-fired sandy paste, smooth burnished surface, orange-beige colour, some fire-blackening.
- 79 (O6-8/18-20) 10-20 cm Sandy paste, orange, burnished below the rim.
- 80 (O8.5-P/18-21) Top of ditch. Biscuit type ware, fine sandy paste, highly-burnished orange surface, mica-dusted, badly weathered.
- 81 (P2.5-3/19-20) 20 cm Sandy fabric, burnished dark-brown surface.
- 82 (O5.5-6/19-20) Just below nat. Fine sandy paste, no rim, body sherd, only example of lattice pattern.
- 83 (P4-4.5/19-20) Nat. Fine sandy paste, dark brown highly-burnished surface.
- 84 (O6-8/18-20) 10-20 cm Sandy fabric, pale orange colour, zones of pattern possibly finely incised with a pointed implement.
- 85 Nat. Sandy fabric, smooth exterior but coarse interior, black burnished surface, heavy cordon and zones of vertical rouletting.
- 86 Nat. Sandy fabric, smooth black burnished exterior zones of vertical rouletting.
- 87 (P2.5-3/19-20) 20 cm Sandy fabric, slight shell-gritting, dark brown burnished exterior, zones of horizontal rouletting (more finely incised than nos. 85 or 86).

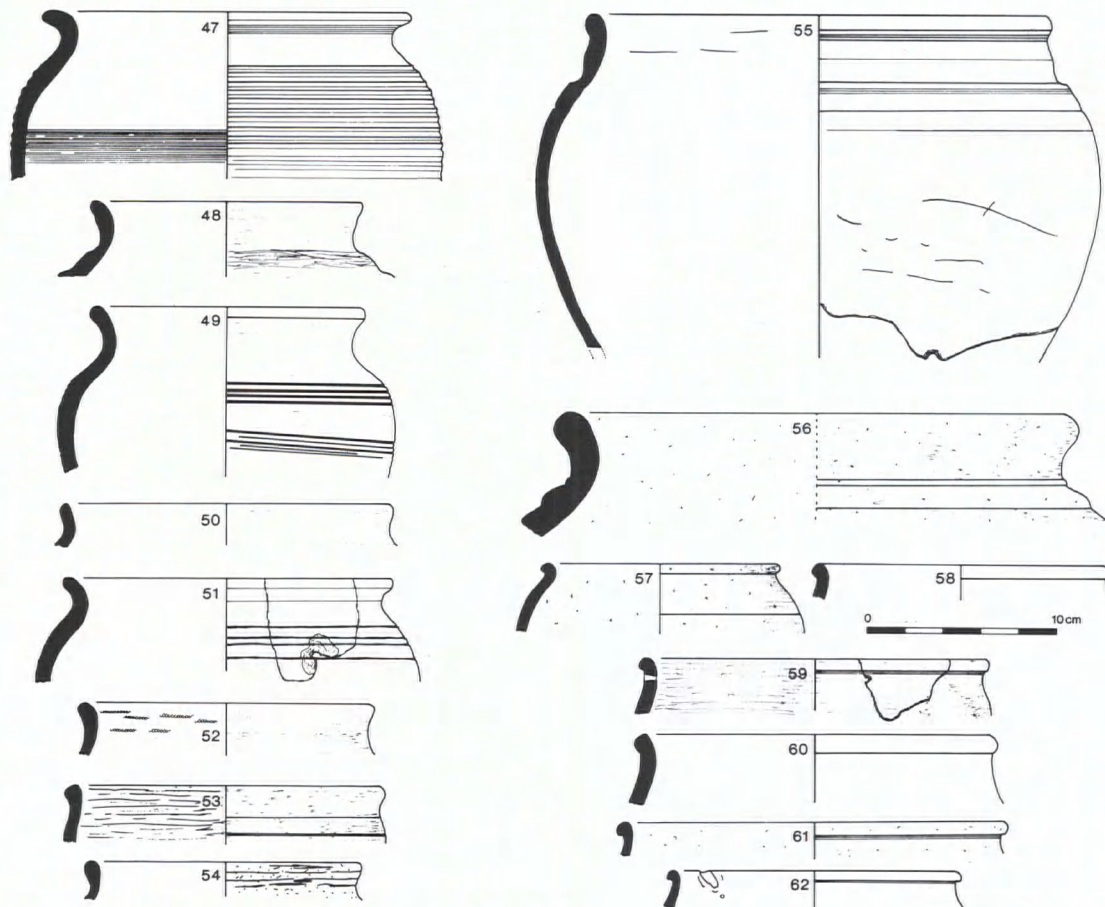


Fig 8 Pottery - Type 3 (47 - 54), Type 4 (55), Type 6 (56) & Type 7 (57 - 62).

Type 13

88 (N8-9/19-30) Bottom of ditch. Sandy fabric with smooth, black burnished exterior.

89 (N7-8/20-21) 20 cm Thick soapy fabric with highly-burnished black exterior.

Type 14

90 (O1.5-.2/18.5-19.5) 14 cm Internal surface - sandy fabric but exterior surface has a softer texture. Internal surface is beige but external is pale orange-brown.

NOTE

(1) Since this paper was first prepared it has been brought to my attention that a possible 'banjo enclosure' was excavated in the late 1980s by the Manshead Archaeological Society. It is published in *Manshead Journal* 28, 1988. The evidence supports my theory of the Sewell Lane site being a 'complex ditch enclosure' with associated cattle pen.

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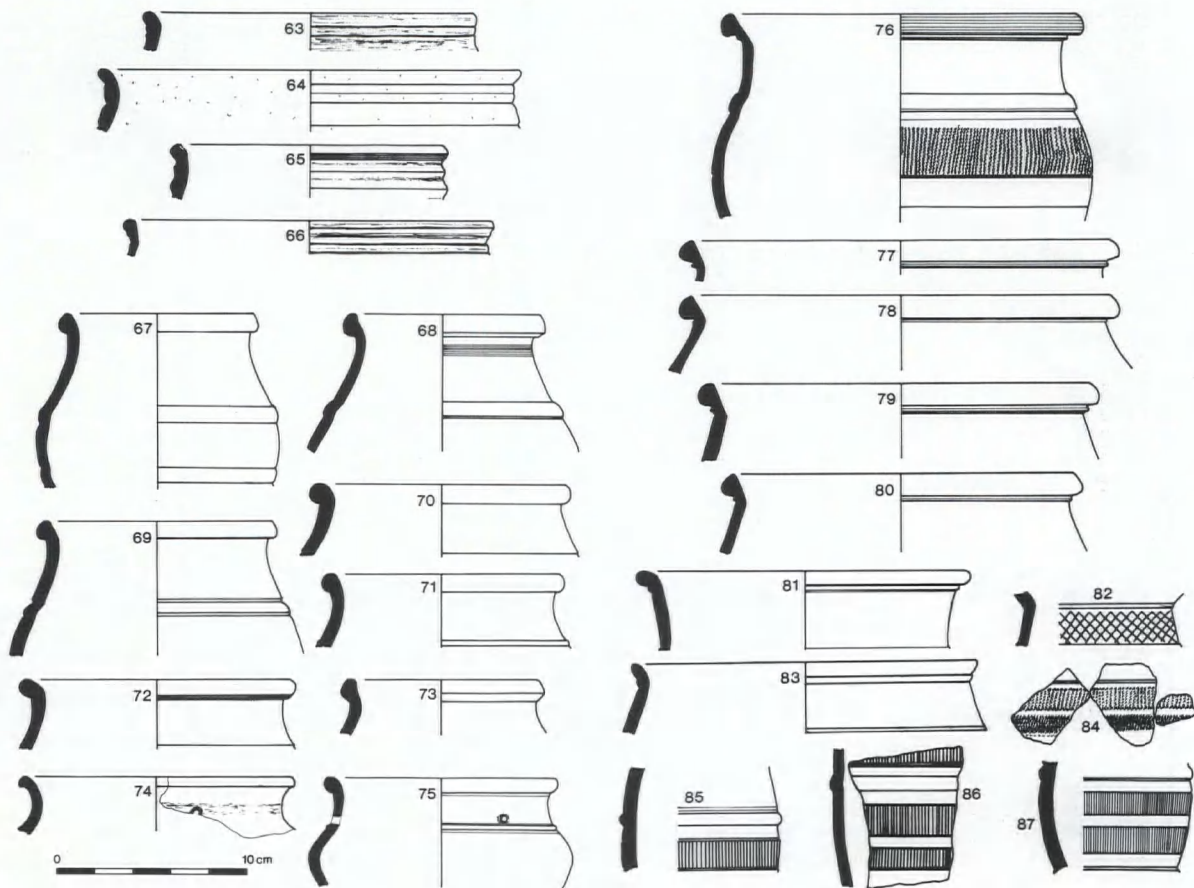


Fig 9 Pottery - Type 8 (63 - 66) and Type 9 (67 - 87).

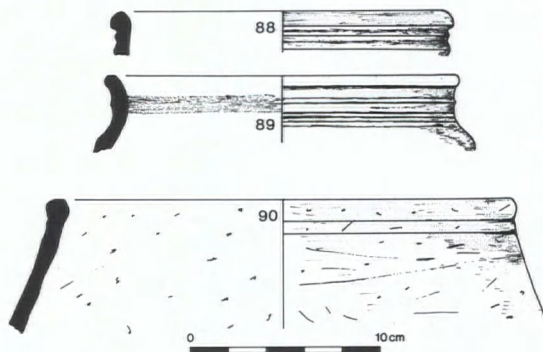


Fig 10 Pottery - Type 13 (88 - 89) and Type 14 (90).

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Romano-British Occupation on Puddlehill, near Dunstable

C L (Les) MATTHEWS AND DAVE WARREN

SUMMARY

The chalk ridge N of Dunstable called Puddlehill, part of the Chiltern Hills, was occupied intermittently by farming communities from the late Neolithic period to the 7th century AD.

The successors of the late pre-Roman Iron Age community appear to have continued to live there during the period of the Roman Conquest, and of the construction of Watling Street over the hill, through the area of occupation. A large fire on the summit may have been lit as a beacon to assist surveyors sighting the alignment of the road.

Occupation during the 1st and 2nd centuries AD was in two separate areas, in both of which there had been late Iron Age activity, and small dwellings were identified, as well as 'corn-driers', an oven and enclosure ditches.

Wheel ruts crossing the hill E-W contained Romano-British debris and 12 coins of the 3rd and 4th centuries. This road may have been an alternative route for the Icknield Way at that period.

INTRODUCTION

The sites described in this report were destroyed by chalk quarrying between 1951 and 1965. The excavation and recording of the archaeological remains were carried out with the kind permission and co-operation of the Associated Portland Cement Co, by the Manshead Archaeological Society of Dunstable as a rescue operation under the direction of C L Matthews.

The prehistoric remains were reported in *Occupation Sites on a Chiltern Ridge Part 1* (Matthews, 1976). It was originally intended that the Romano-British and Anglo-Saxon occupation should be published together as Part 2 of this report. In the event the later period was published in *Anglo-Saxon Studies* (Matthews & Hawkes, 1985), leaving the Romano-British period to wait for a suitable opportunity, which has now presented itself in *Bedfordshire Archaeology*.

The present writer has compiled this report from field notes (some nearly forty years old) and a half-completed first draft by the late C L Matthews. Any mistakes, anomalies or omissions that may

have occurred must be attributed to the present writer and not to C L Matthews.

Roman Site 2 lies in an area rich in remains of earlier occupation (Matthews, 1976), while Roman Site 1 is in close proximity to both late Iron Age and Saxon features. This report, therefore, is the missing link between purely archaeological information and history, when we can begin to relate the physical evidence to recorded events.

PUDDLEHILL AND THE ROMAN CONQUEST

Puddlehill, 2 km N of Dunstable, is crossed by the Watling Street, which today passes through a cutting made in the hill in 1837 to speed the horse-coach traffic.

The modern road follows very closely the course of the original Roman road and recent work in the cutting has shown two gravel spreads in the bank, one 60 cm above the other, which are probably metalling of the Roman road and the 18th century coach road which passed over the hill.

On the hilltop, only a few metres from the Roman Watling Street, was a 'Belgic' homestead which was probably still occupied at the time of the Claudian invasion of AD 43 (Matthews, 1976).

Very soon after the invasion, the pre-Roman settlement of Verlam 20 km to the S, came under the control of the occupying forces with the construction of a fort by the river Ver. Excavations there have indicated that the transition to Roman rule was peaceful and have shown that shortly after AD 43 the Roman Watling Street was being constructed (Frere, 1972). The 'Belgic' stock-raisers and farmers of Puddlehill must therefore have soon experienced the shock of Roman troops and the upheaval of road-builders passing through their farms. If this caused them to abandon their farms it was only a temporary break, for occupation was continued on exactly the same two sites, but the new regime brought dramatic changes to the way of life for the farmer. New techniques in house building, pottery manufacture, the need to grow more corn and to dry it (probably to pay taxes) were to provide a different ground plan for the archaeologist to uncover.

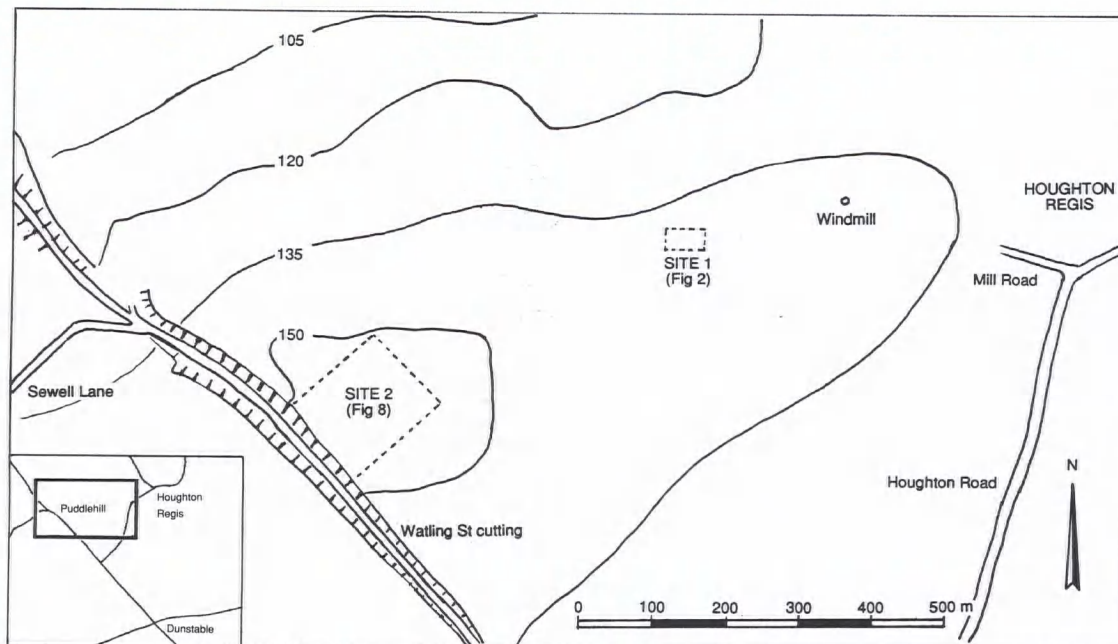


Fig 1 Location and general area map.

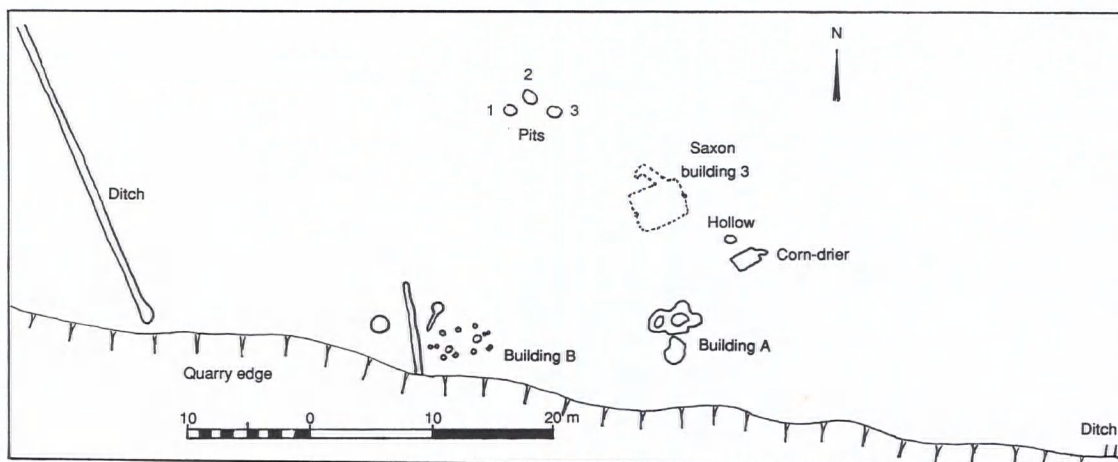


Fig 2 Plan, Roman Site 1.

THE EXCAVATIONS

Two areas of Romano-British occupation were identified. Buildings on site 1 are identified by letters, those on site 2 by numbers, to conform with the original field notes.

ROMAN SITE 1 (TL 009237)

Fig 2

Site 1 lay 650 m NE of the highest point of the Watling Street cutting as it exists today on a line between there and a windmill stump which is still extant up Mill Road, Houghton Regis. It comprised two buildings (A and B), associated hollows and ditches, and a corn-drier. This first site was and is probably more extensive but the chalk quarrying had removed a lot of the hill to the S before archaeological excavation began and with the ending of chalk winning in the area the rescue excavation was halted. The site is in very close proximity to a series of late Iron Age ditches (Matthews, 1976 p176) and also a later Saxon site (Matthews and Hawkes, 1985; see particularly Figs 1 and 2).

Roman Building A

This was a 1st to 2nd century structure which survived only as a number of hollows worn in the natural chalk. It has been suggested on the grounds of the lack of specific structural remains i.e. post holes or sleeper beam trenches that this was not a structure at all, just an area of hollows. However, the reader is referred to building 2 on the second site (see below) which was only recognised as having existed by the concentration of pottery and a fortunate circumstance. The concentration of pottery was evident here also and the hollows appear to have originated through wear rather than as deliberately dug features. To focus the frequency and amount of wear required to create such hollows in a very small area of an otherwise open space, factors limiting and concentrating movement must have been involved. Walls, however flimsy, are the most likely explanation. Sleeper beams let only into the topsoil, would after centuries of worm action and later ploughing, leave no trace. The density of personal items should also be noted.

The pottery which is identical in character to that from the beacon fire (see below), includes sherds from poppy beakers and Nene Valley wares plus a few fragments of Samian. A large quantity of shell-gritted material was also found, in particular 2 large storage jars.

A number of the small finds (included in Fig 7) from the building such as the toilet set, brooch,

bangle and the flat stone which together with the longer copper alloy rod may have formed a cosmetic palette and pestle suggest habitation by a woman. This 'hut', like building B below, is perhaps rather small for year round occupation but would be quite adequate for seasonal use. Intermittent use might explain why so much pottery accumulated, possibly over a long period with nobody bothering to tidy these occasional shelters.

Building A may be the accommodation set aside for a female worker who did the cooking for the field hands and who filled in any spare time with a little weaving, using the double-ended bone pins found here, assuming, that is, neither was a hair ornament.

No coins were discovered in the hut itself, but 3 coins (see coins from ruts) of the mid-fourth century together with the remains of 4 or 5 late-Roman (shell-gritted) pots were found in the overlying stratum.

Roman Building B

This structure lay 17 m W of building A and appears to date to a similar period: 1st to 2nd century. It was a post-built structure with the long axis oriented almost E-W (Fig 3). Six post holes, (3 on the N side, 3 on the S) indicate the main structure was slightly rhomboidal and measured approximately 2.5 m x 3 m. The S wall was extended a further 1.3 m to the E by a double post hole paired with another double post hole halfway across the E end. These would seem to represent a porched entrance facing away from the prevailing wind.

Two small circular pits were found within the area of the building but may be of a different date. They were both very shallow: one was dug 28 cm into the natural chalk, the other only 13 cm. The deeper (see inset section A-A in Fig 3) was filled with ash and dark loam suggesting a fire place. However, unless it was sited to take advantage of ventilation afforded by the entrance, its position would seem somewhat inconvenient, if contemporary.

If, as the amount of pottery found indicates, it was a dwelling, like building A it was the meanest of hovels, and likewise perhaps just a shelter for the use of field hands as occasion required.

The building contained 139 identifiable rims. These include 17 plain jars, 44 cooking pots (10 with recessed rims), a flagon, 3 bowls, 4 mortaria, 4 storage jars, 14 dishes and a beaker. In addition there are bases and body sherds of Samian, poppy beaker, a grey ware with traces of paint and one amphora.

The only notable small find was a lead plug (Fig 7

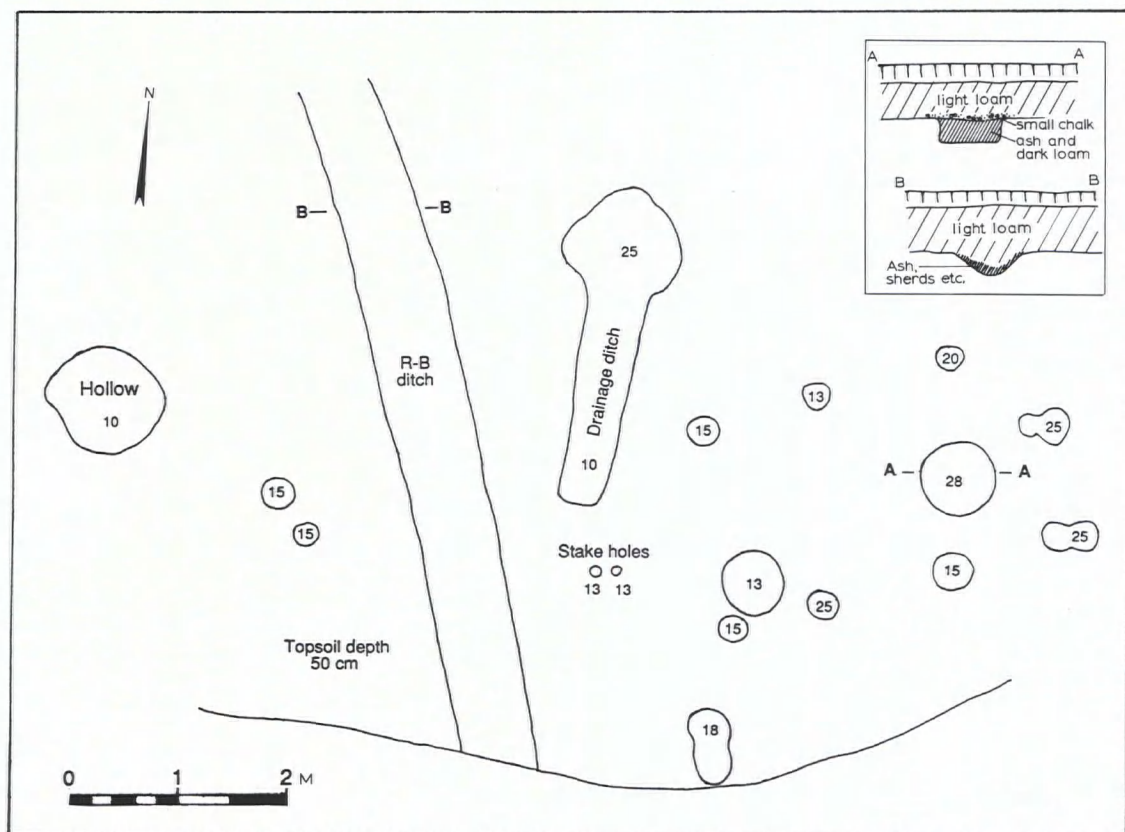


Fig 3 Plan, Building B. Numbers are depths below natural in cm.

no. 44), perhaps used to seal a knot-hole in a wooden bucket.

The Corn-drier

This was of the same order of size as those on site 2. Its only notable feature is that the stokehole or flue is at an angle to the NE side of the body. It was identified as Roman by the pottery.

The Pits

Various pits and hollows containing Roman material were discovered in the area. Some pottery from the cluster of pits to the N of building A is illustrated below. A rather curious 'tadpole-shaped' feature is shown next to building B. The 'tail' cut 10 cm into natural chalk runs into a pit (15 cm deeper) at one end. It looks as though it was meant to collect water but unless it was somehow gathered from the

roof of building B (possibly by gutters) there is no obvious source.

Pottery descriptions

Where applicable parallels are noted as follows: Ver - Verulamium (Frere, 1972, 1983 and 1984); Ox - Oxford Roman Pottery (Young, 1977); KHL - King Harry Lane (Stead and Rigby, 1989).

Fig 4 Building A and miscellaneous features

- 1 Flagon in a hard white ware. Note. The 'flange' is damaged. (Ver 401, AD 105-130). Building A.
- 2 Bowl in fine white ware. Copy of Dr 37. (Ox W42.1, AD 150-300). Building A.
- 3 Bowl in coarse ware with shell grits. Fired brown/black. (Ver 327-30, AD 75-105). Building A.
- 4 Jar fired biscuit. Heavily shell-gritted. Building A.
- 5 Flagon in a hard sandy white ware. (Ver 567, AD 130-50). Corn-drier.
- 6 Hard grey ware. (Ver 285, AD 75-105). Corn-drier.
- 7 Bowl in orange sandy ware. Burnished. Corn-drier.
- 8 Red-grey vessel with grey core. Depression N of corn-drier.
- 9 As no. 25 (These pots are illustrated in the Verulamium

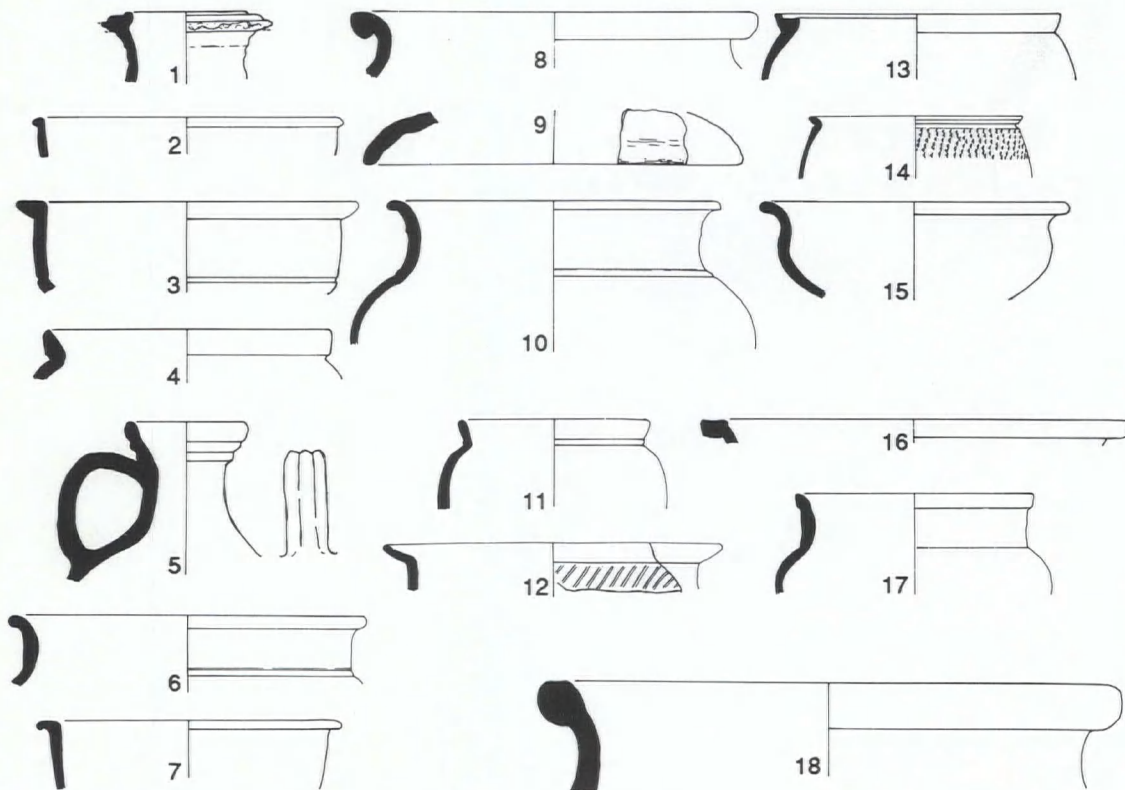


Fig 4 Site 1 pottery. Building A and miscellaneous features. Scale 1:4.

- report as bowls). No. 9 was burnished on the inside which perhaps suggests that this was the use. However, the vessels are early and seem to be following the native tradition as lids. (Ver 22, AD 60-75). Pit 1.
- 10 Light blue-grey sandy ware with lighter core. (Ver 158, AD 60-75). Pit 1.
- 11 Hard sandy dark grey ware. Pit 1.
- 12 Red-grey vessel with grey core. Burnished decoration below rim. (Ver 35, AD 75-130). Pit 2.
- 13 Jar, heavily shell-gritted. Grey paste fired biscuit. Rim recessed for lid. Native ware. (Ver 81 (fabric) 82 (rim), AD 49-75). Pit 2.
- 14 Beaker in fine ware with band of rouletting on shoulder. Orange paste, with light brown slip. (Ver 423, AD 85-105). Ditch.
- 15 Bowl in grey sandy fabric. Fired black/buff. (Ver 319, AD 75-105). Ditch just W of building B.
- 16 Bowl in hard sandy grey ware. (Ver 337, AD 85-105). Ditch just W of building B.
- 17 Brown vessel in a sandy paste. Soft fabric similar to the native wares. Burnished. (Ver 49, AD 49-60). Building B (depression N of post holes).
- 18 Storage jar in a 'soapy' grog-tempered ware fired brown. Some sand also present in a dark grey paste. Building B (depression N of post holes).
- 19 Mortarium in buff sandy ware. Light brown/translucent grits.
- 20 Mortarium in hard, finely granulated pinkish-buff ware. Sparse brown grits. (Ver 548, AD 90-135), probably made at Verulamium.
- 21 Dog dish, dark grey smooth paste. Burnished black.
- 22 Bowl in black sandy ware. Burnished on outside. Grey core.
- 23 Bowl in fine white ware. Copy of Dr 37. (Ox W54.2, AD 100-300).
- 24 Bowl in fine white ware. (Ox W53.1, late 1st-early 2nd C).
- 25 Lid in coarse sandy ware. Fired black and red. Light grey core. (Ver 222, AD 60-75). See also no. 9.
- 26 Jar in a heavily shell-gritted fabric. Fired biscuit.
- 27 Coarse shell-gritted storage jar, fired brown on a grey core.
- 28 Hard light grey sandy ware with rouletted pattern. (Ver 155, AD 60-75).
- 29 Butt beaker with zones of lattice pattern. Dark grey sandy ware. Coating of white paint on inside. (Ver 62, AD 60-75).
- 30 Jar, body sherd with stamped 'impressed line' lozenges. (Ver 822, AD 150-60).
- 31 Jar? Decorated body sherd.
- 32 Sherds in hard light grey ware with zones of deeply grooved stamped patterns.
- 33 Bowl fragments with reeded rims. Fired biscuit. (Ver 671, AD 130-50).
- 34 As no. 35. (Ver 121, AD 60-75; KHL Fig 76 no. 2).
- 35 Narrow-necked jar in fine sandy dark grey ware. At Ver occurs AD 60-130.
- 36 Jar in hard sandy ware. Red paste, fired grey-brown.
- 37 Poppy beaker in silver grey ware with lighter burnished slip. (Ver 598, AD 130-150).
- 38 Sandy ware fired black from grey paste. Fine combing on body of pot. (Ver 481, AD 105-115).
- 39 Beaker, in a soapy fabric. Grey paste fired brown. Burnished. (Probably native ware.)
- 40 Crudely made light grey ware. (Ver 297, AD 75-105).

Fig 5 Building B

- 19 Mortarium in buff sandy ware. Light brown/translucent grits.
- 20 Mortarium in hard, finely granulated pinkish-buff ware. Sparse brown grits. (Ver 548, AD 90-135), probably made at Verulamium.

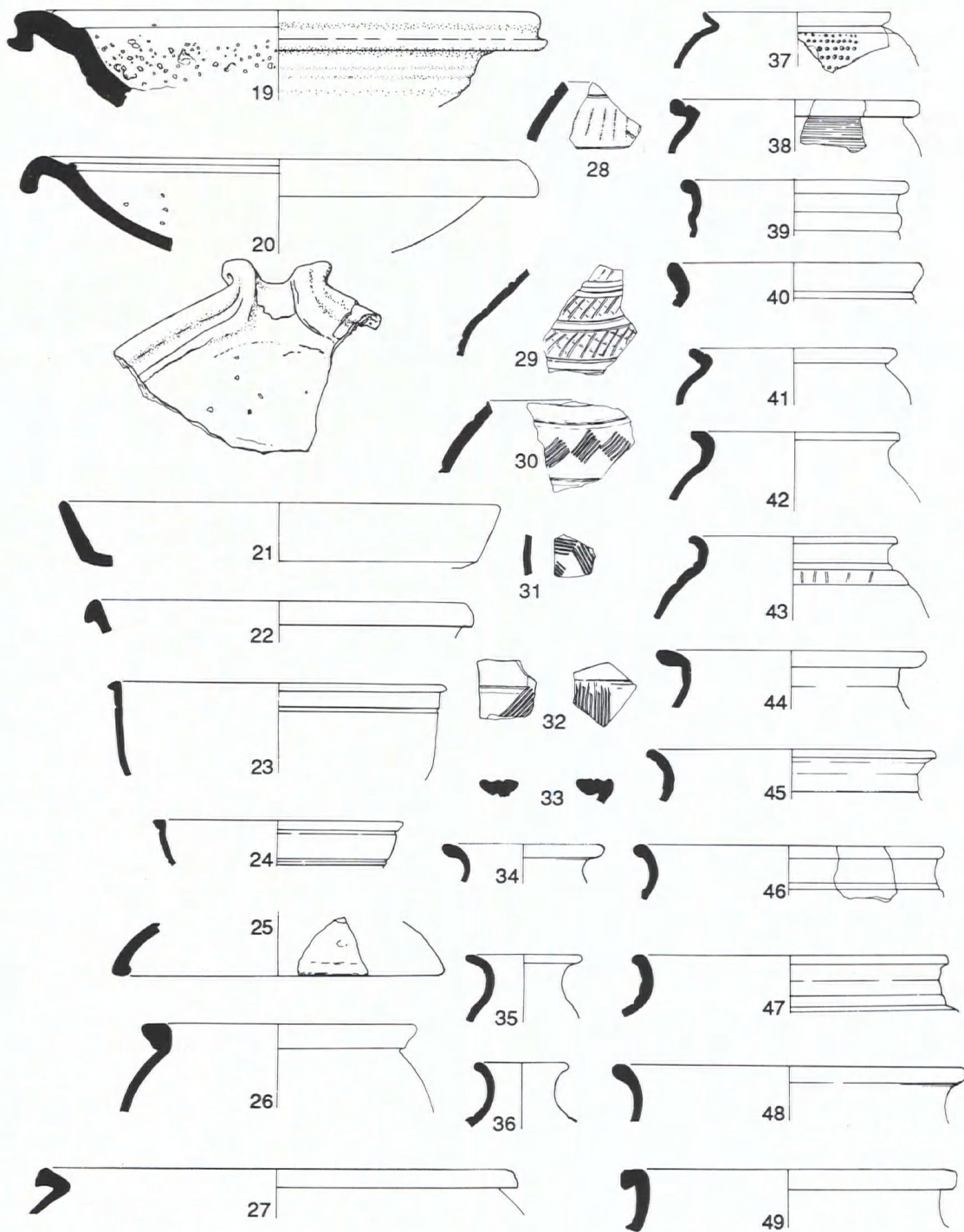


Fig 5 Site 1, pottery from Building B. Scale 1:4.

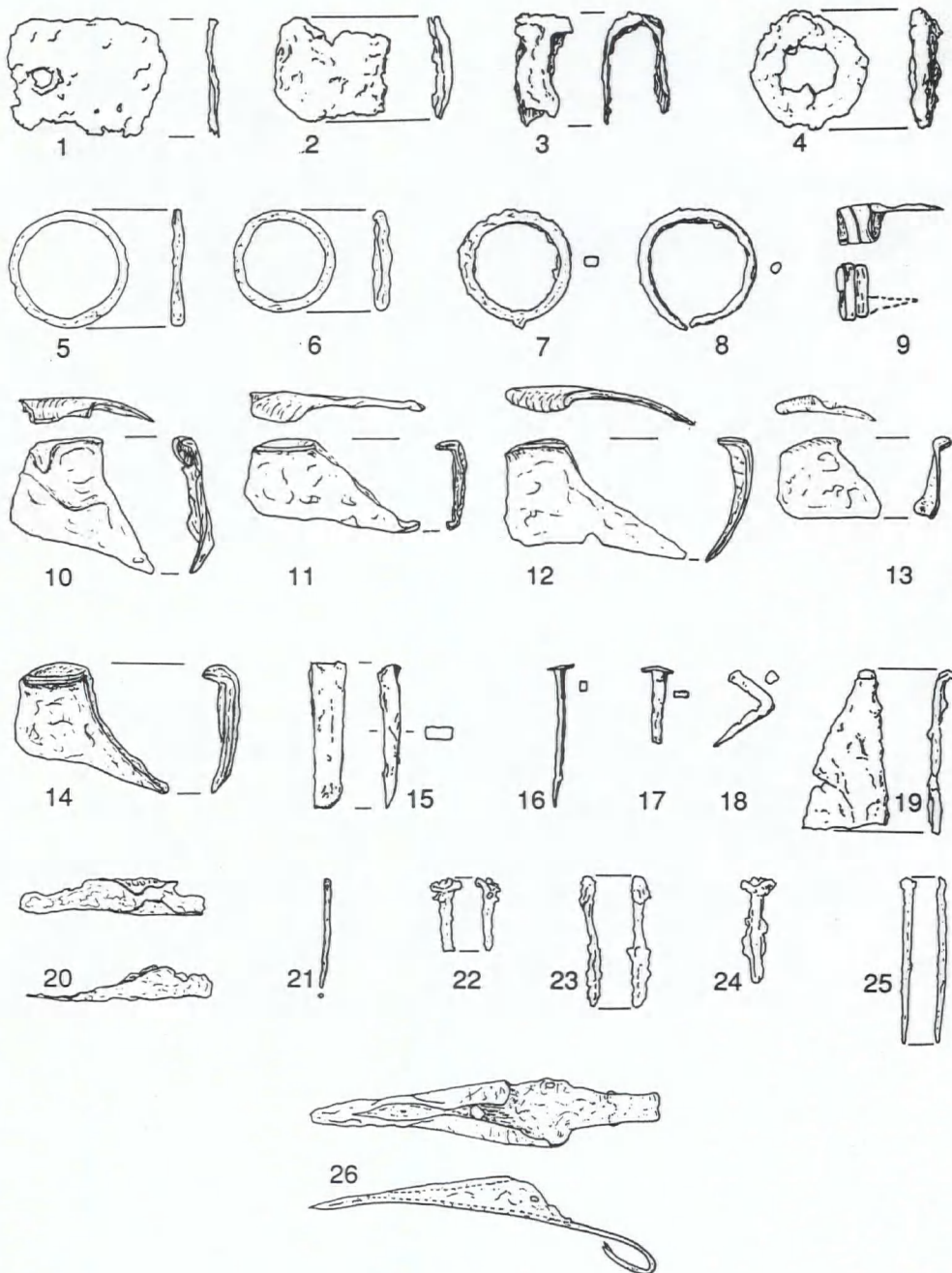


Fig 6 Sites 1 and 2, objects of iron. Scale 1:3.

- 41 Jar in coarse sandy ware fired dark grey on red sub-surface, grey core. (Ver 481, AD 105-130).
 42 Coarsely granulated buff ware. (Ver 282, AD 90-105).
 43 Jar in coarse dark grey ware with light grey core. Burnished vertical decoration. (Ver 269, AD 75-105).
 44 Vessel with an orange paste and white slip.
 45 Sandy ware fired black-brown. (Ver 276, AD 75-105).
 46 Hard grey sandy ware. (Ver 451, AD 105-30).
 47 Fabric as no. 40, unburnished. (Ver 449/55 (form), AD 105-30).
 48 Fabric as no. 40, unburnished. (Ver 283 (form), AD 75-105).
 49 Hard dark grey sandy ware. (Ver 648, AD 130-50).
 Not illustrated: amphora (rim only). Dressel 20, in a hard very sandy orange fabric. (Ver 10, AD 105-30).

Objects of Iron (including those from site 2) Fig 6

- 1 Flat sheet, roughly rectangular, 6.5 x 5 cm with a hole punched in the centre of one end. Building 1.
 2 Flat sheet, roughly rectangular, 5 x 4.5 cm. Slightly curved in one plane. Building 1.
 3 Flat sheet. Folded, making a staple-like object 5 cm high and 2 cm wide. Building 1.
 4 Flat washer. External diameter 5 cm with a 2 cm hole. Building 1.
 5 Ring, 5 cm diameter, circular section. Building 1.
 6 Ring, 4 cm diameter, circular section. Building 1.
 7 Ring, 4.5 cm diameter, rectangular section. Building 1.
 8 Ring, 5 cm diameter, penannular (through corrosion?) with circular section. Building 1.
 9 Two ox-goads. Complete example 4.5 cm long, both Building 1. Two others from this building and one from Building A were also found.
 10 to 14:
 Tines (of a bed harrow?) Identification suggested by the present author, but thought by the excavator (C L Matthews) to be ploughshares. In Frere 1984 Fig 38 no. 24 and also in Neal, Wardle and Hunn 1990 Fig 133 nos. 483-4 similar objects are seen as wings of hipposandals. See fuller discussion under finds from Building 1 below.
 10 (6 x 5 cm) Blade curved to right, flange also to right. Building 1.
 11 (7 x 3 cm) Blade straight, tip bent to right, flange to right. Building 1.
 12 (7 x 4 cm) Blade curved to right, flange also to right. Building 1.
 13 (4 x 3 cm) Blade curved to right, flange to left. Building 1.
 14 (6 x 5 cm) Blade curved to right, flange also to right. Building A.
 15 Wedge, 6 cm long and 1.5 x 0.8 cm at the head. It has a rectangular section with a 'chisel' tip. Building 1.
 16 Nail, 6 cm long with a small flat head, and nearly square section. Building 1.
 17 Nail, 3 cm plus long with small flat head and a flat rectangular section. Building 1.
 18 Nail, 5 cm long, bent, no head but widening slightly with squarish section. Building 1.
 19 Flat sheet in the form of a right-angled triangle, 7 x 3.5 cm sides. The tip of the narrow angle is bent over. Building 1.
 20 Winged socket. The size suggests an implement such as a pruning knife or reaping hook but note similarity to no. 26 below. Building 1.
 21 Eyed needle, 4.5 cm long 2 mm diameter. The pierced end is flattened. Material apart, it is identical with modern examples. Building 1.
 22 Nail, 3 cm plus long. Small head, square section. Building A.
 23 Nail? 5.5 cm long. Both ends have thickened corrosion, no head. Building A.
 24 Nail, 4.5 cm plus long. Small head, heavy corrosion. Building A.
 25 Nail or Pin? 7 cm long 3 mm square, one end pointed the other slightly spatulate. Building A.
 26 Winged bar-share, 16 cm long with the last 2 cm bent over and broken across attachment hole. A second hole in the body

may be the result of corrosion. From the cart ruts on site 2. An identical object may be seen in Frere 1972 Fig 61 no. 17 from a context dated AD 280-315.
 Not illustrated: 28 boot nails. Building A.

