

# Archaeological recording of a Roman Villa at Brigstock Road, Stanion, Northamptonshire April – May 2002

by

MARTIN TINGLE

with contributions by

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## SUMMARY

*In the course of topsoil stripping prior to the construction of a composting facility, part of a Roman villa was unexpectedly revealed, together with ancillary structures. A pond-like feature beneath the excavated part of the villa contained dumped occupation debris, including carbonised plant remains, dating to the later first century AD, and indicating the presence of occupation on the site from at least this time, while pottery from quarry pits to the north, excavated in 1984, may suggest an origin as early as the mid-first century AD.*

*The main villa building was constructed in the later first century AD. The excavated remains comprised the westernmost room of a villa building aligned west to east, and at least 30-35m long, with a corridor along the northern side, perhaps forming an open veranda. The excavated and aerial photographic evidence would suggest a simple plan form, with the main strip building perhaps comprising some five domestic rooms. There were remnants of tessellated pavements in both the corridor and the excavated room, and displaced smaller tesserae from the room may suggest the presence of a small central mosaic. Fragments of painted wall plaster also came from this room. Amongst the ceramic building material from the demolition rubble there is a small amount of box-flue tile suggesting the presence of at least one room with a hypocaust heating system. A corn drier or malting oven lay to the west of the villa, along with a small oven that incorporated the base of an amphora. In this area there was also a stone-lined well, and its fills contained sherds of amphora, partially articulated cow skeletons and the skeleton of a raven.*

*In the late second or early third century the building was abandoned. Deposits of burnt debris lying on the scorched surface of the tessellated pavement probably relate to the systematic dismantling of the building, as accumulations of burning debris. Very small quantities of fourth-century pottery indicate that there was some later activity in the vicinity of the villa.*

## INTRODUCTION

### THE DEVELOPMENT

On the 4th April 2002 a site examination was carried out at Brigstock Road, Stanion on a site where topsoil had been stripped from an area of approximately 0.75ha, prior to the site being levelled for the construction of a composting facility (NGR SP 9235 8687, Fig 1). The examination was carried out by the author in order to fulfil the terms of a brief issued by the Northamptonshire County Council Historic Environment Team, which had specified that an inspection was primarily concerned with the potential for the recovery of any evidence of medieval pottery production of Lyveden/Stanion wares.

In fact, at the eastern end of the site, the removal of the topsoil had exposed the remains of part of a Roman villa and further associated structures. Following the discovery of the villa remains, a site meeting was held between the developer and the Northamptonshire County Council Archaeological Planning Officer, to examine whether there was any scope for a 'preservation by-design' solution. Unfortunately, relocation within the immediate vicinity of the proposed site was restricted by the proximity of a sewage treatment plant to the west, problems with access roads to the east, the proximity of a water course to the south and a major road to the north. Relocation to another site in the area was considered impossible because covenants on the surrounding land restricted it to agricultural use. Re-design of the composting facility on the site would have required the importation of substantial quantities of inert material (as the important archaeological remains were located on the highest part of the sloping site).

Consequently, Northamptonshire County Council provided funding for a team from Northamptonshire Archaeology to work with the author to determine the extent of the preserved remains so that an informed decision concerning future action could be made. The ground plan of the building was defined, although at its southern end plough-truncation had reduced the remains to foundation level with no survival of internal horizontal stratigraphy (Fig 2). At the northern end however, it was estimated that floor surfaces were sealed by 300-500mm

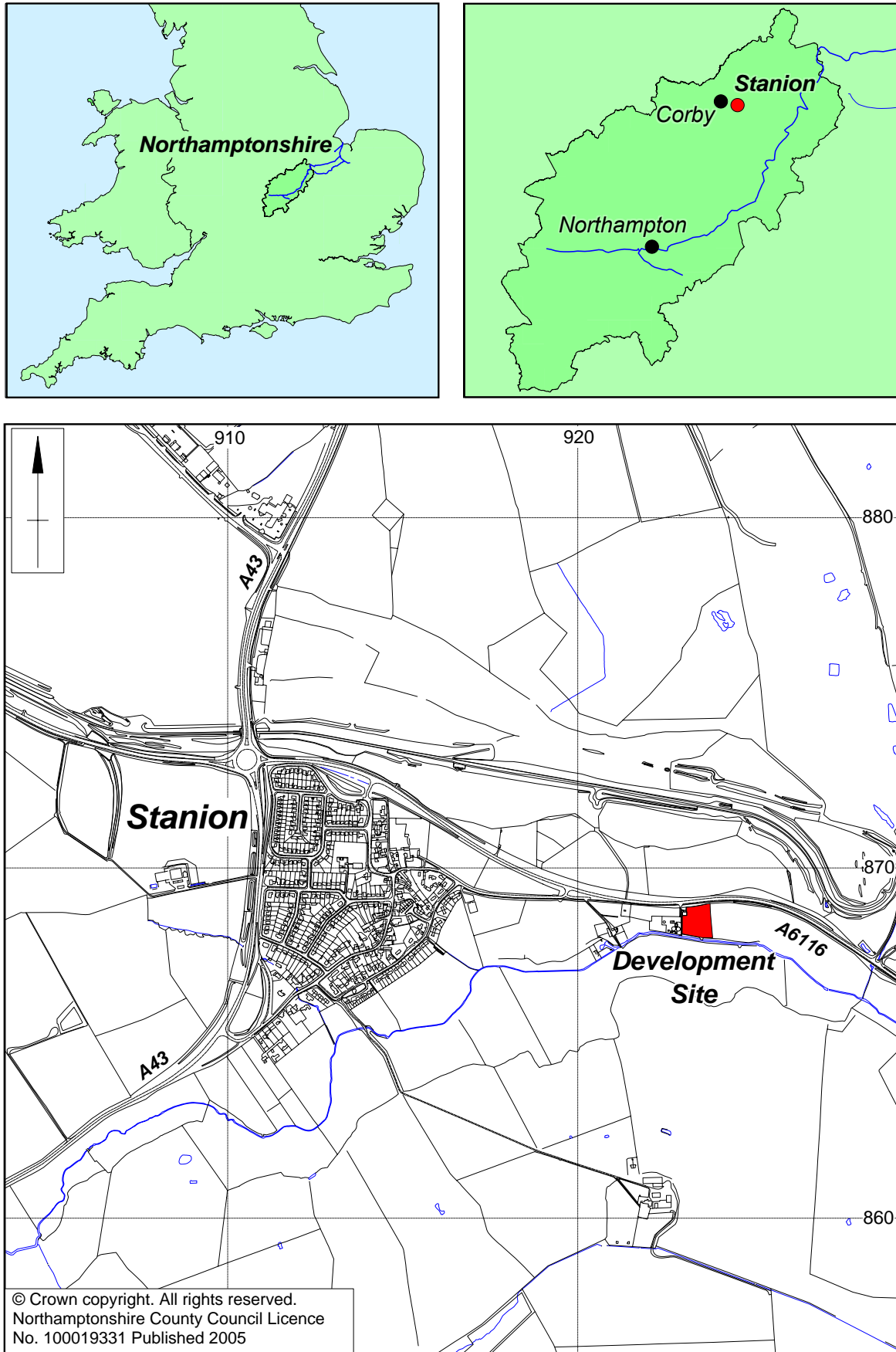


Fig 1 General location plan

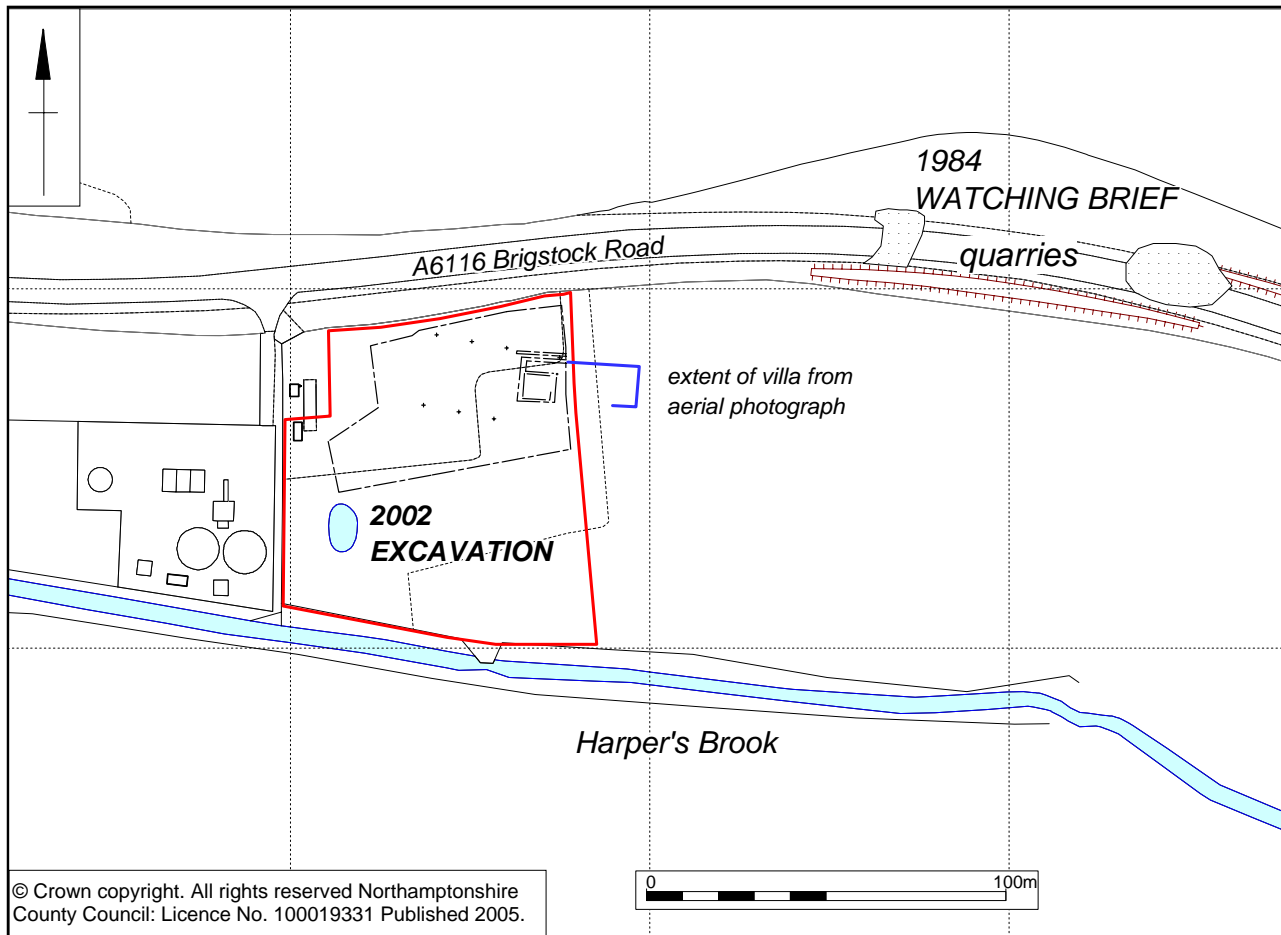


Fig 2 Location of excavated areas and Roman villa

of intact deposits. Two areas of *in situ* tessellated floor were found, as well as fragments of painted wall plaster.