Objects of Copper Alloy, Bone, Lead, Stone and Glass (including those from site 2) Fig 7

- 27 to 30:
 Copper alloy toilet set. Building A.
 27 Nail cleaner, 6 cm long decorated with crossing zig-zag lines with circles at the ends.
 28 Tweezers. Plain, 5.7 cm long.
 29 Flannel holder? Decorated with a zig-zagging zig-zag line on the outside. An unknown length appears to be missing. Its purpose is also unknown but if it was a functional part of the toilet set then a cloth or sponge holder is suggested. A bangle or bracelet with hook and eye ends is another possibility except that although now bent twice it does not look as though it was ever circular. Rather, in fact, if the bends are both ancient and purposeful, that it made a square loop suspended at one corner with a hook to close it.
 30 Half a loop. Probably the keeper ring for the set.
 31 Copper alloy brooch 5 cm long. Complete and made from one piece of metal with a 'knot' type spring. Plain catchplate. Building A.
 32 Copper alloy disc, diam 27 mm. Although of a size to be a coin the faces are plain and do not appear worn down. Building A.
 33 Copper alloy rod, 11.5 cm long tapering from 6 mm to 2 mm. Circular in section it has flat ends with rounded edges. Building A.
 34 Copper alloy rod, diam 6 mm. One end is pierced and thinned down with angled shoulders. The other end is broken. Building A.
 35 Copper alloy bangle or mount which is decorated with continuous stamped? slightly hooked wavy lines. The interior was originally smoothed as were the edges. A section of indeterminate length is missing. Building A.
 36 Copper alloy rod, 5.7 cm long. Circular section slightly tapered with maximum diam 1.5 mm. Building A.
 37 Copper alloy wire fragments. One appears to be a small (unclosed) chain link. Building A.
 38 Copper alloy ring, 2.2 cm diameter, seamless with very smooth dark patina. 2 mm circular section. Building 1. (Illustrated full size.)
 39 Copper alloy mount, 1.8 cm long. Very crudely made, decorated with transverse grooves across body. All the holes were countersunk on the underside. The centre countersinking was cast and may have held a stone such as a garnet which protruded through the hole. The countersinking of the outer holes was done or at least finished by drilling. Building 1. (Illustrated full size.)
 40 Copper alloy 'safety pin', 2.7 cm long. The catchplate is flattened to a knife edge and appears never to have had the hook-over to actually 'catch a pin'. It is possible however, this has been filed away and the pin bent back to create a makeshift toilet implement such as an ear scoop or nail cleaner. From a post hole possibly associated with corn-drier 1. Found with the glass bottle (no. 47 below). (Illustrated full size.)
 41 Bone pin, 11.5 cm long. Maximum diam 8 mm, pointed both ends with highly polished tips. A hair pin or possible weaving implement is suggested. Another proposal is that this and 43 below are awls, but it would seem rather impractical to point a tool for perforating other materials at both ends and to make it in a material which is limited as to what it could penetrate. Building A.
 42 Bone pin. One end is broken, the other end has two grooves round it just behind the pointed tip. Minimum length 6 cm diam 2 mm. Building A.
 43 Bone pin pointed both ends length 10 cm. Maximum diam 11 mm slightly flattened circular section. Smoothed all over. A weaving tool is suggested as it seems a little fat for a hair ornament. Building A.

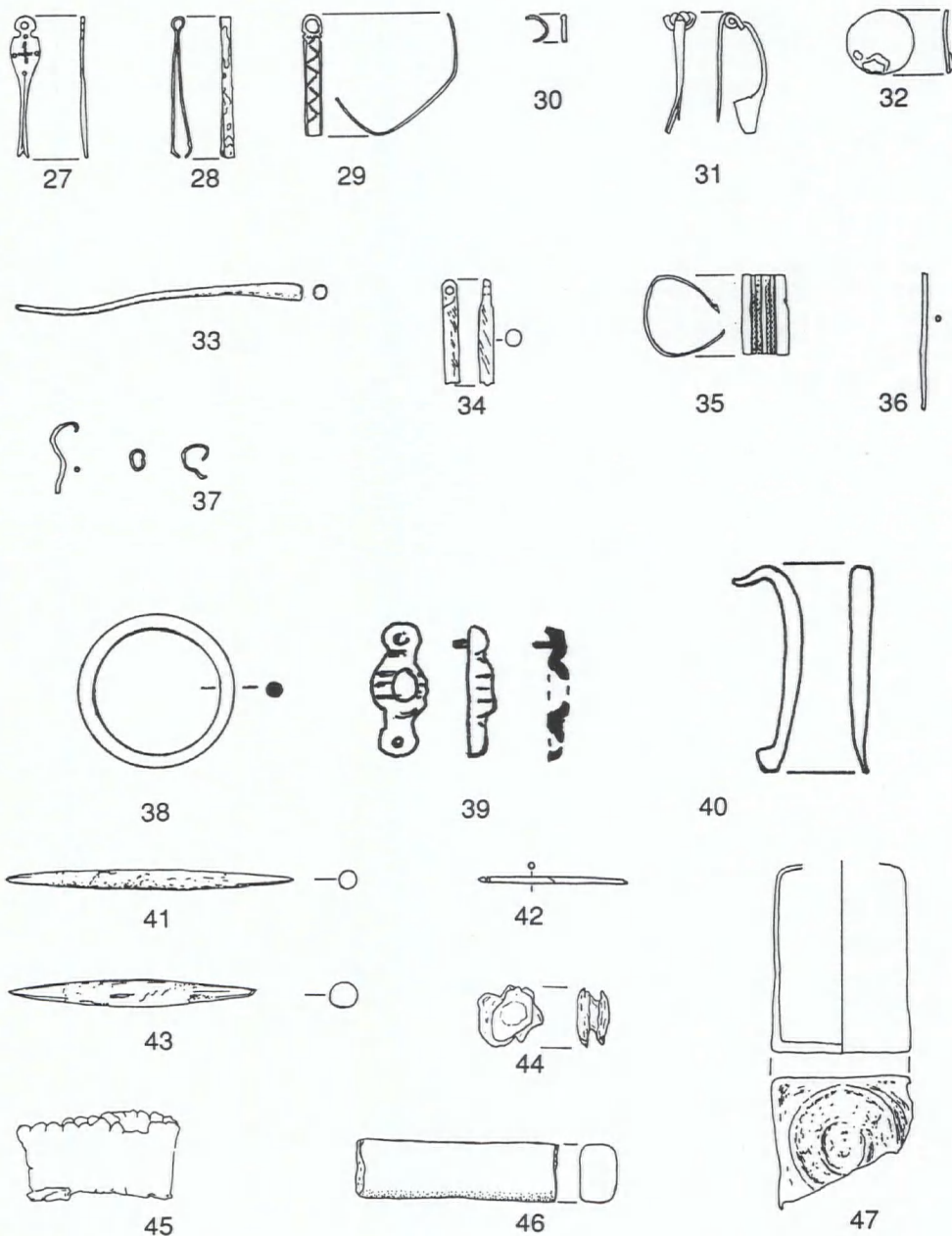


Fig 7 Site 1 and 2, objects of copper alloy, bone, lead, stone and glass. Scale 1:3 (except 38 - 40, 1:1)

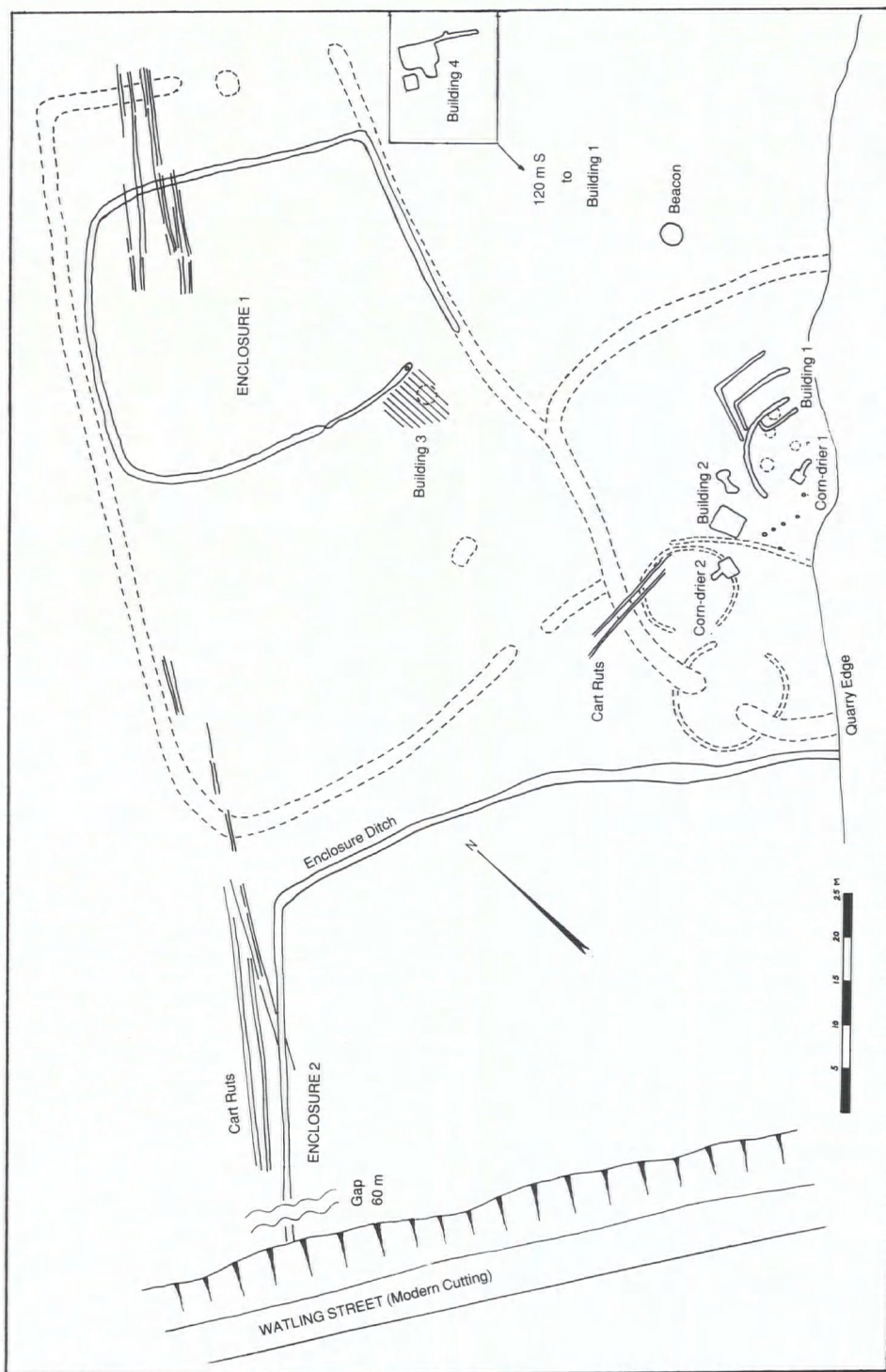


Fig 8 Plan of Site 2. Pre-Roman features are defined by broken lines.

- 44 Lead plug. Possibly made to stop-up a knot hole in a wooden bucket. Building B.
- 45 Lead mount. Flattened but with an original circumference of at least 13 cm it is 3.5 cm deep. The slightly wider edge has a crude scalloped frilling. A drinking horn decoration is suggested. However, one might expect the plain edge to be at the lip of a vessel in which case a wooden jug seems likely. Building 1.
- 46 Hone stone. 8 x 2.5 x 1.5 cm with rounded long edges. It is a fine grained hard material possibly carborundum. Building 1.
- Not illustrated: Fine grain sandstone, (half a large flat pebble) with one very flat but unpolished surface. Building A.
- 47 Glass bottle. 8 cm high to the shoulder (neck missing), 5.5 cm square. Of light soda green glass it has two concentric circles moulded on the base. From post hole possibly associated with corn-drier 1 (see under Corn-driers). Found with no. 40 above.

ROMAN SITE 2 (TL005234)

Fig 8

Site 2 lay against the highest point of the E side of the present cutting and encompassed the high point of the hill (now quarried away) just to the E. The site consisted of a beacon fire, a series of primitive timber houses or sheds, two so-called corn-driers, an oven built into the side of a ditch and two or three ditched enclosures.

The Beacon Fire

This was sited on top of a knoll which formed one of the highest points of Puddlehill and would have been visible in all directions, particularly to the N and S. Northwards the ground slopes sharply to the Ouzel valley and the view from the hilltop extends for many miles. To the S the knoll is opposite the gap in the Chilterns through which runs the river Ver to St Albans (Verulamium).

The top of the small knoll had been stripped of topsoil and a round bowl-shaped depression 3 m across and 50 cm deep had been made into it (Fig 9). Within this bowl was a sooty carbonised filling 20 to 30 cm thick containing several forged nails and a few burnt potsherds. The depth of ashy material indicates that the fire had burnt for a considerable period of time and the forged nails within it suggest dressed timbers had been used to feed the fire.

The pit was sealed with a stratum of yellowish

subsoil containing many small fragments of Roman pottery probably the debris from subsequent occupation.

The Pottery

Fig 10

Pots no. 50 and no. 51 were found deep within the pit and are therefore certainly contemporary with it. A sherd of no. 51 was found in the ashy fili, burnt brick red. This fitted with other sherds of the highly-burnished black platter which lay on the natural chalk around the perimeter of the depression and outside the area of the fire.

The other sherds were found in the sealing stratum above the fire pit and are possibly the residue from subsequent occupation, but nos. 52, 53, and 54 are certainly native wares and the rest would all be at home in the decades AD 50 to 70.

- 50 Mica-dusted vessel. Fired reddish/yellow and decorated with round bosses. Smooth dark grey fabric. (Similar to Ver 29, AD 49-60).
- 51 Bowl in black ware with tooling marks inside and out. Part of the base of this pot was found in the ashy loam of the fire burnt brick-red. One other vessel of this type was found which was light grey in a soft fabric. (Ver 344, AD 75-105).
- 52 Jar in hard grey sandy ware. (Ver 186, AD 60-75).
- 53 Jar with internal recess on rim, fired black with a red sandy paste. Native ware.
- 54 Lid in sandy ware. Fired buff. One other lid was made from a smooth grey paste and fired red. See Fig 4 no. 9.
- 55 Jar in hard grey ware. (Ver 387, AD 105-30).
- 56 Jar, (1 of 6) with out-turned rim slightly recessed for a lid. Fired red/black. Native ware.
- 57 Jar with turned out rim in a soft fabric. Fired grey.
- 58 Small beaker with zone of burnished lattice on body. Fired black. (Ver 848, AD 130-40).
- 59 Bowl in soft grey ware.
- 60 Jar in hard grey ware.
- 61 Flagon rim. Pink ware, light grey paste. A fragment of another flagon was pink with a cream slip. (Ver 408, AD 105-30).
- 62 Jar, body sherd in hard grey ware decorated with stabbed pattern above cordon. (Ver 151, AD 60-75).
- 63 'Cheese press', bottom with holes pierced before firing. Fired red with black outer surface. (Ox R78.4, AD 100-400).

Roman Building 1

This was a timber structure that had had many alterations during its lifetime. It had an earth floor and was partially built on the sill-beam principle.

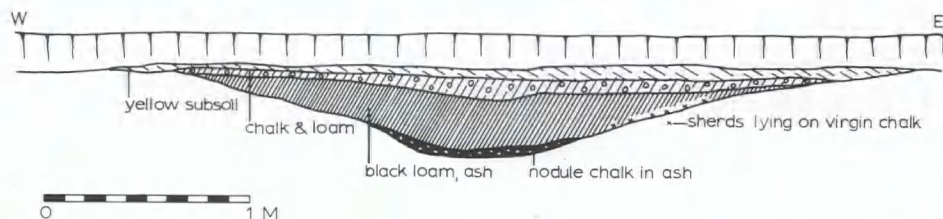


Fig 9 Section through beacon fire.

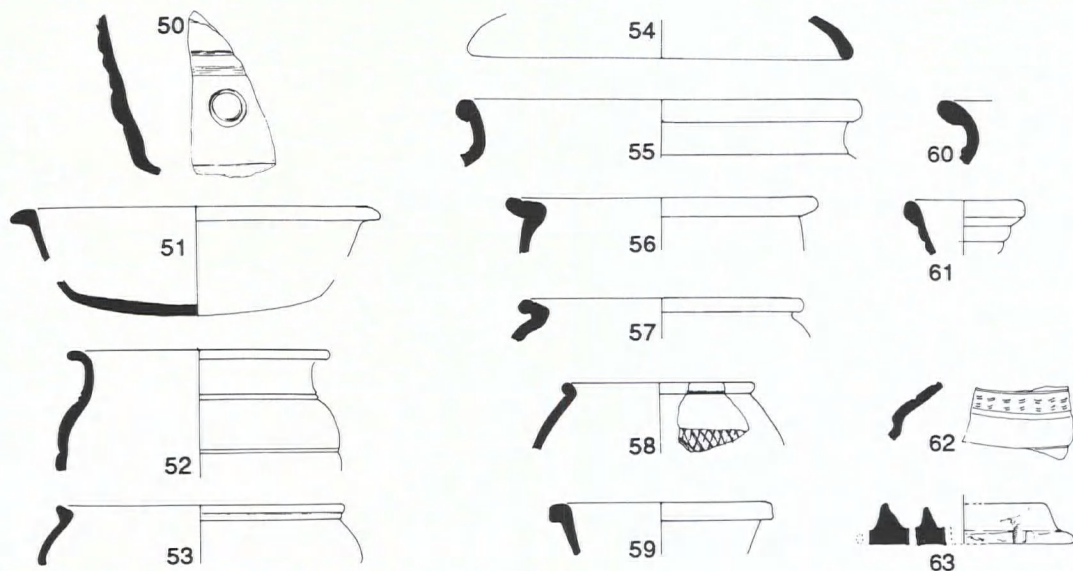


Fig 10 Beacon fire pottery. Scale 1:4.

The sill-beam trenches and a scatter of potsherds, many of them much trodden, were all that remained. Unfortunately the evidence proved insufficient to construct a complete picture of the building. It had apparently started as a round structure, represented by the curving trench on the plan. At a later date it was rebuilt into a rectangular structure, 8 m long and 5 m wide with possibly a porched entrance. The N wall of this structure showed as a curved sill trench, ending with a post hole. Later still, the N and W walls were replaced and the structure became 7 m wide. For this later structure a tree trunk or large branch had been used as the sill-beam for the W wall. The slot to contain this was 120 cm wide at one end thinning to 30 cm wide at the other. The beam trenches varied in width from 38 cm to 60 cm and were approximately 30 cm deep with a flat floor. It was also noted at the time of excavation, that no evidence of an E wall survived. Adjacent to the building was an irregular hole in the chalk 20 cm to 25 cm deep that contained a few potsherds in a dark loam fill.

This is a peculiar structure with its curving sill-beam trenches and it is difficult to make a reconstruction of the building particularly as there was no end wall apparent on the eastern side. It is tempting to see it as perhaps an open ended cart shed or grain store with adjacent corn-driers and cart ruts

approaching from the western side, but the spread of potsherds over the floor suggests that it was a dwelling rather than a farm building.

The finds

Covering the whole area of the building was a floor of small trodden potsherds. As the structure had a thin earth floor it was impossible to say with any certainty which sherds belonged to any period of occupation. Two iron rings were found tucked down the side of the curving trench and a copper alloy pin was found in the trench of what was presumed to be a porched entrance at one period of the building. Trodden into the earth floor was the skull of a dog. This had had its back teeth removed and the cavities were healed over. Presumably this was to give the dog a 'soft mouth' and allow it to be used for retrieving game.

The majority of the sherds were from cooking pots in a soft sandy fabric. Shell grits were used in the large pots and these vessels have a soapy texture. Representative examples are illustrated in Fig 11.

The two iron rings together with two others are all of a size and ideal for simple headstalls for oxen or horses. No less than four so-called ox-goads (two illustrated Fig 6 no. 9) were found within this building.

Also discovered within this structure were iron

objects, first identified as ploughshares, (Fig 6 nos. 10-13) but they appear much too small for this purpose. At Verulamium and Gorhambury similar pieces are seen as the wings of hipposandals, (Aubert type 1). However, several of those found here (another plus an ox-goad from Site 1 Building A) are in quite good condition and appear to be whole objects in their own right, ie not broken pieces of larger things. Moreover, if the tip of each is pointed forward the 'blade' of four of the five, (the other is straight) is curved slightly to its right, even the only one with the flange to the left (no. 13). Also each flange is at right-angles to the body of the object. If these pieces were broken from something larger, one might expect the fracture to occur at the angle and not create a false flange. It is also asking rather much of co-incidence that the 'wings' of one side only would be found, but no complete or any other identifiable fragments of hipposandal.

An alternative is suggested, namely that they are tines from a form of 'bed-harrow' (see later suggestion by Matthews, 1981 Fig 48 nos. 30 - 32) and protruded some 3-5 cm below a frame, each being held in place by a wedge (Fig 6 no. 15) and prevented from pulling through by the flange. Such an implement used on already broken ground would produce a fine tilth for sowing, and after cross-harrowing would neatly bury the seed.

On several of these objects the corrosion exhibits a tendency to flake or split the object into three

layers.

Another iron object (Fig 6 no. 20) also indicative of agricultural pursuits is a very corroded winged socket with a partial 'blade' identified as a reaping or perhaps a pruning hook. A third alternative, the tip of a winged barshare similar to that found in the cart ruts is also possible.

Fig 11 Pottery descriptions

- 64 Jar and variant rim in a soft heavily shell-gritted soapy fabric. Fired biscuit to brown. (Ver 44 (form), pre AD 49).
- 65 Jar, fabric and firing as no. 64. (Ver 280 (form), AD 75-105).
- 66 Bowl in a soft sandy fabric. Fired biscuit to brown.
- 67 Bowl in hard silver grey ware. (Ver 958, AD 150-60).
- 68 Jar with a very everted rim in a soft sandy fabric. Fired biscuit to brown. (Ver 280-4 (form), AD 75-105).
- 69 Jar in a soft heavily shell-gritted 'soapy' fabric. Fired biscuit to brown. (Ver 280 (form), AD 75-105).
- 70 Beaker in sandy ware. Fired biscuit with white slip.
- 71 Jar with a recessed rim in a soft sandy fabric. Fired biscuit to brown. (Ver 666 (form), AD 130-50).
- 72 Sherd in hard grey ware with chevron pattern applied with a milled wheel. (Two vessels of this type were found.)
- 73 Body sherd of a decorated bowl (Dr 37?) showing a fighting cock. Several sherds of plain Samian dishes were also found.
- 74 Jar in a soft sandy fabric with a slight groove on the outside of the rim. Fired biscuit to brown. (Ver 647 (rim), AD 130-50).
- 75 Jar in a soft sandy fabric with recessed rim. Fired biscuit to brown. (Ver 666 (rim), AD 130-50).
- 76 Jar in a soft sandy fabric. It has a groove just below the neck creating the effect of a false or double shoulder. Fired biscuit to brown.
- 77 Dog dish in black burnished ware. (Ver 1007, AD 150-60).
- 78 Jar in a soft, heavily shell-gritted soapy fabric. Fired biscuit to brown.
- 79 Jar in a soft sandy fabric. Fired biscuit to brown.

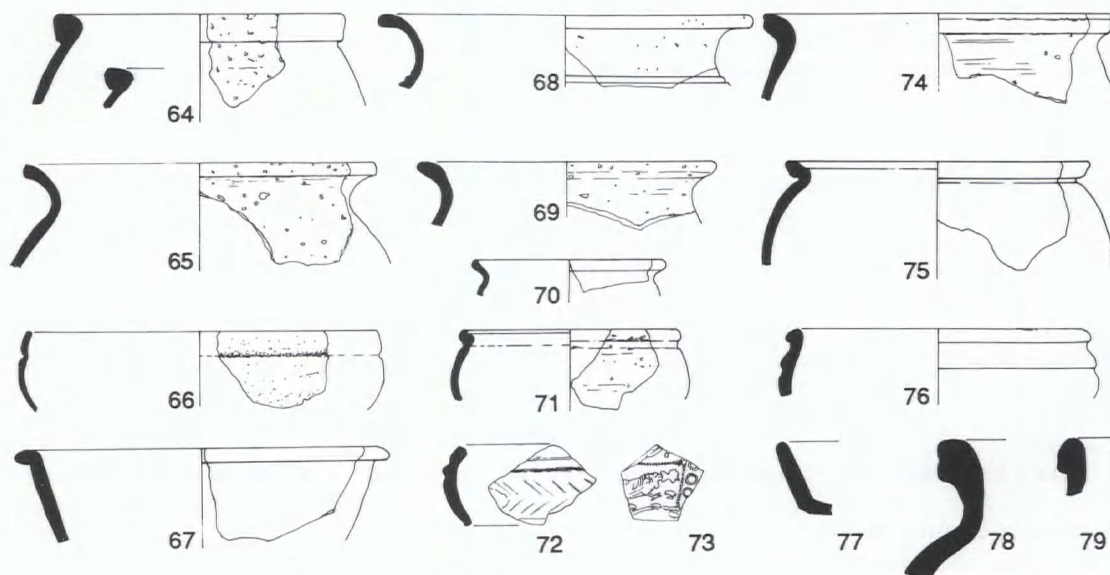


Fig 11 Building 1 pottery. Scale 1:4.

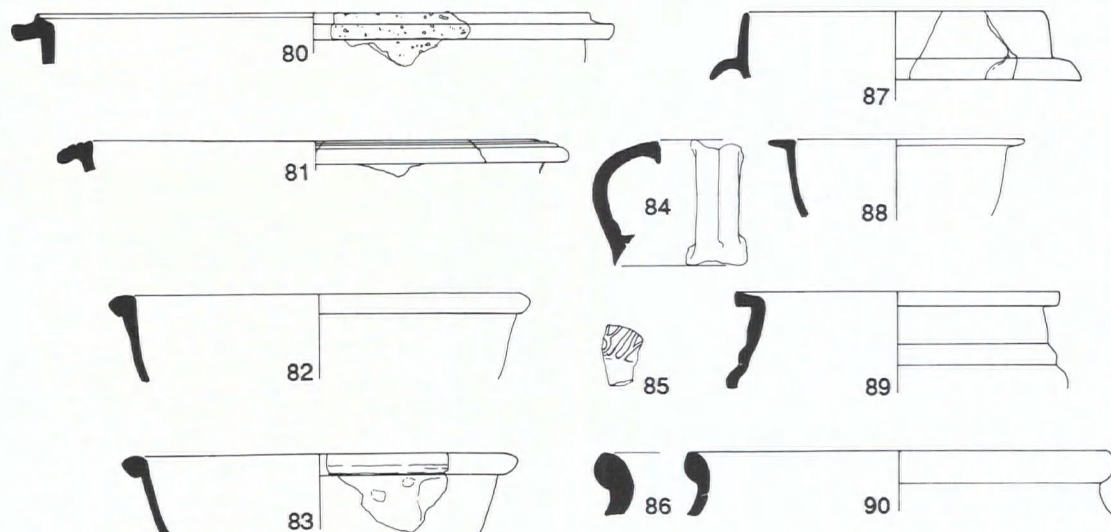


Fig 12 Building 3 pottery. Scale 1:4.

Roman Building 2

This was sited some 10 m to the W of building 1. It measured internally 3.7 x 2.2 m and was probably a timber construction placed directly on the ground with no post or stake-holes to anchor it. Its earthen floor contained many trodden potsherds.

It is worth recounting how its size is known with such accuracy. A wide area of topsoil had been removed and within a limited area of 3.7 m x 2.2 m a number of trodden sherds were found with the trowel. This was not understood, as nothing could be seen in the wide expanse of uniformly yellowish subsoil, so the area was left for a period but on a visit to the site just before dawn one morning when the hilltop was protruding from the fog-filled valley, the area could be seen as a very dark patch. This was marked out with meat skewers and by the time the sun tipped the horizon the 'shadow' of the building had disappeared. When excavated, the natural chalk was found 5 cm beneath the soil and the skewers marked exactly the area of trodden pot-sherds. No post or stake-holes were found in the chalk and the only evidence to show that a building had stood there were the sherds and the brief glimpse when conditions of humidity were just right.

This timber building set on the ground with its earth floor may have been a hen house or out-house,

but the scatter of sherds over the floor strongly suggests that it was used for human habitation.

Roman Building 3

This was sited some 35 m to the NW of building 1. It consisted of two floors separated by a slight chalk bank. One room measured 3.7 m x 3 m and showed as a depression 13 cm to 16 cm deep filled with a very dark loam. This was divided from room 2 by a chalk bank some 30 cm wide with a single entrance linking the two rooms. Room 2 was probably the same size as room 1; they had common boundaries, but one side had been destroyed by ploughing.

No post holes or any other form of walling was found bordering the sunken floors on three sides but on the E side they were edged by a sill-beam trench 45 cm wide and 30 cm deep. This trench was extended beyond the limits of the two floors which suggests that the building had originally contained more than two rooms. The trench, and hence the building, formed part of the western boundary of enclosure 1 on the north side of the entrance.

Within the building had been dug a rounded pit which contained a floor of baked clay. This clay had been deliberately shaped into a rectangle with sharp edges. It was 38 cm long, 30 cm wide and 5 cm thick. Note the similarity to the hearth or oven next to

building 4 below.

The dark soil in the depressions of the floors contained many sherds of trodden pottery.

Fig 12 Pottery descriptions

- 80 Bowl in heavily shell-gritted fabric. Fired pink and black. (Ver 497, AD 105-30).
- 81 Bowl in white sandy ware with reeded rim. Ver 506, AD 105-30.
- 82 Bowl with burnished finish. Fired biscuit. (Probably re-fired in hearth fire.) (Ver 960, AD 150-60).
- 83 Bowl in a smooth fabric. Fired pink. (Ver 960-1, AD 150-60).
- 84 Flagon handle in white ware.
- 85 Fragment of white ware mortarium with cypher stamp.
- 86 Storage jar in 'soapy' shell-gritted fabric. Fired orange.
- 87 Flanged bowl, form Dr 38, in sandy ware. Fired brown. (Ox Q48.1, 2nd C or later).
- 88 Bowl in light grey ware. (Ox R41, 2nd C or later).
- 89 Jar in very sandy ware with cordon at base of neck.
- 90 Storage jar in shell-gritted fabric. Fired biscuit.

Roman Building 4

This building lay some 120 m due N of building 1 and about 95 m from building 3. It survived as depressions in the chalk filled with dark occupation soil containing Romano-British sherds and nails. A certain amount of clay thought to be daub was also found. A lack of post holes suggests construction using sill-beams, with, as the clay indicates, wattle and daub walls of a structure about 4.5 m square with perhaps a porched entrance facing SW.

A trench cut 40 cm into natural chalk ran for at least 18 m SE from the E corner of the building in

line with one side of it. Between 3 and 4 m from the building the ditch is cut by what is described as a sleeper trench running nearly due N-S.

Just over a metre from the building the ditch had been widened on both sides and an oven built into the E side. This consisted of a rectangular slab of clay 28 x 20 x 5 cm surrounded on three sides by chalk blocks. A ledge, slightly higher, cut into the bank behind may have been the base of a flue. It would appear to be exactly the same method of construction as the 'hearth' in building 3. Even the relationship of the building to what is probably an enclosure ditch is similar.

Three Iron Age storage pits were in close proximity to the house and suggest a continuity of occupation if not of this building, then of one on or very near the same site, into the Roman period. The pottery associated with the building and ditch is illustrated below.

Fig 13 Pottery descriptions

- 91 Jar with rim recessed for a lid. Sandy ware with sand protruding from fabric. Fired grey. From ash in oven bulge. (Ver 660 & 666 (form), AD 130-50).
- 92 Jar in sandy ware with rim recessed for a lid. Fired brown. (Ver 666 (form), AD 130-50).
- 93 Jar in sandy ware. Fired grey. (Ver 660 and 666 (form), AD 130-50).
- 94 Jar in heavily shell-gritted fabric. Fired red black. (Ver 666, AD 130-50).
- 95 Jar in hard dark grey sandy ware.
- 96 Jar in sandy ware. Fired biscuit.

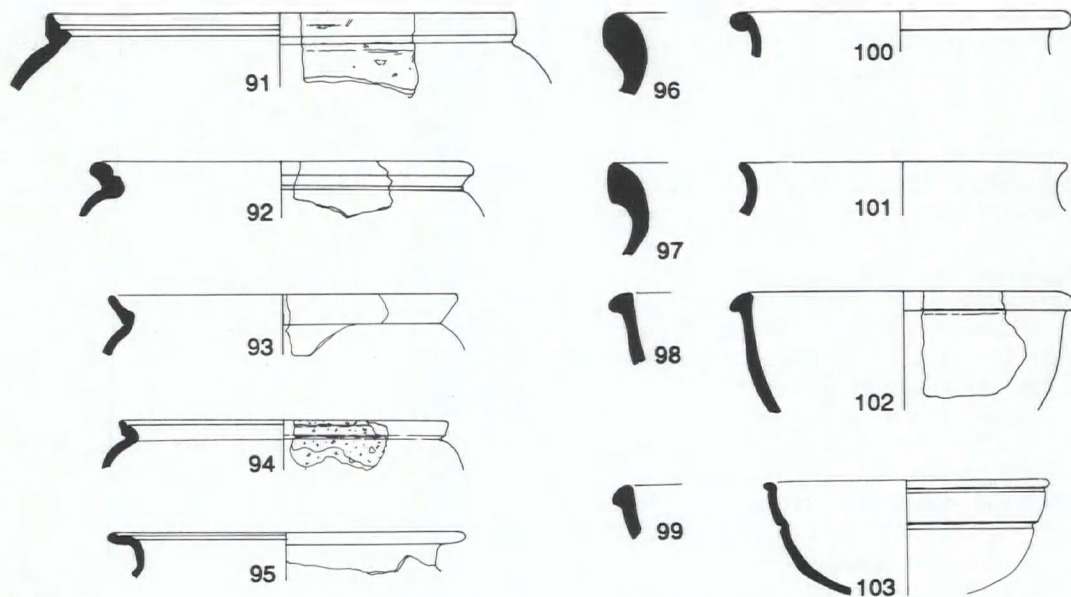


Fig 13 Building 4 and associated ditch pottery. Scale 1:4.

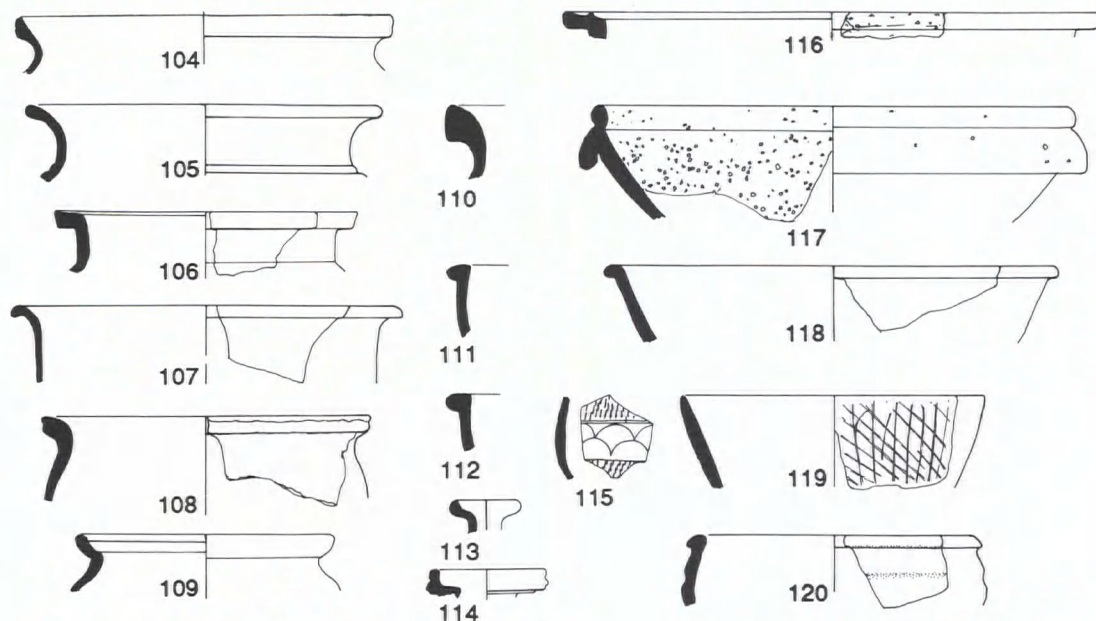


Fig 14 Site 2, Enclosure 1 ditch pottery. Scale 1:4.

- 97 Jar in shell-gritted fabric with soapy texture. Fired orange. (Ver 878 (form), AD 150-60).
 98 Dish in sandy ware. Fired grey. (Ver 960 (form), AD 150-60).
 99 Bowl in sandy ware. Fired grey.
 100 Jar in coarse sandy ware. Fired grey.
 101 Jar in coarse sandy ware but very eroded fabric.
 102 Bowl in sandy ware. Fired black. (Ver 958-9, AD 150-60).
 103 Bowl in sandy ware imitating form DR 37. Fired light red. (Ox O45, AD 100-200).

The Roman Enclosures

Adjacent to the farm buildings were two enclosures marked by shallow ditches. A third may be associated with Building 4 (see above).

Enclosure 1

This was the smaller of the two and was a rectangle measuring approximately 32 m wide and 37 m long with a single entrance in one corner.

It was defined by a slight ditch 1 m wide and 30 cm to 45 cm deep. On the S side the ditch had been dug through an earlier Iron Age ditch. The filling of the ditch was loam and chalk with chalk predominating and many potsherds with the greatest concentration on the S side nearest to the site of the buildings. No evidence survived to show how the entrance was closed. This enclosure had gone out of use by the 4th century (see below under road ruts).

Fig 14 Pottery descriptions

- 104 Jar with rim recessed for a lid, in sandy light grey ware. Sand protrudes through fabric.
 105 Jar in smooth sandy ware. Fired light brown. (Ver 283, AD 75-105).
 106 Jar in hard dark grey ware. (Ver 867/70 (form), AD 150-60).
 107 Jar in soft grey ware. (Ver 316 (form), AD 75-105).
 108 Jar in sandy fabric. Fired black outside and light brown inside.
 109 Jar in hard smooth sandy ware. Fired blue/grey.
 110 Storage jar, shell-gritted fabric with soapy surface. Fired orange. (Ver 667, AD 130-50).
 111 Bowl in coarse ware fired dark grey.
 112 Bowl in soft sandy ware. Sand protruding from badly eroded fabric.
 113 Flagon top in white ware. (Ox W8.3, AD 100-240).
 114 Flagon top in white ware. (Ox W8.2, AD 100-240).
 115 Hard grey ware, fired pink with light brown slip. Zone of incised half circles between bands of rouletting.
 116 Bowl in shell-gritted soapy fabric. Fired biscuit.
 117 Mortarium in white ware with brown trituration grits. (Ox M10.3, AD 180-240).
 118 Bowl in grey ware. (Ver 960-4, AD 150-60).
 119 Bowl in sandy fabric decorated with faintly burnished pattern. Fired black. (Ver 1000, AD 150-60).
 120 Jar/bowl in very light grey sandy ware.

Enclosure 2

This enclosure was bounded by a ditch similar to that of enclosure 1. It was approximately 1 m wide, varying in depth from a few centimetres to 60 cm. The ditch fill was mainly small chalk (containing many snail shells) except on the eastern side, in the vicinity of the huts, where the ditch contained more loam and many potsherds. Here also this ditch had

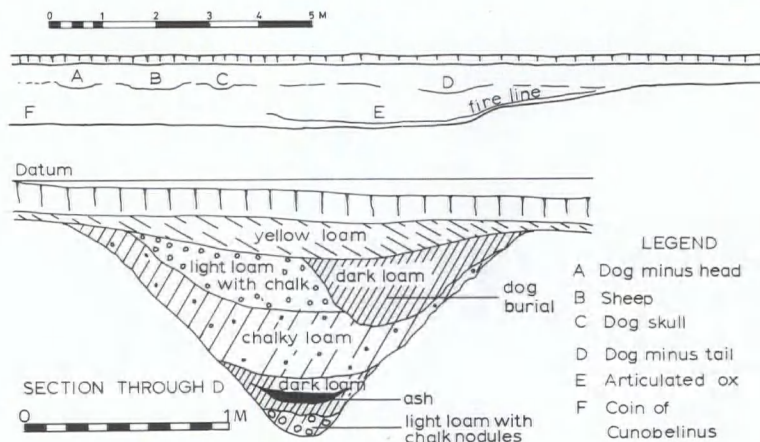


Fig 15 Site 2, Enclosure 2 ditch sections.

been dug into an earlier loam-filled Belgic ditch⁽¹⁾ which would account for the difference in fill, if the bank that once existed next to it had silted back into the ditch. The size of this enclosure is unknown. 65 m of the ditch running NW-SE (parallel to the cutting) was excavated but the southerly continuation had been destroyed by quarrying. At the N corner the ditch turned through a near right

angle and was followed for 86 m to where it met the chalk cutting for the modern Watling Street and had been destroyed.

The NW-SE section of the ditch (the portion which had followed the line of the still visible Belgic ditch) had been used for animal burials (Fig 15). The skeletons of two dogs and a sheep were found. Dog 1 was lying on its right side and the front right paw



Plate 1 Corn-drier 1.

had been severed with a clean cut. The paw was found lying beneath the right leg bones. Two metres further along the ditch was the skull of a dog. This also had been severed with a clean blow. Another 2 metres along was the skeleton of a sheep. This was lying on its left side with its head between its front legs. One metre beyond, also along the ditch, was the skeleton of a dog with the skull missing.

Discussion on the Enclosures

The shallowness of the enclosure ditches suggests that they were supplemented by thorn hedges or hurdling. It would appear that the smaller of the enclosures is too small for a corn field, although it may have been used as a kitchen garden. However, it is more likely to have been a sheep pen.

The larger enclosure was of several acres and may have been used for sheep grazing. The W side of the Watling Street cutting was examined, but a continuation of this enclosure was not found.

The discovery of the animal skeletons is of interest and may suggest that sheep-rearing was a major occupation of the farm. Perhaps the two dogs had been accused of sheep-worrying and had paid the penalty. Sheep when worried tend to give in easily and put their heads between their legs and die of fright. The one in the ditch was found in this position and it may have been brought to the farm after *rigor mortis* had set in.

Corn-Driers

Two of these were found at Site 2. Drier 1 (Fig 16 and Plate 1) lying about 7 m S of building 1 was the smaller of the two but in a much better state of preservation. The body of the drier measured 1.22 m x 1.27 m x 30 cm deep into the natural chalk. The floor of the drier had been supported on two columns made with flat slabs of chalk held in a chalky-clay mortar. (This clay has a natural outcrop in the banks of the Ouzel in the valley bottom.) The flue of this drier which projected eastwards, had been capped with flat slabs of chalk some of which had collapsed on to a domestic chicken's nest. The crushed egg-shells were found beneath the fallen stones. One corner of the drier had become worn, perhaps burnt out with constant use, and a repair had been carried out using a block of clunch stone.⁽²⁾ Clunch stone was also found within the fill of the drier together with the local gault clay and this was probably the residue of the original flooring of the drier body. Traces of burning were found over the floor of the drier but the heaviest concentration was along the flue which was 1.5 m long with a worn

area at its end. A short distance from the drier to the W was a line of four post holes with two other holes nearby. These may have had some connection with the drier in the provision of draught control. Within one of the post holes was a copper alloy brooch of simple type and part of a square glass bottle (see Fig 7 nos. 40 & 47).

Drier 2 lying 3 m to the SW of building 2 had been almost destroyed by ploughing but it survived sunk 15 cm into the natural chalk to show that the body of the drier had measured 2.15 m x 1.7 m with a flue 1.5 m long on the west side. A dark ashy loam covered the floor of this structure. There were no associated finds.

Oven-like Feature

Fig 17

This was an apparently isolated feature situated some 130 m NW of building 1. A section of an Early Iron Age enclosure ditch⁽³⁾ had been re-excavated for a distance of approximately 3.5 m exposing the natural chalk sides of the ditch. Into this a hole of about a cubic metre had been dug to form an oven.

The floor of this miniature 'cave' had been covered with stones and flints about the size of a fist. These were found within the oven mixed with a black ashy loam and charcoal fragments. Rake-out from the oven covered the floor of the ditch to a depth of 30 cm. Within this ashy rake-out were many stones similar to those lining the oven, together with Romano-British potsherds.

Charcoal from the oven was identified as follows:⁽⁴⁾ Wood of mixed origin, but consisting mostly of oak (*Quercus* sp) and maple (*Acer* sp) both present in equal amounts. Also one piece of wood and a twig both apparently of willow or poplar but with the structure imperfectly preserved. One piece of hornbeam ? (*Cappinus* sp?). One piece of yew (*Taxus* sp).

ROAD RUTS

Fig 8

Crossing the hill E to W were many cart-ruts of a roadway that must have existed from Roman times until it was diverted in 1782 by the cutting made through the hill to assist stage-coach traffic. On the W side of the site the ruts were found up to the edge of the modern cutting, that today carries the Watling Street.

On the highest point of the hill, where the topsoil is thin, ruts had bitten deep into the natural chalk but on the lower ground in deeper soil they were found as puddled earth. Surrounding soft soil could be removed by the excavators to leave the rut standing 25-30 cm high. The ruts were identified, some as

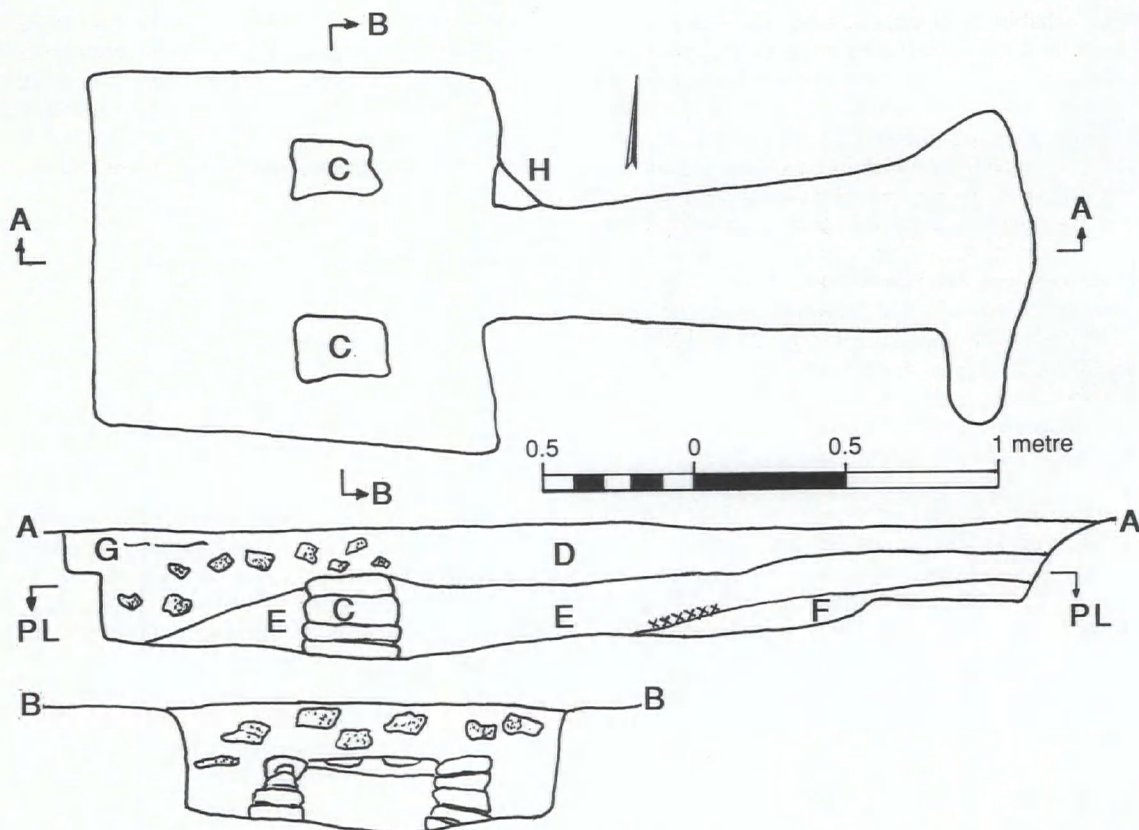


Fig 16 Corn-drier 1, plan and section.

PL level of plan
 A-A section looking N with column
 superimposed
 B-B section looking E
 C clunch columns
 D clay and stone with lumps of burnt
 clunch

E ash with clay
 F burnt chalk
 G cement layer
 H remade corner
 xxx eggshell layer

Roman, some as medieval, by the coins and fragments of pottery found within them. On the western side of the site deep Roman ruts skirted the two enclosures and a second series of ruts left this track between the enclosures and led towards building 1. Another set of ruts, containing 3 coins of Gratian, Magnentius and Valens, (all 4th century) crossed over the ditch of enclosure 1 indicating that this feature had gone out of use by the 4th century. In (Matthews and Hawkes, 1985 p89), the coin of Gratian above is recorded as being found in a grave dated by association with others, as Saxon. The grave was crossed at one end by ruts in a cobbled

surface. Surviving notes do not positively exclude the possibility that the coin was intrusive via the trackway, but it seems unlikely if the period of the grave, which seems reliable, is accepted.

As a grave find it gives a *terminus ante quem* for at least some of the ruts, if not the track, of about AD 375. However, that could argue for a very late road or a very early Saxon. A better explanation is lateral wander of a route of which the graves were originally 'roadside' burials. The over-running of a grave would then indicate continued use beyond the earliest Saxon period.

The number of coins lost suggests trade between

local inhabitants and passing traffic.

In addition to the coins a winged barshare was found (Fig 6 no. 26). Frere 1972, Fig 61 no. 17 from a context dated AD 280-315 is identical except that more of the tang survives.

E of the site the ruts led to Site 1 and existed at the time of excavation as a deeply rutted farm track for about 200 m where they then became a footpath skirting the N side of Houghton Regis. From here it lines up with the grass track of the Icknield Way that climbs the Chilterns some 8 km to the E.

To the W the track would skirt the S side of the Early Iron Age fort of Maidenbower and then continue as an existing green way to Totternhoe (the site of a large Roman Villa, the subject of a report elsewhere in this volume). Beyond this it would join the present Icknield Way where its passage across country would be restricted to a narrow belt of country by deep coombes in the hillside caused by spring rises from the Chiltern scarp. These cart ruts may therefore be part of the Roman winter Icknield Way. However, the absence of early coins in the ruts, the apparent lack of any metallurgy and the crossing of an enclosure might indicate that this part of an E-W route did not come into being until quite late, but why?

Evidence from the Roman cemetery in Durocbrivis (Matthews, 1981) such as multiple burials in the top of disused wells and the surrounding ditch, some juxtaposed with horse burials, suggests the possibility of an epidemic of some kind having occurred in the 4th century. There is a suspicion therefore (as yet unproven) that the town was abandoned for a period. Should such

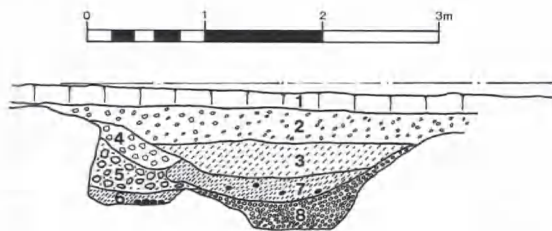


Fig 17 Oven section

- 1 Ploughsoil
- 2 Loam and small chalk
- 3 Ash and loam
- 4 Loam and chalk
- 5 Burnt chalk and earth
- 6 Ash and pebbles
- 7 Heavy ash with rake-out pebbles
- 8 Hard packed small chalk and loam

events have come to pass then giving the place as wide a berth as possible would be sensible. N-S traffic could have made use of the ancient green lanes passing W of the town. E-W travel on the other hand is constrained to the S by the hills. To the N a route across Puddlehill perhaps utilising where possible local tracks, offers a good alternative, close to water (the springs) with little additional distance involved. Refugees from the town could well be those, as suggested above, doing the trading possibly providing as best they could services normally available in Durocbrivis.

Coins found in, or associated with, the cart ruts. (found over Building A)*

Tetricus II AD 270-73. Antoninianus Ae 19mm
Obv Young hd. radiate crown. C PIV ESV TETRICVS CAES.
Rev Helmeted figure stg. l. SPES AVGG. R.I.C.270.

Carausius AD 287-93. Antoninianus Ae 23mm (silver wash)
Obv Rad. hd. r. IMP C CARAUSIUS PF AVG.
Rev Pax l. holding olive branch & sceptre. PAX AVG (SP in field)
M. ML (London) R.I.C.118.

Constantine I AD 306-37.* Follis Ae 16mm (silver wash)
Obv Helmeted bust l. CONSTANTINOPOLIS.
Rev Victory on prow. L.R.B.C.1. 655. (copy).

Constantius II AD 330-33. Follis Ae 18mm
Obv Draped & cuirassed bust with diadem r. CONSTANINVS MAX AVG.
Rev Two standards between soldiers, Gloria Exercitus type. R.I.C.219 (copy?).

Constans AD 335-37. Follis Ae 14mm
Obv Pearl diademed hd. r. CONSTANS AVG.
Re. Single standard between two soldiers. GLORIA EXERCITIS. L.R.B.C.1384. (copy?)

Magnentius AD 350-53. Maiorina Ae 23mm (silver wash)
Obv Draped bust with diadem r. DN MAGNENTIUS PF AVG.
Rev Emp. stg. (staff in l. hand, statuette of victory in r.) l. FELICITAS REIPUBLICAE.
M PSLG. Lyons.

Gratian AD 375-78. Centenionalis Ae 17mm
Obv Draped & cuirassed bust with diadem. DN GRATIANVS PF AVG.
Rev Emp. holding captive by hair r. GLORIA ROMANORVM. MLVGS. Lyons. R.I.C.18.

Valens AD 367-75. Centenionalis Ae 16mm
Obv Draped bust with pearl diadem r. DN VALENS PF AVG.
Rev Winged Victory stg. l. hldg wreath. SECVRITAS REIPUBLICAE. M. TRP? Trier. R.I.C.21.

Valens? Probably as last. Ae 16mm (very worn & damaged)
Obv Bust? r.
Rev Winged Victory stg. l. SECVRITAS REIPUBLICAE.

Valens AD 367-75.* Centenionalis Ae 18mm
As first but different dies.
M SIS? Sisica.

Valentinianus I AD 364-75.* Centenialis Ae 19mm
Obv Pearl diademed bust r. DN VALENTINIANVS PF AVG.
Rev As Valens.
M Illeg.

One other coin was found in the vicinity of the cart ruts. This was a Greek coin struck in Phrygia about the time of Caracalla.

AD 211-217. AE 25mm.
Obv Head to Rt. No legend.
Rv ASKAEPIOS.
Legend IEPAMONEITN.
Mint Hierapolis.

Other coins found in the ruts:

Edward IV 1464-1465. AR groat.
Reckoning counter 1610-1660.
Lead token, diam 15 mm. Hole pierced in centre partially destroying a date., probably 1664.
Lead token, diam 30 mm. Hole pierced in centre. One side has a cross made with five lines to each arm. The other side a large M or W.
Lead token, diam 50 mm. No marking.
English token 1664, John Whitley in Dunstable.
English token 1667, William Elemend in Dunstable.
English token 1685, Peeter Abraham of Luton. L695.

DISCUSSION

Close dating, and the sequencing or separation of events over what may be a short time span was difficult to determine by excavation due to the thin covering of soil on the chalk downs. Stratification was virtually non-existent and even the silting of ditches over short periods of time was of no help.

As an example, a slit trench rather like an Iron Age ditch was dug by the Home Guard in 1940 on the hill. This was re-excavated 21 years later, and after removal of briars and lank vegetation it contained an accumulation of only 8 cm of soil in the bottom. Had this been a late Iron Age ditch with broken Romano-British sherds trodden into the fill it would duplicate exactly the stratification of the Romano-British homestead.

One interpretation of the evidence could indicate a very short-term gap in the occupation and it would appear that this interruption coincided with a complete change from the traditional sources of pottery: from the softer native wares to the products of the new manufacturing techniques introduced by the invader.

Two areas on Puddlehill were occupied during the late pre-Roman Iron Age (Matthews, 1976) and

native farmers with their herds of cattle were probably still in occupation when the XIV Legion marched through their farm, an event which could account for the ox-roasting (Matthews, 1976 Fig 113) and burning of their primitive huts. This could also have been the occasion of the great fire built on a knoll by their homestead. What happened to these peasant farmers of Puddlehill following the autumn of 43? Did they stay put and face the foreigners or did they become refugees until calm had returned to the land and the road builders had moved on?

The large pit on the high point of the hill appears to have been for a fire for fire's sake, yet it must have had a purpose. Otherwise it is difficult to understand why a small knoll had been stripped of its topsoil and a depression dug into it just to contain a fire. One theory must be that it was used as a sighting beacon during the building of the Watling Street. It is located in the right place, on the highest point of the hill and opposite the gap in the Chilterns followed by the Roman road from Verulamium. It would have needed to be kept burning for a considerable length of time and to make certain that the winds in this high place did not blow out the base of the fire it was situated in the made hollow. The presence of iron nails in the fill might be explained by the Roman road builders not hesitating to use any wood to hand. Timbers from an abandoned farm house would suit the purpose very well.

A second event likely to have caused a break in occupation is the Boudican revolt in AD 61.

At Verulamium excavation has shown that in all pre-Flavian levels 75% of the pottery was of 'Belgic' fabric. On Puddlehill the transition from 'native wares' to the much better fired pottery we call Romano-British appears to have occurred as an abrupt break with tradition rather than a gradual change over time as people began to reap the 'benefits' of the *Pax Romana*. This ceramic revolution could have occurred as a result of a temporary abandonment of the hill in the immediate aftermath of invasion but is more likely to have resulted from the Boudican revolt. The example of Verulamium above indicates that absorption of Roman technology was slow, in a rural setting such as Puddlehill it is likely to have been slower still. Following the Boudican disaster however, the area was probably depopulated to a large degree, either by the passing rebels on their way north after the sack of Verulamium or, as it is quite probable that many if not all the local inhabitants were in the host, their being wiped out in the battle which ended the

rebellion. Those surviving, or brought in to repopulate the area, are likely to have been people who had either already adopted Roman ways, or who now, reluctantly or otherwise, had little choice.

The gap suggested by the pottery evidence therefore is more likely to have been at the time of the Boudican revolt, when much if not all the farm stock might also have been taken or killed. This break, if it did occur, was probably of short duration because occupation was resumed on exactly the same two sites.

With Romanisation, the effects of which almost certainly intensified after the Boudican revolt and with the loss perhaps of livestock during the troubles, the native farmers' way of life changed completely. They now grew grain probably as a cash crop which they had to dry in corn-driers and which went to pay their taxes either in coin or directly in kind. Their house was a little more comfortable, but not much, they kept chickens, had more material things such as glass bottles, wore hob-nailed boots and the women folk had toilet sets, brooches and bracelets. The pottery was fired harder and was therefore more durable perhaps enabling the family to eat better cooked food.

The wider use of coinage, (a coin of Nero was found in the farmyard) probably more than any other single event, helped them to avail themselves of the material things of life.

The evidence of the pottery suggests that permanent habitation of both the Romano-British sites on Puddlehill did not last beyond the 1st and 2nd centuries. No substantial buildings were found particularly at site 1, but the great number of potsherds and also the personal items such as the toilet set, suggest that people were living on the site, though perhaps only on a regular seasonal basis. Their presence was presumably connected with agricultural activity. The skeleton of a sheep, apparently the victim of worrying by dogs, was found in the ditch of an enclosure on site 2, and it is suggested that the enclosures may have been pens or paddocks for farm animals. The 'corn-driers' found on both sites indicate that cereal crops were

being grown.

There is no direct evidence of 'habitation' on Puddlehill between the 2nd century and the later Anglo-Saxon settlement in the 7th century. Perhaps the Romano-British town of Durocobrivis lying just to the S simply absorbed the population of Puddlehill into itself. However, the coins in the cart ruts (see above) show that an E-W route over the hill was in use in the later Romano-British period, and the number of coins lost in quite a small area suggests that some sort of trading may have been carried on here, near its junction with Watling Street and it should be remembered that large areas of the hill had been quarried away before archaeological investigation began, and that other areas still remain undisturbed.

NOTES

1 Belgic Ditch 2 (Matthews, 1976, 33 Fig 113). Part reproduced here as Fig 15.

2 Locally known as Totternhoe Stone. It probably occurred as an outcrop at the western edge of the ridge during Roman times. It was used for internal structural work in the Roman villa at Totternhoe.

3 Enclosure III (Matthews, 1976 Fig 12).

4 Identified by Dr G Taylor, Royal Botanic Gardens, Kew.

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Plate 2 Photograph showing the excavation of Roman Puddlehill taken by the Royal Air Force. (© British Crown copyright 1991/MOD reproduced with the permission of the Controller of Her Britannic Majesty's Stationery Office.)

A Roman Villa at Totternhoe

C L (Les) MATTHEWS, JOAN SCHNEIDER AND BARRY HORNE

SUMMARY

A courtyard villa c 68 m x 73 m was occupied in the 4th century, with possible earlier occupation of the site. Several heated rooms were deliberately demolished, some of them in the 4th century. There was a polychrome mosaic and painted wall plaster. Late alterations included the throwing together of a suite of rooms with tessellated floors to make a barn with a rough flint floor and the dismantling of a sandstone gateway in the courtyard wall to make two small buildings.

DISCOVERY AND HISTORY OF THE EXCAVATION

Worthington Smith (1904) recorded a Romano-British ditch and enclosure W of Totternhoe Church and Roman waste pits 800 m NW of the church. A piece of polychrome mosaic found in Totternhoe in the 19th century is preserved in Luton Museum (Simco, 1984 p26).

The Roman Villa at Totternhoe was discovered by the Manshead Archaeological Society of Dunstable in September 1954 when Mr G Pratt of Church Farm reported that in the course of cultivating his field, lying immediately SE of Totternhoe Church, his ploughshares were often broken on flint walls buried just beneath the surface of the soil. At times the lines of walls could be followed and the plan of a building seen in the surface scatter of flint. This was confirmed by his ploughman who added that when he ploughed with the horse, before the days of the tractor, he could only go three or four inches deep "for fear of getting his teeth knocked out."

To Mr Pratt's knowledge this field had been used as a quarry for roadmaking flint for the past three generations of his family. Less fortunate farmers of the village requiring flints would have to travel to the "clay with flint" deposits that cap the Downs to the south east.

The Society commenced excavation during September 1954 while harvesting was still taking place on the field. Mr Pratt indicated where his plough had hit walls and the area first opened was chosen by the condition of the crop still standing. It proved to be a very good choice and excavation

uncovered the eastern corner of the building.

Excavation continued at week-ends until nearly the end of November. Two years later, between June and September 1956, further cuts were made to establish the extent of the structures in the field, and parts of the N and W wings were uncovered, together with the wall and gateway on the S side.

Although the foundations and floors of the Roman building are in places less than 25 cm below the ground surface, it has not yet shown as a crop-mark on air photographs. On the further side of the brook a pair of parallel dark lines running NE-SW are sometimes discernible from the air (Plate 1). These could be ditches of a road running parallel to the Icknield Way, c 100 m SE of the villa.

It was hoped to undertake further investigation of the site in subsequent years, but this never proved possible. The excavations therefore covered only a small part of the building and left many questions, especially of chronology, unanswered. A note and plan appeared in *Roman Britain* in 1956 (Matthews, 1957) and a short account in *Ancient Dunstable* (Matthews, 1963). The site was designated a scheduled monument in 1954.

Reports were written by C L Matthews after each season's excavation and these, together with the site plans, sections, notes and photographs, form the basis of the present report. The present writers have studied and analysed the pottery and other finds. At the time of the original excavation the Manshead Society had no storage facilities, and only samples of building materials, wall plaster etc. were retained. Few animal bones were preserved, although a record was kept of some.

SITUATION

The Roman building lies c 200 m SE of Totternhoe church in a field which slopes gently down to a brook on its SE boundary, and the main entrance gate is on this side. The site is overlooked by Dunstable Downs to the SE, and a spur projecting from the Downs, called Totternhoe Knolls, to the NW. This spur, rising to a height of 160 m, gives the village its name: Totternhoe = lookout place on a hill. In this area there is a stratum of "Totternhoe stone" which has been used locally for building



Plate 1 Air photograph of the villa site looking N. The photograph was taken after the first season's excavation, which shows as a white soil mark. Dark parallel soil marks are visible in the field SE of the villa.

since Norman times, and was also used in the construction of the Roman Villa.

The alignment of the villa walls was only a few degrees different from that of the field boundary at the time of excavation.

The map shows a number of roads and tracks converging on this part of Totternhoe (Fig 1). The road running between the church and the villa can be linked to paths and tracks to form a route parallel to the modern Icknield Way (B 489), leading from Puddlehill to Edlesborough and beyond.

EXCAVATIONS

The four sides of the building are called N, S, E, W. Grid N was in fact roughly NW.

The general plan of the building was a rectangular courtyard c 57 m x 52 m, bounded on 3 sides by a veranda or corridor with rooms on its outer side, and on the 4th side (S) by a flint wall with a sandstone gateway off-centre.

W WING

Only sufficient of this side of the building was

excavated to establish its location and general character. The veranda was identified in two places. It was 2.4 m wide.

Central Section

The wall between the veranda and the rooms had been robbed, but appeared to have been built in a similar manner to the walls of the N range. The flint wall between the courtyard and the veranda ended in the cut made near the centre of the W wing and the carbonised remains of what may have been a door post were set in a slot in the end of the wall. The gap in the wall was at least 1.5 m wide, but probing established that the wall continued on the same line further N.

In this section of the veranda the floor was of earth, without any evidence of flooring material. Two infants had been buried in a hole c 23 cm in diameter, sunk just below floor level inside the veranda near the wall. A few cm away were the carbonised remains of a round stake 5 cm in diameter. Another infant burial was found in the veranda floor next the wall of the room.

Fig 2

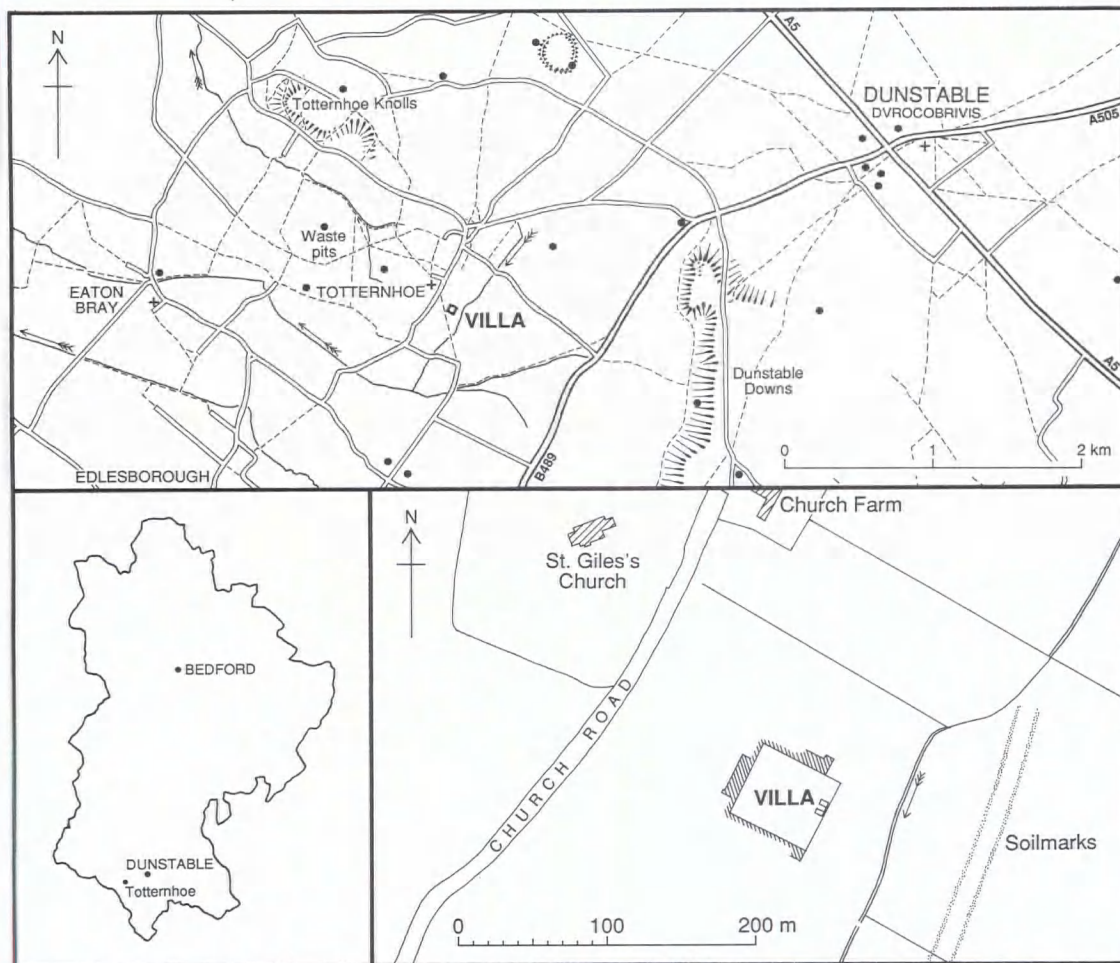


Fig 1 Location plan. Roman find spots are shown.

Lying on the veranda floor were several iron objects and the shattered remains of a large lava quern, possibly destroyed by the heat of a fire (Fig 25).

West of the veranda was a room (dimensions not established) floored with crushed tile trodden into the old land surface. Lying over this was a great deal of carbonised wood, which may have been the remains of a wooden floor, or of roof timbers. Over the whole of this section of the excavation was a thick layer of ash and burnt roofing tile. This burning was particularly heavy over the veranda and a carbonised beam was found lying right across it. The area had been subject to considerable disturbance by ploughing, as the soil covering was very thin. Much building material is exposed on the

surface when the field is ploughed, and most of the roofing tile spread over the W wing showed signs of burning.

S End

At the SW corner of the building the veranda walls were found to join a flint wall 1.2 m thick (the S courtyard wall). The corridor floor was covered with a layer of finely-crushed tile, and there was again evidence of burning.

The ground W of the veranda had been dug out to a depth of 105 cm below the level of the natural chalk, evidently to accommodate the hypocaust of a room 5.3 m x 3.8 m (room 18). The flint walls of the room were based on the natural chalk and the sides of the hypocaust below this were also of

Fig 7 section F-F

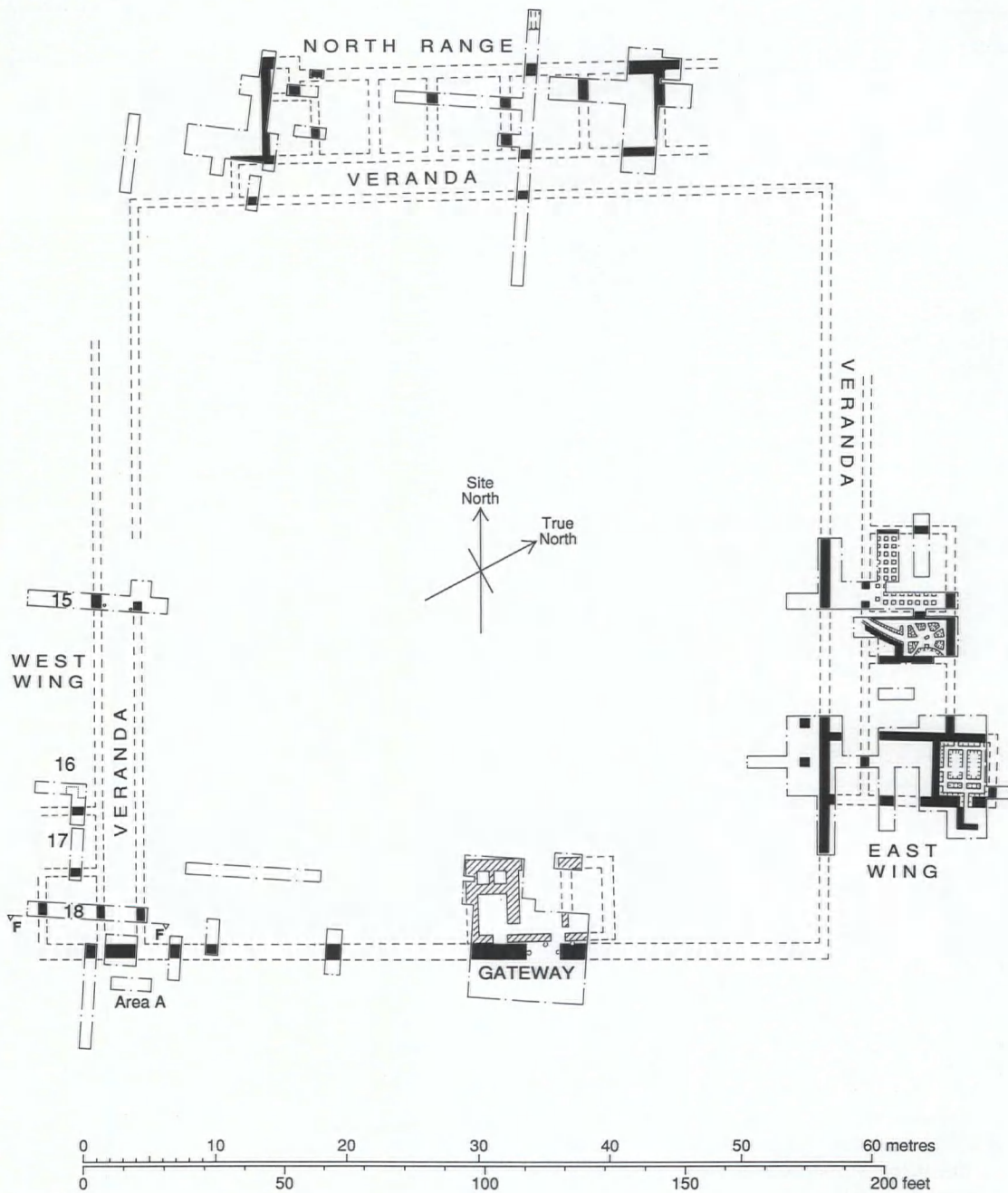


Fig 2 Site plan.

natural chalk. The tiles of a pillared hypocaust had been removed, leaving only square impressions in a 5 cm thick layer of sandy cement to show where the *pilae* had stood.

The area below floor level was filled with fine building rubble. This was removed by the excavators only on the W side of the room, to establish that the same fill continued to the bottom. Tip lines were observed throughout the fill, which consisted mainly of lumps of mortar and plaster. There was a layer of dressed Totternhoe stone blocks, but there were very few flints and virtually no tiles. Large quantities of fragmented painted plaster were found, the colours including purple, pink, red, blue, green, black and white. Some had squiggled red lines on a cream background.

Next to the W chalk wall of the hypocaust, a loam-filled robber trench cut through the fill of building materials, indicating that a facing wall of some kind had been removed after the infilling was complete.

To the N of this room lay another (room 17), very similar, measuring 4.1 m across. Here, too, a hypocaust had been robbed out and the area filled with rubble, but it was sunk less deep below ground level than the previous room. Its N wall was built of flint on the natural chalk surface.

N of these two rooms, in an area of very shallow topsoil, no trace of flooring was found, nor was a wall found on the line of the W wall of the room in the S corner.

The excavators took several cuts outside the S wall. The natural chalk was c 25 cm below the ground surface. The most westerly area exposed showed a spread of sandy mortar c 7 cm thick, and Area A, S of the veranda, had a scatter of pottery on the surface of the chalk.

W Wing Discussion

Matthews suggested that the W wing was the servants' quarters. No tessellated pavements were found, and some floors seem to have been of bare earth. The undisturbed ash and burnt tile lying over the earth floor is evidence that no paving material had been removed by later ploughing. The presence of the millstone suggests domestic or agricultural activity. It is also more likely that infants would have been buried near the slaves' quarters than by the main reception rooms. Matthews suggested that the carbonised stake had marked these little graves.

Fire appeared to have destroyed the central part of the W wing. There was no subsequent rebuilding,

and the burnt-out structures seem to have been left where they lay.

At the SW corner of the villa the two hypocausts had been completely dismantled and then deliberately filled up to ground level, re-usable material being salvaged. There is no record of burnt material being found among the rubble used for this fill, so it may have been deposited before the occurrence of the fire. There was no evidence of new floors being laid in the rooms, and at some later date, when there had been time for the infilling to become consolidated, a robber trench was dug through it.

No close date can be given for any phase in the history of this wing. No coins were found, but the pottery appears to be earlier than that found in other parts of the villa. There were two sherds of poppy-head beakers (c 2nd century) found near the entrance from the courtyard; there were parts of two Samian pots and two reeded rims of 2nd century type (Fig 9 nos. 4 and 6) from the corridor. No flanged bowls or other typically 4th century forms were found, though these were common in the assemblages from the N and E ranges of the villa. It is therefore suggested that the W wing went out of use before the rest of the building, and perhaps as early as AD 200. It must, however, be remembered that only a small area of the W wing was excavated and conclusions drawn from the limited sample of finds may be misleading.

E WING

Veranda and Courtyard

Fig 3

The wall between courtyard and veranda was of flint. The walls abutting on it, and the inner veranda wall, had been robbed out. These walls appeared in the excavation as trenches c 90 cm wide, with sandy mortar and a few flints in the bottom.

About 75 cm W of the courtyard wall and 2.2 m apart were 2 squares of flints (75 cm x 75 cm) set solidly in white mortar (unlike the sandy mortar of the walls). Next to these was very dark loam containing potsherds.

Between these blocks of flint, and extending up to the wall, was an area of compressed broken tile (fragments thumbnail size). A coin of Tetricus (270-273) was found on this surface, c 30 cm from the villa wall.

On line with the W edge of the flint squares there was a clearly-defined junction between the spread of crushed tile and an area of flint cobbling extending westwards.

The flooring of the veranda was also of crushed tile.

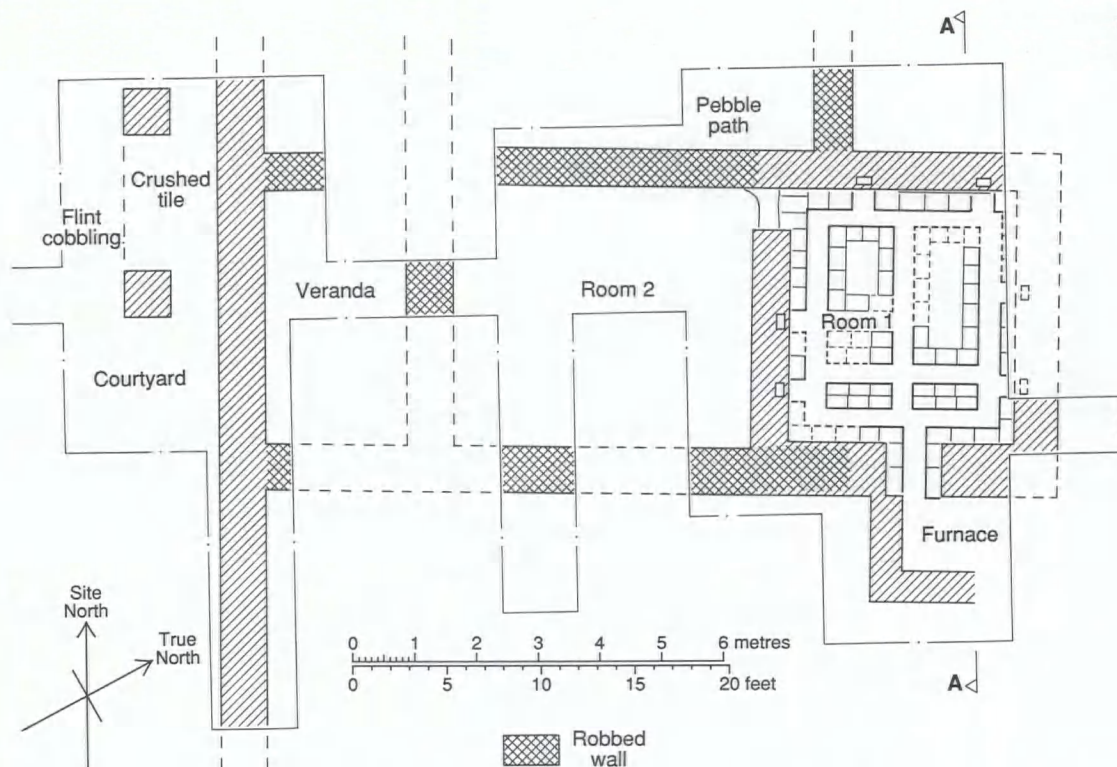


Fig 3 E Wing: Plan showing Hypocaust 1 in Room 1.

Room 2

E of the veranda, in the most southerly area of the excavation, were 2 rooms. Their S wall had a foundation dug c 55 cm into the chalk bedrock to accommodate the depth of the hypocaust in room 1. The N wall of room 2 was not sunk as deep as that of room 1. The N, S and W walls of room 2 had been robbed, but the E wall, which separated it from room 1, had its foundations in place. It was built of Totternhoe stone faced with flints, and had a few cm of pink painted plaster still *in situ*.

Room 2, which measured 4.8 m x 4.2 m, had a fine red concrete floor, less than 20 cm below the surface of the field, and was made with such good quality cement that it was still in excellent condition. Two small round patches of burning were the only blemishes on its smooth surface. No ash was found on these patches. Overlying the floor was a thin layer (c 20 mm) of crushed white plaster.

The trench of the robbed S wall (of which only part was excavated) was filled with building rubble, mixed with sherds, and other debris. This section of robbed wall produced more varied finds than any other on the site. They included a fluted lead cup

(Fig 20 no. 1),

a carved bone object (Fig 21 no. 1), a coin of Constans (337-350) and one of the two highly polished pebbles (the other came from the robbed N wall of the same room. See Building Materials).

A narrow tile-paved doorway in the NE corner of this room led into room 1.

Room 1, Hypocaust 1

Plate 2, Figs 3 and 6 This room measured c 3.7 m x 4.1 m and had been heated by a hypocaust. The ground at this point slopes downwards towards the brook at the SE end of the field and to accommodate the hypocaust the natural chalk had been dug out to a depth of c 50 cm at the N end and c 40 cm at the S. On this level the walls of the building had been laid, the N wall against the bank of the higher ground. These walls were c 75 cm thick, made from roughly dressed flints; the S wall contained some broken *tegulae* in its make-up below the room floor level, and some Totternhoe stone in its foundation. An opening constructed of tiles led through it to a furnace.