Northamptonshire Archaeology carried out a Geophysical survey within the development and also in an adjoining area, over the presumed location of the undisturbed building. Unfortunately, due to adverse soil conditions, no useful data was revealed. Following on from this work, English Heritage agreed to fund a salvage excavation of the threatened area, concentrating on the known building and the corn drier. The excavation was carried out jointly by Northamptonshire Archaeology, with Rob Atkins carrying out the site recording, and the Northamptonshire Archaeological Society, with the author supervising a group of volunteer society members.

#### ACKNOWLEDGEMENTS

The author would like to thank the owner of the site, Mr Lawrie Baker, for delaying development and allowing the excavation to take place, although he was under no statutory obligation to do so. He would also like to thank the members of the excavation team from Northamptonshire Archaeology, working under the supervision of Rob Atkins, and the members of the Northamptonshire Archaeological Society and Middle Nene Archaeological Group (MIDNAG) who

worked with them, especially Gill Johnston and John Hadman. Thanks are also due to Bob Kings for the initial metal detecting of the site and to Steve Critchley for subsequent detecting, coin identification and geological information.

The author also owes a debt of gratitude to Pat Foster for supplying the plans, slides and the pottery from the 1984 watching brief which added vital information to this report. Thanks are also due to Northamptonshire County Council and English Heritage for funding the work. Finally, the author would like to express thanks to Myk Flitcroft and the other members of the NCC Historic Environment Team (HET), who promptly arranged funding for an initial examination of the site and liaised with English Heritage so that the excavation could proceed.

Since the excavation took place the post of county planning archaeologist has been cut and Myk has moved on to CgMs Consulting Ltd, while the rest of the HET have been dispersed within the County Council. It can only be hoped that when (and it is only a matter of time) the next major archaeological discovery comes to light in similar circumstances there will be someone in the planning department with the responsibility and resources to act as Myk and the HET were able to do.

In post-excavation the project manager for Northamp-

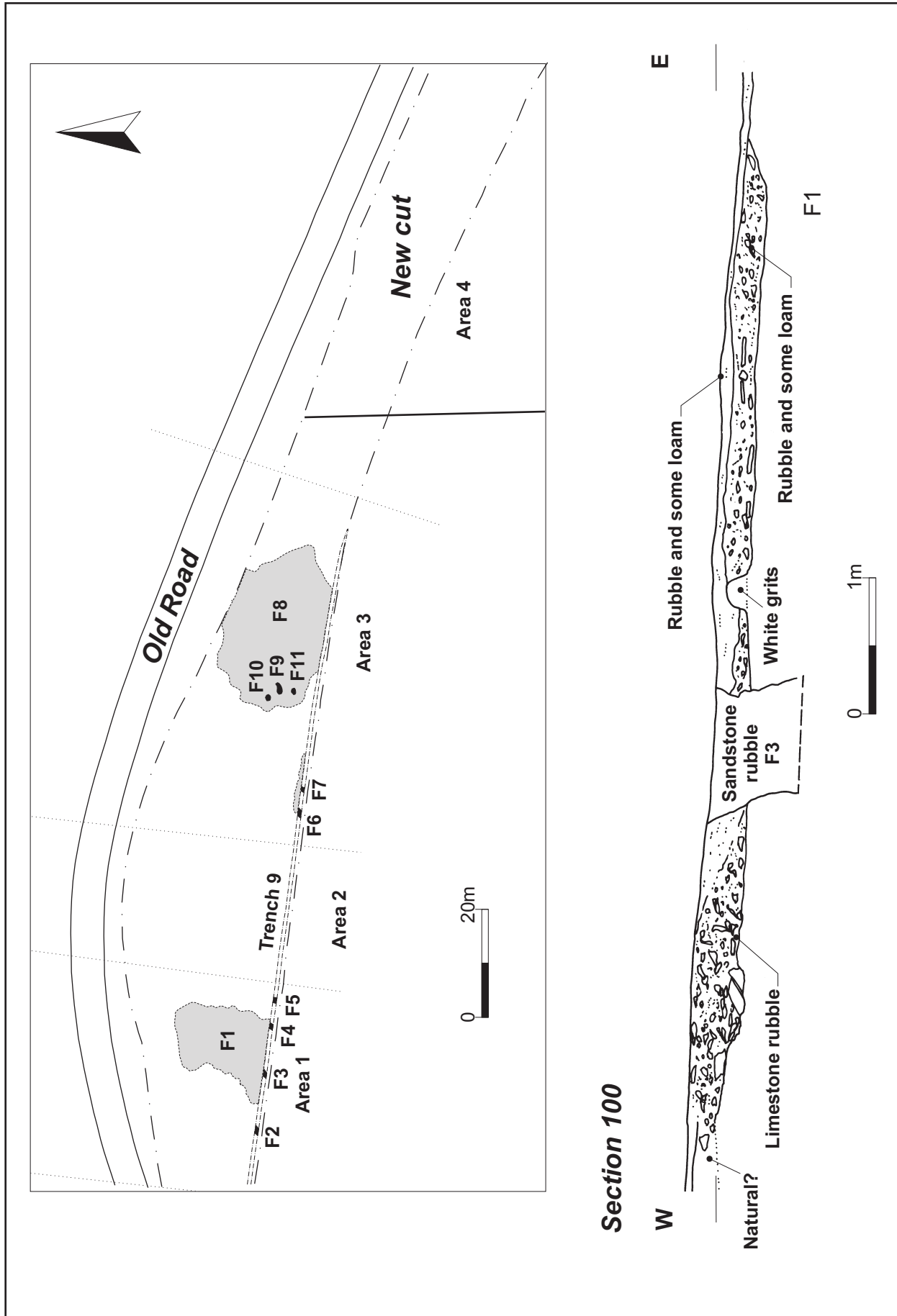


Fig 3 The 1984 salvage excavations

Northamptonshire Archaeology was Tony Walsh. The illustrations were prepared by Pat Walsh, LeeAnne Whitelaw and Jacqueline Harding, and the text has been edited by Tony Walsh and Andy Chapman in line with refereeing comments provided by English Heritage, with Helen Keeley acting as project manager.

## TOPOGRAPHY AND GEOLOGY

The site is located adjacent to the A6116 Brigstock Road approximately 1km north-east of the village of Stanion in north-east Northamptonshire. It is on a south facing slope above the Harper's Brook at between 60m to 70m AOD.

The underlying natural geology of the area mainly comprises rocks belonging to the Lias and Inferior Oolite Groups of Middle Jurassic age. Harper's Brook is floored by alluvium covered mudstone of the Whitby Mudstone Formation (formerly known as the Upper Lias), above which and exposed in the banks of the brook are the sandy ironstones of the Northampton Sand Formation (formerly known as the Northampton Sand Ironstone). This in turn is overlain by the Grantham Formation (formerly the Lower Estuarine Series), a succession of laminated clays, silts and sands. Exposures of the Grantham Formation are noted to the west of the villa buildings, which are founded on an apparently unmapped outcrop of coarse grained, fossiliferous, yellow-brown limestone of the Lincolnshire Limestone Formation. It is likely that there is a faulted junction between the two Formations.

## PREVIOUS ROMAN FINDS

### PUBLISHED SOURCES

Roman activity at Stanion was first mentioned by John Morton in his *Natural History of Northamptonshire* which described how Roman coins were found in 'Stanion field betwixt the town and the wood' (Morton 1712). The entry for Stanion in Whellan's Directory of 1874 states that 'In Willow Spring Close, near the village, were found some Roman Pavements, some years since' (Whellan 1874, 809). The RCHME (1979, 135) suggests that the find spot may be related to Willow Lane, a street within Stanion.

A survey of historic maps held in the Northamptonshire records Office did not reveal any significant information about the site or indicate the location of 'Willow Spring Close'. The Enclosure Map (NRO 2856) for Stanion dates from 1802 and lists field names surrounding the village which include 'Willow Lane Close' immediately to the south and 'Spring Close' to the north-west. The field in which the site is located is not named, although it appears on an estate map of 1639 (NRO 2991/6) as part of 'Neather Feilde'

Ordnance survey maps from the first edition to the present, show the field in which the villa was found marked with a cross and the appellation 'Roman remains found here 1840'. This is mentioned in the Royal Commission volume, although the precise location of the site is unclear (RCHME 1979, 135). Approximately 200m to the north-east of the site there is another cross recording a coin hoard, also found in 1840. Perhaps because these finds were not precisely located by the Royal Commission,

neither appeared on the Northamptonshire SMR in 2002.