The other 3 walls had each been fitted with 2 box flues to take the heat and fumes from the hypocaust



Plate 2 Hypocaust 1 in Room 1, looking N. Furnace entrance in foreground. Wall plaster *in situ* on far wall, right hand side.

up through the walls. They had been held in place with a cement reinforced with finely crushed tiles (*opus signinum*) and although none of the box tiles were left in position this mortar remained and on it could be seen the impression of the wavy key marks that had been scored on the tile. Fragments of box tiles were found in the fill of the room; these were of high quality and some of them carried an elaborate geometric pattern, impressed with a roller, on one face (Fig 22).

At least 5 coats of plaster had been used on the walls; the first, coarsely mixed material, had been put on thickly to cover up the inequality of the flint surface. Subsequent coats were much finer and the final coating had been a light skim over the wall with a very smooth paste, the whole totalling a 5 cm thick plaster finish to the walls. The last coat was the foundation for the paintwork which had been applied before the plaster had hardened and the painter's brush marks could be seen impressed into the surface. The plastered walls had been completed and painted before the hypocaust or the floor were installed. A part of the N wall still retained its plastered surface and the painted decoration was taken below the level of the floor. It could be seen where the painter had dropped splashes of paint and finished off his work by wiping his brush on the part of the wall that was not to show after the floor was laid. This room had been decorated in shades of

greens, blues and pinks. The wall appeared to have been divided into panels, and straight borders of 6 mm lines in green and red were found on fragments of plaster within the fill of the room. One piece had a light blue background stippled with white star-like spots.

Only when the walls had been completed was the heating system installed. The base was covered with a 5 cm thick layer of greenish clay. The channels for the hypocaust were constructed on top of this. They were irregularly spaced, 3 along and 3 across the room, made of coarse red tile that varied in length from 37.5 cm to 40 cm. They averaged 37 mm in thickness and 27 cm in width, and had been cemented into place along the lines of the flues. The channels had been made by stepping inwards a further 6 tiles; the final one would have been used as a capping to bridge the two sides and completely seal the flue. The solid areas between the flues had been filled with rammed down building rubble held with a wash of coarse cement.

None of the floor of room 1 was found *in situ*, but a great deal of mortar and some red *tesserae* found in the fill of the hypocaust channels may have come from the destroyed floor.

The furnace room was sunk c 40 cm into the natural chalk and enclosed by an L-shaped flint wall on the S and W. It contained a layer up to 20 cm deep of ash with rubbish which included pottery,

bones (some burnt), oyster shells, nails, a knife blade and other iron fragments, painted plaster, red *tesserae* and a coin of Constantius (330-335).

After the room and its heating system went out of use the floor was destroyed and some of the building materials, in particular the box tiles from the walls and many of the tiles used to construct the hypocaust channels, were removed. The walls of room 1 were not robbed below ground level, except perhaps on the S, near room 2.

The excavators found the channels and the furnace filled with building materials and refuse. Considerably more pottery was found in the furnace than in the hypocaust channels. There was a piece of Totternhoe stone (now lost) carved in the shape of an animal's paw, and a coin of Constantinopolis (330-340) was found in the SW corner of the hypocaust. Near the E wall were pieces of a cream-coloured *tegula* which appeared to have been deliberately broken up, perhaps to provide *tesserae* like those used in the mosaic in room 6.

Above this fill were considerable quantities of coarse yellow roofing tiles, and above these again there was a scatter of flints, along with Roman potsherds and other rubbish, throughout the level below the modern plough soil.

Outside the walls of rooms 1 and 2

S of the wall of room 2 was an area of rough cobbles, suggesting that this was not an interior room. S of room 1, next the furnace wall, were traces of gravel, possibly a path.

N of room 2, running N-S alongside the robbed E wall, was a hard-packed path made up of pebbles (averaging walnut size) with a distinct camber. This suggests that this was an unroofed area. The path was not found continuing up to the wall of room 5 to the N.

Room 5, hypocaust 2

Plates 4 and 5, Fig 4
5.1 m N of room 2 was the S wall of a room (c. 3.3 m x 2.8 m) which had been heated by a hypocaust constructed of Totternhoe stone, set on a white mortar floor. The channels radiated from a central area in a "Union Jack" pattern. In the central area had stood several columns of tiles, and the bases of two of these remained. Heat had been supplied through a long, slightly curved flue from a furnace shared with hypocaust 3. The stone blocks of which the hypocaust columns were constructed had been dressed to fit closely and in places they arched inwards slightly over the channels. The walls of the room were built with flint, and on the N and E sides they had been robbed. No wall flues were found, but there were fragments of burnt box tile found in the fill.

Lying on the S wall, opposite the centre of the hypocaust, was a spread of crushed tile, and also a heavily burnt tile similar to those used in the centre of the hypocaust. This may indicate an entrance to the room at this point.

Along with mortar and painted plaster a quantity of red *tesserae* 25 mm square were found in the fill of the channels, the main concentration being near



Plate 3 Hypocaust 1 in Room 1, showing corbelled construction. Ranging rod (scale in feet) is lying along the W wall, N end.

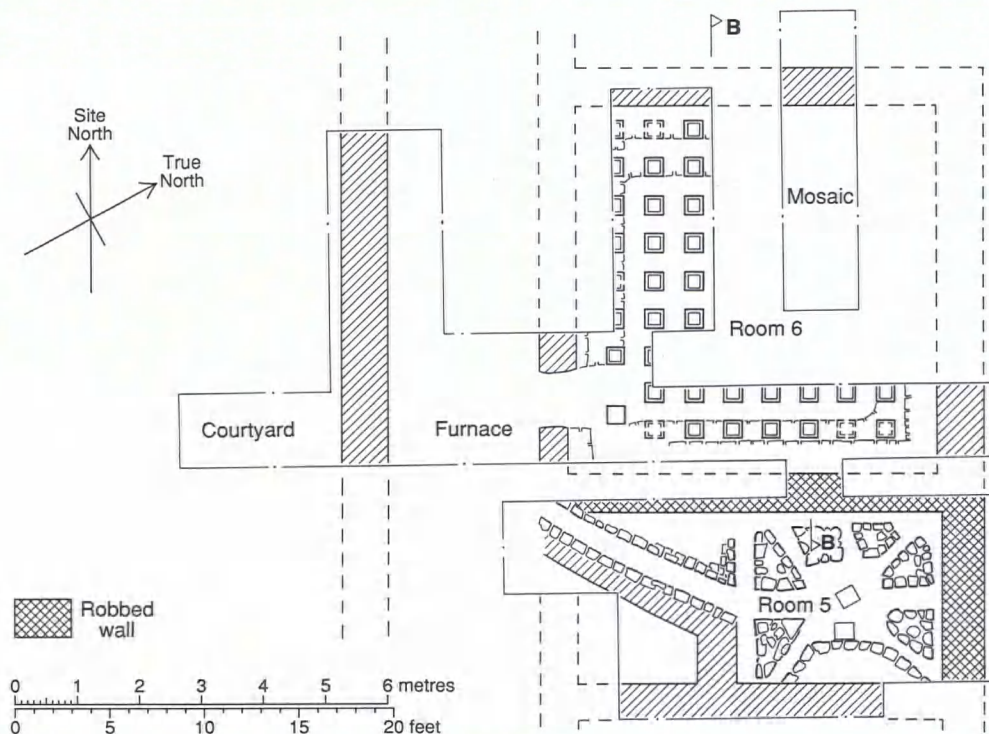


Fig 4 E Wing: Hypocausts 2 and 3 in Rooms 5 and 6 respectively.

the N wall. These probably came from the original floor, and there may have been a tessellated entrance between rooms 5 and 6.

All the channels had been filled in with refuse after the destruction of the floor. The soil in the central area was very dark and included flecks of carbonised wood.

A large quantity of pottery (nearly 8 kg) was found in the fill of hypocaust 2, and it included some examples of particular interest. In the main flue two complete but broken pots had been deposited: the Samian dish and the cream-coloured jar illustrated in Plate 5 and Fig 12 no. 92. In the central area the pot-base decorated with symbols (Fig 13 no. 103) was found. The pots illustrated Fig 13 (nos. 106-108) are very distinctive and came from the upper fill. One was almost complete, though broken.

A quantity of oyster shells, with some mussels, estimated by Matthews as "more than a hundredweight" (51 kg) was recovered from the filling of the channels, and also a mass of seed, mainly from the food plant Good King Henry (*Chenopodium bonus-henricus*).

Two coins were found: Claudius II (268-270) and Urbs Roma (330-340).

Room 6, hypocaust 3

Plates 6 and 7, Figs 4 and 6
The robbed-out wall trench between rooms 5 and 6 was 115 cm deep below the modern ground surface, and partly filled with building rubble. The flint base of the N wall of room 6 was intact, and outside it to the N was a spread of crushed tile.

Room 6 was not completely excavated; a cut was taken E-W across the S side, and 2 cuts N-S.

The room measured 6 m x 5.8 m and it had been heated by a hypocaust constructed of *pilae* spaced evenly c 60 cm apart. The base tile in each column measured 30 cm x 30 cm and the others 18 cm x 18 cm. There were 9 rows N-S and 8 E-W. On the inner side of the flint walls of the room a stepped shelf of Totternhoe stone had been built to support the outer rows of *pilae*. No wall flues were found, but they could have existed in sections of the wall which were not excavated.

A small area of the floor supported on these



Plate 4 Hypocaust 2 in Room 5, looking W.



Plate 5 Pots from the Main Flue of Hypocaust 2.

columns was found still in place, just N of the centre of the room. It was paved with a mosaic of red, black, cream, grey and white *tesserae*. The section surviving appeared to be a corner with the design turning through a right angle. On the outer (N) side was a border of plain red *tesserae* (25 mm square). This border, 75 cm wide, appears to have run round the outside of the room and large pieces of it were found collapsed into the bottom of the hypocaust. Within this border were plain bands of smaller *tesserae* in grey, white and black, and two zones of *guilloche* pattern; the outer 3-strand interlace was 27 cm wide and the inner 2-strand 20 cm. Within these were further plain bands. (Plate 7 and Fig 24).

Some of the tiles from the *pilae* had been robbed. Rubble from the wrecked floor filled the spaces between the remains of the tile columns. Above this debris was a stratum of dark loam up to 30 cm thick which had formed in what must have been a hollow in the ground, 75 cm deep at its lowest point. In the upper part of the dark loam were many snail shells and sherds from at least 10 Anglo-Saxon pots of the 5th or 6th century. Above this the hollow was filled with lighter loam. Just below the modern ploughsoil

was a trail of scattered flints.

The furnace which supplied heat to hypocaust 3 and also to hypocaust 2 was sited between the walls of the veranda, which were 75 cm thick and constructed of mortared flint.

E Wing Discussion

No evidence was found for the date of building of any of the structures.

The two flint squares in the courtyard area were cemented with a white mortar which differed from the sandy mortar found in most of the walls and they may therefore have been constructed at a different period (white mortar was also used in hypocaust 2). The flint squares may have been bases for posts supporting a porched entrance to the veranda. The fact that a wall across the veranda joined the courtyard wall opposite the gap between the flint squares makes an entrance here less likely; on the other hand, the wall may have belonged to a different period in the life of the building. Matthews believed that the crushed tile layer which covered the floor both in the veranda and outside the courtyard wall between the flint squares would not



Plate 6 Hypocaust 3, Room 6 S end looking W.

have stood up to regular wear, particularly not in an entrance, and that it was covered by wooden flooring. If this was so, the wall crossing the veranda may simply have been a support for floorboards.

The areas of dark loam next to the flint squares suggest the possibility of flower beds: perhaps creepers or vines growing up the posts. Matthews suggested an alternative explanation for the plinths as bases for sculpture, drawing attention to the animal paw carved in Totternhoe stone found in hypocaust 1.

It is possible that there may have been further flint squares, outside the area of the excavation, perhaps a row of them, but it should be remembered that the depth of ploughed soil was less than 30 cm and further stone bases would probably have been

detected by probing.

The rooms 1 and 2, E of the corridor, appear to have been constructed together: the foundations of the S wall shared by them were dug deep enough to accommodate the hypocaust. The N wall of room 2 was not so deep, and may have pre-dated the rooms to the S of it. The doorway between rooms 1 and 2 suggests they were in use together. There is no evidence of room 1 being used as a bathroom, though any drains would probably have been in the unexcavated area on its E side. If it was a bathroom, room 2 could have been a changing room.

The presence of the pebble path N of room 2 suggests that the rooms were approached from the N across an open area.

The area S of the rooms, which was cobbled, also



Plate 7 Fragment of mosaic from Hypocaust 3, Room 6, under excavation.

appears to have been unroofed.

The N, S and W walls of room 2 had been completely robbed out, but not the E wall, nor the other walls of room 1. Matthews suggested this was because the robbers were seeking only flints, and the E wall of room 2 had a Totternhoe stone core. An alternative explanation is that room 1 was left standing when room 2 was dismantled. The layer of white plaster from either ceiling or walls found on the floor of room 2 suggests that it had stood derelict for some time before its final destruction. The coin found in the fill of the robbed S wall gives an earliest date of *c* 340 for this destruction.

The destruction of room 1 seems to have begun with the removal of the floor. This gave access to the tiles constructing the hypocaust channels, many of which were removed, and the lower box tiles of the wall flues. These were all taken out. Some fragments were found in the fill of the abandoned hypocaust; these may have been from tiles broken during removal. The coin of 330/50 gives an earliest possible date for this evidently deliberate destruction and infilling.

The channels of the hypocaust were filled with debris of building materials with an admixture of pottery etc, and on top of these lay large quantities of roof tiles, indicating destruction of the roof and possibly of the walls. The large quantity of pottery and other rubbish in the ash of the furnace may indicate that it had ceased to be used as a stoke-hole and was available for dumping refuse before the dismantling of the floor and walls of room 1, where comparatively little pottery etc was found.

There was no evidence in the section for a hollow in the ground being left for any period of time; it appears that the area was filled in with flints and loam up to normal ground level.

There was no sign near the wall of room 5 of the pebble path which led N from room 2. This suggests that it had been destroyed during the construction of hypocaust 2, which was therefore later than the path, and also, perhaps, than rooms 1 and 2. However, there is no clear evidence as to the relative age of the structures, and Matthews believed rooms 1 and 2 to be later additions.

It seems clear that rooms 5 and 6, with their differently designed hypocausts, were contemporary: they shared a furnace and had a communicating doorway. The smaller room 5, with its "storage heater" stone columns, could have maintained a steady warmth, whereas room 6, nearer to the furnace and with more direct access for hot air to the floor, could have been heated more



Plate 8 Tessellated pavement in Room 8. See Fig 8, Section D-D.

quickly and to a higher temperature. It seems unlikely that two neighbouring living rooms would have heating systems, but no evidence was found for use as a bath house. There is a parallel, on a grander scale, for this pair of heated rooms at Verulamium, Building IV, 8, rooms 2 and 6 (Wheeler, 1936), where they are interpreted as the *sudatorium* and *tepidarium* of a bath house, originally constructed in the second half of the 2nd century.

After room 5 had gone out of use the floor was removed and also most of the tiles from the central columns. The underfloor space was then filled with rubbish. The dark earth, charcoal, bones, and large quantities of oysters and other shellfish suggest kitchen refuse. Either there was cooking/eating going on nearby, or loads of rubbish had been brought for dumping from middens near a kitchen elsewhere on the site. The deposit of the two complete but broken pots (one of them 200 years older than the bulk of the pottery from the site) in the main flue seems to have been deliberate. The remaining space was filled with building rubble etc,

presumably from the demolished room over the hypocaust.

The coins found give a date of 330 as the earliest possible for the infilling of hypocaust 2.

Unlike hypocausts 1 and 2, the destruction and infilling of hypocaust 3 and room 6 above it was not carried out thoroughly and completely. Part of the floor was still in place when excavated, and other sections of it appeared to have collapsed into it over a period of time. Some tiles had been salvaged from the *pilae*, perhaps after the floor had fallen in through neglect, but many were left in place. Rubbish and building rubble were found in the hypocaust channels but only 1.2 kg of pottery was found in the area excavated, compared with nearly 8 kg from hypocaust 2. The ground had not been levelled up: in the hollow where the room had been, up to 30 cm of dark soil collected, and the presence of many snail shells indicates the development of rough vegetation. In this hollow was a scatter of sherds of Anglo-Saxon domestic pottery. This looks like the disposal of refuse from a living site into a convenient nearby hollow. They lay near the top of



Plate 9 Room 8, showing tessellated floor after removal of some of the superimposed flints. Part of the border of grey *tesserae* next to the wall of Room 9 is on the left.

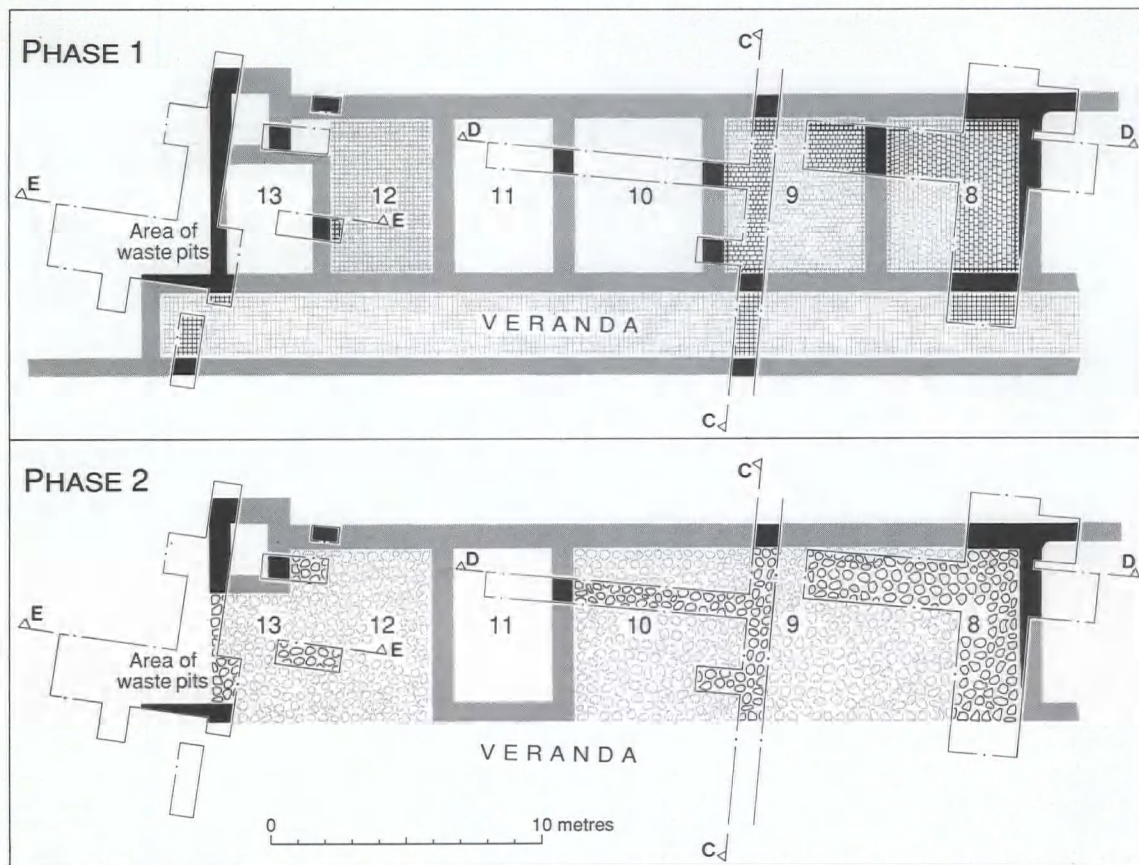


Fig 5 Phase plans of North Range.

the stratum of dark loam, indicating that there was not time for worm action to cover them deeply before the hollow in the ground was filled in – presumably in preparation for agricultural activity.

The trail of flints *c* 30 cm below the modern surface probably came from the tops of the buried wall bases, dislodged by ploughing or, as suggested by Matthews, dropped by later wall-robbers.

The coin dates, and also the bulk of the pottery, give the middle to late 4th century for the demolition of the buildings in this part of the villa, but the data available do not make it possible to work out a chronology. Some pottery of a much earlier date was present, suggesting a long period of occupation somewhere on the site. The coin of Tetricus found in the supposed porched entrance suggests that this part of the building was in use in the late 3rd century.

There is no evidence of rebuilding or re-use of this part of the site after the destruction of the

hypocausts and the robbing of many of the walls.

Apart from the incorporation of a *tegula* in a wall foundation in room 1 there is no evidence for re-use of materials. The large quantities of flints salvaged from the walls may have been used for the floors in the N range (see below). Tiles, particularly broken ones, could have been smashed up for use in the crushed tile floors found in several parts of the villa, and some were broken up for the manufacture of red *tesserae*. The care taken to extract the box tiles from hypocaust 1 suggests an intention to re-use them in a heating system elsewhere.

N RANGE

Plates 8 and 9, Figs 5 and 7
This was a range of seven, possibly eight, rooms extending along the N side of the courtyard for 30 m. Except for the NW corner the outer walls were 85 cm thick and of flint; the inner walls were 70 cm thick. The NW corner was of Totternhoe stone. The

cement used was, in the main, white.

To the N was a 1.5 m wide, 0.85 m deep ditch, 3 m from the N wall. Although only a short length was excavated it is probable that it ran parallel to the back wall. The fill was a greasy loam, like 'sewage sludge', with no finds.

Along the whole of the S side ran a 2.4 m wide veranda. The wall separating the veranda from the courtyard was flint with a sandy cement.

At the E end in the area beyond the E wall of room 8, and level with its base, lay the carbonised remains of a burnt beam. This was overlain by roofing tiles. Over these was a thin layer of black earth into which a covering of rough flints had been set.

Phase 1

Rooms 8, 9 and 10

These form a suite of similar rooms and are considered together.

Room 8 was 5.7 m (N-S) by 5 m. The floor was a white chalk rock tessellated pavement with 5 rows (13 cm) of grey border around the W, S and E sides of the room. Along the N wall the border was in places 45 cm wide with a ragged edge. The *tesserae* were in rows aligned N-S. In places the floor had subsided causing *tesserae* to be displaced. One or two white *tesserae* had been replaced by red, and two large patches had been crudely repaired by spreading mortar and placing into it *tesserae* following no pattern. Occasionally flint pebbles had been used in the repair; no attempt was made to level the floor first.

Room 9, 5.7 m x 5.2 m, had a similar white chalk rock tessellated pavement with a grey border. In this room the rows of *tesserae* were aligned E-W.

Room 10 was 5.7 m x 4.9 m and had no tessellated floor in the areas investigated although the mortar base for them was present. In the fill of the robber trench between rooms 10 and 11 were some fragments of wall plaster with light blue paint. It is therefore probable that one or both rooms were painted this colour.

By examination of the floor in room 8 it was possible to see that in the original construction no attempt had been made to give it a sound foundation; a layer of crushed tile had been placed directly on to the turf. This had then been covered with an 8 cm thick layer of mortar into which the *tesserae* had been placed.

A small fragment of colour-coated ware was found in the turf below the tessellated pavement.

Rooms 11 and 12

Very little of these rooms was investigated but room 11 had a mortar floor similar to that in room 10. The decor may have been light blue (see room 10). Room 12 seems to have been paved with red *tesserae* as its floor consisted of mortar and disturbed red *tesserae*. The excavation did not reveal the location of the wall which separated rooms 11 and 12.

Rooms 13 and 14

These numbers were assigned by Matthews to the complex at the W end of the range. The excavation of this area was not total, but by use of the plans and notes of the excavation it is possible to propose the following.

Room 13, adjacent to room 12 on the S side of the range, was 3.1 m wide and extended a distance of 4.1 m across the building. To the N of this, in the NW corner of the range, was a small room 2.0 m x 1.4 m with external walls of dressed Totternhoe Stone. The small room extended beyond the building line on the N side of the range. Although of a different material, Matthews considered it contemporary with the rest of the building as the Totternhoe stone extended under, and was keyed into, the flint wall which made up the S side of the small room. The main end wall of the range butt joined this flint cross wall and it is possible that this end wall was later. This cannot be ascertained since we do not know its relationship to the S wall of the range, which was robbed out in that position. It differed from the other walls, being only 60 cm thick. The excavated section of room 13 revealed an ash filled hole.

Beyond the W end of the range was an area of waste pits, an earth floor and the possible base of an insubstantial wall.

Veranda and Courtyard

To the S of room 9 a section of the veranda and courtyard was investigated. The veranda was 2.4 m wide and was separated from the Courtyard by a flint wall.

Like the adjoining room, 9, the veranda had been paved with a white tessellated pavement; patches of *tesserae* still remained along each side of the veranda, but along the centre they had been worn away and replaced with broken tiles and small flints.

Phase 2

Rooms 8, 9 and 10

At a later date the walls separating these three rooms had been taken down almost to the level of the

tessellated pavements. Large flint nodules and tile fragments, set at an angle, had then been cemented over the pavements to produce a very rough uneven surface. These flints, with sandy mortar adhering to them, were fixed in position with a white cement. Part of the flint area in room 10 had been set in dark loam rather than mortar.

Matthews commented that it was not easy to distinguish the floor from the dismantled internal walls or the S wall; only the colour of the mortar and the straight joint between the flints allowed a distinction to be made.

Room 11 appears to have been unaffected by these changes.

Rooms 12 and 13

Like rooms 8, 9 and 10, these were floored over with rough flints after the wall separating them had been reduced almost to the old floor level. It seems likely that the W end wall was removed at this time.

Veranda and Courtyard

A source of the flints used in the modifications described above, seems to have been the wall separating the veranda and the courtyard. Only the base of this wall remained; its robber-trench being full of builder's rubble including red, cream and wine-coloured wall plaster. The mortar of the robbed veranda wall was identical in appearance to that on the flints used for the floors in rooms 8, 9, 10, 12 and 13.

Extending S from the wall of room 9, across the veranda, across the robber trench and out across the courtyard was a layer of building rubble including broken roof tiles, mortar and painted plaster. This appears to confirm that the robbing of the wall was not part of the final destruction.

Waste Pits

Along the W end of the range was a series of pits or a ditch. This feature contained a wide variety of material in addition to 10 kg of pottery. The finds included *tesserae* of chalk rock and red tile, similar to those which paved the veranda and rooms of the block, as well as other coloured *tesserae* (some made from Samian pottery) from a patterned mosaic. Also present were animal bones, oyster shells and mussel shells.

The pottery is not of one period but includes jars dating from the 1st century AD, a *mortarium* of DOBALLUS from the 2nd century and flanged bowls of the 3rd and 4th centuries. There is also much Samian pottery.

Matthews commented that the contents were not stratified but mixed, with earlier pottery overlying pottery of a later period. He further suggested that the character of the material indicated that it was put in the pits at one period, after a tidying-up operation on the site. The inclusion of *tesserae* from the floors suggests that the pits may have been filled at the time of the conversion of the building to a barn.

Phase 3

Final destruction of the range

The destruction had been effected by stone robbers who removed the N wall, the E wall, the S wall at the W end and the wall which had separated rooms 10 and 11. While removing the flints from the E wall the wall robbers seem to have removed most of the flints over the tessellated pavement of room 8.

Saxon sherds were found in the soil above the cobble floor of room 10 and in the robber trench which separates rooms 10 and 11.

N Range Discussion

The plan of building as excavated appears to date from one period, the earliest possible date being given by the small piece of colour-coated pottery found in the turf underlying the tessellated pavement. It is of course possible that a more extensive excavation of the W end would reveal more phases. The small room in the NW corner appeared to be a space for a staircase: it is difficult to think of another use for such a small room with dressed stone walls. These walls would be ideal to take a wooden staircase. A staircase would imply that there was a multi-storey building or a tower, and as a consequence a greater floor area.

The impression is of a building which was erected 'on the cheap'. No effort was made to ensure that the floors were durable: they were built directly onto the turf and the *tesserae* were soft chalk blocks. Along the N wall of room 9 Matthews noted that the grey border had a ragged edge with a close parallel in that found at Lullingstone (Meates, 1979). Meates suggests that the lack of *tesserae* around the Europa panel, in the dining room (room 12), is explained by the disposal of furniture.

As the floors subsided the *tesserae* became loose and detached, leaving large patches which were repaired in a crude way. The veranda, which had been subjected to much use, was entirely free of *tesserae* along the centre.

It is not known how long the range existed in this state. The ash-filled pit in room 13 may show the

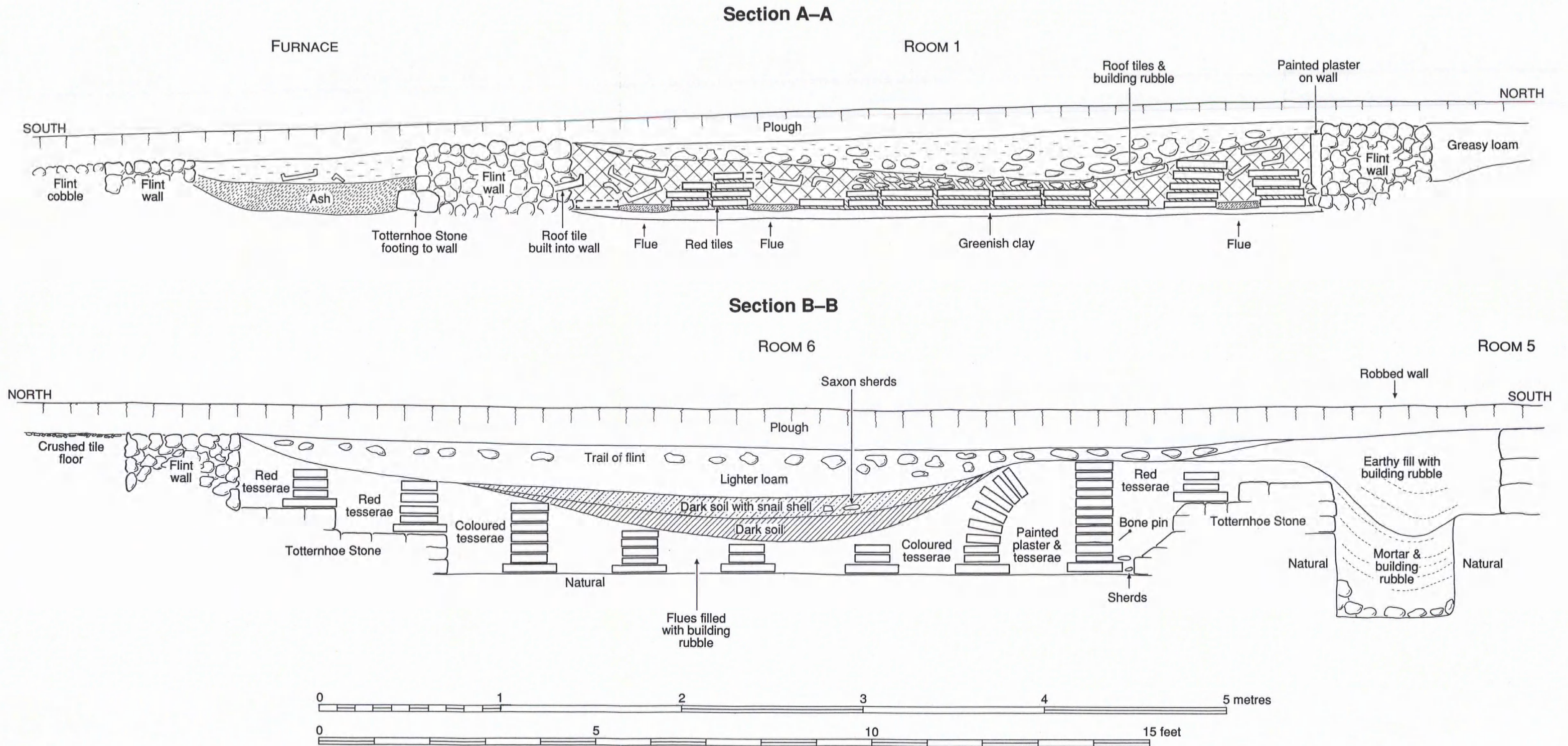
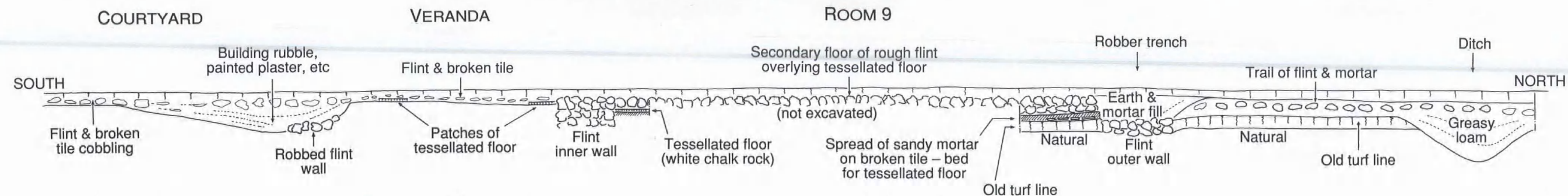
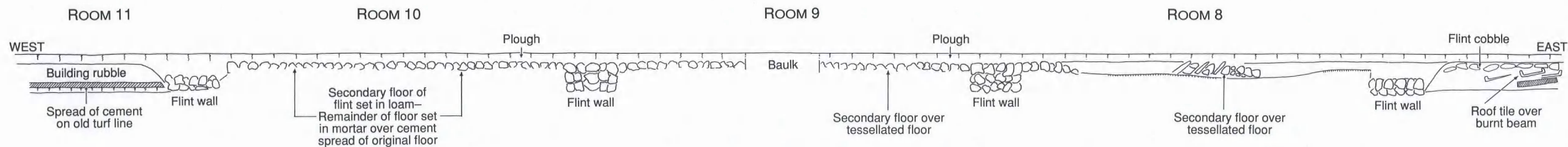


Fig 6 E Wing: Section A-A through Hypocaust 1, and composite section B-B through Hypocaust 3.

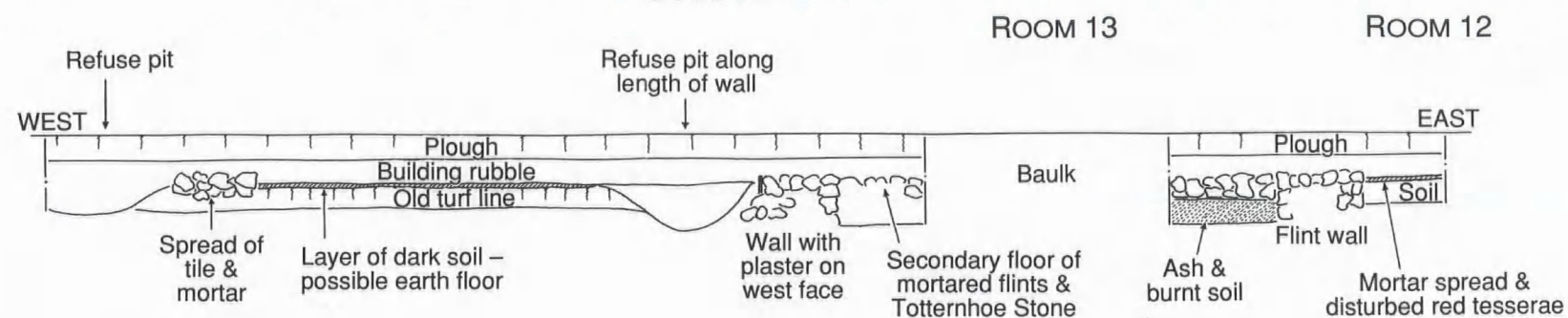
Section C-C



Section D-D



Section E-E



Section F-F

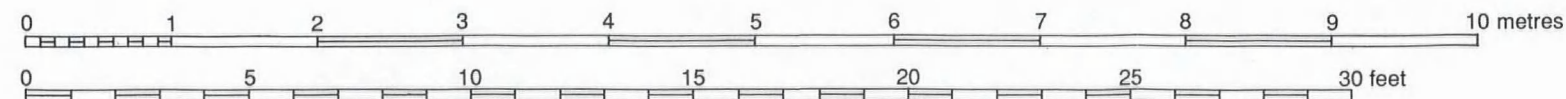
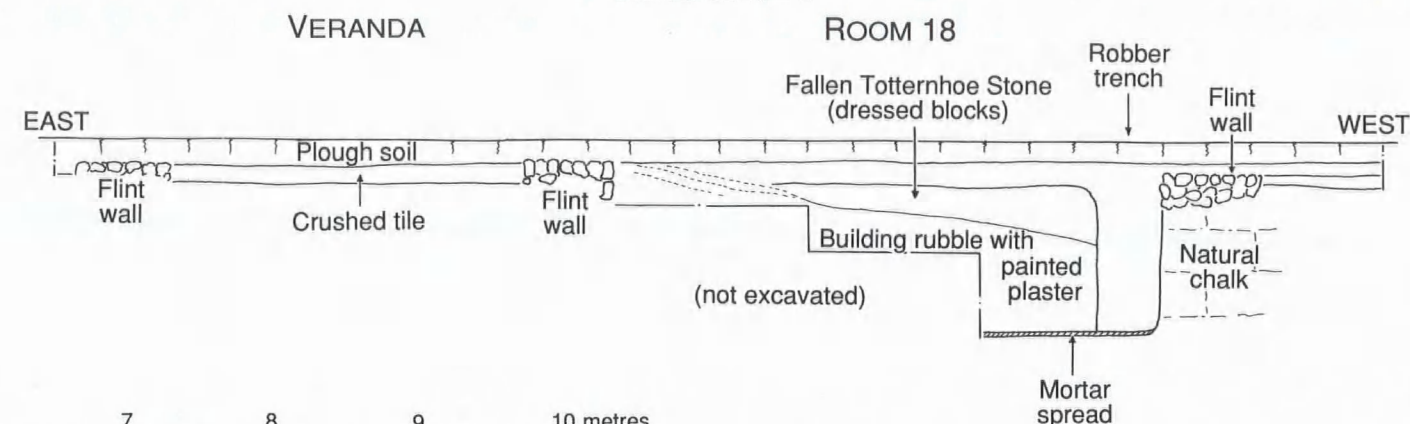


Fig 7 Sections C-C, D-D & E-E through N Range, and section F-F through Hypocaust in W Wing.

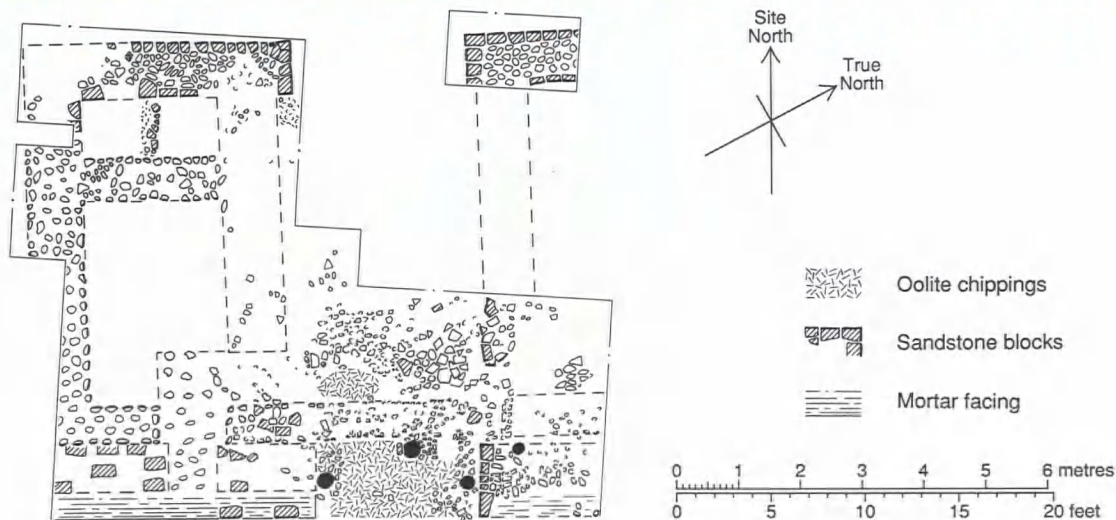


Fig 8 Plan of South Gateway and Secondary Buildings.

presence of a hypocaust, possibly in a back addition. It is also possible that it was a kitchen. If this was the case it would help to explain the waste pits at the W end. This is, of course, speculative as the excavation of the whole block, particularly the W end, was incomplete.

After a time the building ceased to be domestic and became agricultural. The veranda wall was removed and the flints cemented over the floors in rooms 8, 9, 10, 12 and 13. The intervening walls between rooms 8, 9 and 10, and between rooms 12 and 13, were removed to the level of the rough flint floors. The S and W walls were also removed. There are two reasons for believing this to be the case. Firstly Matthews commented that he could not easily detect the change from floor to wall in the case of the S wall; and secondly the stone robbers only removed the N and E walls, the S wall at the W end and the wall which separated rooms 10 and 11. Presumably these were the only walls standing and apparently available.

Such extensive modifications would have necessitated the use of wooden or stone supports for the roof or upper floor. In view of this it is unlikely that there was an upper floor, and the suggested staircase in the NW corner should be seen as leading to a tower (cf Gadebridge, Neal 1974 p94).

The rough flint floor would have been unsuitable for animals and Matthews, after discussion with the farmer, proposed that the floor was suitable for the storage of grain in sacks, air being free to circulate.

Although possible this seems unlikely as the sacks could easily become damaged by the flints. The reconstruction discussed above would have provided a large open-fronted barn. Dr P Reynolds of the Butser Ancient Farm suggests (personal comment) that this would be suitable for the storage of unthreshed sheaves, the large flints keeping the straw off the ground and the roof providing protection from the weather. He further suggests that the room between the two areas of flint flooring could be a threshing floor. This cannot be confirmed because of the limited excavation.

There were few finds from phase 2 and the final destruction, so it is reasonably certain that no domestic habitation was near. The significant sherds are the two Saxon sherds which show the final robbing to be post-Roman. The absence of medieval material shows that the robbing was almost certainly during the Saxon period.

S COURTYARD WALL AND GATEWAY

Plates 10 and 11, Fig 8
The southern boundary of the courtyard was formed by a well-built flint wall some 1.2 m thick. In places the foundations were still standing 30 cm high.

In a cut taken across the wall 15 m E of the W veranda wall a cobbled surface formed of close-packed round pebbles was found at a depth of 45 cm. It was overlain by a secondary surfacing of rough flint and broken tile.



Plate 10 Looking S through S Gateway. On the left sandstone blocks outline the wall E of the entrance with the hole for a gatepost next to it. The other gatepost hole is on the right of the photograph. The oolite metalling of the entrance is visible between the post holes, with later flint cobbling removed. The wall of one of the secondary buildings cuts across the metalling and the hole for its door is sunk in the centre. In the foreground, flint cobbling covers the oolite trackway.

Gateway

30 m E of the W veranda wall was an entrance through the S Wall 2.6 m wide. A gateway of red sandstone had been constructed in the wall. The blocks used were dressed into lengths that varied between 25 cm and 45 cm x 20 cm wide and 20 cm thick, and their upper surface showed mason's marks. On the E side of the gate a complete lower course of these blocks still lay in position and defined the thickness of the wall at the entrance as 1.2 m. Sandstone was also used to face the flint wall on the outside of the gateway, but it is uncertain how far this had extended, as this part of the wall had been destroyed during the Roman period and there was also disturbance from modern ploughing. The sandstone probably came from the Greensand Ridge some 10 km to the N.

At each side of the entrance, set at the centre of the wall, was a post hole large enough to take a post

22 cm square, and it is assumed that a door or gate (doors or gates) hung here.

The entrance way was paved with loose chippings of white oolite, a rock found in NW Bedfordshire, c 35 km away. None was found elsewhere on the site. A large flat slab of rock 2.13 m x 1.37 m and 30 cm thick had been used to surface the roadway outside of the gate. The only find from underneath it was a fragment of animal rib bone.

Ruts in the metalling of the roadway indicated a maximum distance of 1.35 m between wheels of vehicles using the entrance.

An iron key and a conical-headed iron stud were found on the road surface (Fig 20 nos. 18 and 3).

Secondary Buildings

The gateway and adjacent wall were dismantled at some later period and the materials used to build



Plate 11 Secondary building inside Gateway, looking E. The N section of the building is shown, with dividing wall on right and traces of partition slot across centre. Scale in feet.

what appeared to be a double structure just inside the entrance, on a slightly different alignment from the wall.

The western unit of the pair was completely excavated. The walls were 90 cm thick, faced with sandstone and had a flint core. The structure was 6.6 m long and 4.1 m wide. There were two entrances, one in the S wall and the other at the S end of the E wall. The interior was divided by a flint partition wall, 75 cm thick, giving an area c 1 m wide at the N end. The natural chalk floor of this area was cut in half by a narrow foundation slot sunk into it, filled with unmortared flint and broken tile. The only stratified object found in the building came from this foundation: a piece of deer antler, sawn through and with splinters removed from it.

The S part of the building also had its floor on the natural chalk, but in the SE corner, in association with the two entrances, was a clearly defined area paved with cemented flints. The base for these flints was sunk below the natural chalk level, so that the

tops of the flints were level with the rest of the floor. The flints continued through the S entrance over the foundation of the great courtyard wall.

The S wall of the building projected eastwards for 1.7 m across the entrance gap in the courtyard wall, cutting across the oolite metalling of the roadway. There was then a gap of 1.2 m between the end of the wall and the beginning of another on the same alignment. There was a post hole each side of this gap on the S side of the building wall. The hole on the W side had been sunk through the oolite chippings and the post had been packed with stone, including sandstone. The hole on the E had been dug through the foundations of the courtyard wall. These posts probably carried a door or gate.

Only a small part of the second building inside the courtyard was excavated, but its plan could have been a mirror-image of that of the first building. The walls of the two buildings which faced each other across the area between them were not faced with sandstone. The area between the two buildings was

paved with rough flints and sandstone laid over the earlier oolite roadway.

S Wall and Gateway Discussion

The wall closing the villa courtyard on the S appears to have been built with both security and visual effect in mind. It was the thickest wall found on the site, and the entrance through it could be closed by a door (evidently with a lock) hanging on one large post and closing against another. If there had been double doors one would expect to find evidence for a stop in the centre of the roadway, but there was none. Materials were brought some distance to give a colourful appearance to the gateway: red sandstone against the black and white flints of the wall, and oolite for the roadway. Matthews noted that the whiteness of this rock was very noticeable after rain and must have been particularly striking when seen against the red sandstone of the gateway.

In the cuts excavated no sign was found of rooms on the inner side of the wall. The cobbling exposed in the cut 15 m E of the veranda, and the surface of stone and tile at a higher level suggest two periods of a roadway, running alongside the wall on the N side, or else part of a yard.

At some point the gateway and adjacent wall were dismantled and the materials used to build new structures. The siting of these at the entrance through the earlier wall suggests that the main length of the wall was still standing at the time, and indeed parts of it were found by the excavators still surviving up to 30 cm high. This contrasts with the many walls in other parts of the site robbed for their flints during the Roman period. The 1.2 m thick courtyard wall would surely have been a favoured quarry for flints if it had been dismantled. The fact that it remained unrobbed suggests that it continued in use until the latest period of occupation of the villa site.

The secondary buildings seem to belong to a late phase of the villa occupation, possibly contemporary with the flint flooring of the barns in the N range. Very little pottery was found in either of these areas. The walls were neatly built, with a decorative sandstone facing, and their strength suggests the likelihood that they supported an upper storey. This may have continued across the space between the two halves of the building. Matthews suggested that the partitioned area at the N of the W block might have enclosed a staircase.

The complex may have formed a gatehouse, inhabited by a porter or steward. The entrance on the S side, with the door posts, was much narrower

than the original gateway in the wall, and would have been wide enough only for foot passengers or riders on horseback. Wheeled vehicles may have had another entrance, nearer the barns. The entry was also partly obstructed by the wall of the eastern half. There was a second entrance directly into the W building over the base of the original courtyard wall.

GENERAL DISCUSSION

The excavation was basically a sampling of the site. In the absence of much evidence for dating, absolute or relative, only very general conclusions can be drawn. No outline of a history of foundation, development and decline can be set out. Only the dismantling of the hypocaust rooms in the E wing can be dated by coin and pottery evidence to the mid or late 4th century.

The presence of a substantial amount of Samian and other early pottery suggests that the site had been occupied since the first or second century and there were probably buildings there at that period, but nothing was found of any structure preceding the courtyard villa. Its size and plan are unlike any others in this locality, though the Latimer villa in the Chess Valley (Branigan, 1971) approaches it in scale. The villas near Verulamium (such as Park Street, Lockleys, Gorhambury) are smaller and lack the great courtyard with rooms on three sides.

In its heyday, perhaps around 300 AD, it was a dwelling house built to impress, fronted by its strong flint wall with sandstone and oolite gateway. It was provided with heated suites of rooms, tessellated floors, painted walls and at least one polychrome mosaic. This was a period of prosperity and expansion in other local villas. Perhaps the occupier was a leading landowner in the district surrounding Durocbrivis (3 km distant) with local administrative responsibilities and a position to keep up. Previous studies of Roman Britain have noted (Salway, 1981 p597) that a single villa often occurs near a town, and the suggestion has been made that it was the residence of an official, perhaps connected with the *mansio* or posting station. Durocbrivis was such a posting station on Watling Street.

The general standard of craftsmanship does not, however, suggest great wealth: there is, for example, no evidence for figurative subjects in the wall painting, the tessellated floors were shoddily laid and no very large rooms were found.

At some time in the mid or late 4th century

significant changes occurred. It appears that the villa was no longer primarily the home of a country gentleman or important official: the hypocausts in the E wing were dismantled and filled with rubbish and there was no new construction on the site. The extensive salvaging of building materials, apparently at the time of the demolition or soon after, suggests that active construction was going on nearby. Some of the flints needed for the barn floors may have come from the demolished E wing rooms as well as dismantled N range walls, but there is no evidence for constructional re-use of any kind of tile.

The N range rooms, after a time of neglect and haphazard repair, were converted to agricultural use. This is paralleled at other villas such as Latimer and Gadebridge (Branigan, 1973 p136). Dr Branigan compares the cottages inside the gateway with buildings at Latimer (Branigan, 1973 p138).

In other parts of Britain there was a late 4th century resurgence of villas, but there is no evidence for this in the Verulamium region. How long the occupation of the Totternhoe villa site, in its reduced state, continued it is impossible to say on the evidence available.

The erection of the buildings inside the S gateway may belong to the same period as the conversion of the N range to agricultural use and is perhaps a sign

of a new type of administration: a manager or bailiff living in a cottage, small but carefully built, rather than a resident landlord. The lack of potsherds in this gatehouse building may suggest a date as late as the 5th century.

By the late 5th or 6th century the site was overgrown, and the hollow above hypocaust 3 was used by Anglo-Saxons living nearby to dump refuse. The filling in of this hollow soon afterwards indicates arable use of the area in the Saxon period. Handmade potsherds found above the wall of room 10 suggest that the Saxons found a use for the flints from the villa.

No evidence of building or settlement on the site in later times was found, despite its proximity to Totternhoe church. No Roman building materials have been detected in the walls of the church, which is built of Totternhoe stone and rendered inside and out. Professor Salway advises that we "should perhaps be more on the lookout in Britain for the remains of villas close to Saxon settlements or the medieval villages" (Salway, 1981 p611). The Totternhoe villa is indeed very close to an ancient focal point of the village, as evidenced by church, former green, several old farmhouses and the convergence of many tracks. This may be more than coincidence: perhaps a continuity of some kind did exist between the Romano-British estate and the English village which grew up on its site.

POTTERY

BARRY HORNE AND JOAN SCHNEIDER

METHOD

It was decided to analyse the pottery by fabric, form of vessel, weight (g), estimated vessel equivalent (eve) and typological features. As no published Roman fabric series existed for the area it was decided to create one as the analysis proceeded; this has resulted in a series where similar fabrics are not numbered consecutively. The vessel forms were decided upon before the analysis began; these were amphora, beaker, bowl, castor box, dog dish, flagon, flanged bowl, jar, lid, mortarium and storage jar. Where it was not possible reliably to determine the vessel form it was given the designation 'body sherd'. In all a total of 34.89 kg of pottery was examined.

The bags of pottery were analysed as follows: for each sherd a freshly broken edge was examined under a low power microscope (x30) and the fabric determined; the form of the vessel was then decided upon and, if appropriate, a rim form ascribed; handles and bases also received the appropriate codes; these details were then coded onto a sheet together with codes for decoration, weight and eve. The eve was determined by placing the rim on a chart of concentric circles and matching the diameter. The proportion of the rim present was then determined by comparison with radial lines. No attempt was made to measure the proportion of bases present.

Any sherds thought suitable for illustration or dating purposes were withdrawn at this stage. All the coded data was then entered into a database on the Society's computer.

A match with the Milton Keynes series, the Newnham Marina (Bedford) series (Aird, forthcoming) and material from Warren Villas kilns (Sandy) was carried out by direct comparison of sherds. While some agreement was found it must be admitted that there were substantial differences. Similarities are indicated in the fabric descriptions. The degree of similarity is shown by a graded scale from 1 to 5: (5) is identical; (1) has a resemblance. A visit was made to Verulamium Museum where members of the Society were given access to the material illustrated in the three Verulamium reports (Frere, 1972, 1983, 1984). It had been expected that there would be a strong correlation between the material found at the villa and the nearby *municipium* some 14 Roman miles to the S. Direct comparison of the material showed very little

similarity in either fabric or form. Some pots which looked similar on the basis of drawings were seen to be less similar when the sherds were compared.

To assist in the analysis of the distribution of the pottery with respect to the different parts of the villa a piece of software called 'scatter' was produced. This enabled extracts to be taken of the database for a particular fabric, form or typological feature such as colour of mortarium grits; the distribution was then displayed superimposed on a plan of the villa.

This analysis resulted in a fabric series of 42 types which are described below.

FABRIC DESCRIPTIONS

MK = Milton Keynes fabric series; NM = Newnham Marina Series; WV = Warren Villa series

Roman fabrics

1. Generally a grey matrix with common, evenly-distributed clear and grey rounded quartz granules. Also present are a few small and large cindery black inclusions (grog). Rarely some small elongate white inclusions. MK - 47AB (1).
2. A grey matrix with many (70% of the volume) rounded quartz granules; both clear and grey. Some ill-defined small white inclusions are present. Small matt black inclusions are present but uncommon; occasionally a large fragment is present. There is an occasional small angular red inclusion. MK - 14A (5) (Upper Nene Valley), 25/30 (4), 53 (4); NM - N1 (2), N13 (4), NB4 (3).
3. Coarse grey matrix with many large clear and grey (occasional brown) quartz granules evenly distributed; can be 50%, by volume, of matrix. MK - 3A (5), 8 (5), 9 (5), 9g (5), 14c (5), 19/29 (5), 28A (3), 31A (5), 32A (5), 42A (5), 43f&g (3) and 47DG (5); NM - N12 (4), N23 (4), N29 (4), NB17 (4).
4. An 'open' matrix with many small and large irregular voids. Contains ill-defined black inclusions. Some very small glistening flakes are present; possibly mica. MK - 28D (4) and 47DG (4).
5. A fine-grained matrix with some very small irregular voids; has the overall appearance of a schist. Soft. Appears to contain small crystals of mica and feldspar (flat, striated). MK - 34A (3) and 41B (3) (?Rhenish).
6. Uniform heavily shell-gritted ware with a coarse matrix. NM - NA4 (4), NA5 (4), NA7 (3), NA10 (4), NA18 (4), NA20 (5), NA22 (4).
7. Very fine matrix with many small inclusions. These include many very small black inclusions. The red inclusions are rare and angular as are the matt-white inclusions. MK - 24 (4) (Oxford), 41d (4) and 57 (4).
8. This is a Samian fabric. Matrix is pink with a white mottle. The many small inclusions give a homogeneous appearance. White inclusions are ovoid or elongate. The black inclusions are elongate. There are occasional small red ovoids. A few irregular voids are present.
9. 'Imitation Samian' fabric. Matrix is fine with a crumbly fracture. Many well-distributed flakes of white mica. In addition there are some small black granules and some largish fragments of grog. The many well-distributed small brown granules may

also be grog.

10. A shell-gritted ware. About 50% of material is shell fragments lined up 'along' pot. Occasional 'tubular' fragments of shell are present. NM - NA11 (2).

11. A mortarium fabric. A fine-grained white matrix with many small, some large, amorphous dark red inclusions. Distributed throughout the matrix are small quartz granules. Surface grits are grey, pink and occasionally red.

12. Fine-grained white fabric with widely-distributed amorphous red granules; most are very small, some are larger. Small quartz granules are present. There are some small voids.

13. Amphora fabric. Fine-grained matrix with many small grey and light brown quartz granules. Many irregular small black granules present. Some larger amorphous dark red inclusions are present.

14. Storage jar. Coarse fabric which breaks with a rough fracture. Many cavities. Many small quartz granules. Sparse to common amorphous red and black inclusions.

15. Very open matrix; many large irregular cavities. Many medium-sized amorphous black inclusions. A few similar dark red ones. Some very small light-coloured quartz granules.

16. Mortarium fabric. Fine grained matrix with many well-distributed small white quartz granules. Many small to medium-sized amorphous red granules. Very dark (red?) surface grits which break with a metallic fracture. MK - 5 (4)(Oxford) and 18c (4)(Nene Valley, Oxford & Verulamium).

17. Fine-grained white matrix with very few inclusions. Those present include very small amorphous black lumps and very small quartz granules.

18. Reasonably fine matrix with many small granules of grey quartz. Occasionally larger quartz granules. A few black granules. A good scattering of amorphous red inclusions. MK - 7 (3)(Central Gaul).

19. Unused.

20. Fairly fine fabric with a scattering of small to fairly large quartz granules. Some thin linear cavities. Large quartz granules are grey while the smaller ones are clear. MK - 6 (4)(Lower Nene Valley).

21. Coarse whiteware fabric with many variably-sized white quartz granules. A small number of small red inclusions. MK - 18g (4)(Ver).

22. Mortarium fabric. Homogeneous mixture of white matrix, clear quartz granules and glassy red/orange inclusions. Quartz can be brown or grey. Matrix appears glassy and breaks with a rough fracture. Soft.

23. Coarse greyware fabric with many quartz inclusions; some fractured - clear, grey or brown. A few largish red amorphous lumps as well as a scattering of small white inclusions. A few large black inclusions. MK - 19/29 (5)(Alice Holt) and 31A (5)(Alice Holt); NM - N24 (5), N30 (4).

24. A coarse red Samian fabric with frequent large yellow amorphous inclusions. A scattering of amorphous red granules and a number of small quartz granules.

25. A fairly even pink-coloured Samian fabric with a number of small white inclusions which merge into the matrix. A general scatter of small/medium amorphous red lumps with a few small grey quartz granules.

26. A coarse greyware fabric with small to medium grey quartz granules and rounded white inclusions. Occasional quartz granules can be large. MK - 9e (3), 9f (3), 44c (5)(Rushden) and 24 (4)(Oxford); NM - N6 (4).

27. A coarse red matrix with many small rounded grey and white quartz granules. Many small cavities.

28. Very coarse shelly fabric with some grey quartz inclusions. Probably not a Roman fabric, possibly Iron Age. NM - NA1 (4), NA17 (4).

29. Medium-coarse mortarium fabric with many quartz granules. Larger ones tend to be brown while the smaller ones are grey. Some very small metallic black inclusions. Some cavities. MK - 11 (3)(Med/Post Med) and 39 (5)(Oxford). According to a note with the pottery at MK this is the same as Magiovinium 93; NM - NB8 (3); WV - Type 3. (3).

30. Mottled pink and white Samian fabric with many hollow white ovoids. Many small white inclusions. A small number of vesicular amorphous red/black inclusions.

31. Fine pink Samian fabric with many evenly spread small white inclusions. Some cavities.

32. Rough white fabric with few inclusions. Odd quartz and amorphous inclusions. Some cavities. MK - 18A (3) and 23abc (4)(Rhine-land, Gaul & Colchester).

33. Coarse orange fabric with a scattering of large grey or white quartz granules. MK - 24 (2), 40 (5), 41c (3), 41H (5) and 41J/K (5).

34. A very rough storage jar fabric. Soft with some quartz grains, pale yellow lumps, amorphous red/black lumps. Many cavities.

35. Fine dark pink Samian fabric with many small inclusions which do not noticeably affect the colour. These are black, white and red. Some small quartz inclusions.

36. Samian fabric; similar to Fabric 35 but coarser; inclusions larger and more noticeable.

37. Coarse pink Samian fabric with a large number of small white inclusions - some large ovoids. Despite inclusions the colour remains pink.

Saxon fabrics

72. Coarse fabric with many quartz granules of varying sizes. Colour of quartz ranges from grey to brown; larger granules tend to be brown.

73. Finer fabric than 72. A few large quartz granules present; tend to be brown. Some small white inclusions. Also present are empty rounded cavities lined with a white material - could be shell.

74. Coarse fabric with many large quartz granules - more than in fabric 72; generally grey. A few infrequent white inclusions (shell?).

75. Coarse fabric with many shell fragments.

Forms

Rim, handle and base types are too numerous to illustrate in this present work. The full list, together with the fabric type series, may be consulted at the headquarters of the Society.

Typological features

Those used in the analysis are as follows:

- 1) Rilling
- 2) Burnishing - stripes, intertwining, curved lines, areas, zones, lattice, radiating, lines with offsets and zig-zag
- 3) Silvered areas
- 4) Demi-rosettes
- 5) Graffito
- 6) Colour-coat - red, orange, grey, white/cream, black and metallic
- 7) Chattering
- 8) Rouletting
- 9) Indentations
- 10) Carination
- 11) Combing
- 12) Perforation
- 13) Kink in pot profile
- 14) Mica-dusted
- 15) Dimples
- 16) Sooting
- 17) Thinned rims in 'dog dishes'
- 18) Grooves - straight and zig-zag
- 19) Notches on rim
- 20) Scratched cross
- 21) Barbotine - lines and dots
- 22) Sandcast
- 23) Lattice - single line and multiple line
- 24) Impressed small-square holes
- 25) Grass impressions on surface
- 26) Mortarium grits - pink/white and black
- 27) Paint - white and red/orange

RESULTS

Roman

Table A shows the amount of each Roman fabric and as a percentage by weight (g) and eve. In some cases the proportion is very small and has been recorded as zero.

Table A

The amount of each fabric and as a percentage of eve and weight

<i>Fabric</i>	<i>eve</i>	<i>%eve</i>	<i>weight</i>	<i>%weight</i>
1	2.16	5.1	75	3.7
2	3.26	7.7	2460	7.1
3	16.70	39.5	12100	35.0
4	1.72	4.1	1790	5.2
5	0.19	0.0	90	0.0
6	5.87	13.9	4330	12.5
7	1.82	4.3	1152	3.3
8	0.48	1.1	300	0.0
9	0.00	0.0	230	0.0
10	0.15	0.0	90	0.0
11	1.05	2.5	1425	4.1
12	0.11	0.0	435	1.3
13	0.48	1.1	615	1.8
14	0.10	0.0	1255	3.6
15	0.31	0.0	330	0.0
16	0.52	1.2	1765	5.1
17	0.00	0.0	105	0.0

18	1.73	4.1	575	1.7
20	0.01	0.0	145	0.0
21	0.00	0.0	465	1.3
22	0.07	0.0	55	0.0
23	0.35	0.0	170	0.0
24	1.31	3.1	340	0.0
25	0.24	0.0	85	0.0
26	1.12	2.7	650	1.9
27	0.48	1.1	485	1.4
28	0.05	0.0	20	0.0
29	0.00	0.0	240	0.0
30	0.20	0.0	105	0.0
31	1.30	3.1	925	2.7
32	0.00	0.0	165	0.0
33	0.00	0.0	40	0.0
34	0.00	0.0	175	0.0
35	0.05	0.0	5	0.0
36	0.00	0.0	5	0.0
37	0.52	1.2	125	0.0

Clearly the two most abundant fabrics are 3 and 6. Fabric 3 is, in general, a grey fabric heavily tempered with quartz granules while fabric 6 is a heavily shell-gritted ware.

Twelve vessel forms were designated and the proportion of each present is shown in Table B.

Table B

Pottery by vessel form

<i>Form</i>	<i>eve</i>	<i>%eve</i>	<i>weight</i>	<i>%weight</i>
Amphora	0.00	0.0	200	0.0
Beaker	2.39	5.6	540	2.7
Bowl	10.90	25.7	5630	28.3
Castor box	0.19	0.0	40	0.0
Dog dish	5.88	13.9	3145	15.8
Flagon	0.71	0.0	45	0.0
Flanged bowl	3.24	8.1	1320	6.6
Jar	17.08	38.4	4425	21.4
Lid	0.07	0.0	20	0.0
Mortarium	2.10	5.0	3585	18.0
Storage jar	0.44	1.0	1000	5.0
Body sherds	0.05		14683	

The most abundant fabric, 3, was used in the forms shown in Table C.

Table C

Vessels in fabric 3

<i>Form</i>	<i>eve</i>	<i>%eve</i>	<i>weight</i>	<i>%weight</i>
Beaker	0.20	1.2	65	0.0
Bowl	5.27	31.6	3160	42.6
Dog dish	4.43	26.5	2370	31.9
Flagon	0.31	0.0	35	0.0
Flanged bowl	1.58	9.5	745	10.0
Jar	4.74	28.4	1080	14.6
Mortarium	0.13	0.0	100	1.3
Body sherds	0.00		4545	

The shell-gritted fabric 6 was the next most common fabric; the forms in this fabric are shown in Table D.

Table D
Vessels in fabric 6

<i>Form</i>	<i>eve</i>	<i>%eve</i>	<i>weight</i>	<i>%weight</i>
Bowl	0.34	5.8	135	7.6
Flanged bowl	0.23	4.0	110	6.2
Jar	4.91	84.4	1320	74.6
Storage jar	0.34	5.8	205	11.6
Body sherds	0.05		2545	

Tables C & D show the essential difference between the two fabrics; fabric 6 was used mainly for jars and storage jars while fabric 3 was predominantly used for bowls and dog dishes. This presumably reflects the more durable nature of fabric 3 and its harder smoother surface which is more suitable for food vessels.

The results of the analysis can also be considered from the point of view of vessel form and the following tables show the fabrics used in the manufacture of the more common forms.

Table E
Fabrics used in the manufacture of Jars

<i>Fabric</i>	<i>eve</i>	<i>%eve</i>	<i>weight</i>	<i>%weight</i>
1	1.05	6.4	280	6.5
2	1.95	11.9	400	9.3
3	4.74	29.0	1080	25.2
4	1.24	7.6	490	11.4
5	0.05	0.0	10	0.0
6	4.91	30.0	1320	30.8
7	0.42	2.6	65	1.5
10	0.15	0.0	45	1.0
15	0.15	0.0	25	0.0
18	1.00	6.1	420	9.8
20	0.01	0.0	20	0.0
24	0.41	2.5	50	1.2
25	0.08	0.0	5	0.0
26	0.09	0.0	25	0.0
27	0.08	0.0	20	0.0
35	0.00	0.0	25	0.0

Table F
Fabrics used in the manufacture of Dog Dishes

<i>Fabric</i>	<i>eve</i>	<i>%eve</i>	<i>weight</i>	<i>%weight</i>
1	0.67	11.4	310	9.9
2	0.22	3.7	170	5.4
3	4.43	75.3	2370	75.4
4	0.11	1.9	50	1.6
15	0.14	2.4	130	4.1
26	0.21	3.6	85	2.7
27	0.10	1.7	30	0.0

Table G
Fabrics used in the manufacture of Bowls

<i>Fabric</i>	<i>eve</i>	<i>%eve</i>	<i>weight</i>	<i>%weight</i>
1	0.30	2.8	105	1.9
2	0.33	3.0	115	2.0
3	5.27	48.3	3160	56.1
4	0.29	2.7	45	0.0
5	0.14	1.3	35	0.0
6	0.34	3.1	135	2.4
7	0.45	4.1	220	3.9
8	0.22	2.0	70	1.2
9	0.00	0.0	50	0.0
15	0.02	0.0	15	0.0
18	0.05	0.0	5	0.0
23	0.35	3.2	115	2.0
24	0.15	1.4	75	1.3
25	0.16	1.5	80	1.4
26	0.57	5.2	220	3.9
27	0.15	1.4	45	0.0
28	0.05	0.0	20	0.0
30	0.20	1.8	20	0.0
31	1.30	11.9	920	16.3
32	0.00	0.0	50	0.0
35	0.05	0.0	5	0.0
37	0.52	4.8	125	2.2

Table H
Fabrics used in the manufacture of Mortaria

<i>Fabric</i>	<i>eve</i>	<i>%eve</i>	<i>weight</i>	<i>%weight</i>
3	0.13	6.2	100	2.8
4	0.00	0.0	5	0.0
7	0.10	4.8	40	1.1
9	0.00	0.0	20	0.0
11	1.00	47.6	1220	34.0
13	0.48	22.9	395	11.0
16	0.32	15.2	1600	44.6
22	0.07	3.3	35	0.0
24	0.00	0.0	30	0.0
29	0.00	0.0	140	3.9

Table I
Fabrics used in the manufacture of Flanged Bowls

<i>Fabric</i>	<i>eve</i>	<i>%eve</i>	<i>weight</i>	<i>%weight</i>
1	0.14	4.3	50	3.8
2	0.64	19.8	230	17.4
3	1.58	48.8	745	56.4
4	0.08	2.5	40	3.0
6	0.23	7.1	110	8.3
7	0.07	2.2	25	1.9
8	0.23	7.1	55	4.2
12	0.06	1.9	20	1.5
24	0.21	6.5	45	3.4

Table J
Fabrics used in the manufacture of Beakers

<i>Fabric</i>	<i>eve</i>	<i>%eve</i>	<i>weight</i>	<i>%weight</i>
2	0.12	5.0	25	4.6
3	0.20	8.4	65	12.0
4	0.00	0.0	5	0.0
7	0.78	32.6	110	20.4
8	0.03	1.3	5	0.0
12	0.05	2.1	185	34.3
16	0.20	8.4	20	3.7
18	0.29	12.1	35	6.5
23	0.00	0.0	10	1.9
24	0.47	19.7	35	6.5
26	0.25	10.5	45	8.3

Care must be exercised when trying to draw conclusions from the above tables. As an example, in Table H 1360 g of the 1600 g of fabric 16 comes from one large sherd of a *mortarium*.

The Samian covered in detail below is included in the above analysis.

SAMIAN by Dave Warren

Except for one complete, but not intact, vessel and one or two fragments broken down into yet smaller sherds, each of the vessels was represented by a single sherd.

The commonest form was Dr 18/31 of which two of the three basal sherds showed them to be R (rouletted) variants. Where the vessels were only evidenced by a rim sherd, in most cases the angle of the wall slope suggests they were Dr 18/31. The other relatively common form was the Dr 33. Three had concave sides two of which also had medial grooves, the third an internal groove at the top. A fourth rim possessed a slightly convex wall with an inside groove at the top and a faint multiple line opposite on the outside. All the 33s represented are very small and, like the last example, would tend to suggest relatively early vessels, except that the fabrics indicate Central Gaulish (CG) origins. The dearth of Samian from any source in the early 2nd century makes a date earlier than late-Trajanic unlikely. One of the fabrics is rather brown which indicates an Antonine date. The evidence of stamps 2 and 3 below, which also appear to be Dr 33, makes a Hadrianic-Antonine date for these vessels the most probable, with the earlier part of this period the more likely.

Other forms noted are a Dr 38 (flange fragment), a body sherd and a basal fragment (different vessels) of Dr 45(?) with pink grits, a Samian-like fabric but a finish which is hardly more than a colour wash. There is a complete absence of typical 1st century

types such as Dr 15, 17, 18 or 27 and most notably little decorated material. Some Samian material from the site is known to be missing and it is possible that this includes some of the above forms.

Most if not all the fabrics are CG with a micaceous content of biotite and possibly some bronzite, but not in quantities indicating a very early date. Also present are white specks (frequently hollow) and often occasional red iron spots and fuzzy black patches. One basal sherd of a Dr 18/31R has rather dense creamy white inclusions in the fabric under a bright but 'grainy' gloss and may be Flavian S Gaulish (SG) but a noticeable amount of fine mica is also present. None of the Samian appears to be of E Gaulish (EG) origin.

Samian Stamps

Only three were recovered and all are of CG potters.

1) LIBERTIM (Libertus {ii}. Lezoux CG) Form Dr 18/31R. Width 26 cm height 6 cm. In Oswald (1931) Libertus (i) is shown as making 18/31s but not Libertus (ii) who, however, is the one against whom the stamp is recorded. Stamps with the same spelling are recorded from sites associated with the Antonine wall but it is not known if the dies are the same. Oswald (1931) dates Libertus (ii) as Vespasian-Trajanic and Johns (1971) to Trajan-early Hadrianic but others presumably on the basis of the Antonine finds make him somewhat later. However, the quality of the red fabric which is hard, dense and given to conchoidal fracturing and with a very good gloss is CG. It looks rather like the description of Les Martres-de-Veyre fabric but Johns indicates he was inclined to experiment with different materials and firing in his workshop at Lezoux. This looks like one of his better efforts.

The width to height ratio of 4.33 is high when compared with illustrated examples in Oswald and Pryce (1920) where the ratio decreases as the form evolves towards Dr 31. This together with the quality suggests Johns is correct as to date span with perhaps an early Hadrianic date preferred, i.e. soon after central Gaul became the chief source of Samian imports.

2) POTTACI (Pottacus. Lezoux CG) Form Dr 33? Basal sherd only. The wall of the vessel has been completely removed down to the interior angle with the base which is just visible and Dr 33s are the only small form associated with this potter. Date, Hadrianic to Antonine. The finish on the surviving exterior is thin, patchy and fairly dull indicating perhaps a later rather than early date.

3) MARTINI (Martinus. Lubie CG) Form Dr 33

(Fig 17 no. 210). This potter is dated by Oswald very loosely from Domitian to Antonine but as he also dates Lubie to between AD 120-160 and the fabric is undoubtedly CG a Hadrianic-Antonine date is reasonable. This was a surface find.

The Martinus stamp is on a base which like the Pottacus one has had the wall of the vessel broken away down to the internal angle with the base. Although in neither case has the break been smoothed down, it is possible that both were intended to serve as crude gaming counters.

The decorated material is recorded in a note contemporary with the excavation as being of Hadrianic-Antonine date. Unfortunately this cannot be verified as it is not amongst the surviving pottery from the site. However, the date is reasonable, given the date ascribed to the plain wares.

Saxon

Table K

The amount of each fabric and as a percentage of eve and weight.

<i>Fabric</i>	<i>eve</i>	<i>%eve</i>	<i>weight</i>	<i>%weight</i>
72	0.03	4.1	45	13.2
73	0.00	0.0	20	5.9
74	0.66	89.2	270	79.4
75	0.05	6.8	5	1.5

POTTERY DISCUSSION

The analysis of the pottery from the villa shows that the most common vessels were jars, bowls, 'dog dishes', flanged bowls and mortaria. This is very much what might be expected as these vessels cover the storage, preparation, presentation and consumption of food. These proportions are very similar to those found at Magiovinium where jars were 44%, bowls 22.3%, storage jars 8.29%, dishes 7.96% and beakers 7.89% (Parminter, 1987).

The most abundant fabric, 3, compares with a number of fabrics found at Milton Keynes and Newnham Marina and the quartz inclusions make it likely that the ware was made somewhere to the N or NW where the greensand outcrops, as this is probably the source of the quartz tempering. Interestingly, a similar, almost indistinguishable medieval fabric from Dunstable, M1, has been identified as coming from a kiln at Flitwick (Green & Home, 1991). It is therefore reasonable to expect the kiln from which fabric 3 comes to be situated in a similar geological position to Flitwick.

Fabric 6, the second most abundant fabric is what is generally referred to as 'native ware' and is more difficult as regards kiln site. It is likely that this fabric comes from a variety of kilns, as a heavily shell-gritted pot from one kiln will be indistinguishable from that from another. A kiln producing this fabric has been identified at Harrold, near Bedford (Simco, 1984).

Fabric 23 appears to be from Alice Holt and the small quantity found shows the villa to be near the northern edge of the market.

The proportion of Samian from the site is 9.7% on the basis of eve and 5.4% by weight. It could be argued that the complete Samian vessel found in the flue of hypocaust 2 should be removed from this calculation as it may well represent a special deposition; it must have been an old pot when it was placed in this position when the hypocaust was destroyed. Even so the proportion of Samian is still 7.3% by eve and 3.5% by weight. This is a high proportion when we consider that during the 3rd and 4th centuries samian was not imported into the country and must represent the residual material imported to the site during the first 2 centuries AD. The Samian recorded in this analysis is not the total found as there are written references to material which cannot now be located. The percentage of Samian found at Latimer villa was 6.8%.

The quality and quantity of Samian is usually thought to be indicative of affluence but Evans (Evans, 1981) argues that earthenware of any sort was considered unfit for the upper class dining table by the 2nd century AD. The researches of Griffiths (Griffiths, 1989) seem to show that Samian was indeed a 'down market' ware as it seems to occur in a greater percentage on lower status sites. Perhaps the higher-than-expected percentage of Samian shows that the villa had lowly beginnings in the 2nd century AD.

The colour coat wares seem to be under-represented with only 1.5% by eve and 0.2% by weight. The low proportion by weight is easy to accept as these vessels tend to be small and light but the true proportion should be given by the eve.

Poppy beakers, an early form, are virtually absent while flanged bowls of the late 3rd and 4th century are common (8.1% eve, 6.6% weight).

In this analysis no attempt has been made to try to link all fabrics to a known kiln. As Darling (Darling, 1989) has pointed out 'unless there are distinctive inclusions, the identification of the source area (let alone kiln/s) on the basis of FABRIC ALONE is remote.'

The Saxon material comes predominantly from above the black soil over the destruction rubble of hypocaust 3. Inspection of the rims shows at least 10 different pots are represented. Three pots have stamps; one has dimples, another has an uneven triangle while the third has a single ill-formed stamp. All three have been examined by Lady Teresa Briscoe. Her comments are in Appendix A.

CONCLUSIONS

Although the pottery recovered from the villa during this excavation (34.89 kg) must be a small proportion of the pottery used on the site during its 'life', we can draw some conclusions.

Imported pottery included Samian ware and some of the colour-coated ware, which may be Rhenish rather than Nene valley. Small amounts like the parchment ware and some *mortaria* came from the Oxford kilns while some came from Verulamium, although this amount is less than might be expected. The *mortarium* by 'Doballus' appears to have come from Northamptonshire (Frere, 1984). Alice Holt in Hampshire also contributed some pots.

For its everyday pots the villa was reliant upon kilns situated somewhere to the N or NW where the greensand outcrops. Smaller numbers of 'native' pots came from a kiln or kilns, possibly in a river valley, producing shell-gritted pots.

POTTERY CATALOGUE

Fabrics are identified thus: (F3)

Parallels from Frere 1972, 1983, 1984 are identified as Ver followed by the pottery illustration number. Oxford wares in Young (1977) are identified as Ox followed by the reference letter and number. East Anglian Archaeology is abbreviated EAA.

Fig 9 West Wing

Nos. 1-8: from veranda, central section.

- 1 Jar (F3). Grey, burnished on rim and outside.
- 2 Storage jar (F6). Buff/grey.
- 3 Jar (F6). Buff/grey.
- 4 Jar (F3). Buff.
- 5 Jar (F6). Buff/grey.
- 6 Bowl (F3). Buff/grey.
- 7 Jar (F3). Grey, burnished over rim.
- 8 Grey sherd (F3) with lattice of thin burnished lines.

Nos. 9-13: from floor of room 15.

- 9 Bowl (F3). Grey, burnished on rim.
- 10 Bowl (F3). Grey.
- 11 Jar (F3). Grey.
- 12 Bowl (F3). Grey.
- 13 Bowl (F3). Light grey stripes, and also on top of rim.

Nos. 14, 15: from robbed hypocaust, room 18.

- 14 Mortarium (F22). Buff fabric, cream surface.
- 15 Flat base sherd (F2) apparently deliberately shaped to a rectangle. Grey.

Nos. 16-23: from area A.

- 16 Bowl (F3). Grey.
- 17 Jar (F6). Grey core, buff surface.
- 18 Bowl (F3). Light grey. (Ox R43, AD 100-300).
- 19 Jar (F3). Grey, burnished on rim. Two grooves at base of neck.
- 20 Bowl (F3). Grey. (Ox R43, AD 100-300).
- 21 Jar (F7). Orange fabric. Red colour coat over rim and outside body.
- 22 Sherd (F3). Grey fabric, surface on exterior of pot brown, covered with grey slip. Latter scraped off to show brown in two horizontal bands. Lattice decoration formed with parallel lines of 4 narrow grooves.
- 23 Sherd (F3). Grey. Burnished horizontal bands. Lattice decoration formed with 2-4 parallel thin burnished lines.

Fig 10 East Wing

No. 24: from entrance to veranda.

- 24 Jar (F1). Black paint on rim.

Nos. 25-30: from the courtyard.

- 25 Dog dish (F4). Grey, burnished on rim and base. Burnished curved lines on side.
- 26 Jar (F3). Grey fabric with orange surface inside pot, brown outside, and on inside of rim.
- 27 Base (F12). Cream.
- 28 Jar (F6). Buff/grey. Sooted on rim.
- 29 Jar (F2). Silver grey burnishing on inside of rim.
- 30 Base (F3). Fabric a sandwich of grey within brown, surface grey.

Nos. 31-33: from room 2.

- 31 Beaker (F7). Brown colour coat on orange fabric.
- 32 Inturned rim (F3). Grey.
- 33 Jar (F4). Grey with burnished horizontal stripes. (Ver 516, AD 115-130; Ver 1477, AD 240-350).

Nos. 34-37: from robbed S wall of room 2.

- 34 Dog dish (F3). Grey. (Ver 1396, AD 150-210).
- 35 Jar (F6). Grey. (EAA 20 Burgh Castle 116).
- 36 Mortarium (F7). Orange colour coat on pink interior. Pink and white grits. (Ox WC7, AD 240-400+)
- 37 Flanged bowl (F6). Rilled on exterior below flange. (Ver 1212, late 4th C; Ver 1258, AD 360-410+; Ver 2423, late 4th C).

Nos. 38-40: From outside S wall of room 2.

- 38 Flanged bowl (F1). Fabric a sandwich, grey within brown, surface grey. Burnished over rim.
- 39 Jar (F6). Grey.
- 40 Mortarium (F11). Buff fabric, surface cream, except gritted area, which is pink. Grits grey pink and red. (Ox M22, AD 240-400+).

No. 41: from pebble path N of room 2.

- 41 Bowl (F6). Reddish inside, grey outside and rim. Slightly burnished outside. (Ver 491, AD 105-155).

Room 1, hypocaust 1.

Nos. 42-48: from above layer of roofing tiles.

- 42 Dog dish (F1). Grey, burnished on rim and on slightly corrugated outer surface. (Ver 1360, AD 250-320; Ver 2558, AD 200-225 or 250-280).
- 43 Jar (F2). Grey, burnished on inside of rim and on outside.
- 44 Dog dish (F1). Grey, burnished curved decoration.
- 45 Jar (F2). Grey, burnished on rim.
- 46 Bowl (F5). Orange fabric, red colour coat. Groove inside rim.

- 47 Jar (F1). Grey, burnished over rim.
48 Flanged bowl (F1). Grey, silver grey burnishing.

Fig. 11 East Wing

Room 1, hypocaust 1 (continued).

Nos. 49-53: from fill of hypocaust channels.

- 49 Bowl (F3). Grey.
50 Jar (F6). Grey.
51 Flanged bowl (F1). Grey, burnished inside and out
52 Jar (F6). Buff with black exterior and inside rim.
53 Bowl (F3). Grey, lightly burnished. (Ver 727, AD 130-40; Ox R43.7, AD 100-300).

No. 54: from E wall of hypocaust 1.

- 54 Indented beaker (F12). Orange fabric with dark brown colour coat. (Ver 1132, AD 310-15).