During the 1950s there were sporadic reports in the journal of the Northamptonshire Architectural and Archaeological Society describing finds of Roman pottery from an area approximately 300m north of the site which was then part of a modern ironstone quarry (RCHME 1975, 135).

## SITES AND MONUMENTS RECORD (SMR)

In the original site assessment carried out prior to the development, an SMR plot revealed indistinct cropmarks approximately 400m south of the site and the known and probable course of a Roman road, which appeared to pass approximately 100m east of the site. The SMR finds record (SMR No 6166/0/1) also noted evidence of Roman iron working, 125m to the north-west of the site (in fact, the finds were located along a stretch of road works and the nearest were approximately 75m from the site and less than 50m from the known extent of the buildings). This had been revealed in 1984 when a watching brief was carried out by Pat Foster, Dennis Jackson and Gill Johnston during road improvements on the A6116 between Stanion and Brigstock. A 400m section of the road works was examined which revealed at least two shallow oval quarry pits, dug into the local Northamptonshire Ironstone (Fig 3, plan, section 100; Fig 4). Both were approximately 30m across and approximately 0.5m deep. As well as the quarry pits,



Fig 4 Watching Brief 1984, quarry pit 3 in section

several other features were noted, including a ditch that was recorded in section, associated with finds of amphora and slag (Fig 3, F3, section 100).

The quarry pits had been backfilled with sandstone (*sic*) rubble as well as slag, ash, mortar and wall plaster and pottery dating from the late first and second centuries. Samian from the pits suggested that while they were open in the second half of the first century they may have been backfilled over a period of a century. The only datable find from the pits was a Hod Hill type brooch that was unlikely to have been manufactured later than AD 60-65.

On completion of the rescue work it was intended that a site report was to be written and placed in the Northamptonshire Archaeological Archive, held at Northampton Museum (Dix 1985, 151). Unfortunately this did not occur, so that much of the above information was derived from unpublished sources and communications with those who worked at the site

Two aerial photographs (NCC Photo Number 9286/033 & 9286/034) (Fig 5) taken in 1996 and held in the SMR archive, show a complex of buildings at the location of the exposed villa. On the reverse of the photographs a possible interpretation of 'WWII Building' is suggested. The photographs indicate buildings that cover approximately 1500 square metres, composed of a rectangular building measuring approximately 10m by

30m which lies wholly outside the excavated area, linked by a substantial wall to the excavated building. It is not clear whether this is the rear wall of another building or the enclosing wall of a courtyard.

Had the Ordnance Survey data, together with details of the unpublished watching brief of the 1984 road scheme been entered on the SMR, this may have led to a different interpretation of the aerial photographs and thus alerted archaeologists within the planning authority to the archaeological potential of the site

## THE ARCHAEOLOGICAL EVIDENCE

### METHODOLOGY

Due to the limited period that was available, the excavation initially concentrated on defining the ground plan of the villa building, which lay at the eastern end of the stripped area (Fig 6 and Fig 7). Beyond the building, excavation was limited to the small number of prominent cut features, which included a corn drier/malting oven and an amphora-lined oven. In the same area a stone-lined well was uncovered during further machine stripping following the completion of the excavations.

In order to determine the structural sequence of the building, a series of 1.0m wide transects were cut across it and adjacent to one wall, revealing evidence not only



Fig 5 Aerial photograph 1996, looking east

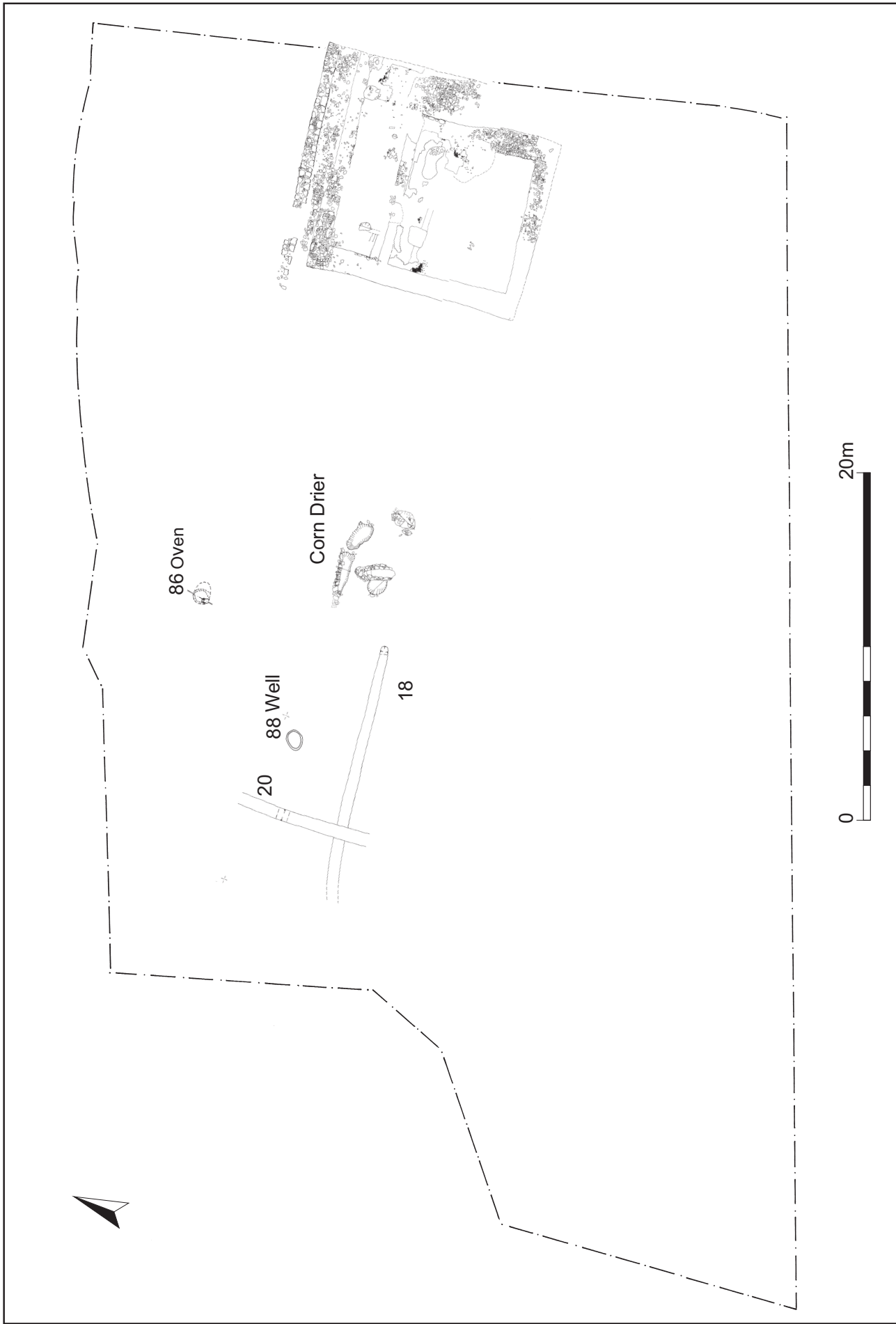


Fig 6 The excavated area



Fig 7 Stanion Villa, after initial cleaning, looking south

for the construction of the building but also the nature of the activity that had preceded it (Fig 8 and Fig 9). However, there was insufficient time to fully explore all the deposits related to the building and the pre-building levels and the significance of some contexts remains uncertain.

Environmental sampling was undertaken following the advice of various specialists, and areas of apparently *in situ* burning on the tessellated floors and within the corn drying oven were sampled for archaeo-magnetic dating.

#### PHASE 1: PRE-BUILDING DEPOSITS (MID TO LATE 1ST CENTURY AD)

The earliest contexts at the site comprised some lengths of gully and a backfilled hollow, perhaps a former small pond, which predated the construction of the excavated part of the villa building, and may have predated the construction of the entire stone-built villa, although this cannot be demonstrated. The presence of quantities of dumped domestic debris in the pond suggests that there was an episode of clearance, perhaps related to the demolition of a timber precursor to the stone-built villa.

#### THE GULLIES

In a small area to the east of the excavated room and south of the corridor there were short lengths of shallow gullies running on both roughly north-south and east-west alignments (Fig 8, 65 and 75; Fig 16, Section 8). A further length of gully lay 2.0m to the north, on the margin of the pond and sealed beneath a later cobbled surface, 60. The gullies were 0.70m wide by around 0.30m deep, and on alignments that have no relation to the later building, suggesting that there was a fundamental reorganisation of the building arrangements at the end of the first century AD.

#### THE POND

Beneath the villa building there was a broad hollow with shallowly sloping sides. As it was only investigated in the series of 1.0m wide transects its plan form was not fully defined, but it may have run on a south-west to north-east alignment, lying beneath the excavated room and extending under the eastern end of the northern corridor (Fig 8). It may have had an irregular plan form and was up

to 5.0m wide and 0.9m deep. The primary fill was green brown sand, the colour perhaps suggesting the presence of cess or some other strong organics (Fig 10, Section 9, 66). Above this there were deposits of dark grey brown sandy clay (Fig 10, Section 9, 55, and Section 16, 82). These fills were all rich in charcoal, including charred grain, and dumped occupation debris that included pottery, animal bone and oyster shells. It is uncertain to what extent this represents a slow accumulation of dumped occupation material, or whether it may represent a single episode of backfilling and dumping closely preceding the construction of the villa building. If it was the product of a site clearance, the absence of larger pieces of stone would suggest that it was associated with timber rather than stone buildings.

The soils filling the pond also produced quantities of charred plant remains. Much of this seems to derive from crop processing waste, and spelt appears to have been the principle cereal, along with Bread-type wheat, hulled barley, peas, Celtic beans and probably oats. There were no imported exotic fruits and spices, but the native hedgerows are represented by hazelnut shell fragments and an elderberry seed.

To the east the fills of the pond were overlain by a layer of limestone cobbles (Fig 8, 60). These may represent an attempt to consolidate the area prior to building, with a further soil layer accumulating or being deposited above the cobbles (Fig 10, Section 16, 76).

#### PHASE 2: THE CONSTRUCTION OF THE BUILDING (LATE 1ST CENTURY AD)

The construction of the building took place during the late first or early second century AD, most probably as part of the provision of the first stone-built house on the site. Aerial photographs (Fig 5) indicate that the excavated part was the westernmost 12.5m of a simple rectangular building some 30-35m long. The excavated part comprised a single square room, with a corridor to the north.

The walls had been heavily robbed so that in places, particularly to the south and west, most of the stonework had been lost and the wall line was only denoted by a shallow deposit of mortar and small stones from 1.0 to 1.4m wide (Fig 8: 5, 7 and 13), which clearly did not indicate the actual width of the standing walls. However,



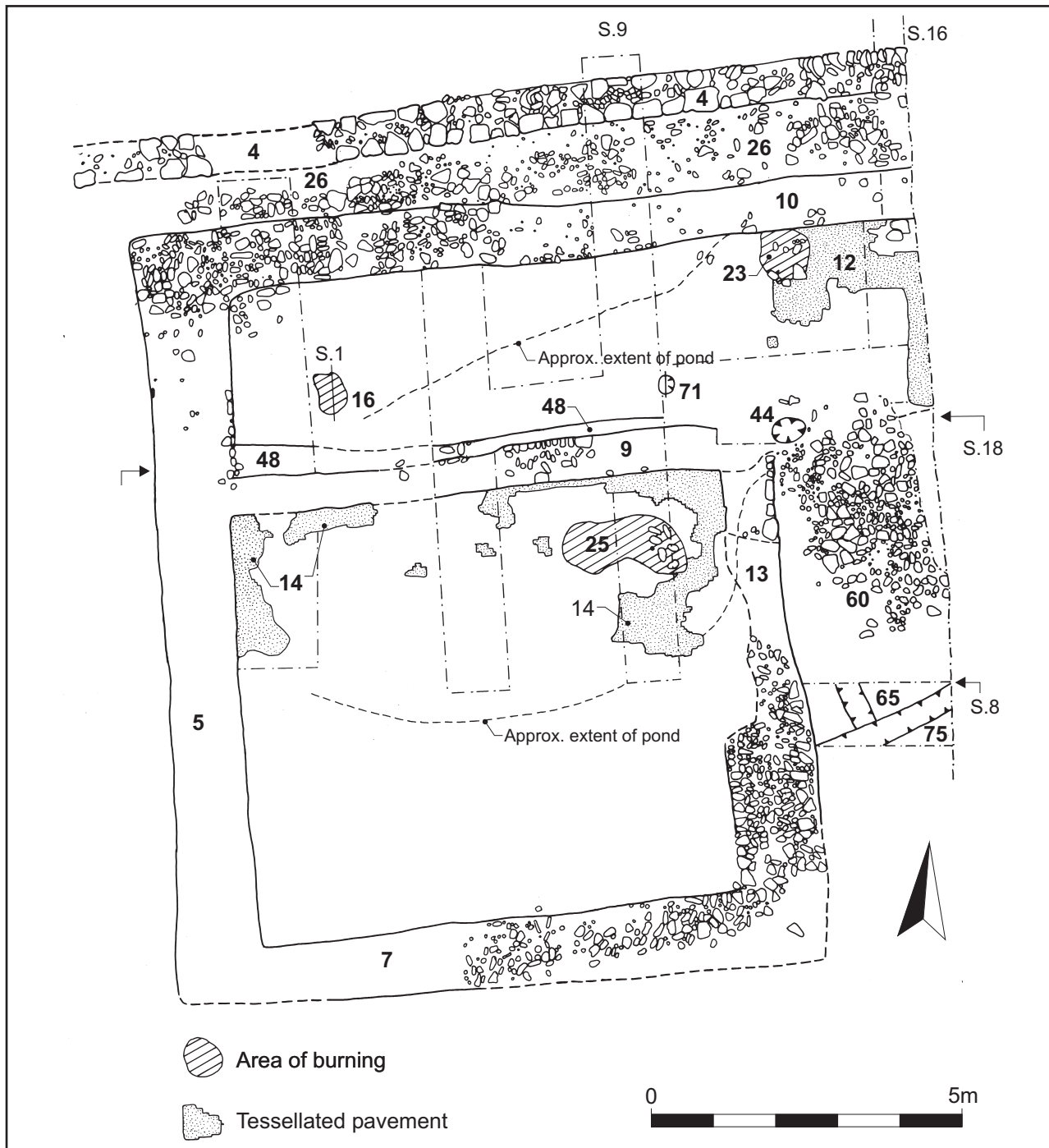


Fig 8 The excavated west wing of the Roman villa

Fig 9 Stanion Villa, after excavation of section transects, looking south

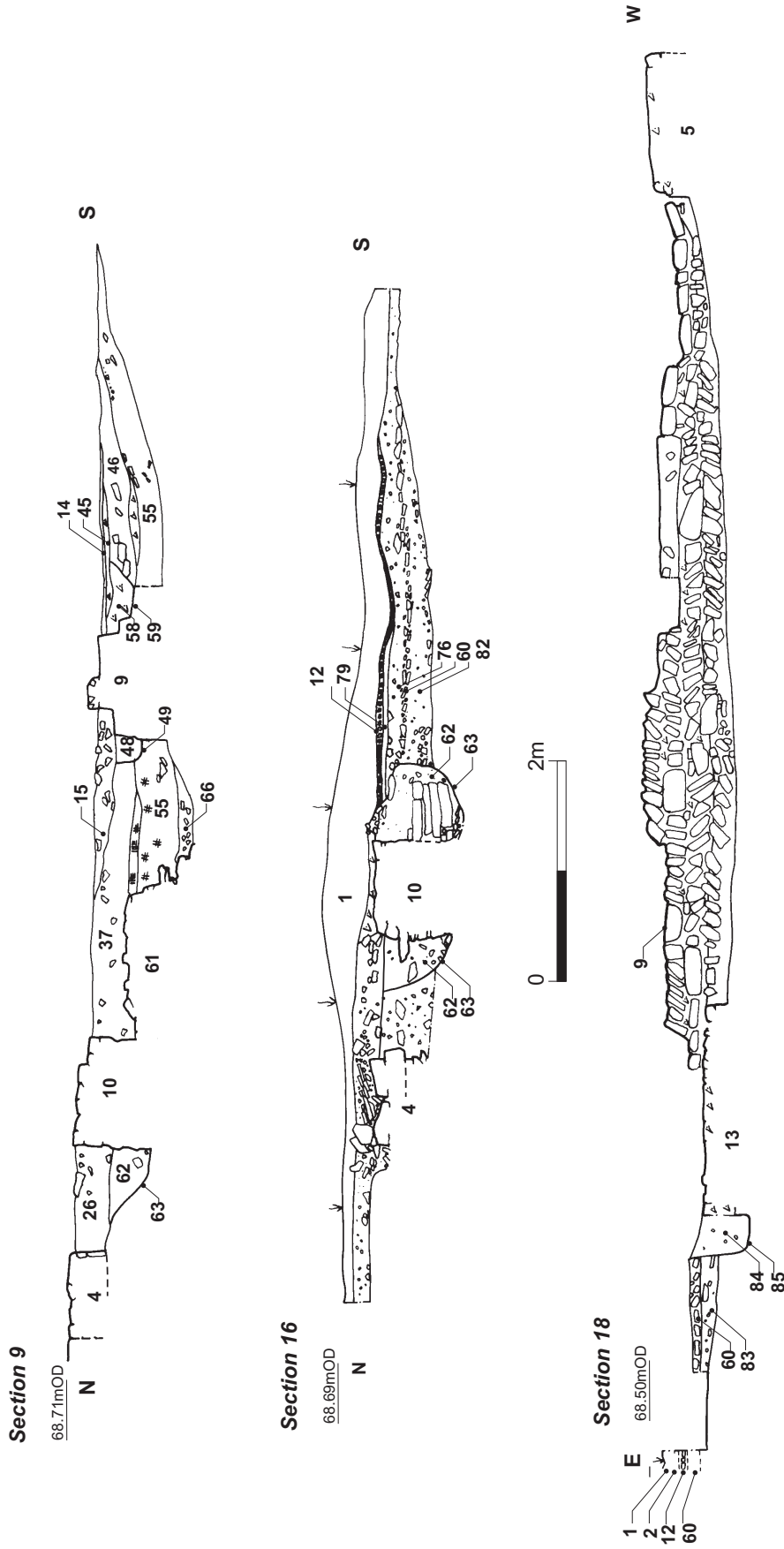


Fig 10 Sections across the villa building

where the walls crossed the soft fills of the pond it had been necessary to provide more substantial foundations. Much of the wall, 9, between the room and the corridor, and the eastern end of the northern wall, 10, had been built within the fills of the pond. For the northern wall a broad construction trench, up to 2.0m wide by up to 0.9m deep, had been cut through the pond silts so that the wall could be founded on the solid bedrock beneath (Fig 10, Sections 9 and 16, 63). The wall, 9, separating the room and the corridor appeared to be set against the northern side of a narrower construction trench, up to 1.6m wide (Fig 10, Section 9, 59).