Nos. 55-71: from furnace of hypocaust 1 (continued in Fig 12).

- 55 Flanged bowl (F3). Grey, smoothed interior. Burnished loop decoration. (Ver 1126, AD 300-315).
56 Dog dish (F3). Grey. Beaded rim and chamfered base.
57 Flanged bowl (F2). Grey, smoothed inside and out.
58 Dog dish (F1). Grey, unburnished.
59 Flanged bowl (F3). Grey, with lighter core.
60 Dog dish (F3). Grey, burnished on rim.
61 Flanged bowl (F3). Buff/grey, burnished interior.
62 Base of dog dish (F3). Grey, with radiating burnished lines underneath.
63 Bowl (F7). Grey fabric, orange-brown surface, burnt after break. Imitation of Dr 36.
64 Dog dish (F3). Grey, burnished inside, burnished lines outside. Groove below rim. (Ver 2535, AD 360-370).
65 Mortarium (F16). Off-white fabric with red-brown colour coat. Dark grits. (Ox C97).
66 Lid of Castor box (F11). Cream fabric with orange colour coat. Chattered decoration.
67 Jar (F1). Grey, burnished over rim.
68 Jar (F4). Grey. Burnished zones over rim and exterior of neck and shoulder. (Ver 865, AD 155-60).
69 Jar (F4). Similar to 68, but with pitted interior. (Ver 387, AD 90-120).
70 Jar (F4). Similar to 68 and 69. (EAA 5 Brampton 138 late 2nd - early 3rd C).
71 Jar (F3). Orange.

Fig 12 East Wing

Nos. 72-88: hypocaust 1 furnace (continued).

- 72 Jar (F6). Grey fabric, surface pink/grey.
73 Jar (F6). Grey fabric, buff surface. Sooted inside rim. (EAA Burgh Castle 220).
74 Jar (F6). Grey fabric, buff surface.
75 Jar (F6). Grey/buff.
76 Jar (F6). Buff/grey.
77 Bowl (F3). Grey, with lighter core.
78 Jar (F6). Grey/buff.
79 Jar (F6). Buff/grey.
80 Jar (F6). Grey.
81 Jar (F6). Light brown, dark colouring on inside of rim and outside of neck.
82 Jar with recessed rim (F3). Grey.
83 Jar (F10). Buff, with dark coloration predominantly on inside of rim. (Ver 1077, AD 150-200).
84 Jar (F6). Buff/grey.
85 Jar (F6). Buff inside, grey outside and inside rim. (Ver 278, AD 80-120).
86 Jar (F3). Grey.
87 Base of bowl (F7). Orange fabric with grey core. Worn red

colour coat.

- 88 Storage jar (F14). Grey core, buff surface. (Ver 2339, AD 280-410+).

Room 5, hypocaust 2. Nos. 89-94: from main flue.

- 89 Flanged bowl (F2). Grey.
90 Jar (F5). Orange with red colour coat. (Ox C78; Ver 1197 4th C)
91 Flanged bowl (F3). Grey.
92 Complete jar (F18). Buff, with dark patches on rim and exterior. (Ox BW2, AD 250-400).
93 Flanged bowl (F4). Brown fabric, brown colour coat. Copy of Dr 38.
94 Jar (F3). Grey.
Also a complete Samian bowl (F31), not illustrated (see Plate 5).

Fig 13 East Wing

Hypocaust 2 (continued).

Nos. 95-111: from channels of hypocaust.

- 95 Mortarium (F11). Orange fabric, pink/buff surface. Red and black grits.
96 Part of the base of a bowl, white with red painted design. (Ox P24, AD 240-400+).
97 Mortarium (F11). Orange fabric, buff surface. Pink grits (Ox M20, AD 240-300).
98 Beaker (F18). Grey fabric, red colour coat on exterior of pot. White barbotine decoration.
99 Mortarium (F11). Buff. Red and pink grits. (Ox M17, AD 240-300).
100 Sherds (F2). Grey. Horizontal grooves and curved burnished lines.
100 Sherd (F2). Grey, burnished. Three horizontal grooves. Dimples, impressed and appearing as bulges inside pot.
102 Mortarium (F13). Buff fabric, surface cream. Pink and brown grits. (Ox M22, AD 240-400+).
103 (scale 1:2) Base of pot (F26). Burnished band round circumference of interior and graffiti drawn with burnished lines: a cross, 4 parallel lines and an oval shape with lines crossing it (it has been suggested that this represents a fish).
104 Mortarium (F11). Fabric buff, surface cream/pink. Grits pink. (Ox M17, AD 240-300; M22, AD 240-400).
105 Dog dish (F3). Grey, burnished zones and intertwining lines. Part of the outside of rim abraded as if by filing. Three nicks across angle of base in 2 separate places. White granular deposit inside. (Ver 1175, AD 190-350).
106 Bowl (F3). Grey fabric, brown surface. Grey horizontal zones inside scraped away to reveal brown surface in lattice pattern. Similar to no. 107. Patches of white deposit inside.
107 Bowl (F3). Grey. Zones of white colour wash inside and out. Lines scraped through it on interior to form carelessly drawn lattice pattern. (Ver 1286 AD, 350-400).
108 Nearly complete bowl (F3). Grey fabric with grey-brown surface. A grey, granular coating has been applied to the inside of the pot below the rim and scraped away to show the brown surface in a lattice pattern and 2 horizontal lines. At least 2 lines are drawn across the interior of the base and may have formed a design radiating from the centre. There are several bulges in the sides of the pot, some of which show on the inside only, and some also on the outside. There are patches of granular white encrustation on the exterior of the pot. This vessel and no. 106 are very similar. No. 107 is of similar design but different surface appearance. Comparable pots were found at Park Street (O'Neil, 1945 p86 and p92), Alice Holt (Lyne and Jefferies, 1979 Class 5B) and at Verulamium (Ver 1701, AD 280-330; Ver 1256, AD 350-410+; Ver 1286, AD 350-400).
109 Flanged bowl (F3). Grey, burnished inside and also outside, apart from narrow stripes.
110 Flanged bowl (F3). Grey, sooted outside.
111 Base (F3). Decoration of burnished lines on exterior of pot.

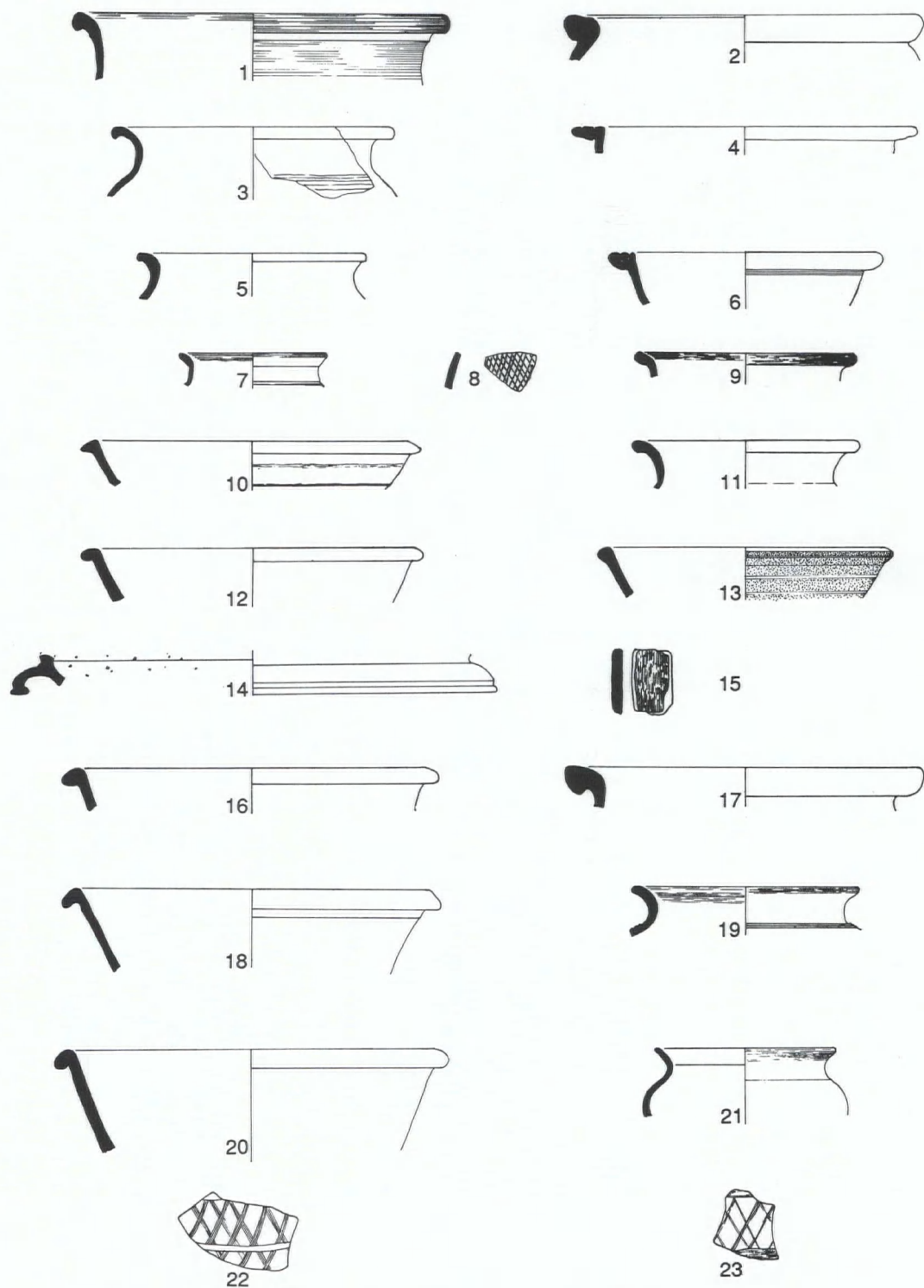


Fig 9 Pottery from the West Wing. Scale 1:4.

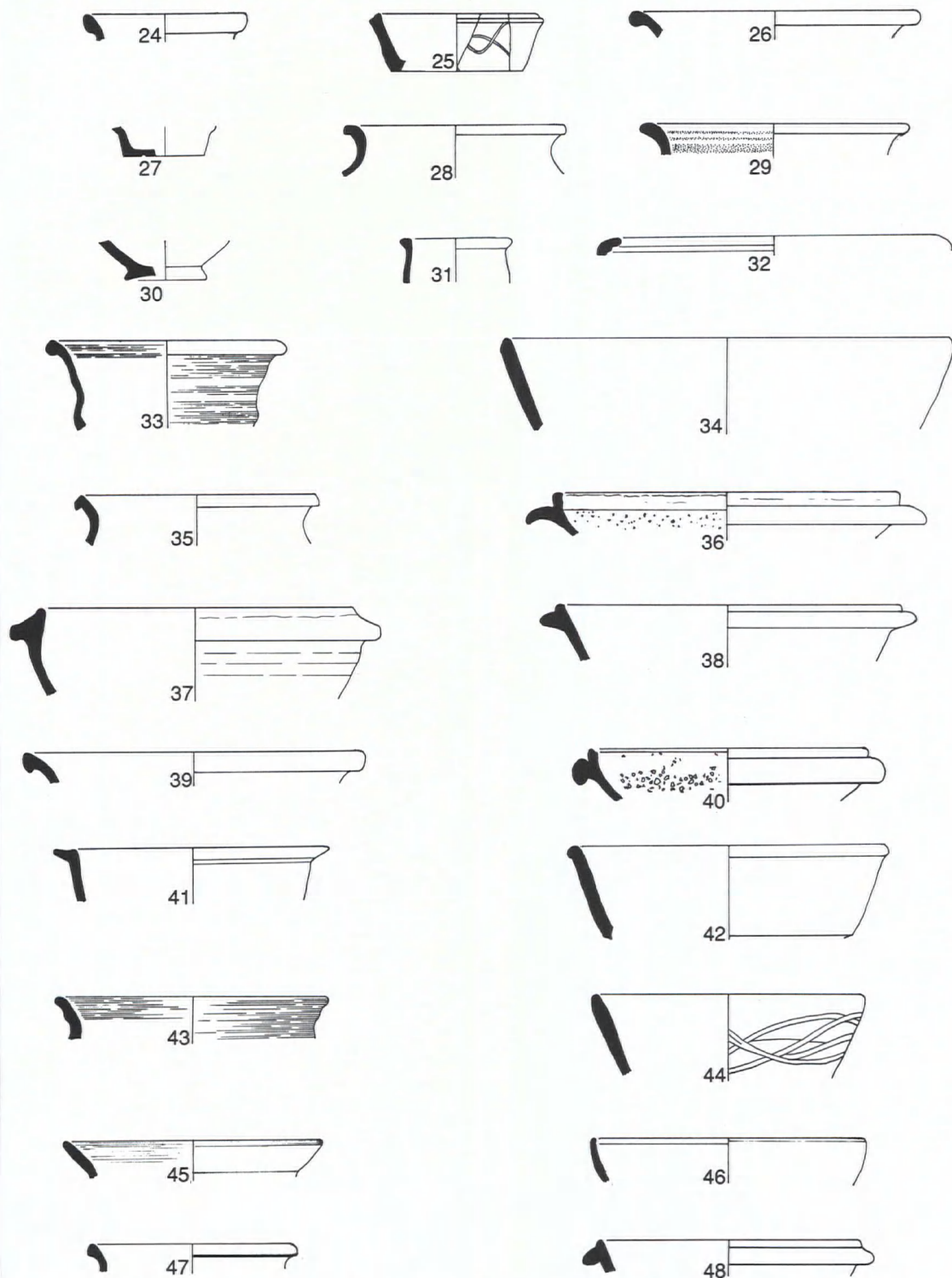


Fig 10 Pottery from the East Wing: Veranda, Courtyard, Room 2 and Hypocaust 1. Scale 1:4.

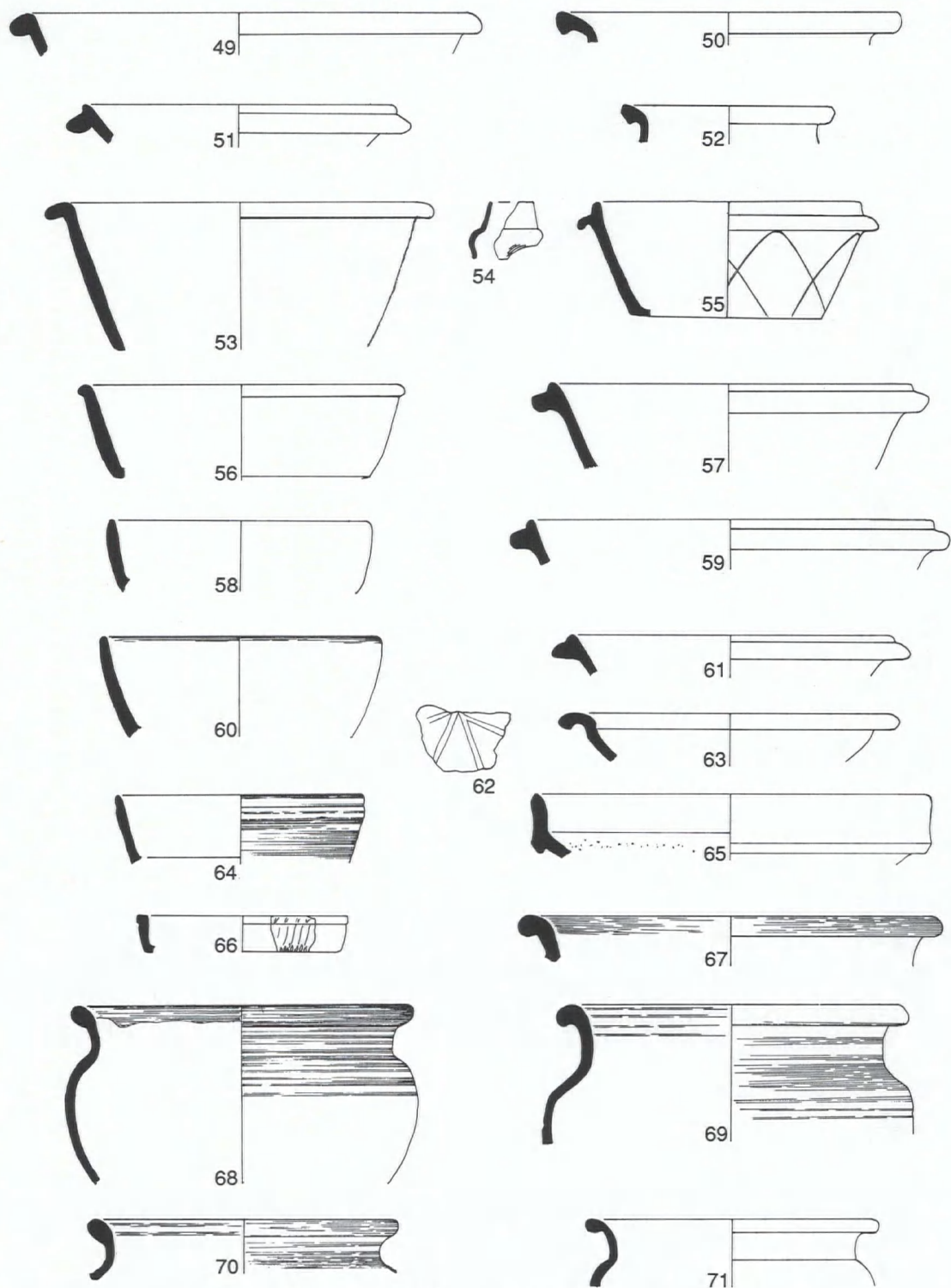


Fig 11 Pottery from the East Wing continued: Hypocaust 1. Scale 1:4.

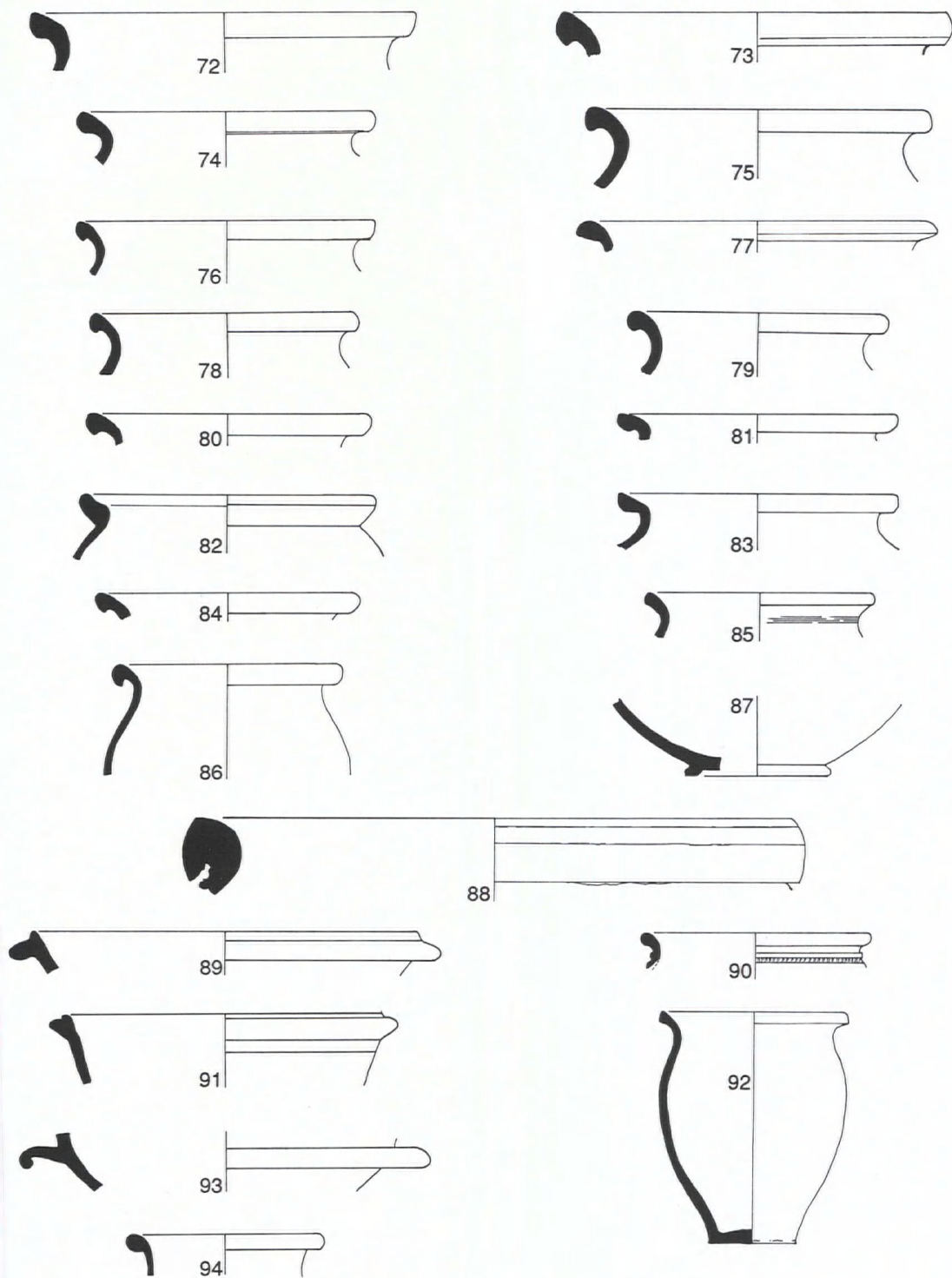


Fig 12 Pottery from the East Wing continued: Hypocausts 1 and 2. Scale 1:4.

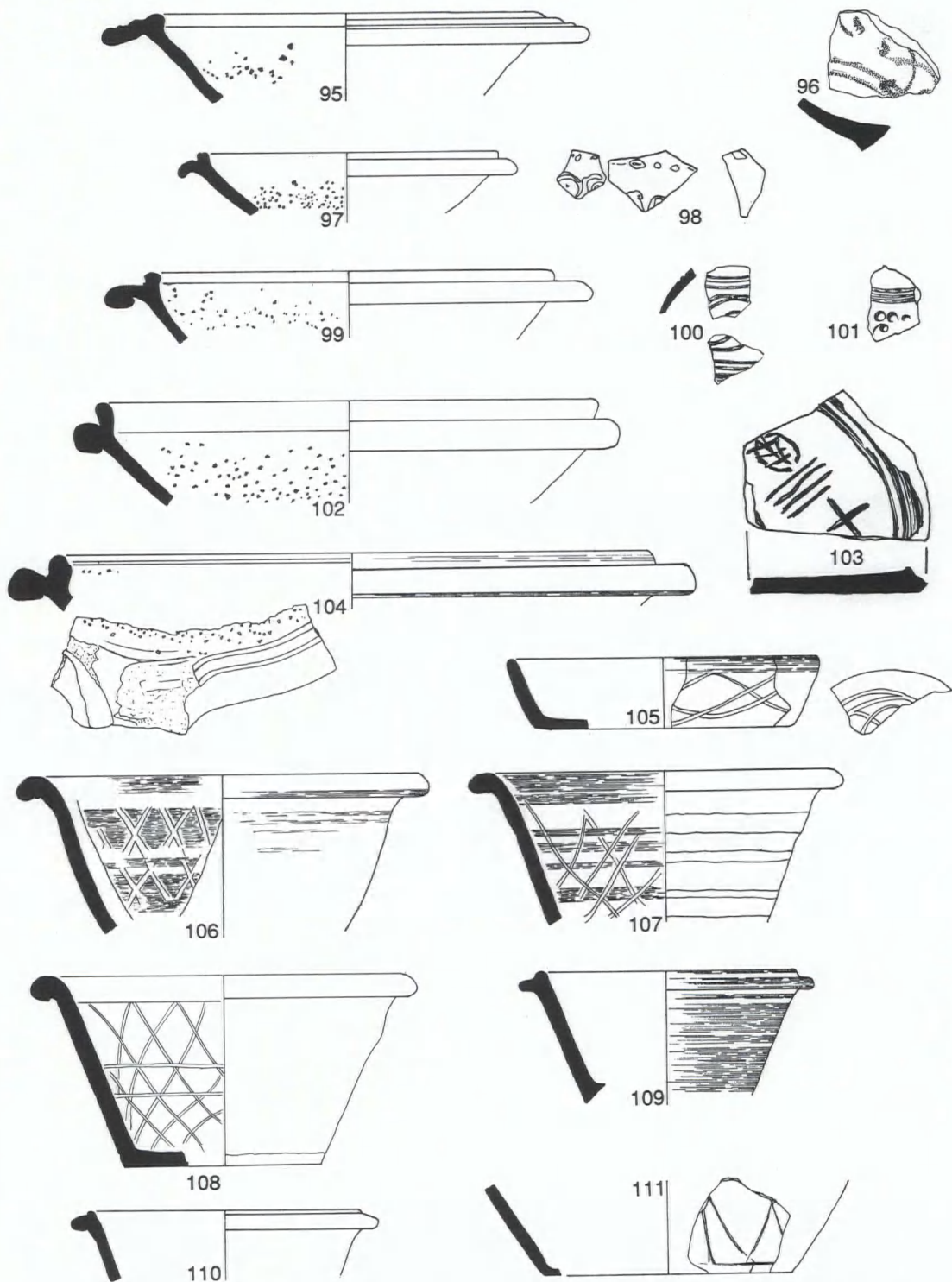


Fig 13 Pottery from the East Wing continued: Hypocaust 2. Scale 1:4 except no. 103 1:2.

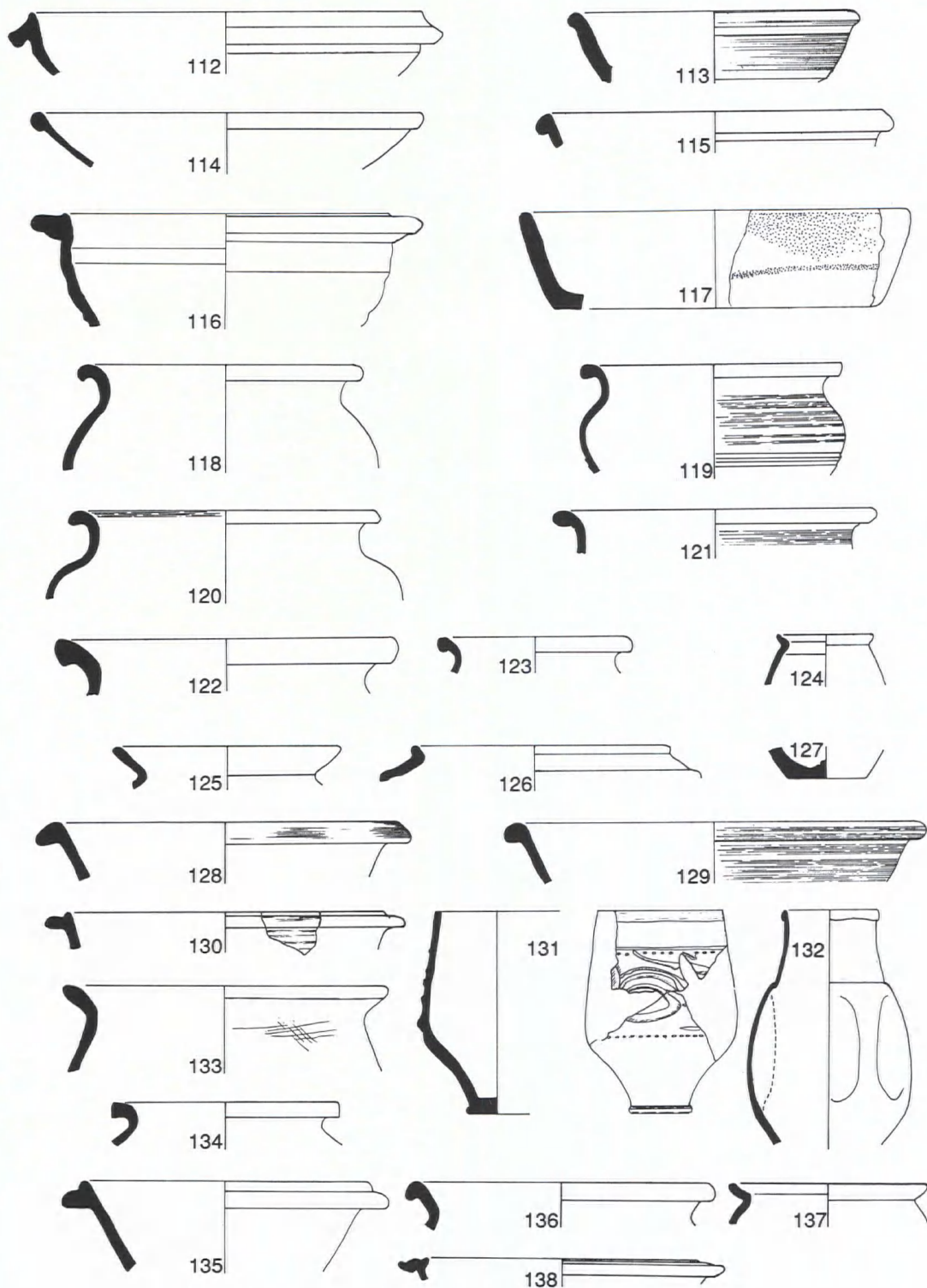


Fig 14 Pottery from the East Wing continued: Hypocausts 2 and 3. Scale 1:4.

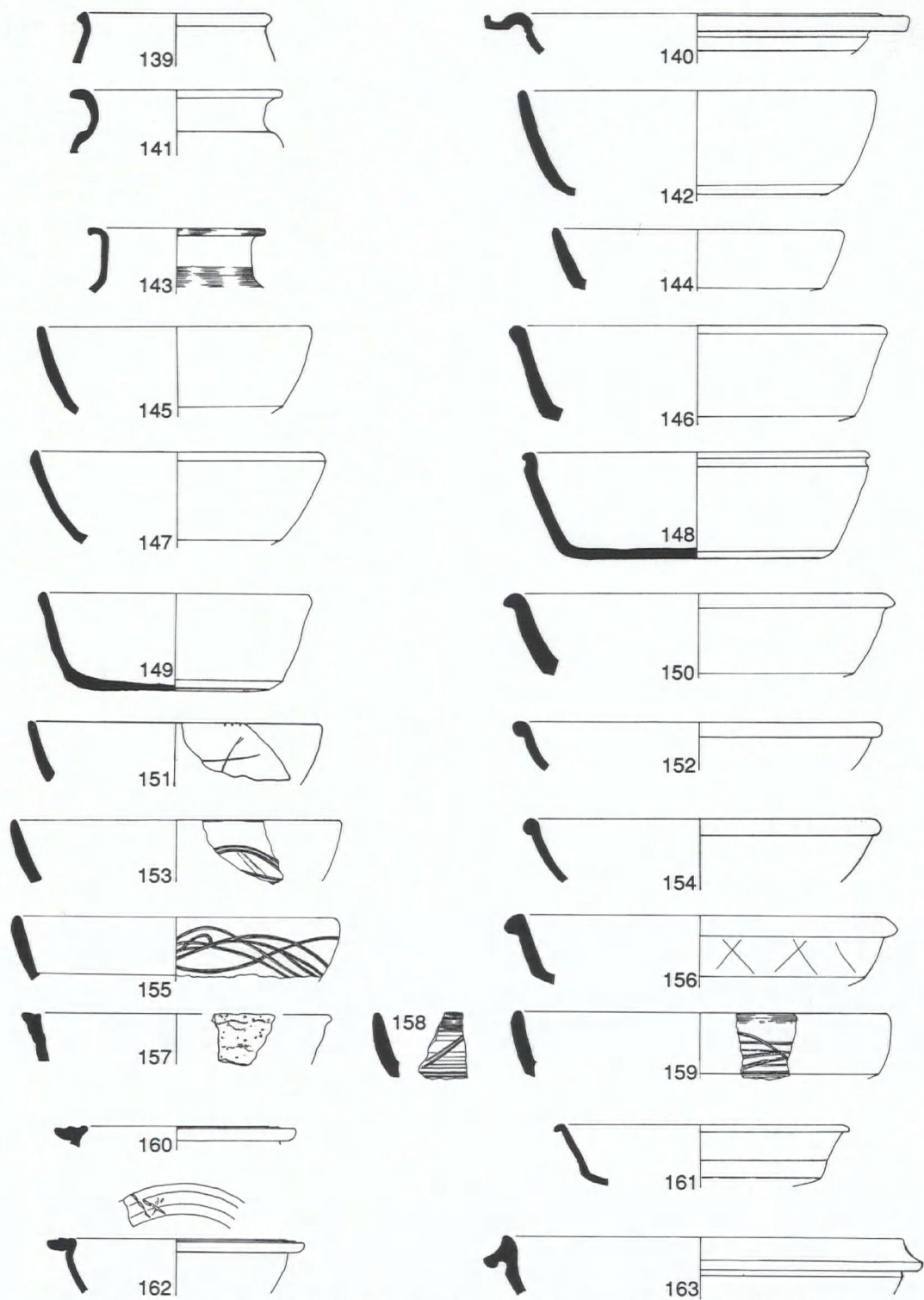


Fig 15 Pottery from the North Range: Room 9, Veranda and Refuse pits. Scale 1:4.

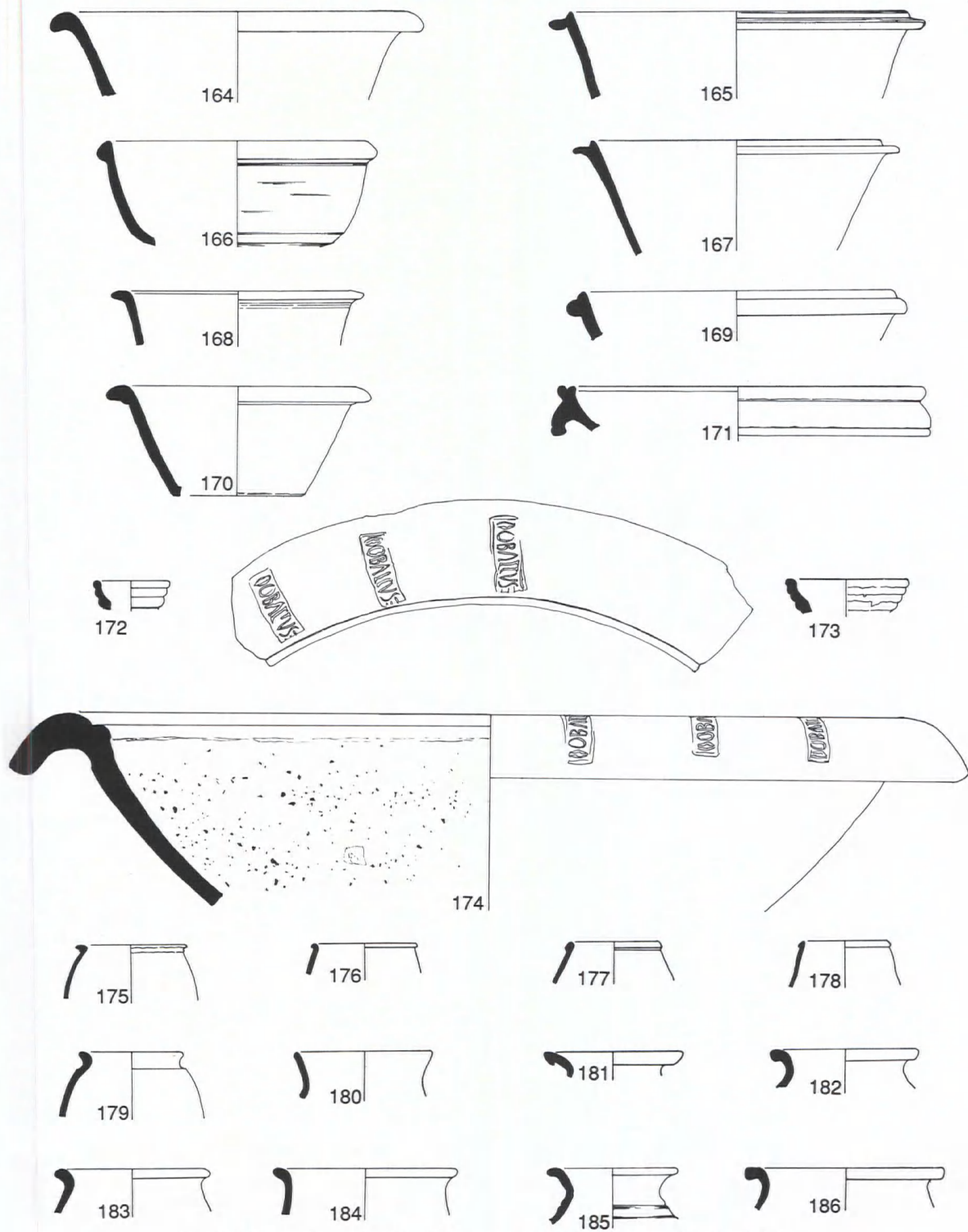


Fig 16 Pottery from the North Range continued: Refuse pits. Scale 1:4.

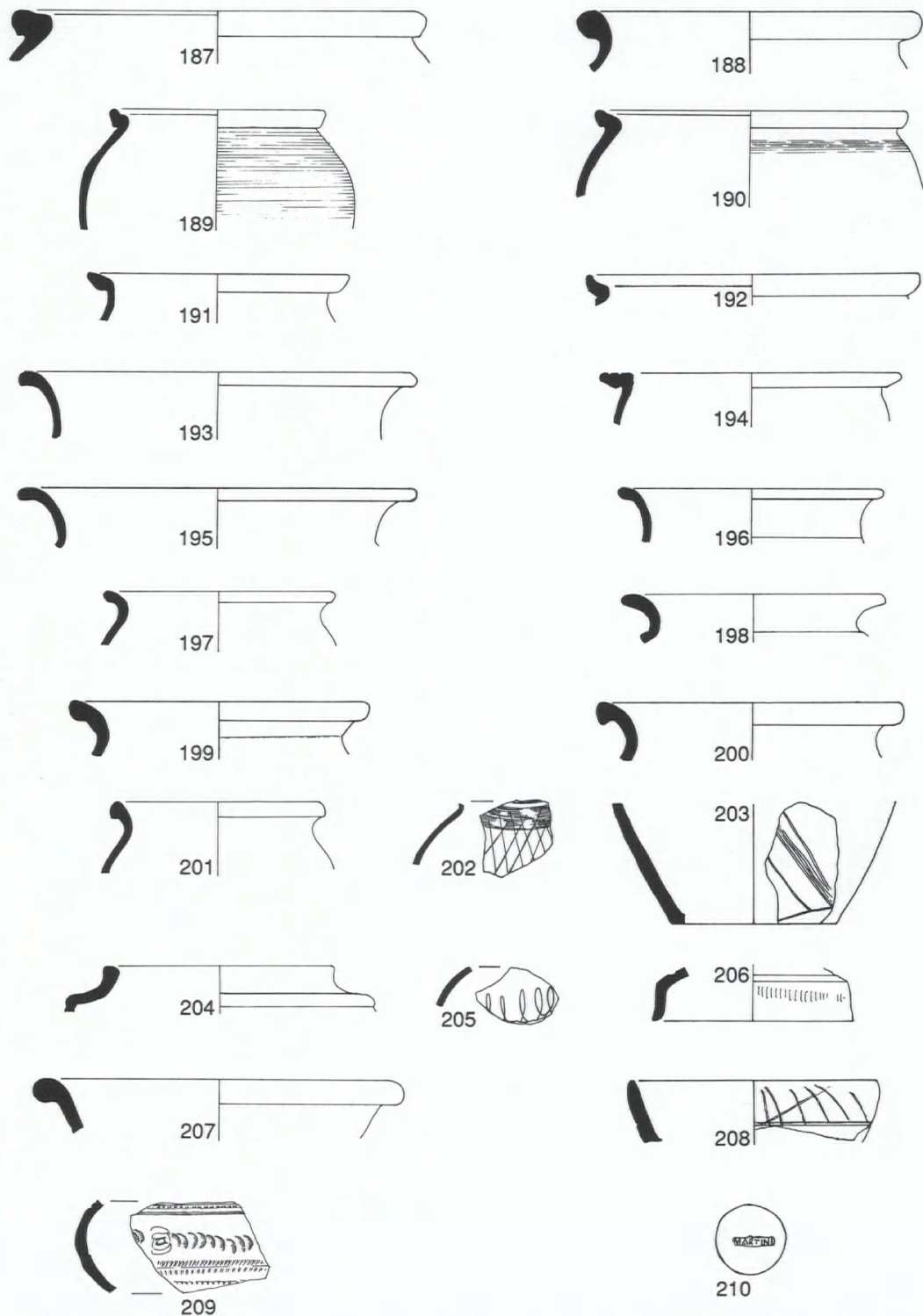


Fig 17 Pottery from the North Range continued: Surface finds. Scale 1:4 except no. 210 1:2.

Fig 14 East Wing

Nos. 112-127: from fill of channels of hypocaust 2 (continued).

- 112 Flanged bowl (F6). Grey core, buff surface.
- 113 Dog dish (F3). Grey, lower part of exterior burnished. Beaded rim, chamfered base.
- 114 Bowl (F7). Red fabric, dark red colour coat. Copy of Dr 31.
- 115 Bowl (F3). Core grey, surface grey inside pot, red outside. Light grey wash over rim, burnished.
- 116 Bowl (F3). Buff. Rough surface with patchy granular deposit on outside. (Ver 2466, AD 210-400).
- 117 Dog dish (F15). Fabric grey with brown outer layer on interior of pot. Patches and a horizontal line of cream colour wash on exterior. (Ver 2536, AD 360-400).
- 118 Jar (F3). Grey, burnished outside.
- 119 Jar (F2). Buff core, orange surface. Stripes of dark colour coat on inside of rim and outside of body. Grooves below shoulder.
- 120 Jar (F3). Grey, burnished inside rim and outside body.
- 121 Jar (F3). Grey, burnished outside.
- 122 Jar (F6). Buff/grey. (EAA 20, 219/20).
- 123 Jar (F3). Grey.
- 124 Beaker (F18). Buff fabric, red colour coat on outside of pot and over rim.
- 125 Jar (F3). Grey, burnished on rim and outside.
- 126 Jar (F3). Grey, burnished below rim on outside.
- 127 Base (F2). Grey.