The wall foundations themselves were 0.9-1.0m wide, 10 and 9, comprising four courses of wall foundations, up to 0.9m deep, formed from large fragments of limestone steeply pitched and bonded with a soft mortar, with the pitching alternating with each course, as seen in the exposed elevation (Fig 10, Section 18, 9). The construction trench had been backfilled, 62 and 58, with a mixture of soil, discarded smaller fragments of limestone and some mortar. Abutting the northern face of wall 9, there was a steep-sided flat bottomed slot (Fig 10, Section 9, 49), up to 0.5m wide by 0.4m deep, that was filled with clean yellow brown mortar containing a few small pieces of limestone. Its function is unknown, unless it was related to the provision of a wall rendering along the southern side of the corridor, which would support the suggestion that this had formed an open veranda.

A further length of wall lay only 0.8-1.2m to the north of the building (Fig 8, 4). This was a ground laid wall, 0.7m wide and standing up to 0.3m high, comprising three courses of flat laid limestone wall facings with a core of smaller limestone. To the east there was a length of pitched stone wall foundation. The relationship of this wall to the building is unclear. To the west remnants of the wall continued beyond the end of the building before all traces were lost to later truncation. Between this wall and the building there was a fill of soil and stones, 26, which was capped with flat-laid limestone that may have been remnants of a stone surface. An intact poppy-headed beaker had been deposited just beneath this surface (Fig 11 and see Fig 17, 1).



Fig 11 Near complete poppy beaker in situ

Wall 4 may therefore have served as a revetment to a stone surface fronting the veranda, but if this was its primary function it may be questioned why there was a good inner facing, rather than merely a revetment wall with an external face.

#### PHASE 3: THE OCCUPATION OF THE BUILDING (LATE 1ST TO LATE 2ND /EARLY 3RD CENTURY AD)

The exposed part of the building was 12.5m long by 12.5m wide. The corridor was 3.0m wide and may be presumed to have run the full length of the building. To the east, over the earlier pond fills, an area of plain tessellated pavement had survived (Fig 8, 12). The pavement was laid on a 10mm thick base of clean yellow mortar (Fig 10, Section 16, 79), and comprised large crudely cut sandstone tesserae, 30mm square by 25mm deep, pale yellow in colour, which closely resemble pieces used in the Weldon villa (Smith *et al* 1988-9, 39).

At the eastern end of the corridor no evidence for a southern wall survived, which would have been an eastward continuation of wall 9. However, the straight southern edge of the tessellated pavement in the corridor lay adjacent to where the wall face should have lain. This area lay just beyond the pond and would not have required the deep foundations that lay to the west. In addition, there was a substantial post-pit (Fig 8, 44), 0.45m in diameter by 0.65m deep, that may have held the western jamb of a doorway, which may account for the absence of the wall in this area. The fill of this post-pit contained a quantity of painted wall plaster that presumably had accumulated in the hole during the demolition of the building.

It is therefore suggested that the excavated area did include part of a second room to the south of the corridor, but the absence of any evidence for distinctive floor surfaces suggests that it was not elaborately decorated like the room to its west.

The main room was 7.0m wide by 8.0m long. To the north, where it overlay the pond, several areas of plain tessellated pavement survived (Fig 8, 14). These were of the same form as the pavement in the corridor, comprising large yellow tesserae set on a mortar bed. However, a range of displaced smaller tesserae in red, blue and white, and measuring between 10-12mm square, were recovered and these suggest that there was probably a decorative mosaic set within the centre of the room.

In addition, quantities of painted wall plaster were recovered from the demolition rubble within this room. The fragments are too small to say much about the decorative scheme, although it included panels with a white background and framed with striped borders in red and black.

To the south of the building there were patchy remnants of probable former yard surfaces.

#### PHASE 4: THE ABANDONMENT OF THE VILLA (LATE 2ND /EARLY 3RD CENTURY AD)

The pottery assemblage indicates that the building fell out of use sometime between the late second and the early third century AD. It would appear to have been systematically dismantled. Painted wall plaster and

tessera within a door jamb post-pit, 44, suggests that even the doors were dismantled for removal. As the site had been truncated by later activity, only a thin spread of demolition deposits survived, making it even more difficult to quantify what was recovered in contrast to what may have been removed for reuse at abandonment.

Some further evidence for the processes of destruction had survived. At the western end of the corridor and within the main room there were distinct areas of burning (Fig 8, 16 and 25), which appear to be within the demolition deposits and presumably represent the burning of unwanted debris. A further area of burning, 23, described as a hearth on site, lay directly on the tessellated pavement at the eastern end of the corridor, and the surface of the pavement had been blackened and scorched red. This deposit was subject to archaeomagnetic dating, but a date could not be obtained as the magnetic directions were scrambled. This suggests that this was not an *in situ* hearth but an accumulation of burnt and burning debris that had fallen onto the floor whilst still sufficiently hot to scorch the floor surface. This may suggest that accidental or deliberate burning may have either been the catalyst for abandonment or part of the process of destruction.

However, while the bulk of the pottery assemblage indicates that the building was abandoned by the early third century, there is a small amount of third to fourth century pottery and the 14 coins recovered are all dated to between the late third and late fourth centuries, 270s to 370s. This evidence suggests that there was still activity on the site through the later third and fourth centuries, although its nature is unknown. One possibility is that the villa was left as a partial derelict shell, rather than being totally levelled, and the later pottery and coins might be derived from later periodic episodes of wall robbing in which the ruins were being treated as a useful stone quarry.

#### PHASE 5: ANCILLARY ACTIVITY

In post-excavation the ancillary features beyond the villa building were assigned to a group labelled Phase 5. However, this does not imply a chronological sequence following on from the four phases of defined occupation.

Several cut features lay to the west of the building. These included a corn drier/malting oven, a pit oven constructed utilising the base of an amphora, and a well. Both the pit oven and the well are associated with amphora and appear to relate to the late first century activity that preceded the stone-built villa, while the corn drier and the associated pits are dated to the mid-second to early third century.

#### THE PIT OVEN

To the north there was a circular oven (Fig 6, 86 and Fig 12). It was formed within a shallow pit, 0.5m in diameter that was lined with part of the body of an amphora, with a complete flat-laid roof tile on one side, probably lining a short flue. A similar oven was located within a fourth century timber barn at the Weldon villa (Smith *et al*

1988-9, 57). The amphora at Stanion was of Dressel 20 type (Peacock & Williams Type 25) of southern Spanish origin, which are dated from late first/early second centuries to the early third century.



Fig 12 Oven base (86) utilising reused amphora

#### THE WELL

The well was only exposed during levelling of the site following excavation, and had to be excavated rapidly (Fig 6, 88 and Fig 13). It was lined with flat-laid courses of limestone and the shaft was 1.0m in diameter. Finds from the fill include quantities of pottery, including amphora dated to the late first century AD, three partial cattle skeletons and a partial skeleton of a raven. These could be interpreted as rubbish deposits although the possibility that they represent 'closure deposits' should also be considered.



Fig 13 The stone-lined well (89)

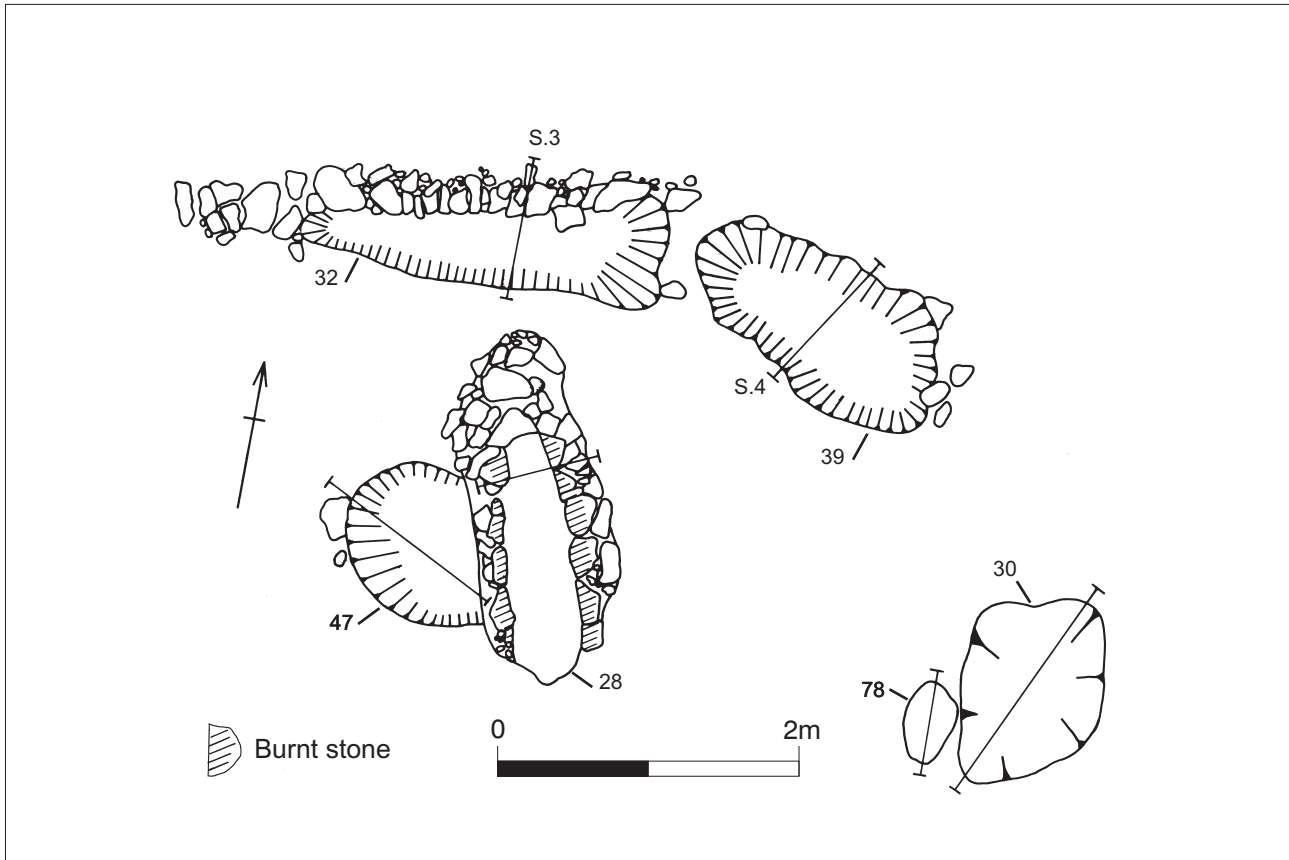


Fig 14 The malting oven and associated pits

#### THE CORN DRIER/ MALTING OVEN

The most prominent group of features comprised a corn drier/malting oven, 28 and 32, and two associated pits, 30 and 39 (Fig 14 and Fig 15).

As a result of later truncation, the corn drier survived as two separate elements, a linear stone-lined channel to the south, with the limestone lining scorched red, 28, and a channel to the north, aligned east to west, for which a lining only survived along the northern side, 32 (Fig 14 and Fig 16, Section 3). However, it is assumed that these were the remnants of a T-shaped corn drier, with the stokehole at the southern end. The flue was 0.4m wide and would have been 2.7m long connecting with a transverse end channel some 3.0m long.

To the immediate east and south east there were oval to irregular pits (30 and 39) (Fig 14 and Fig 16, Section 4). Both contained dark fills with some charcoal, probably at least partly comprising dumped debris from the oven. Pit 39 also contained a near complete lower stone from a rotary quern 500mm in diameter.

The fills of the oven and the pits were sampled for analysis of the charred seed content. The cereal concentrations from the northern channel and pit 30 were both rich in barley, suggesting that this was the main crop being dried in the oven, although there was no evidence that this was malted barley. The pit, 47, cut by the flue of the oven, contained or had been contaminated with quantities of mixed cereal processing waste, particularly



Fig 15 The corn drier/malting oven, looking north

chaff and also charred spelt. This mixed material may well be remains of the flue used to fire the oven.

Samples for archaeomagnetic dating were also taken but, partly because these are low temperature ovens, a reliable date was not obtained.

#### DITCHES AND GULLIES

To the west of the corn drier there were two lengths of intersecting ditch or gully (Fig 6, 18 and 20), which ran

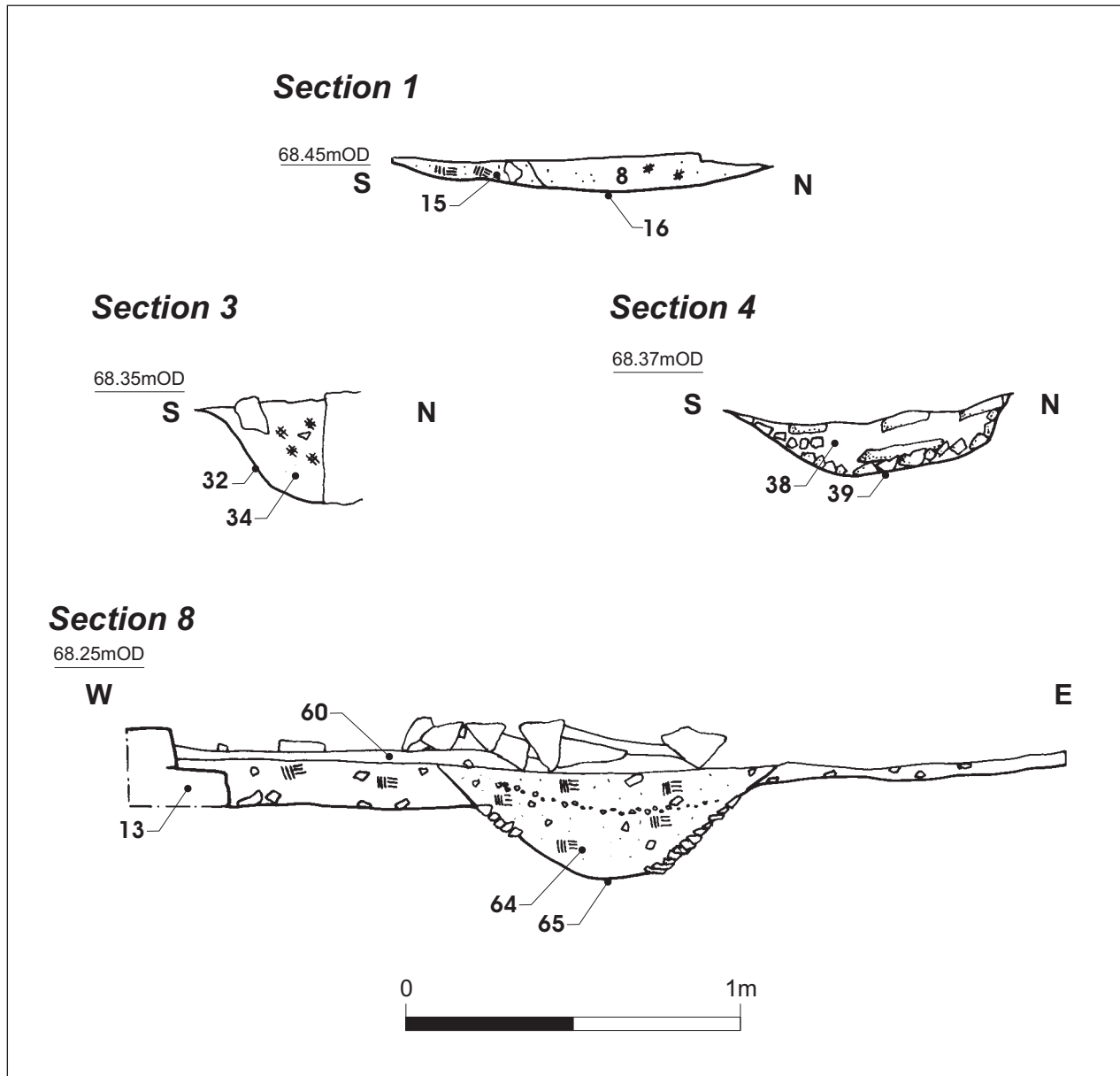


Fig 16 Sections of excavated features

on east-west and north-south alignments that coincided with the alignment of the villa itself. They presumably defined a series of rectilinear plots to the west of the villa, but the full extent of these features had not survived. At best, they were up to 0.65m wide and up to 0.15m deep, but often less.

**PHASE 6: POST-ROMAN ACTIVITY**

Stanion is principally associated in the archaeological literature with the production of medieval pottery. Small quantities of medieval pottery were recovered from the site, most of which derived from the topsoil or from contexts that could have been disturbed by ploughing and was probably evidence of medieval manuring or post-medieval and modern activity at the site.

**THE ROMAN POTTERY**

*R M Friendship-Taylor  
with M J Darling, B Dickinson and M Powell*

**INTRODUCTION**

Stanion villa yielded a total of 3150 sherds of pottery, which weighed a total of 58.12 kg.

There were few well-dated groups from the site under investigation, although a general feel for the main periods of occupation was obtained. However, there were few real surprises from the group as a whole (Fig 17).

There were nine medieval sherds (0.29%) from four contexts and seven post-medieval sherds (0.22%) from six contexts. These were presumably from medieval and or post-medieval plough disturbance or other means of contamination.