Nos. 128-132: from lowest level of hypocaust 3

- 128 Bowl (F3). Grey core, brown surface. Cream colour coat on rim.
- 129 Bowl (F2). Grey. White colour coat on top of rim, burnished.
- 130 Flanged bowl (F3). Grey, burnished.
- 131 Beaker (F12). White fabric, brown/black colour coat. Barbotine decoration. (Ver 1205, probably mid 2nd to later 3rd C).
- 132 Indented beaker (F7). Orange fabric, red colour coat inside neck and on outside of pot.

Nos. 133-137: from the channels of hypocaust 3.

- 133 Jar (F6). Buff/grey.
- 134 Jar (F15). Buff, burnished inside rim.
- 135 Flanged bowl (F2). Grey, burnished. (Ox R47.2, 3rd C onward).
- 136 Jar (F7). Grey, with brown core.
- 137 Jar (F3). Grey core, orange/brown surface. Rough surface. (Ver 134, AD 60-75)

No. 138: from robbed E wall of hypocaust 3.

- 138 Bowl (F18). Cream fabric, orange surface.

Fig 15 North Range

No. 139: from cobble floor, room 9.

- 139 Beaker (F2). Grey.

Nos. 140-143: from robbed wall S of room 9.

- 140 Bowl (F27). Orange fabric with grey core. Traces of red colour coat inside. Mica-dusted. (Ox C49.1 and 2, AD 240-400+).
- 141 Jar (F1). Grey.
- 142 Bowl (F3). Grey.
- 143 Jar (F2). Grey, burnished on rim and below neck.

No. 144: from veranda, W end of N range.

- 144 Dog dish (F15). Buff. Chamfered base. (Ver 996 AD, 150-170).

Nos. 145-163: from refuse pits, W end of N range.

- 145 Dog dish (F3). Grey. Surface silvered, except on outside of rim.

- 146 Dog dish (F2). Grey, silvered on rim, burnished inside. Chamfered base. (EAA 5 Scole no. 150).
- 147 Bowl (F1). Grey. Chamfered base. (EAA 20 Fig 42).
- 148 Dog dish (F3). Grey. Groove below rim.
- 149 Dog dish (F26). Grey. Silvering on rim. Chamfered base.
- 150 Bowl (F3). Grey, burnished inside and horizontal bands outside. Chamfered base.
- 151 Dog dish (F26). Grey, burnished. Grooves scratched on outside after firing, also notches on rim. Similar notches have been found on pots at Bramingham Rd. Luton (Warren, 1990).
- 152 Bowl (F7). Fabric: sandwich with grey core, orange outside. Red colour coat. Imitation of Dr 31. (Young C46).
- 153 Dog dish (F3). Grey, burnished line decoration. Interior burnished.
- 154 Bowl (F4). Grey fabric with orange surface. Dark brown colour coat. Imitation Dr 31.
- 155 Dog dish (F3). Grey, burnished over rim and intertwining lines. (Ver 1854, AD 340-360).
- 156 Bowl (F3). Grey, burnished inside and out, and faint criss-cross decoration. (Ver 1264, 3rd-4th C).
- 157 Rim sherd (F28) of non-Roman pot. Brown/grey. Hand made, probably Iron Age.
- 158 Dog dish (F3). Grey, burnished line decoration. Interior burnished.
- 159 Dog dish (F3). Grey. Decoration of burnished lines. Chamfered base.
- 160 Bowl (F23). Buff/grey. Reeded rim. (Ver vol 3 Fig 102)
- 161 Bowl (F26). Buff/grey.
- 162 Bowl (F3). Buff/grey. Reeded rim with marks incised after firing.
- 163 Flanged bowl (F6). Buff/grey.

Fig 16 North Range

Nos. 164-186: Refuse pits at W end of N range (continued).

- 164 Bowl (F3). Grey fabric, buff/grey surface. (Young R43).
- 165 Flanged bowl (F2). Grey, burnished on rim.
- 166 Bowl (F3). Grey, burnished horizontal lines. (Ver 2566, AD 270-310; Ox R43 AD 100-300).
- 167 Flanged bowl (F3). Grey, burnished inside.
- 168 Bowl (F6). Buff/grey.
- 169 Flanged bowl (F3). Brown fabric, grey surface. (Ox R47, 3rd C onwards).
- 170 Bowl (F3). Orange fabric, burnished inside.
- 171 Mortarium (F3). Orange fabric, cream surface, not smooth. (Ver 2686, AD 140-200).
- 172 Flagon (F27). Orange fabric, pink surface. (Ver 1322, AD 130-180).
- 173 Flagon (F3). Orange fabric, pink surface. (as 172).
- 174 Mortarium (F16). Cream. Black grits. The stamp DOBALLVS occurs 3 times on the rim. K F Hartley (Frere, 1974 p284) suggests that Doballus was active in Northamptonshire, AD 140-180.
- 175 Beaker (F24). Orange fabric, brown colour coat on outside.
- 176 Beaker (F24). Orange.
- 177 Beaker (F7). Fabric a sandwich with grey core, orange outside. Brown colour coat inside pot, metallic outside.
- 178 Beaker (F24). Fabric brown inside, black outside. Black colour coat inside; metallic black coat outside.
- 179 Beaker (F3). Orange fabric, burnished outside.
- 180 Beaker (F26). Grey, silver coat on outside of pot and inside rim.
- 181 Jar (F24). Orange.
- 182 Jar (F6). Buff.
- 183 Jar (F1). Grey.
- 184 Jar (F3). Brown fabric, grey surface.
- 185 Narrow-necked jar (F4). Grey, burnishing on rim and lines round neck. Cordons. (Ver 1490, AD 140-190).
- 186 Jar (F6). Buff/grey.

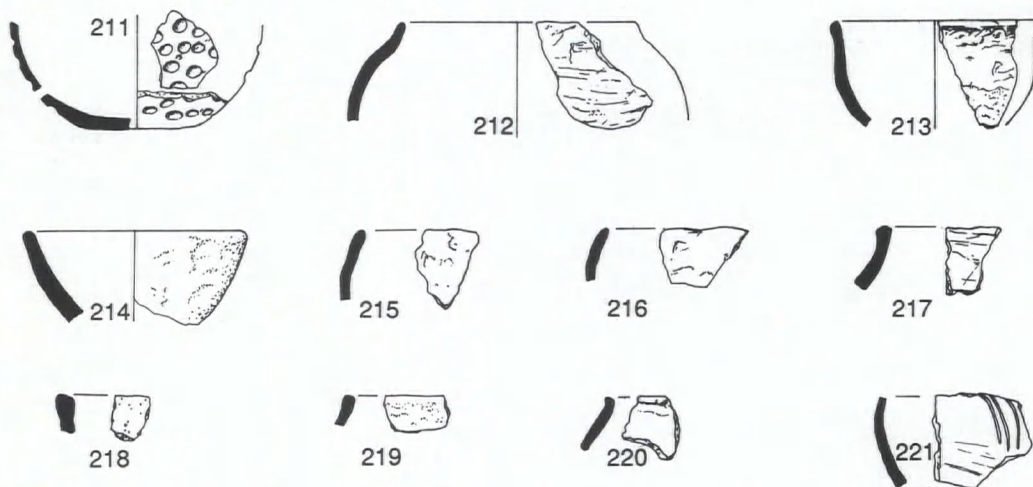


Fig 18 Saxon pottery.

Fig 17 North Range

Nos. 187-206: from refuse pits, W end of N range (continued).

- 187 Storage jar (F6). Buff.
- 188 Jar (F3). Grey, granular surface.
- 189 Jar (F6). Orange. Recessed rim.
- 190 Jar (F6). Buff/grey. Recessed rim.
- 191 Jar (F3). Buff fabric. Sooting on rim and exterior.
- 192 Jar (F24). Fabric: grey core, orange outside.
- 193 Jar (F2). Grey.
- 194 Jar (F3). Fabric: orange core, cream surface. Reeded rim.
- 195 Jar (F26). Grey.
- 196 Jar (F3). Grey.
- 197 Jar (F6). Grey.
- 198 Jar (F3). Grey.
- 199 Jar (F6). Grey.
- 200 Jar (F6). Grey. Sooted inside rim.
- 201 Jar (F6). Brown/grey.
- 202 Sherd (F3) with horizontal burnished bands and lattice decoration.
- 203 Base (F3). Grey, burnished lines of decoration.
- 204 Jar (F1). Grey. (Ver 1772 AD 30-43).
- 205 Sherd (F26). Grey. Burnished line forming looped decoration.
- 206 Lid (F18). Orange fabric, orange glossy colour coat. Rouletted decoration.

No. 207: from outside W end of N range.

- 207 Bowl (F3). Grey. Traces of white colour coat on inside, similar to No. 107.

No. 208: from rough cobble of main gateway in S wall.

- 208 Dog dish (F3). Dark grey. Irregular lattice decoration of thin burnished lines on outside.

Nos. 209, 210: Surface finds from plough-soil over villa.

- 209 Jar (F7). Orange fabric with grey core. Red colour coat.

Decorated with a groove, rouletting and demi-rosettes. In a gap in the line of rosettes there is a deep hole with a square base, causing a bulge on the interior of the pot. The colour coat is missing in a roughly circular area, 15mm diameter, round the hole, suggesting that a knob or decoration had been affixed here. (Ox C78 and 79, AD 340-400+).

- 210 Base of Samian bowl (F25) with stamp MARTINI. Possibly deliberately chipped to shape. Scale 1:2.

Fig 18

Nos. 211-221: Saxon pottery. No. 212 from above the wall between rooms 10 and 11 in the N range. All others from loam layer above hypocaust 3.

- 211 Base (F74). Grey, burnished inside. Decorated on outside with impressed dimples. Chaff impressions under base. (See Appendix A.)
- 212 (F74). Brown outside, grey inside. Sandy grains project from the surface all over, but the outside has been smoothed over and grass-wiped.
- 213 (F74). Grey, burnished inside.
- 214 Bowl (F74). Grey. Hard, with granular surface.
- 215 (F74). Grey, burnished inside and out. See Appendix A.
- 216 (F74). Black, burnished inside and out. See Appendix A.
- 217 (F74). Grey. Uneven surface. Grass-tempered.
- 218 (F75). Grey. Horizontal wiping outside.
- 219 (F74). Grey. Hard, granular surface.
- 220 (F72). Black, burnished inside and out.
- 221 (F74). Grey, with brown patch. Well made, burnished outside, rough inside. Decorated with 3 curved grooves.

GLASS

Footring of a glass bowl.

Glass contains many air bubbles and has impact damage where the two concentric footrings have been in contact with a surface. Diameter of outer ring 39 mm; diameter of inner ring 19 mm. The

centre and the area between the footings appear to have been 'silvered'. Thickness of the glass - 1 mm. Fig 19 no. 1.

Melon bead

20 mm in diameter. 16 mm deep; hole is 9 mm across. 19 flutes. Texture is rough. In places there is a brown stain (rust?). Fig 19 no. 2.

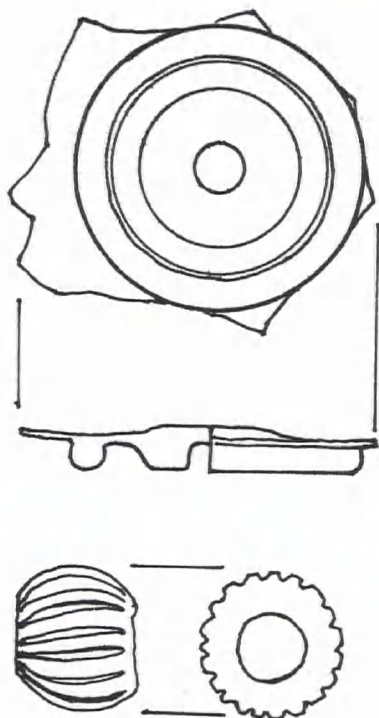


Fig 19 Glass. Scale 1:1.

COINS

The present writers have been unable to locate the coins found in the Totternhoe Villa. The following descriptions are taken from the original report. Identifications were made by the British Museum.

Carausius AD 286 - 293. Unstratified.

Claudius II victoria avg AD 268 - 270. Found in hypocaust 2.

Constantine AD 337 - 350. Found in robbed south wall of room 2.

Constantine I? vrbs roma AD 330 - 340. Found in hypocaust 2.

Constantinopolis Salonica mint. AD 330 - 340. Found in hypocaust 1.

Constantius AD 330 - 335. Found in furnace of hypocaust 1.

Tetricus AD 270 - 273. Found in entrance to E wing.

METAL

Lead alloy

Lead alloy cake cup/mould

Wt 75 g. Max width 74 mm. Max ht 30 mm. 3 mm thick. Fluted on the inside, smooth outside. Flutes uneven and of unknown number because of damage to the vessel. Made of two thicknesses of lead(?). Does not appear to be two identical pieces stacked one inside the other as the two pieces are, in places, joined by lead bridges. Found in robbed south wall of Room 2. This vessel almost exactly parallels one found in a grave at the Lankhills Roman cemetery (Brown, 1979). Three similar vessels have been found in east Anglia: in the Great Icklingham Hoard (Suffolk) and one at Hockwold (Norfolk). Fig 20 no. 1.

Analysis showed the composition to be Lead 64%, tin 35.9%; with traces of other elements. See Appendix B for full details.

Copper alloy

Copper alloy razor

38 mm long, 31 mm wide, 2 mm thick. wedge shaped with a triangular hole and a ring. Surface find. Fig 20 no. 2.

Ironwork

Nails

Numerous nails ranging in size from 30 mm to greater than 80 mm were found. All but 4 were Type 1b - flat-headed (Manning, 1985); those not Type 1b were two Type 2, a 'T' headed staple and a 'round-headed' stud.

On the basis of length, the Type 1b nails recovered are as follows:

30mm and less	7
30-40mm	16
40-50mm	14
50-60mm	13
60-70mm	24
70-80mm	33
80mm and over	16.

Of those greater than 70 mm long, 17 have large flat heads 20-30 mm across. Often the head is asymmetrically situated on the shaft. 6 of the remaining long nails have lost their heads.

Iron stud

Stud with conical head. 50 mm long. Head is 13 mm in diameter. Found in area of the gateway. Fig 20 no. 3.

Large Type 2 nail

Weight 50 g. Length 133 mm. Shaft is 8 mm x 7 mm. 'Diamond' shaped head. 22 mm wide, 7 mm thick, 14 mm high. Found in corridor of N range. Fig 20 no. 4.

Fig 20 nos. 5 - 20. are a selection of iron nails.

Some (15, 18 and 20) have rust encrustations showing grain of wood. Nos. 18, 19 and 20 are some of the large-headed nails. No. 16 clearly shows the end being hammered over.

Numerous nail fragments were not included in the above.

Iron objects

Iron key

Weight 165 g. An example of a slide key in very good condition. Originally had six projections, four still remain. Length 130 mm. From cobble of gateway in S wall. Fig 20 no. 21.

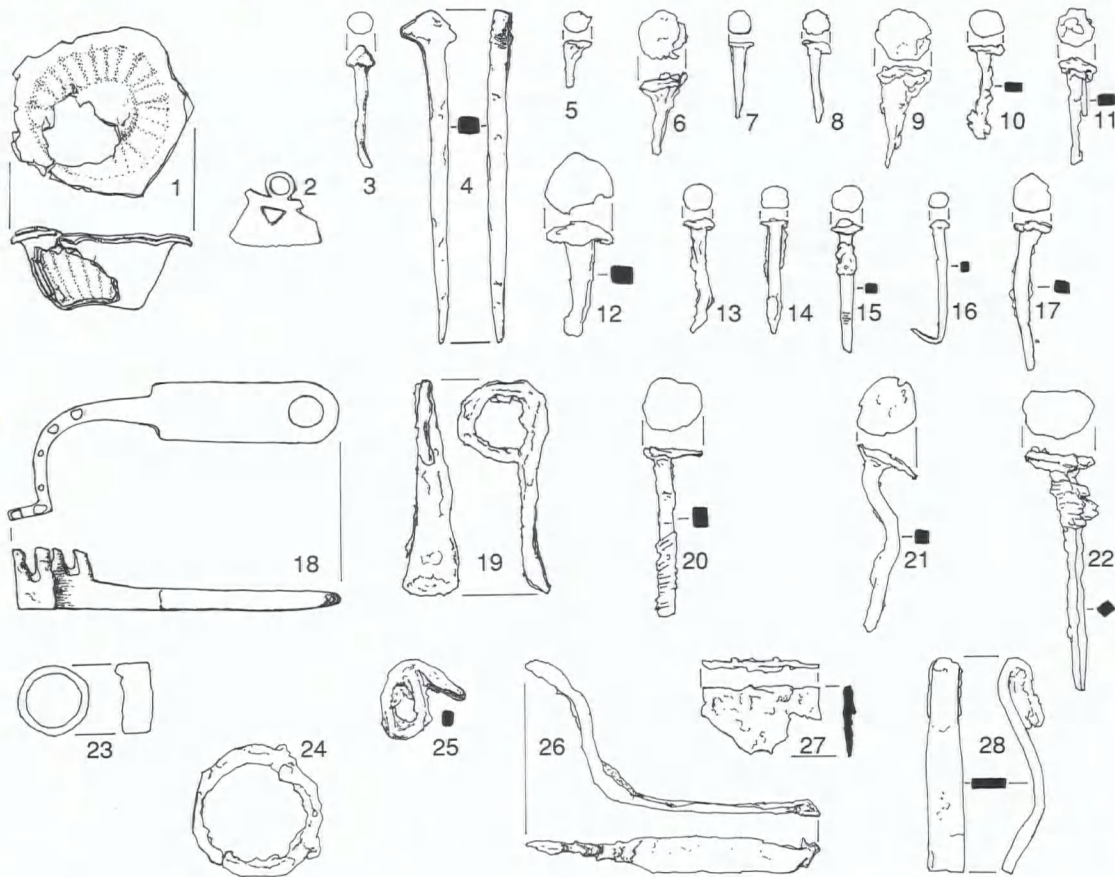


Fig 20 Metal objects. Scale 1:3.

Latch

Weight 50 g. Consists of a single strip of iron with a loop at one end. 88 mm long, 22 mm wide at end opposite to loop. Tapers to 5 mm wide. 9 mm thick. Tapers to 5 mm thick. Fig 20 no. 22.

Ring

Weight 20 g. 28 mm diameter, 12 mm wide, 4 mm thick. Fig 20 no. 23.

Iron ring

Possibly a bridle fitting. Diameter 55 mm. (Neal, 1974 p 176 no. 552 - 554). Fig 20 no. 24.

Incomplete iron ring

As above. Diameter 55 mm

Fragment of plate

Rectangular corner of an iron plate with a nail hole. 47 mm x 45 mm.

Rectangular-section rod

Bent over and flattened at one end. 90 mm long. Section 10 mm x 5 mm.

Iron fragment

Bent into a ring shape. Incomplete but possibly part of a ring-headed pin. (Neal, 1974 p 176 no. 546 - 548). Fig 20 no. 25.

Hippo-sandal or rasp fragment. Fig 20 no. 26.

Part of a door hinge. Fig 20 no. 27.

Knife blade. Fig 20 no. 28.

Iron fragment Length 130 mm

Iron door latch and iron ring. From W wing

Part of door hinge from W wing

A piece of rusted iron 110 mm long. 29 mm wide at the squared end tapering to 21 mm a distance of 15 mm from the other end which is rounded. There are two holes, one at each end. One is 10 mm in diameter, 6 mm from squared end; the other is 4 mm in diameter, 12 mm from the other end. Item is 4 mm thick. Weight is 40 g.

Discussion

In the main the nails are straight although 15 of those in the range 60-80 mm are bent. In some cases this appears to be due to how they were used, in other cases it is probably caused by the nail being extracted.

The large nails with large flat heads seem ideally suited to holding something in position rather than fastening pieces of wood together. One possible use is the securing of heavy *tegulae* to a roof. The finding of a *tegula* fragment with nail hole might support this but inspection of a nail found in a *tegula* nail hole at Piddington shows it not to be of this type; it is very like the nails we have of length 50-70 mm. It is unlikely that the large-headed nails were used to secure *tegulae* by their lateral edges as they are of insufficient length; few of them exceed 90 mm. By the same token they could not have been used to secure flue tiles to a wall.

The very short nails seem too short to have a structural use and seem more suited to fastening a covering material or for decoration.

The medium-sized nails could have a variety of uses such as fastening floor boards down, fastening boarding to a roof prior to covering with tiles, holding weather boarding or shingles in position. As noted above they could have secured *tegulae* to a roof. It seems unlikely they would be strong enough or long enough to fasten a roof together which was to bear the weight of several tonnes of *tegulae* and *imbrices*.

BONE

Carved bone object

23 mm long, 20 mm wide at the wider end, 19 mm wide at the narrower end. Hollow centre 12 mm across. The holes have wear as shown in the illustration. The cross-hatching is not all round, only on one side. This seems to imply that the object is to be viewed from one side only. The general form indicates that it is a decorative end of perhaps a wooden shaft, and that it was suspended on a string or thong passing through the holes. Perhaps round the neck of the wearer. Fig 21 no. 1.

Stylus or pin

93 mm long. Triangular head is 10 mm wide. Fairly crudely carved, not turned. Similar to Cunliffe (1971 Fig 68 no. 28). Fig 21 no. 2.

Bone pin

70 mm long. Knob on the end is 6 mm wide. Shaft is 4 mm at

widest point. Knob is crudely carved, not turned. Fig 21 no. 3.

Broken bone pin

30 mm long. Knob on the end is 8 mm in diameter. Fig 21 no. 4.

Needle

86 mm long. 12 mm at widest end, 3 mm thick. Hole 33 mm diameter. Probably fashioned from a fibula (pig?). Fig 21 no. 5.

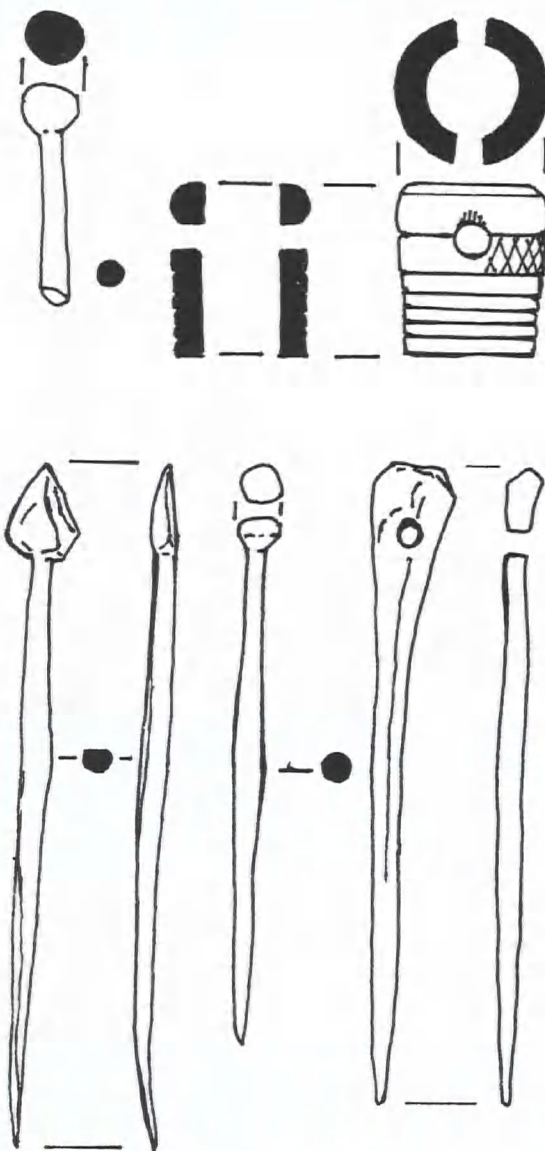


Fig 21 Bone objects. Scale 1:1.

BUILDING MATERIALS

TILES

We were assisted by Sandra Garside-Neville (Department of Greater London Archaeology) with the analysis of the tiles.

The tile fabric types found at the villa are as follows:

- 1 Very fine fabric. Fine sanding on back.
- 3 Fairly fine. Some coarse quartz; silt; grog; mica.
- 7 Sandwich. Fine clay matrix, occasional pebbles. Calcium carbonate. No sanding.
- 8 Fine matrix. Lots of rounded quartz. Little sanding.
- 10 Hard coarse fabric. Flint and chalk inclusions.

Tegula

Lower half; outer width 290 mm, inner width 235 mm, 20 mm thick. Cutaway is Type B. Flange height 45 mm. Some mortar on flange. Tile fabric 8. Signature. Fig 22 no. 1.

Fragment; 25 mm thick. Flange height 50 mm. Cutaway is Type B. Mortar on upper surface. Tile fabric 1.

Fragment; 20 mm thick. Flange height 50 mm. Chamfered lower edge. Embedded in *opus signinum*. Sanded on back. Tile fabric 3.

Lower third; outer width 310 mm, inner 240 mm, 20 mm thick. Flange height 60 mm. Corners have been broken off to produce a cutaway. Smoothed and incised on right side of tile only. Tile fabric 3. Signature. Fig 22 no. 2.

Fragment of upper corner with cutaway; 25 mm thick. Flange height 50 mm. Sanded on back. Upper surface has smoothing lines. Smoothed halfway up the side. Pebble inclusions. Tile fabric 3.

Fragment of lower corner; 18 mm thick. Flange height 58 mm. Cutaway (?). Some holes on upper surface. Tile fabric 3.

Imbrex

Fragment; 16 mm thick. Rough inner surface. Tile fabric 3.

Fragment; 15 mm thick. Wiped end to end on outside. Tile fabric 3.

Fragment with a small radius of curvature; 15 mm thick. Mortared inside and out on end. Surface damage near that end.

Ridge tile

Length incomplete; measures 240 mm around curve. 78 mm high. 20 mm thick. Tapers. Mortar on all surfaces. Tile fabric 3.

Box-flue tile

Incomplete; dimensions are 160+ x 130 mm+; 15 mm thick. Keying on one surface with an 8-toothed comb. Mortared surfaces. Tile fabric 3; flint inclusions. Fig 22 no. 3.

Incomplete; broken at vent; side dimensions of side without keying are 97 x 93 mm; 14 mm thick. Keying is with a 7-toothed

comb. Tile fabric 3; grey core with voids; smooth and fine. No sooting.

3 Large fragments; 270+ x 100+ mm; 13 mm thick. Coarse combing with a 5-toothed comb; each groove is 5 mm wide. Mould line on inside. One fragment has a side cut-out. Tile fabric 10; well fired with chalk and flint inclusions. Fig 22 no. 4.

Small fragment; 15 mm thick. Keyed with a 9-toothed comb. Tile fabric 8; grey core, hard fired.

Fragment embedded in *opus signinum*; Curved keying with an 8-toothed comb. Sanded on back. Tile fabric 3.

Fragment; 16 mm side thickness. Length at least 320 mm, width 113 mm. Keying with an 8-toothed comb. Side vent. Fig 22 no. 5.

Fragment; 15 mm thick, 45 mm wide. Side cutout is 35 mm from face. Keying with a 6-toothed comb. Tile fabric 3.

Fragment; 18 mm thick. Keying with a 6-toothed comb. Tile fabric 3.

Rectangular fragment 15 mm thick, 98 mm x 92 mm. Keyed with a 6-toothed comb. Tile fabric 3. Fig 22 no. 6.

Voussoir fragment; 110+ x 90+ mm, 20 thick. Roller decoration. 110 deg angle. Tile fabric 8. Fig 22 no. 7.

Incomplete; 12 mm thick. Includes part of side vent hole. Keying on one surface with a 6-toothed comb. Tile fabric 3. No sooting. Fig 22 no. 8.

Bessalis

Complete; 195 x 180 x 39 mm. Rough sanding on lower surface with 3 small finger impressions. Upper surface smooth. Pink mortar on upper surface and over one side. Tile fabric 1.

Complete; 175 x 165 x 35 mm. Uneven under surface. Strike marks on smoother upper surface. All edges chamfered in varying degrees. Signature on upper surface. Tile fabric 1; coarse quartz inclusions up to 13 mm. Fig 22 no. 9.

Lydion

Complete except for two corners missing. Upper surface is 350 x 230 x 35-41 mm; lower surface is 345 x 230 x 35-45 mm. Lower surface is very irregular; longitudinal strike marks on upper surface. Some of the sides are smooth half way up. Mortar and concrete on upper surface. Signature. Tile fabric 1. Fig 23.

Tile Fragments

Incomplete; 18 mm thick. Rough under surface with a grass impression. Irregular striations on upper surface. Tile fabric 7; light brown surfaces, grey core.

Incomplete; 180+ x 150+ x 45 mm. Rough surface with some pebbles. Mortar on surfaces. Tile fabric 1. Upper surface has dog paw prints and possible manufacturing marks. Incompletely fired. Fig 22 no. 10.

42 fragments of white/cream *tegulae* and some *imbrex*. They all have purple on one or both side. The maximum size of fragment is about 60 x 50 mm. Thickness is about 20 mm. 10 fragments

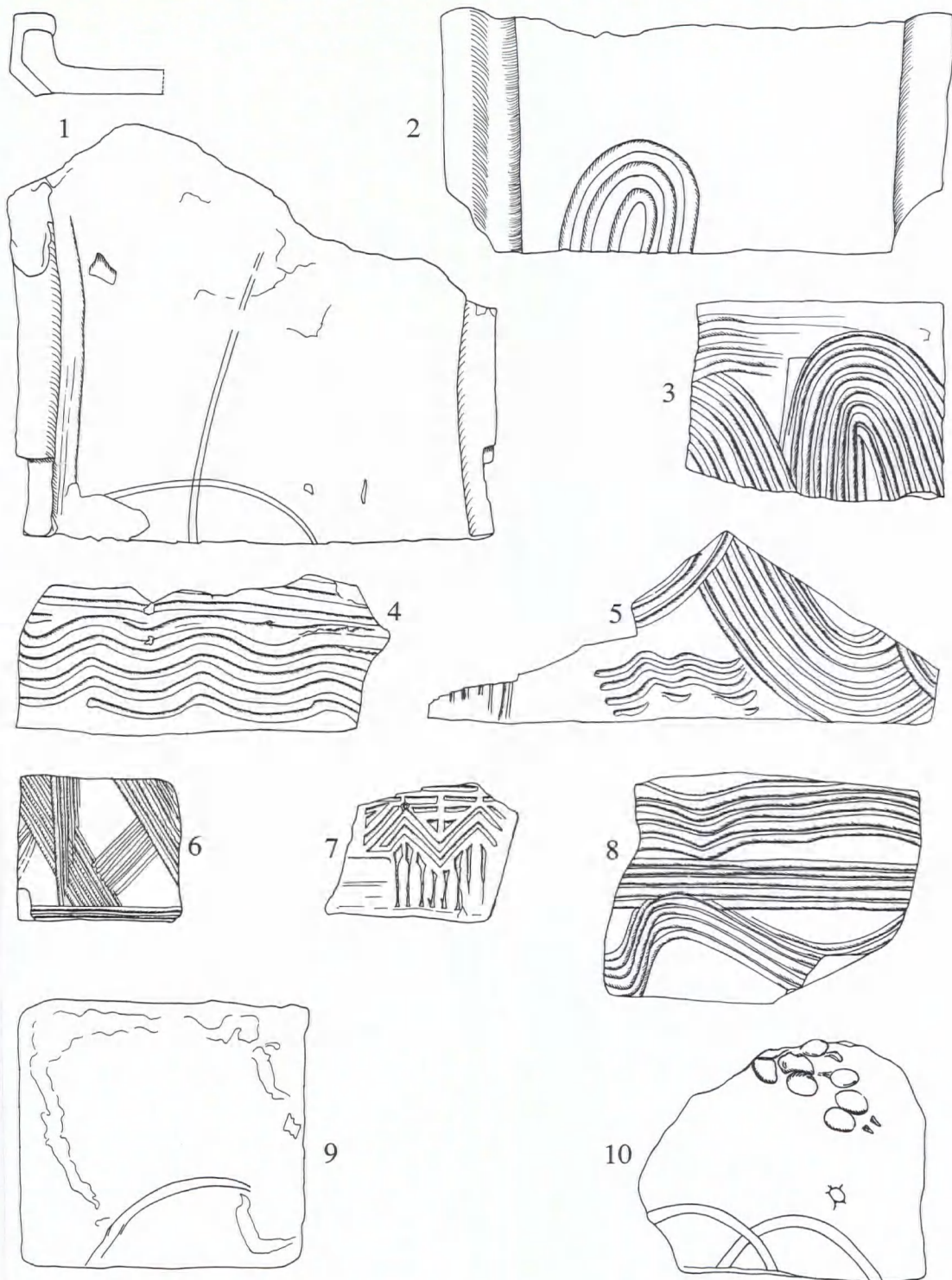


Fig 22 Tiles. Scale 1:4

could be joined into pairs. Matrix is medium coarse cream/white. Inclusions are some scattered clear quartz granules, some small black and small and large amorphous red grains. Cavities present. Fabric is by no means homogeneous.

Discussion

During her examination of the material from the villa Sandra Garside-Neville commented that they were the smallest examples of Roman building ceramic she had seen.

The examples of *tegulae* are few in number but they do not compare favourably with the sizes listed by Brodribb (Brodribb, 1987). Examples from Caerleon and Silchester are given as being 380 mm and 480 mm wide respectively; the smallest, from Piddington, is given as 270 mm; the average is given as 330 mm. That from Totternhoe is 290 mm wide. Average *bessalis* dimension is given as 198 mm; those from Totternhoe are 195 x 180 mm and 175 x 165 mm. Brodribb gives the *lydion* average as 403 x 280 mm; the Totternhoe example is 350 x 230 mm.

The only evidence we have of *tegula* nail holes is in a small piece of reduced tile.

Documentary evidence from the excavation suggests that fragments of *imbrex* were found with

a zig-zag decoration around the end. This is paralleled with examples at Bidwell (Matthews, 1986) Park Street (O'Neil, 1945) and Piddington. This might indicate a local production site or itinerant tile makers.

Excavation notes also mention yellow tiles. Although we do not have any examples we do have the 42 red-painted fragments of yellow *tegula* described above. Wheeler (Wheeler, 1936) notes that there was a sporadic use of yellow bricks in the early 2nd century at Verulamium and Davey (Davey, 1945) mentions yellow tiles at Park St, St Albans and their frequent use in London. He notes that they contain 8% chalk. The use of such tiles in the Totternhoe area is not unexpected because until 1940 yellow bricks were made in Stanbridge, a nearby village (Cox, 1979). The red painting on the yellow fragments noted above may have been an attempt by a tile maker to make his tiles acceptable in a fashion-conscious world. As some of the fragments are painted on both sides we know that the tiles were painted prior to being put on a roof.

Signatures occur on two *tegulae*, a *lydion* and an incomplete tile, see Figs 22 and 23.

An interesting point is that none of the box-flue fragments show any sign of sooting. Assuming that these tiles were actually used it suggests that the hypocausts were entirely fired with charcoal.

The *voussoir* fragment with roller stamp decoration is unusual and may date from the period 80-150 AD (Lowther, 1948).



Fig 23 Lydion. Scale 1:4.

WALL PLASTER

Numerous pieces of plaster were kept; in most cases the plaster was only about 10 mm thick and homogeneous in composition. One fragment from the E wing was 49.5 mm thick and multi-layered. The composition of the layers is as follows:

Layer 1. 15 mm thick. Sandy coloured mortar with grass/straw impressions. Hard with some large lumps of white mortar. Seems to be the material used to level the wall.

Layer 2. 15 mm thick. Whiter mortar. No grass or straw impressions. Surface is textured by grooving - 5 mm apart.

Layer 3. 10 mm thick. White mortar. Some small stones.

Layer 4. 9 mm thick. White mortar. Some large stones.

Layer 5. 0.5 mm thick. Fine white mortar with red paint.

Paint

It is not possible to get a complete appreciation of the decoration as only small fragments of painted wall plaster were found and retained. Many of these fragments, particularly in the area of the veranda, were painted with dark red paint and it is possible

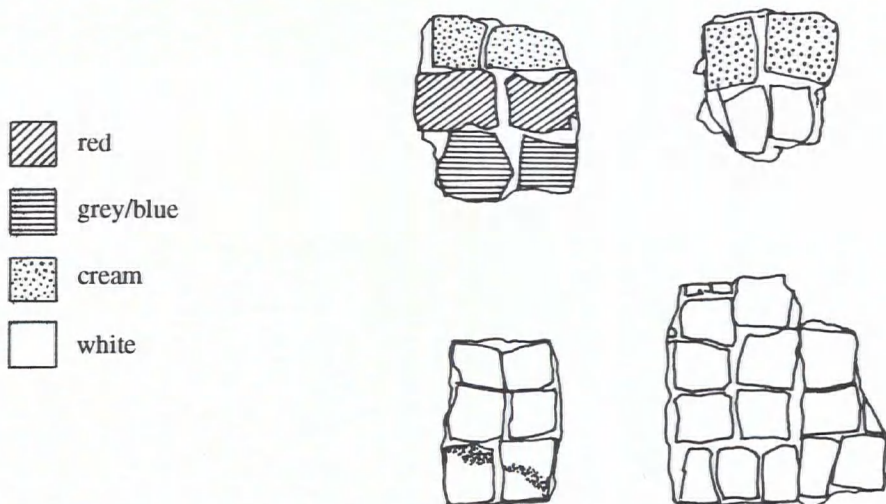


Fig 24 Mosaic. Scale 1:2.

that this is the colour of much of the exterior of the building.

The fragments of plaster from the W wing showed a wide variety of colour including purple, pink, red, blue, green, black, white and squiggled red lines on a cream background.

Colours from the E wing were shades of green, blue and pinks. One piece had a light blue background stippled with star-like spots. Other pieces with 6 mm wide lines in green and red show that the walls may have been divided into panels.

The only colour found in the N range was light blue although the veranda and courtyard adjoining produced red, cream and wine-coloured material.

MOSAIC

There are four pieces of mosaic available for study; in all they contain 29 *tesserae*. There are 2 red, 2 grey/blue, 4 cream and 21 white *tesserae*. Fig 24.

Red tesserae

These are fragments of oxidised tile fragments. The thickness is variable, the thickest being 15 mm.

Grey/blue tesserae

These are fragments of reduced tile. The two examples we have are 6 mm and 11.5 mm in thickness; one was thin-sectioned to determine composition.

Cream tesserae

These are fragments of ceramic material. The matrix is medium coarse. Inclusions include some well scattered quartz granules and some very small black, and some slightly larger red amorphous grains. Quartz is clear or slightly orange. These tesserae appear to be derived from the tile fragments described above.

White tesserae

These are fairly uniform in thickness (7-10 mm) and seem to be rock, possibly marble.

Matrix in which tesserae are set

This is white with quartz granules and many small orange inclusions - opus signinum.

STONE

Lava quern

A large number of fragments of the lower stone were found. The weight of the fragments is 17.9 kg. The origin of the material has

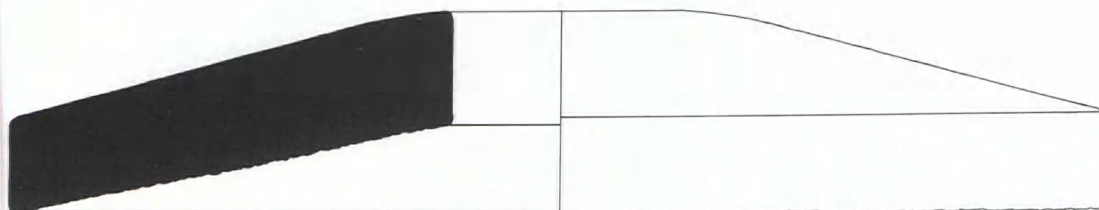


Fig 25 Lava quern. Scale 1:5.

been positively identified as Mayen (Niedermendig area) in Germany. Fig 25. See Appendix B for full report.

Sandstone

This material which was used in the construction of the gateway in the S wall occurs in the greensand which outcrops 10 km to the NW.

Oolite

The oolitic limestone used as the metalling for the road through the S gateway is Jurassic. The nearest outcrops are to be found in N Bedfordshire and Northamptonshire.

Polished Pebbles

One pebble is 43 mm long, 33 mm wide and 13 mm thick. In places there are small areas of concrete adhering to it. Both pebbles were found in robbed walls of Room 2. Similar pebbles have been found in a geological deposit on Billington Hill, some 5 km to the NW. Another was found in a Roman context in Dunstable.

HUMAN REMAINS by E V Jones

The disarticulated infantile bones in open tray were examined. These were in the main part of a skeleton of a baby less than 6 months old, and tibia and part of basi-occiput of another skeleton of similar age but physically smaller. One bone was unidentified and could have been animal.

Measurements in mm.

(A = absent; - = not measurable; * = 2nd skeleton)

Skull	
Frontal	L & R supraorbital ridges
Sphenoid	L & R alae
Zygomatic	L
Squamous Temporal	R
Petrous	L & R
Occipital	L & R lateral centres + 3rd

Limbs	Len	Max Prox diam	Max Dist diam	Min AP mid shaft	Min Lat mid shaft
Hum L	A				
R	64	13	18	6	5.5
Rad L	-	-	6.8	-	-
R	-	-	6.5	2	3.5
Uln L	-	5.5	-	3	4.1
R	50	6.2	7	3.5	4.5
Fem L	-	-	22	7	7
R	76	18	22	7	7
Tib L	65	16.5	11	5	5
R	67	15	13	5	5
R*	-	13.5	-	7	6.2
Fib L	64	5	4	2.5	3
R	64	5	4	2.5	3
Clav L	A				
R	44.5	6.5	7.5	3	2.6

Hand
Phalanges 2

Foot
Metatarsals 3

Axial	Lower Marg	Upper Marg	Medial Marg
Scap. L	A	A	A
R	30	21	30.5
	Diam GSN	Max Len	
Pelvis L	26.3	38.2	
R	26.3	38.1	

Vertebrae
Body max diameters - 15, 15.1, 14.7, 14.1, 13.1, 13, 13, 12.8, 12, 11.