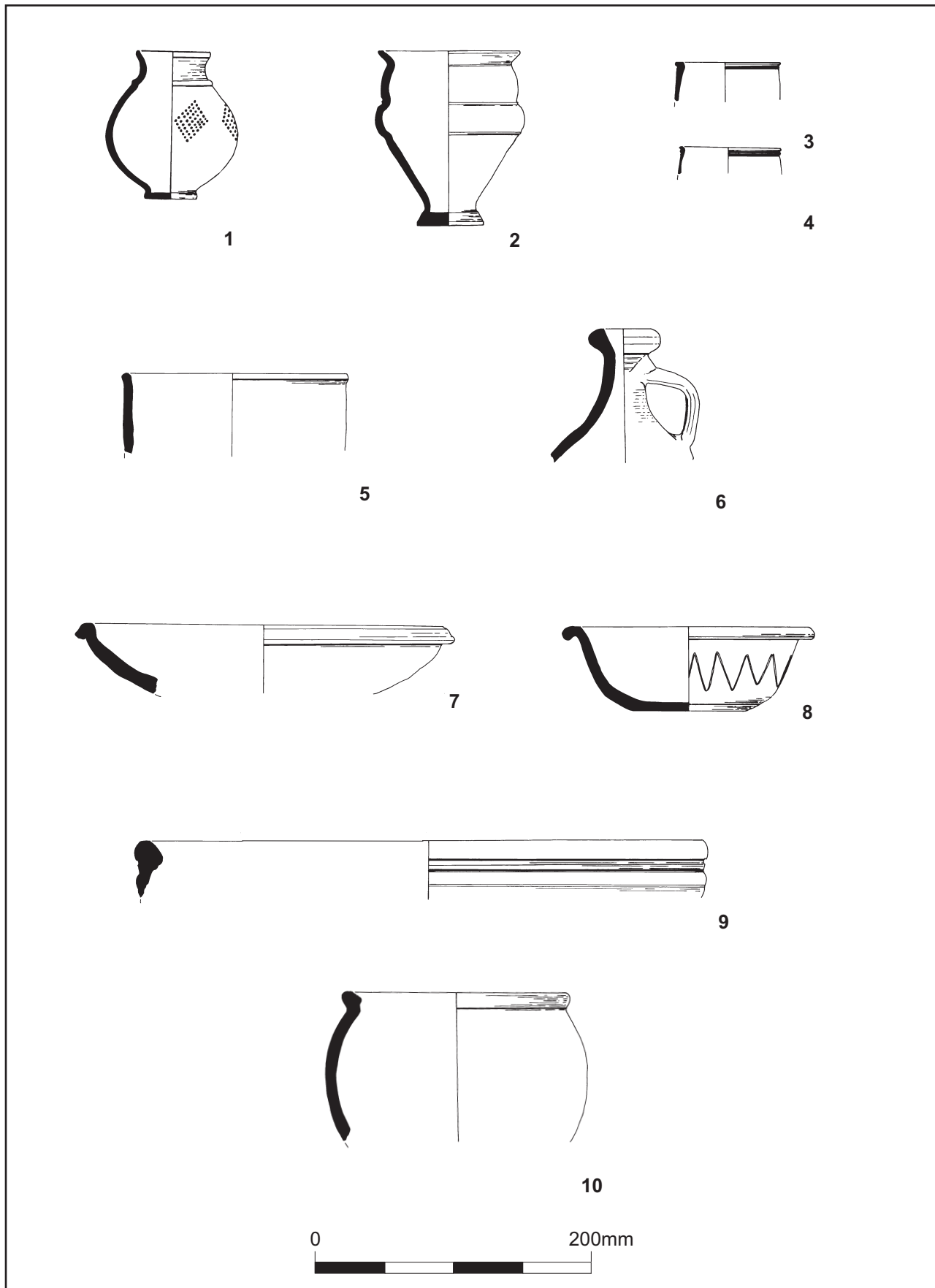


Fig 17 The Roman pottery, 1-10

Table 1: Roman pottery, main fabrics, sherd count by %

Fabric type	Sherd Count	%
Various Grey wares (GRY)	1077	34.19
Lower Nene Valley grey ware (LNVGW)	39	1.24
Grog wares (GRO)	625	19.84
Amphora (DR 20)	251	7.97
Calcite/shell/calcareous (CG)	271	8.60
Lower Nene Valley Col Ct wares (LNVCC)	161	5.11
Samian ware (SAM)	153	4.86
Mica gilt ware (MIC)	15	0.48
London ware (LON)	23	0.73
Post-medieval (P/MED)	7	0.22
Medieval (MED)	9	0.29
Oxford red CC wares (OXRC)	6	0.19
Oxford white mortaria (MOOX)	8	0.25
Other fabrics	505	16.03
Total	3150	100

Generally, the sherd size was small which suggests the site may have been abandoned at a relatively early stage, with a life of only 100 years or so, and had remained open in perhaps a semi derelict state for some time allowing some fourth-century pottery to accumulate. Apart from the main recognisable fabrics as noted below, there was a considerable range of fabrics of which no doubt many had originated from the immediate locality of the Stanion villa.

Samian ware represented 4.86% of the group. Small quantities were present in many contexts. Most of the sherds had fresh breaks, which suggests they had been deposited relatively quickly after breakage. This small group helps greatly to reflect the general date range of the area examined. Perhaps another pointer for an early date is the fact that although the site is not very far from the centre of the lower Nene pottery industry, there was comparatively little lower Nene Valley colour coated fine wares present (5.11%) within the group as a whole. The little that was present possibly reflects the later part of the site's occupation and therefore the end of the main phase of use of the villa, perhaps as early as the late second century or, as late as the early third century AD.

A small but significant quantity of mica gilt ware (mainly beakers) (0.48%) was recovered from various contexts. Most of this appears to have originated in the UK, and may well have come from the lower Nene region during the mid second century; only a single sherd of this ware may have been a continental import.

Also possibly originating from the lower Nene valley were several sherds of the so-called 'London ware' mostly copying samian forms such as Dr. 37 and Dr. 30 types (.33%). (Howe, Perrin and Mackreth *no date*, fig 2, 23 – 25.). This type of pottery was also made at other manufacturing centres such as Pakenham (Suffolk) and the north London area (maybe Highgate Wood).

The largest fabric grouping is the ubiquitous grey ware that is represented by 34.19% (1077 sherds). Most of which appears to be of local origin. However, there is a single sherd of rusticated grey ware (which is quite rare in Northamptonshire and may have originated from Lincolnshire to the north-east of Stanion; only two sherds

of this ware have been found at Piddington to date and one from Nether Heyford (Stephen Young pers com).

A triangular rim sherd of a bowl, (GRY 27) which could be of Highgate Wood Type, (London) (Brown & Sheldon, 1969a, 1969b & 1971) was also present. Although this ware is not that common in the region, it does occasionally appear in Northamptonshire, for example, several vessels have been recognised at Piddington.

The large Trajanic/Hadrianic kiln complex at Ecton in the Upper Nene Valley (Johnston 1969) is represented at Stanion by only four vessels (GRY 8), comprising three jars and one bowl.

Not surprisingly, the bulk of the grey wares from Stanion possibly originated from the middle Nene area, though no single piece could be recognised from a particular location. The main bulk of the vessels were jars, but bowls and dishes were also present. Grey ware from the lower Nene Valley kilns (LNVGW) seems to be in the minority and is represented by only some 39 sherds (1.24%). Given the location of this site and the low number of LNVGW sherds and together with the colour coated wares, may be a further pointer to an early to mid second century date for the main period of development of this site.

However, the main date range of the pottery conforms largely to the mid to late second and possibly the early third centuries, suggesting that this part of the villa was occupied during this period. There is little pottery of the later third/fourth centuries present within this assemblage, suggesting that activity of some kind may have continued somewhere on the site at least into the fourth century (See above introduction).

Medium sized jars from outside the region have been found at sites such as Stanion, Piddington and elsewhere suggesting that these vessels were likely to have been used as containers to transport commodities such as honey or butter, rather than the local wares which were made for immediate domestic use.

There is a surprisingly large quantity of Amphorae, all of Dressel 20 type (7.97%) comprising one rim and two bases, from at least two, but possibly from three or four vessels. One of these may have been reused as a field oven. The secondary use of this amphora in this way was very similar to an example from the villa at Piddington, where a large storage jar had been laid on its side to create a draught-proof oven. These amphorae had originated from southern Spain and may have contained olive oil.

Apart from the large number of amphorae sherds and the combined grey ware fabrics, the second largest fabric group of vessels present was what is sometimes called 'Roman grogged ware' (termed in this report as GROG) (19.84%). This is a 'lumpy' hard-fired creamy/fawn fabric, which also contains quantities of sand/quartz, grog and sometimes some calcite. It is often used for the larger storage type of vessel, although at Stanion there were many 'developed lid seated jars' (perhaps the most common type of jar) and smaller necked jars also in this fabric.

Surprisingly, there was little shell/calcite tempered pottery (8.60%) within the assemblage as a whole, and again, this may indicate a later start of occupation or a



late ending for the site. No late Iron Age forms or fabrics were noted within the assemblage.

The only fourth-century pottery present (Contexts: 1; 15; poss. 27; poss. 37; poss. 43; 48; poss. 60) consisted of a single sherd of Oxford red colour coated ware and an Oxford white mortarium and a little late, lower Nene valley colour coated wares. This fourth-century material could have derived from occupation on another part of the site, which remains unexcavated – or, it may be all that remains of a fourth-century use of the site. Medieval/post-medieval agricultural activity, of which there is ample evidence, may have destroyed and contaminated some of the upper contexts.

#### SUMMARY AND CONCLUSIONS

Based on the evidence of the pottery, one can suggest a period of occupation from the late first century AD, with the main period of occupation occurring during the early to mid second century. The occupation appears to come to an end in the late second century or more likely by the early third century. However, there must have been some activity during the fourth century, but how intense this was is unclear.

#### ROMAN POTTERY FROM THE 1984 ROAD SCHEME

During post-excavation a pottery assemblage came to light that had been recovered from rescue excavations undertaken in 1984 during improvements to the road immediately to the north of the villa.

This group of pottery generally conforms to an earlier date range than that from the adjacent villa excavated in 2003. The 1984 group consistently dates from around the mid first century AD through to the early second century AD, but nothing later. Therefore, it would seem that the earliest settlement probably lies somewhere to the north or north-east of the later villa, and that by the second decade of the second century had shifted to the south where the villa later emerged. This earlier settlement may therefore have developed as a simple mid-first-century roadside settlement along the nearby Godmanchester to Leicester road, built probably as a result of early Roman military activity in the area.

The range of forms from this rescue excavation was generally quite limited. The most common form of vessel present was the Developed Channel-rim (lid-seated) jar (JLSD) which should be dated from the late first and into the second century. There were two sherds, both in different fabrics within the group which had attempted to copy the samian form Dr. 30. A grey ware bowl with a burnished lattice decoration and a London Ware copy was represented by a single sherd which was decorated with a burnished fern-leaf design. There may be an element of overlap or continuity, in that both groups have a very limited number of sherds of grey rusticated jars (JRUST) which should both date to the earlier second century. Ecton ware is represented by a single grey ware dish (D) of Trajanic date. There was also a small dish indicating a Gallo-Belgic copy which may also have originated from Ecton. The remainder of the pottery especially the grey

wares, probably originated from the locality of the site and the mid Nene valley area.

There seems to be a connection at Stanion with the unusual group of innovative mid-first century pottery found at Rushden by Woods, which he defines as by ‘intrusive potters’ (Woods and Hastings 1984; Friendship-Taylor 1999). The Stanion vessel is a single narrow-necked jar (JNN) with almost a ‘funnel-neck’ and a beaded-rim (Fig 18, 18). Around the girth of the vessel are several rows of a notched wheel decoration, above which are double raised cordons and then on the shoulder is a single row of double scratched zig-zags. This matches closely with decorative elements from Rushden. Woods suggested the potters may have arrived with the military from eastern Europe and therefore, its date may be circa Claudio/Neronian (c 45-60s AD). The fabric is a burnished grogged ware and its colour is a bright orange/fawn colour (no painted decoration appears to have been applied to this vessel), very similar to many of these fine Rushden vessels, especially the example in Friendship-Taylor 1999 (fig 92, 2). This vessel, when found, seems to have been inverted with its base uppermost and carefully trimmed off, probably at mid point between rim and base. It was found in a pit whose contents suggest may have been part of a ‘structured deposit’.