Arches
Cer L 3
R 1

Axis L & R
Others
L 8
R 8

Rib fragments 20
Unidentified 1

ANIMAL REMAINS

It is to be regretted that very few of the animal remains found during the excavation of the villa have survived to the present day.

However, those that do survive and the written records enable us to build up a picture of the animals kept and eaten by the occupants. Molluscs available included oysters, mussels, whelks and snails. The latter may not have been eaten but they are of a type (*Helix aspersa*) introduced by the Romans. The oysters were in plentiful supply with 50 kg (one hundredweight) being found in hypocaust 2. Molluscs were found only in the SE corner of the villa and also in the waste pits of the N range.

The bones of the larger mammals were also predominantly found in the SE corner. A few, however, were also found in the north range, the SW corner and the gatehouse area.

The animals identified are: pig, ox, sheep/goat, deer (two antlers) and cat (left mandible of a small adult).

There were also quantities of bone fragments and teeth including burnt bones found in the furnace of hypocaust 1.

PLANT REMAINS

Chenopodium bonus-henricus

A quantity of seeds found in hypocaust 2. Identified by Dr G Taylor (Director), Kew Gardens.

APPENDIX A.

Saxon stamped sherds

- Lady Briscoe and Diana Briscoe

Fig 18 no. 211

Briscoe type D 1ai - size 9 x 6 mm - Archive number 1/340.

This is a simple and easily made stamp, but its use in this case is unusual, as it appears to have been used on a bowl to produce rustication. The stamp itself is paralleled by one of the same size from Sandy on pot BM 118 - Myres Corpus no. 3970, Fig 326 - where it is accompanied by a Dot-in-circle (A 2bi) stamp.

The pot and decoration method appear to resemble that on **Haslingfield - Myres no. 400, Fig 99** - which has two stamps used randomly on a small bowl.

High Down - Myres No 127, Fig 111 - a globular bowl with one stamp used all over it.

Brandesburton Yorks - Myres No 127, Fig 111 - a squat jar with overall random decoration using two stamps.

In addition there is a pot from Morningthorpe, Norfolk with very similar shape and decoration, and one from Canterbury, though this may be a later date.

Fig 18 no. 216

Briscoe Type M 4ai - size 8 x 9 mm - Arch no. 3/340.

This has two uneven impressions, making an uneven triangle. The longer side on our cast suggests that whatever was used to make it may have been covered by some sort of fine material.

I have a slightly similar stamp from **Lackford - 49.11 - Myres Corpus no. 903, Fig 247.**

Fig 18 no. 215

Briscoe type G 2ai (segmented horseshoe) - size 6 x 5.5 mm - Arch no. 2/340

This is not a very common stamp type, but occurs all over the country, the Totternhoe example is of the same shape as that on the pot from Whipsnade (Matthews & Hawkes, 1985), though the latter is slightly larger.

APPENDIX B.

Lead cake cup/mould

- Chris Robinson

Analysis using atomic emission ICP showed Lead 64.0%, Tin 35.9%; The remaining 0.1% is traces of iron, copper, zinc, nickel and sulphur.

APPENDIX C.

Report on the geological provenance of rotary quern 33 from Totternhoe Roman Villa

- Dr Olwen Williams-Thorpe with J S Watson and Dr P C Webb

Introduction

A sample of c 20 g, designated TOT33, was removed from this rotary quern and submitted to the Department of Earth Sciences, Open University, for provenancing to its geological source. The quern is manufactured of fresh finely-vesicular grey lava of basic composition, and likely proximal sources are in Germany (Eifel region, including the well-known Roman millstone quarry area near Mayen and Niedermendig; eg Crawford and Roder 1955) and in the Massif Central of France, where Roman millstone production is also known (eg Roder 1953). While lava millstones found in Britain are often assumed to be of German origin (eg Royal Commission on Historical Monuments 1970, 601) work by Williams-Thorpe and Thorpe (1988) has shown some to be imported from Central France. Provenance of such mills therefore requires confirmation by petrological and geochemical analysis.

Petrology

A petrological thin section of TOT33 examined by Dr R S Thorpe shows frequent phenocrysts of concentrically and sector zoned green and brown clinopyroxene, plagioclase feldspars (some altered), and iron titanium oxides in a fine grained matrix. No olivine was seen in the small (c 1x1.5 cm) section available.

Geochemical analysis and comparison with potential sources

TOT33 was crushed in an agate pestle and mortar, prepared as a fused glass bead, and analysed for major and three trace elements using an ARL 8420+ wavelength-dispersive X Ray Fluorescence spectrometer. Precision and accuracy are better than ca. 5% relative for all major elements. The analysis

is given in Table 1. The sample is a basic rock characterized by high alkali content, in particular K_2O of 3.90%. It falls on the borderline between mugearite and phonolitic tephrite according to the classification of MacKenzie et al. (1982).

Chemical discrimination between the basic rocks of the Eifel and of the Chaîne des Puys (Massif Central) has been demonstrated by Williams-Thorpe and Thorpe (1988, 282). Comparison of TOT33 with these data show that it is consistent in chemical composition with samples from Niedermendig near Mayen (East Eifel), and cannot be from the Chaîne des Puys because of higher K_2O/SiO_2 ratios in TOT33 (cf. Williams-Thorpe and Thorpe op. cit., Figure 2b). Basic rocks from the Cantal (southern Massif Central; Downes 1984) do not include rocks with comparable K_2O/SiO_2 ratios. An analysis of Niedermendig lava is given in Table 1, showing the excellent agreement with TOT33.

Conclusion

The rotary quern examined has petrological and in particular chemical characteristics consistent with an origin in the Eifel at the Niedermendig area, and cannot be from Central France lavas

Table 1

	TOT33 Quern	ML296 Niedermendig
$SiO_2(\%)$	48.66	49.94
TiO_2	2.08	2.05
Al_2O_3	16.42	16.65
Fe_2O_3	8.54	8.28
MnO	0.18	0.18
MgO	5.30	4.80
CaO	8.97	8.69
Na_2O	4.61	4.74
K_2O	3.90	4.24
P_2O_5	0.47	0.42
S	0.01	n.d.
L.O.I.	0.54	(0.48)
Total	99.68	100.0
Ba(ppm)	1191	1194
Cr	67	64
Ni	49	44

Notes: L.O.I. Loss on ignition, included in total in TOT33, excluded in ML296. n.d. not determined. ML296 from Williams-Thorpe and Thorpe 1988, total normalised to 100%.

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The Manshead Archaeological Society 1951 - 1991

JOAN SCHNEIDER

In September 1951 a skeleton dropped from the quarry face into the Houghton Regis chalk pit. News of this reached the curator of Luton Museum, Mr Charles Freeman, and he invited the Luton Grammar School Archaeological Society to investigate. News, however, had also reached Les Matthews in Dunstable. Unaware of Luton Museum's involvement, he obtained permission from the quarry manager to excavate with his friends. So, through no-one's fault, began a rivalry, and sometimes an unfortunate hostility, between two groups of amateur archaeologists which it took all Mr Freeman's tact to smooth over.

Les Matthews' introduction to archaeology had been through the excavations on the Five Knolls during the 1920s, when he was a lad living nearby. The interest then kindled was pursued through the 1930s with the help of fellow Rover Scouts, and finds from their investigation of a Bronze Age site at Totternhoe quarry required identification at the British Museum. Here Les met Mr Christopher Hawkes, a meeting that began a lifelong friendship.

The war interrupted Les's regular observation of the quarries near Dunstable, but he resumed after returning from naval service. So it was that he and his friends were ready to investigate the archaeological site revealed in 1951 at Houghton Regis.

There was no doubt of the urgency of rescue action on the site, which became known as "Puddlehill". It began with a race against the mechanical digger, working in wintry conditions, and Mr Freeman was anxious lest enthusiasm and haste might be leading to destruction of recoverable evidence. He wrote to Les (8th November 1951): "It needs very careful handling indeed and I am asking the University of London Institute of Archaeology whether they could send down a supervisor to give advice on the work. It will probably involve the Luton Corporation in considerable expenditure, but it seems to me the only way to get a real picture of the happenings on that site."

Les replied (9th November 1951) "I am sure that you are quite correct about the importance of the site at Chalk Hill and I feel that it should be investigated by competent authority and that you have taken the

right action... A mechanical navvy is no respecter of prehistory and the method we have adopted has been to remove as much evidence as possible before the whole thing was swallowed up. At present quarrying progress, all the 'digging area' so far undertaken will have vanished within the next fortnight and I feel that the results in my possession so far justify our methods. Notes and measurements have been taken, a plan based on the Ordnance Survey map has been produced and all the pottery from the site is packed separately and numbered for location. I consider this to be a far more satisfactory state than to have four pegs in the ground but all the evidence underneath churned into cement.

"I will inform my companions of the changed circumstances and will ask them to suspend digging until I get more information from you."

C E Freeman to C L Matthews (12th November 1951):

"I did not mean to delay you or your companions as far as digging is concerned. Obviously it is desirable to take advantage of what little fine weather we are likely to get before the site disappears."

The Puddlehill operation was expected to be over within a few weeks, but in fact co-operation from Mr Cox, the quarry manager, and the number of sites, from Neolithic to Saxon, which were exposed as time went by, meant that archaeological work was almost continuous on Puddlehill for fifteen years. On several occasions during that period Les believed that "we have virtually finished there now and can begin preparing the final report", but each time something fresh turned up.

No London expert was found willing to take over supervision of the site. By March 1952 it was evidently felt that the *ad hoc* digging group should become an organised society and the inaugural meeting of the "Manshead Field Archaeology Club" was held. The name of the Manshead Hundred of Bedfordshire was chosen to embrace the intended area of activity: it included Dunstable, Leighton Buzzard and neighbouring districts, but not Luton.

Mr Freeman continued to support both the groups working on Puddlehill. He sent equipment and advice: "I think it would be a very good idea to

keep a complete record of the club's activities in the form of a journal right from the beginning of its foundation. You may be intending to do this but, if not, you will find that such a journal in future years is invaluable from many points of view - identifying finds, providing the history of the club, and as something to show interested people from time to time."

On 7th April 1952 Les sent him the duplicated interim report of the winter's investigations. They covered Early Iron Age, "Belgic" and Roman features. Les also asked "Have you any further news of the 'life' that has been granted us? If we now have plenty of time we propose to 'clean up' the site - Partly as appeasement to the other party."

Mr Freeman suggested affiliation to the Council for British Archaeology and in May 1952 he wrote "I hope everything will go smoothly now because there is no real reason why it should not, and the Lord knows, there is enough work in many areas in South Bedfordshire for a dozen archaeological societies, much less two!"

Throughout the summer up to a dozen workers were digging at weekends and in the evenings. They

had the use of tools etc. lent by Luton Museum and stored at the Cement Company premises, since the club had as yet little property or storage space of its own. A member with a cine camera made a short black and white film, which includes the excavation of a girl's skeleton found lying in an Iron Age ditch. It was several years before the next film, now in colour, was made. From then until about 1980 excavations, post-excavation work and outings were intermittently filmed, a valuable record now transferred to video tape. The increasing expense of filming brought these records to an end, but with members acquiring camcorders, filming has begun again.

Photographs were, of course, always part of the record, but dependent on the presence of a skilled photographer. It was not until the late 60s that Les acquired a good camera and could keep his own site record, and in 1986 the Society itself purchased a camera. There are now well over 2000 slides in the archive.

The Puddlehill site was partitioned between the Manshead and the group which was now constituted as the South Bedfordshire Archaeological Society.



Puddlehill 1964: Young members excavating Saxon Building 4. Les Matthews and Terry White are standing on the far baulk, and Ray Harris is on the left of the picture.

Since the sections of ditch allotted to each turned out to be part of the same enclosure, it was not surprising that demarcation disputes and disagreements over method sometimes threatened in what John Morris once called "trench warfare on Puddlehill". However, at the close of the 1952 season, the South Bedfordshire Society withdrew from the site, leaving the Manshead in sole possession, and Mr Freeman suggested (23rd September 1952) that they should "carry on independently" of the Museum. "That is not to say that I am no longer interested but merely that you will be freer agents."

The excavators felt their need to learn, and applied to the Workers Educational Association for a tutor. Mr Jacques at Cambridge took immense trouble to find the right person, consulting several eminent archaeologists. The first Manshead students enrolled in October 1952 for Prehistory with Miss Isobel Smith. The Manshead has had reason to be very grateful to the WEA, the Cambridge Extra-mural Board and their tutors. Prehistory was followed by the Romans and then the Dark Ages, so beginning the association with Dr John Morris, which lasted until John's death in 1977. Soon after taking over the Dunstable class he wrote to Mr Jacques about plans for them (25th November 1953): "I think that giving [the opportunity of an archaeological summer school] to them might with luck lead to the establishment of a permanent nucleus and a sound archaeological tradition in S Bedfordshire, which would be a permanent gain to the future of early history." In the summer of 1954 the Cambridge Extra-mural Board arranged for Dr John Alexander to conduct a training excavation on Puddlehill. Over the years John Morris's courses changed from pure instruction to collaboration in the preparing of a report on the Puddlehill site. More recently Dr David Trump has helped the Society to keep up to date with techniques and thought in archaeology.

In March 1953 a second interim report on Puddlehill appeared. Les wrote: "Scarcely an evening has passed during the summer, without some members being present on the site and as many as 15 have been working together at week-ends".

Finds were displayed at a hobbies exhibition in Dunstable in October, attracting much interest and bringing in new members, including Ernie Hawes, Secretary of the Society from 1955 to 1968. The Associated Portland Cement Co asked for a similar display to be mounted at their works.

Several members, including Les, joined the

Nottingham University training excavation at Great Casterton in 1953.

In the late summer of 1954 Les wrote (12th September 1954) to John Morris: "I think I've found a Roman Villa in the middle of a cornfield at Totternhoe. I visited the site at the invitation of the farmer who told me that his plough hit the flint walls of a Saxon Church and sure enough whacking great flints lie about on the surface. By probing I hit floors at different levels... A borrowed spade and a little rabbiting produced a tiled floor - a mortar spread of yet another and loads of Roman pottery... The site is situated in a lovely setting - surrounded by hills and on good grain producing land - just the place for a wealthy house." A short season of excavation began, and the first cuts found a concrete floor so close below the surface that in the dry weather it was possible to brush the topsoil away and expose it. Soon after, the remains of hypocausts were uncovered. There was great local interest. Les reported again to John on 21st September: "I'm afraid the locals have had a Roman holiday on our work - hundreds of people have walked and jumped all over it."

The brief season left many questions unanswered, and in 1956 a further investigation was made. It was hoped that other seasons could follow, but this has never proved possible.

In 1954 the first of a series of popular "Brains Trusts" was held in collaboration with the South Bedfordshire Preservation Society. Dr Ashton, who, with Mrs Ashton, had given much support to the Society, was asked to become President, a position he held until 1982. In December the official title was changed to its present form: "The Manshead Archaeological Society of Dunstable".

During 1955 Dr Morris introduced a radio series on "The Dark Ages". It took the form of a discussion among experts of different aspects of the topic, with Les Matthews representing the interested layman. The starting point was the finding of the Totternhoe villa.

The new Secretary, Ernie Hawes, inaugurated winter lectures, a dinner and dance and a coach outing. The latter started a tradition by being very enjoyable and losing money.

The Society still had no premises of its own. When Les was asked in 1962 to speak to the British Association for the Advancement of Science on "The Problems of the Amateur Archaeologist" he recalled "The amount of material now being discovered began to become embarrassing, and it became a problem where to keep it. The tools went

out of the garden shed, the coal came out of the coal bunker on to the garden, the front room became littered like a Victorian parlour, there were skeletons under the bed, and there were perpetual rows - if you don't remove those old bits of bricks, I shall throw them on the fire...! It became essential to acquire a headquarters where site drawings and the classification of pottery could be carried out." Feelers were put out to see if Dunstable Council could provide premises for a museum, including rooms where Society members could work on the finds, and in 1955 the Town Clerk wrote that at present nothing could be done, but that when the Civic Centre was built, room for a museum would be provided at Priory House.

The search for a work room continued, and in December 1956 Dunstable Borough Council offered a condemned property, 22 West Street, at a nominal rent. The Manshead had an HQ at last. It was timber-framed, gaslit and with an open fire. Old crates were collected from the market to build fires of alarming size and ferocity. Few members owned cars, and for the grand removal of 5 years' accumulated finds from the Site Director's house to the new HQ, the rag-and-bone man's horse and cart were hired, members following on foot. Post-excavation work could now be carried on throughout the winter evenings.

A meeting place regularly open to members (Mondays, Wednesdays and Fridays are Manshead nights) has been very important to the vitality and success of the Society. It means a thriving social life as well as the opportunity to work on finds and reports. There is space for the ever-expanding library and to store equipment, and members and visitors can see and handle examples of local finds. When No. 22 was to be demolished, in 1963, Dunstable Council, after a period of anxious uncertainty, provided another property, slightly less ancient and quirky. After the demise of Dunstable Borough, South Bedfordshire District Council assumed the role of provider. The Society is extremely grateful for this support given by the local authority to archaeology. Since 1956 we have occupied six different premises. The moves are always stressful, with some loss and damage to material almost inevitable. We are therefore very glad to have been undisturbed and unthreatened by demolition since 1977.

By 1957 the membership numbered 61, and the subscription was doubled, to ten shillings. Some Luton members formed a sub-group, under Terry White. This was to deal with a Roman site revealed

by housing development at Gooseberry Hill, and the group ceased its separate existence after excavation there finished. Another housing site, at Marina Drive on the border between Dunstable and Totternhoe, exposed skeletons of a Saxon cemetery in its foundation trenches. The jewellery and other grave goods were deposited in Luton Museum, who contributed £10 towards the cost of the excavation, along with £15 from Luton Corporation.

Les was as interested in the countryside as he was in archaeology, and in May 1957 he inspired the first of what became a regular, semi-official, Society event: the Dawn Chorus. On this legendary occasion ten members met before daybreak on Totternhoe Knolls to listen to birdsong, and saw a ghost.

In January 1958 Les proposed approaching other Bedfordshire archaeological societies to discuss forming a County society. This was the first move towards the creation of the Bedfordshire Archaeological Council, but the Manshead has always been fiercely independent and its committee was divided on the idea of this link. It was not until 1959 that the membership (with three opposing) agreed to the proposal. This led to the formation of the BAC.

The Society was always conscious of the importance of publication. Puddlehill was on its conscience, but it was impossible to produce a report while the excavation continued. The Marina Drive cemetery was a different matter: the production of a report, with the assistance of John Morris, became first priority.

To issue interim reports on excavations, and to keep members in touch, the first Manshead Magazine (price 9d) was rapidly produced in October 1958 - too rapidly and light-heartedly for its critics. However, the editor, chastened, introduced No. 2 in January 1959, writing "we cheer ourselves with the thought that the criticism of the last number is a good healthy sign and means that the Society is very much alive. It also raises the issue of the form that this magazine will take in the future. Is it to be a magazine containing occasional frivolous articles or are we to appeal to a wider public and to produce an archaeological magazine containing only serious studies?" By 1965 the Magazine had increased its solid content and adopted the title of Manshead Journal. No. 31 appeared in 1991. Because some members found the contents heavy going and regretted the absence of less serious items, a Newsletter, usually appearing twice a year, was instituted in 1966.

During 1959 membership reached 100. John

Morris's WEA class began card-indexing all archaeological sites and finds in Bedfordshire, beginning work in the Luton Museum archives. These records, expanded over the years, ultimately formed the nucleus of the Sites and Monuments Records at Bedford.

The early 1960s saw the end of an era in the Society: the top of Puddlehill, with its concentration of archaeological features, had gone. Winter digging was no longer necessary and members went field walking, or scrub clearing on Totternhoe Knolls. The end of excavation on Puddlehill, often falsely predicted, really seemed in sight at last. Other sites were investigated and rescue excavation switched for a while to Totternhoe quarry and even across the county border to Pitstone. This latter was really rather far from Dunstable to maintain regular digging, but the Manshead returned there when necessary, co-operating with Aylesbury Museum and the Pitstone Local History Society.

Quarrying at Puddlehill switched to the SE face of the pit and interest rose again when Neolithic pits and a Saxon village and cemetery were found. In 1965, however, quarrying ceased, and 15 years of

archaeological excavation on Puddlehill ended in 1966.

Membership included up to 20 "students", some of them girls from Queen Eleanor's School, Dunstable, working for a Duke of Edinburgh's Award. The average age of members was very young, most of the active adults being in their 20s and 30s. John Morris, describing the Society in 1964 wrote of "an unusual archaeological society in Dunstable; unusual because its large membership is mostly made up of weekly wage-earners; very largely of young people... and because they thoroughly enjoy each other's company, and attain a very high academic standard." Catering for the youngest element was sometimes seen as a problem, either of discipline on site, or of providing occupation and instruction at the HQ. Students complained that they arrived ready to work, but no-one had time to show them what to do. For a while Friday was "students' night" to try and solve this problem, but it tended to recur whenever there was an influx of young members.

1962 saw the publication of the first *Bedfordshire Archaeological Journal*, containing reports on the



Friary Field, Dunstable 1965: Les explaining the site. On the left: Bill Pilkinton, Maxene Miller, Andrew Amos, Molly Pilkinton, Ernie Hawes. Behind Les: Eric Michell, Richard Pilkinton, Ray Harris.

Marina Drive cemetery and the Saxon finds from Puddlehill. The Society had hoped to produce a cheap, popular booklet on Marina Drive for local consumption. The academic articles in the BAJ, and its price of 35 shillings did not fit this description. An independent publication was therefore planned, to coincide with Dunstable's charter celebrations in 1963. Its scope was expanded to cover local archaeology from earliest times up to the pagan Saxons. Les wrote the first draft in six weeks, urged on and assisted by Jean Collins, editor of the Magazine since 1960. *Ancient Dunstable* was published in May 1963. Donations and advertising made a price of 5 shillings possible. It was sold at the Dunstable pageant, (in which Society members took part), from market stalls, in local shops and by members in person (all Les's friends and workmates were expected to buy copies) and the first print of 1500 went within a week. Another 1500 were printed, finally selling out by 1970.

A pointer towards things to come was the excavation in 1963 of a well under a Dunstable High Street shop: this contained much Roman, as well as medieval, material, and when redevelopment in Dunstable began in 1964, rescue work showed there could no longer be any doubt that the Roman settlement of Durocobrivis had lain near where Watling Street and Icknield Way still cross in Dunstable town centre.

The Society had been formed for rescue excavation and by the 1960s had built up a stock of experience and practical expertise. With Puddlehill finished they were therefore faced with the problem of maintaining momentum and keeping their hand in. There was much post-excavation work to be done, but without a current excavation general interest might flag and membership fall away. This would not only be a pity for those concerned, but would also mean that if a call came to a threatened site there would be no pool of practised excavators to answer it.

As redevelopment progressed, it was plain that eventually most open sites in the town would be built over. Permission was therefore obtained from Mr Stevens, owner of the Friary Field, to begin excavation there, and in 1965 a new phase of Manshead history began.

Puddlehill veterans shared a language of catch-phrases, nicknames and in-jokes. They look back with strange nostalgia to the bracing bleakness and wide horizons of the hill. Les, in his acknowledgements in the final report, wondered "Why on a Sunday morning with an icy wind

blowing frozen snow into drifts, could I follow cycle tracks up the hill to be greeted by a young man without coat or gloves who told me that I was 10 minutes late? Why do people do this? Why not stay at home and look at icicles hanging by the wall from the comfort of the fireside? Is it a sense of duty we have to these faceless, nameless people who have gone before us and, by handling their pottery, looking again at the holes they dug, making them live again in memory? Perhaps saying thank you for giving us the chance to hear the larks singing, to watch the plover weaving in the sky, or to glory in the colour of wonderful sunsets and to sit on the hill after a hot summer's day and watch the ragworts begin to walk in the deepening dusk. They experienced these same things in this same spot and no doubt they gave them the same pleasure."

The pleasures of Friary Field were more genteel: tall trees, lush grass, privacy; a new generation of excavators grew to feel at home there, grateful guests of Mr Stevens for the next 15 years.

The foundations of the domestic buildings of the Dominican Friary were gradually exposed as digging continued. It was, however, within 3 weeks of work commencing a new member, Maxene Miller, made the Society's most famous find: the "Dunstable Swan Jewel", now celebrated as one of the British Museum's medieval treasures. A treasure trove inquest followed and a visit from a TV crew.

As excavations progressed, Romano-British features succeeded monastic walls, and a specialised team, including Bob Paton, a trained skin diver, was formed to excavate a 28 m deep Roman well.

Mysterious cross-shaped pits were discovered, in regular rows. They remain a mystery. When skeletons began to appear, buried on the same alignment, it was thought that the whole might have been some great building incorporating foundation burials. It became apparent, however, that while the skeletons were late Romano-British, the crosses were medieval and presumably linked in some way with the Friary.

A road scheme threatened the Friary Field in the early 1970s and the Manshead, feeling their resources were insufficient to carry out a complete excavation in a limited period, invited Dr Ian Stead, with a team from the Department of the Environment, to work there in 1972-3. Manshead diggers did not feel they were welcome in the visiting team, so they instead carried out small excavations elsewhere in 1972, and in 1973

arrangements were made with Dunstable Borough Council for a major excavation on the future SW Quadrant car park. Full-time work was necessary to cover the site in the time available, and for the first time money, provided by the Council, was paid to a member to act as site supervisor throughout the week and to co-ordinate the volunteers. There were pits, ditches and wells, Roman and medieval, and the most surprising find was the skeleton of a barbary ape buried in a 2nd century pit. It was in 1973 that the Society received an award from Dunstable Rotary Club for their work for the community

In the later 1970s (the road scheme having been abandoned) digging resumed on the Friary Field and its Roman cemetery. The Society entered the BBC Chronicle competition for independent archaeologists in 1979. As one of six finalists we were visited by judges and a TV team. House building was now imminent on the Field and excavation was drawing to a close, but fresh cuts had to be made for the cameras to film, and on the

appointed Wednesday unprecedented numbers of members appeared; some had not been seen on the site for 10 years. "It's like finals day at Wimbledon" the director said. The entry was unplaced in the Chronicle contest, but was a runner-up in the Legal and General Silver Trowel for enterprise in archaeology (£150).

Interesting excavations permanently available in the centre of Dunstable were good for membership, which in 1975 rose to a record 137. Social activities flourished, including barbecues, firework parties, tramps' suppers, even gymkhanas. There were two memorable Open Days, with fete, held on the Field in 1974 and 1975. Not every fete offers the chance to be photographed beside a skeleton still lying in its 4th century grave. The social events attracted still more members and an uneasy feeling grew that perhaps archaeology was being swamped. At the 1975 AGM the Chairman (from 1959-1985) Ron Fowler warned of a "dichotomy" developing, and the factions were referring to each other as "socialites" and "eggheads". An enthusiastic



Dunstable 1974: A winter excavation of a Roman well on the site of the new police station. In the background Molly Pilkinton is frying sausages to sustain the diggers. Standing on the right: Joan Schneider and Barry Horne.

organiser with a genius for fund-raising was filling the grateful Society's coffers, but doubts were expressed as to the ethics of half the profits going back into subsidised parties. In 1976 finances were brought under central control and the social activities, along with membership, declined again. This was sad in some ways, but unity was restored and interest in archaeology was once more the main reason for joining.

The Puddlehill Report, the culmination of many years' work by many people, was published as *Occupation Sites on a Chiltern Ridge* by British Archaeological Reports in April 1976, with a section by Professor C Hawkes.

Some members broke new ground in 1978-81 with the construction of an "Iron Age House" at the Chiltern Open Air Museum, based on one excavated at Puddlehill.

The Second Age of the Manshead drew to a close when the Friary Field was taken over for house building in 1980. Local archaeology had changed a great deal in the 1970s. There was now a professional county unit, and the large-scale redevelopment of Dunstable was over. The

Manshead was uncertain of its future role. A backlog of material awaited publication (though interim reports had appeared in the *Manshead Journal*) but this could not occupy everyone. As in 1965 a "digging society" was looking for a dig, and throughout the 80s a number of sites were investigated prior to building or road development. Between times the Society kept its hand in at Sewell, not far from Puddlehill.

Building material ploughed up in a field near Bidwell was investigated in 1984 and revealed an odd late Roman structure with walls supported on wooden piles in the waterlogged clay subsoil. This was Les's last season as Site Director, a position he had filled almost continuously for 33 years. He was now 74 and felt it was time someone younger took over. Dave Warren therefore became Site Director in 1985. Ron Fowler, Chairman since 1959, also retired, his successor being Dr Vivien Jones. Friends of Les had long felt he deserved some recognition of his services to archaeology and in 1985 he was elected Fellow of the Society of Antiquaries.

Memories of the Friary Field were revived in 1988 when an adjacent area was redeveloped and



Bidwell 1984: Excavation begins on a Roman building. L to R: Clive Bates, Dave Warren, John Hitchcock, Vivien Jones, ? , Ray Field, Ron Fowler, ? , Roy Goodchild.

members worked with the professionals from Bedford, exposing the foundations of the monastic church.

Les Matthews died, after two years of failing health, in February 1989. Without him the Manshead Archaeological Society would never have existed, nor would it have become an effective force without his personality at its head. Though not always tactful, he could nearly always turn away wrath with cheerful charm. His dogmatic statements occasionally caused offence, but he welcomed argument and was prepared to be converted by good evidence. He set out his approach to his workforce in the 1977 Newsletter: "We all like finding things, even the Site Director, and the only way to encourage new members into the team is to let them feel the thrill of excavating a piece of pottery...Of course long-standing members also like to find things and I will try to see that everyone gets a chance at the more interesting jobs. But I must make it quite clear that there will be no such thing as 'my hole'. We are a team." When members gathered at the HQ on a winter evening and Les was not there, they tended to stand about aimlessly, chatting. Within ten minutes of his arrival everyone was happily at work.

Andrew Selkirk, in his obituary of Les in the *Guardian*, wrote: "He was a dynamic and forceful lecturer and many a somnolent conference has been woken up when Les strode to the lectern. Love him or leave him you certainly couldn't sleep through him." In a voluntary group someone who can inspire enthusiasm is probably the most important ingredient for success and this, as well as his own knowledge, experience and ability to read a landscape or a section, was what Les provided. There were periods in the Society's history when it would probably have faded away if Les had left, but by the end of the 70s a core of experienced members had built up and membership steadily increased in the late 1980s, now standing at about 100.

In recent years field walking has been organised more rigorously, surveying the routes of new roads and systematically covering agricultural land in S Bedfordshire. Concentrated flint scatters have revealed Mesolithic activity as well as Neolithic and Bronze Age, while pottery of the Late Iron Age and Romano-British periods in particular have drawn attention to several previously unknown areas of occupation.

Publications in the 80s included the Roman Cemetery, Saxon Puddlehill (with the help of Mrs Sonia Hawkes) and short reports in *South Midlands Archaeology*. Les had hoped to see his report on the Totternhoe villa published, but failing health and energy prevented him undertaking the necessary revisions, so that has had to wait till now. *Ancient Dunstable*, long out of print, was thoroughly revised to include the work of the years since 1963 and re-published in 1989 in memory of Les.

Many people and organisations have been generous to the Society with their money, time and expertise, and we are grateful: professionals, academics, landowners, farmers, quarry managers and workers, local authorities and councillors.

To celebrate forty years of the Manshead Archaeological Society a conference has been organised for 24th October 1992, to be held in Ashton Middle School, Dunstable. The distinguished list of speakers includes two Vice-Presidents of the Society: Mrs Sonia Chadwick Hawkes and Dr Ian Stead, and also other good friends of the Society: Dr Peter Reynolds and Mr Roy Friendship-Taylor, and to chair the morning and afternoon sessions Mr Andrew Selkirk and Mr Ron Fowler (Vice-President and former Chairman).

After forty years the Society can review its record: at the least, much archaeological evidence has been recorded which would otherwise have vanished without trace. All sorts of people have discovered the fascination of the past and made lasting friendships working together on a common interest. There have been rows, disappointments, problems, but all in all we look back with pleasure and forward with optimism.

Sources and acknowledgements

This account has been compiled with the help of Manshead Society minute books, correspondence and other documents in the files of the Society and also at Luton Museum, where thanks are due to Dr R Holgate for providing access and assistance. Thanks also to the officers of the WEA Eastern District for allowing access to relevant records and for their help. For the years before 1963, when the writer joined the Society, she is grateful to early members, in particular to Mr E C Hawes, for sharing their recollections. This account is a personal one, and the writer takes responsibility for any views expressed.

Bibliography of Manshead Archaeological Society Publications

This list includes publications by members of the MAS and also some by other authors which contain important comments on sites excavated by the Society. Unless otherwise stated reports and articles were written by C L Matthews, sometimes assisted by other members of the Society.

Accounts of Puddlehill in the *Manshead Journals* are superseded by *BAR* 29 and *Anglo-Saxon Studies* 4, and of the Dunstable Romano-British cemetery by *BAJ* 15.

The Manshead Magazine/Journal

- 1 1958 *October* Puddlehill: Early Iron Age pits; Marina Drive: Saxon graves; Heath and Reach: Romano-British.
- 2 1959 *January* Puddlehill; Billington: Early Iron Age, Romano-British.
- 3 1959 *July* Puddlehill: Early Iron Age structure, Romano-British; Skimpot: mass burial.
- 4 1960 *June* Puddlehill: Early Iron Age storage pits and granary, Romano-British, Saxon grave; Totternhoe: Early Iron Age pot; Houghton Regis: Medieval pit.
- 5 1960 *October* Puddlehill: Early Iron Age house, Saxon cemetery.
- 6 1961 *June* Eggington: Romano-British, Saxon, Medieval.
- 7 1961 *November* Pitstone: Saxon cemetery, Medieval; Totternhoe: Bronze Age.
- 8 1962 *April* Eggington: Romano-British, Medieval; Totternhoe: Bronze Age, Summary of Totternhoe sites.
- 9 1962 *August* Eggington: Romano-British, Medieval.
- 10 1962 *December* Puddlehill: Romano-British, Saxon village; Pitstone: Early Iron Age; Chalton: Romano-British.
- 11 1963 *April* Rosslyn Crescent, Luton: Belgic, Romano-British; Maiden Bower; Puddlehill: Early Iron Age storage pit with skeleton.
- 12 1963 *December* Dunstable: well, Romano-British and Medieval; Puddlehill: Belgic, Saxon huts.
- 13 1964 *October* Puddlehill: Neolithic, Belgic, Romano-British, Saxon; Pitstone: Early Iron Age, Medieval; Tingrith hoard.
- 14 1964 *December* Dunstable N E Quadrant: Romano-British, Medieval.
- 15 1965 *November* Puddlehill: Neolithic, Saxon.
- 16 1966 *Spring* Dunstable: Friary Field, Swan Jewel.
- 17 1967 *January* Dunstable: Friary Field; Puddlehill: Neolithic, Saxon hut.
- 18 1968 *Spring* Dunstable: Friary Field Romano-British well, Cross Street; Totternhoe: Early Iron Age.
- 19 1969 *Spring* Sewell: Beaker, Early Iron Age, Saxon hut, Maiden Bower; Dunstable: Friary Field Romano-British well and kiln, cross features.
- 20 1970 *Spring* Dunstable: Friary Field Romano-British cemetery, cross features; Sewell: Saxon huts; Markyate: dene hole; Leighton Buzzard: Romano-British well.
- 21 1972 *Spring* Dunstable: Aldbanks ring ditch, Friary Field Romano-British cemetery, cross features.
- 22 1973 *January* Eggington: Mesolithic, Early Iron Age, Romano-British, Saxon; Tilsworth: Warren Knoll motte.
- 23 1974 *March* Dunstable S W Quadrant: Romano-British, Medieval.
- 24 1975 *March* Dunstable Friary Field and S W Quadrant: Romano-British (including cemetery) and Medieval.
- 25 1979 *January* Dunstable: Romano-British cemetery.
- 26 1984 *January* Dunstable Saracen's Head: Medieval.
- 27 1987 *January* Dunstable: Priory Gardens (by D Warren).
- 28 1988 *March* Sewell: Early Iron Age; Dunstable: W Street Romano-British skeletons, Kingsbury (by D Warren).
- 29 1989 *February* Skimpot: Early Iron Age; Dunstable: Kingsbury (by D Warren), Friary Church (by Royston Clark and Anthony Maull); Leighton Buzzard: skeletons near church (by B Horne).
- 30 1990 *February* N Luton: Romano-British (by D Warren and R Hudspith); Barton Bypass (by R Hudspith); Caddington: field survey (by R Hudspith); Heath and Reach: Belgic (by B Jones).
- 31 1991 *May* Dunstable: Medieval pottery (by M Green and B Horne), Pond Cottage Romano-British and Medieval and "Eleanor's Cross" development (by D Warren); Caddington, Houghton Regis and Luton:

fieldwalking (by R Hudspith); Leighton Buzzard bypass (by B Jones); Sundon: White Hart well (by R Fowler).

- 32 1992 April Dunstable: Dominican Friary (by I M Stead), Wellington Terrace (by D Warren); Conger Hill (by J Hitchcock); Chalgrave, Limbury, Sundon, Streatley and Toddington: fieldwalking (by R Hudspith); Maiden Bower (by M A Hamilton and C J Pollard); Leighton Buzzard Southern Bypass (by B Jones).

Bedfordshire Archaeological Journal

- 1 1962 "Anglo-Saxon Cemetery at Marina Drive, Dunstable" and "Saxon Remains on Puddlehill, Dunstable".
 7 1972 "A Roman Well at Dunstable" by C L Matthews and J B Hutchings.
 15 1981 "A Romano-British Inhumation Cemetery at Dunstable".
 19 1991 "Fieldwalking at Houghton Regis and Caddington, S Bedfordshire 1988-90" by R Hudspith
 20 1992 "Les Matthews - an appreciation" by R Fowler; "An Investigation of a Late Iron Age site at Sewell Lane, near Dunstable, Bedfordshire" by D Walker; "Romano-British Occupation on Puddlehill, near Dunstable" by D Warren; "A Roman Villa at Totternhoe" by C L Matthews, J Schneider and B Horne; "The Manshead Archaeological Society 1951-1991" by J Schneider; "Bibliography of Manshead Archaeological Society Publications".

Other Publications

- 1955 October *The Blue Circle* (House Journal of the Blue Circle Cement Organisation) Vol 9 no. 4. "Saxon Warrior found at Puddlehill, Houghton Regis."
 1957 *Journal of Roman Studies*, Roman Britain in 1956.

- 1959 April *The Blue Circle*, Vol 13 no. 2. "Dunstable Quarry Archaeological Discovery Puddlehill" (Early Iron Age).
 1962 March *The Advancement of Science* (British Association). "The Problems of the Amateur Archaeologist."
 1963 *Ancient Dunstable - A Prehistory of the District*.
 1964 *Proceedings of the Prehistoric Society* Vol XXX. "New Neolithic Sites in Dorset and Bedfordshire, with a Note on the Distribution of Neolithic Storage-Pits in Britain" by N H Field, C L Matthews and I F Smith.
 1972 *The Archaeological Journal* Vol. CXXVIII. "The Pre-Belgic Iron Age in the Central and Western Chilterns" by C Saunders.
 1973 *Town and Country* by K Branigan (p138).
 1976 BAR 29 *Occupation Sites on a Chiltern Ridge* by C L Matthews with a Foreword and Summary by C F C Hawkes.
 1979 November *Current Archaeology* 69. "Dunstable" by A Selkirk.
 1981 *Roman Britain* by P Salway (pp696, 706).
 1984 *Survey of Bedfordshire, The Roman Period* by A Simco.
 1985 *Anglo-Saxon Studies in Archaeology and History* 4. "Early Saxon Settlements and Burials on Puddlehill, near Dunstable, Beds." by C L Matthews and S C Hawkes.
 1986 *South Midlands Archaeology* 16 (CBA Group 9) "Possible Late Roman Temple, Bidwell, Near Dunstable."
 1989 *Ancient Dunstable*, revised edition by C L Matthews and J Schneider.
 1991 *South Midlands Archaeology* 21 (CBA South Midlands) "Excavation at Pond Cottage, Bull Pond Lane, Dunstable" by R Hudspith; "Fieldwalking at Houghton Regis" by R Hudspith; "Leighton Buzzard Bypass" by B Jones.
 1992 *South Midlands Archaeology* 22 (CBA South Midlands) "Wellington Terrace" by D Warren; "Fieldwalking at Chalgrave, Limbury, Sundon and Streatley" by R Hudspith.

MANSHEAD ARCHAEOLOGICAL SOCIETY

The present activities of the Society include excavation, fieldwalking, finds processing and recording, writing and publishing of reports, and talks by visiting speakers. The Society's Headquarters in Dunstable with workrooms and library are open 3 evenings a week for members to meet and work informally in a friendly atmosphere. Coach outings are arranged as well as an Annual Dinner.

New members are always welcome, anyone interested should contact the Hon Secretary: Barry Horne, Beaumont, Church End, Edlesborough, Dunstable, Beds. LU6 2EP. Tel 0525 221219.

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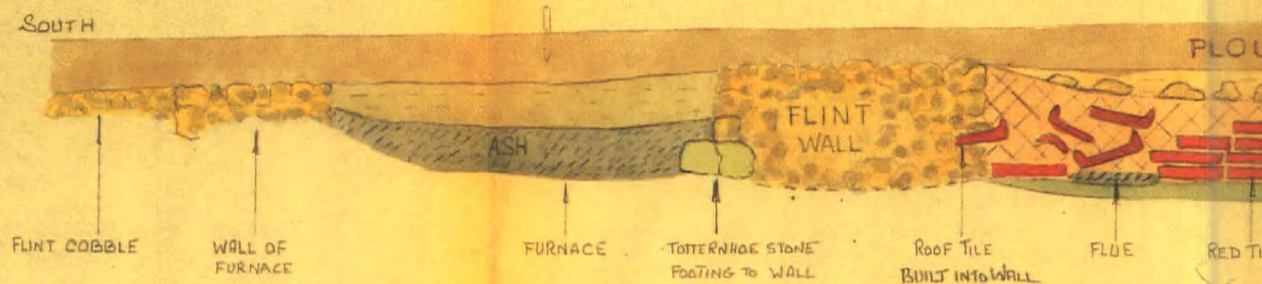
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