Table 2: Forms present in the 1984 pottery assemblage

Samian	Dr. 18, 27, 30, 37
Channel-rim Jar	JLS
Double Channel-rim Jar (lid-seated)	JLSD
jar with tall upright rim	JNLN
Out-turned rim jar	JO
Small jar	JSML
Medium-sized storage jar	JSS
Large storage jar	JS
Narrow-necked jar	JNN
Reed-rim bowl	BRR
Dish	D
Cover	COV

#### THE AMPHORAE

*R M Friendship-Taylor and M Powell*

There are 276 sherds of amphorae, mostly with fresh breaks, weighing 23.20kg. All were from Dressel 20 (Peacock & Williams Type 25) and were mainly from south Spain. These are dated from late first/early second century to the early third century and there are a minimum of 23 vessels present.

There are no stamps, graffiti or *depinti* present on any sherds, but just below a handle springing there is what appears to have been a possible signature incised onto three body sherds in the form of a circle, with its ends overlapping each other and similar to that often seen on the surface of a *tegula* (roof tile).

There is evidence for the reuse of several sherds, such as two handle fragments, which appear to have been used as ‘pestles’ and two joining body sherds, probably from the base of the neck, just above the shoulder, which had been ground down to a very smooth edge.

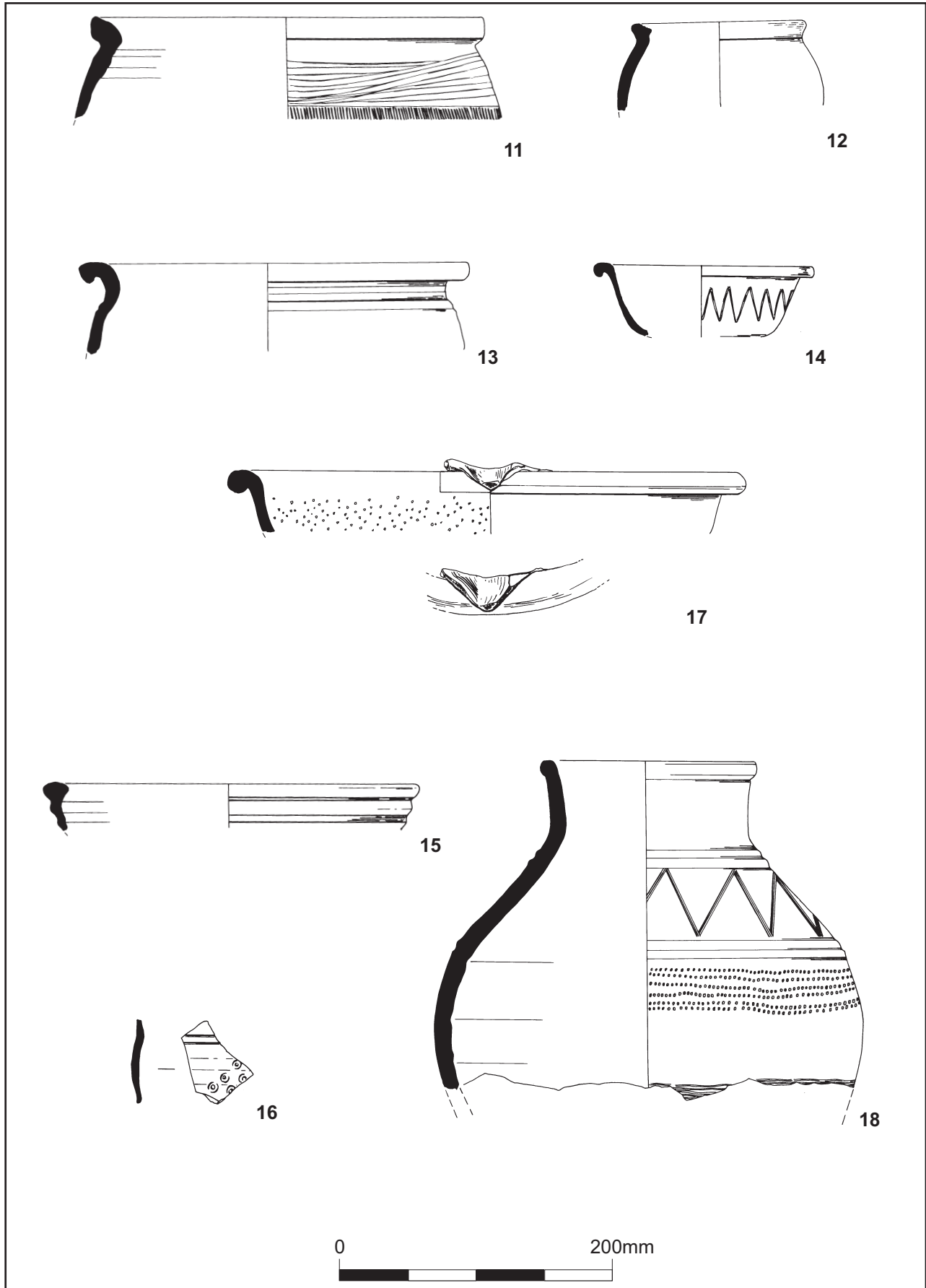


Fig 18 The Roman pottery, 11-18

Table 3: The mortaria

Context no	Fabric	Attribute	Min. Vessels	Sherds	Weight (g)	Date (AD)
1	MOOX-R	BO	1	1	8	3rd-4th century
15	MOOX-W	R	1	1	88	240-400
15	MOOX-W	BO	1	1	19	post 240
15	MONV-L	BO	1	1	13	mid 3rd century
31	MOOX-W	BO	0	1	7	
37	MONV-U	R	1	1	58	late 3rd -3rd century
46	MOMD	R	1	1	75	
53	MONV-L	R	1	1	21	mid 3rd century
64	MONV-L	R	1	2	77	mid-late 3rd century

Two base sherds are also present, one of which shows very clear evidence of the method of manufacture by the insertion of a ball of clay into a pre-cut and scribed hole in the base of the body of the vessel.

Although some discolouration was noted on a small number of body sherds, it was thought that this might not necessarily have occurred as a result of use as a 'field oven'. However, as noted above, the reused sherds with the smoothed edges may have some connection with a 'field oven', although these sherds exhibited no discolouration.

It would appear that most of these vessels were of southern Spanish origin, especially from Cordoba in the valley of the Guadalquivir. Only one fabric (STAN 1) appears to have come from a different source, namely Catalonia in southeastern Spain.

THE AMPHORA FABRICS

Because there was such a diverse range of fabrics present, it was decided to establish a fabric type series (STAN 1 to STAN 8). It was felt that the *National Fabric Reference Collection* (Tomber & Dore 1998) has too few amphorae examples, and therefore only minimal use has been made of it. For all colour references the Munsell soil colour chart was used.

STAN 1 Tomber & Dore, Catalan Amphorae (CAT AM) p.91 Munsell - red-brown (5YR 5/4 – 5/6) to red (10R 5/8 – 4/8 throughout). It is very hard with harsh surfaces and hackly fracture. Common to abundant ill sorted sub angular fine to very coarse sand that consists predominantly of altered alkaline feldspar and quartz with sparse biotite and plutonic rock fragments.

STAN 2 Tomber & Dore, Cadiz Amphorae (CAD AM) p.87. Munsell - pale brown (7.5YR 7/3, 7.5YR 7/4 – 6/4) to pale red or orange (2.5Y 8/2 to 8/3) margins also have slipped surfaces. The fabric is hard with rough surfaces and irregular fracture.

STAN 3 Munsell - pink (7.5YR 7/4). Small ill-sorted white granules less than .5 mm. and larger brown grains up to about 1 mm with fine black grains that may be volcanic ash – no mica is visible.

STAN 4 Munsell - light brownish grey (10YR 6/2). Small white inclusions up to about 1mm. medium sorted. Fine grained matrix containing

very small particles of dark material. Sherds tending to delaminate – no visible mica.

STAN 5 Munsell - very pale brown (10YR 7/3). Quartz grains within the fabric up to .2mm. and occasional ?ironstone up to 1.5mm. Hackley surface with sparse surface mica.

STAN 6 Munsell - pink (7.5YR 7/4). Similar to STAN 5 but the white inclusions are long and thin which may be shell; up to 5mm long. Sherds attracted much iron staining.

STAN 7 Munsell - pink (7.5YR 8/4). Sparse mica and quartz grains approximately .5mm. Generally hard fired.

STAN 8 Munsell – pinkish grey (7.5YR 6/2). Similar to STAN 1 but with addition of 'Box Iron' and small flinty fragments up to .5mm.

THE MORTARIA

*R M Friendship-Taylor and M Powell*  
(Notes taken from a discussion with Kay Hartley)

The assemblage of coarse wares includes ten mortaria sherds from eight vessels, weighing 366g. These vessels came from a limited number of sources, such as the lower and upper Nene valleys and Oxfordshire. At least one vessel shows extensive signs of heat discolouration. Recently, pottery specialists are becoming more aware of the numbers of mortaria that show evidence of some form of heat application during use rather than after use.

THE SAMIAN

*M J Darling*

The samian totals 146 sherds, weighing 825g. The average weight is 5.6g but the group is quite fragmentary, containing many chips or flakes. The pottery has been archived using count and weight as measures according to the guidelines laid down for the minimum archive by *The Study Group for Roman Pottery*.

Table 4: Sources of the samian

Source	Sherds	%	Weight (g)	%
South Gaul	15	10.27	64	7.76
Les Martres de Veyre	7	4.79	21	2.54
Lezoux	124	84.93	740	89.70
Total	146	100	825	100

Three separate groups of sherd links occurred between 31.8 and 37.111; 37.103 and 37.18; 37.46 and 52.44 and 52.52.

#### Dating of the samian

South Gaulish wares (SAMSG) include two form 37 bowls, both datable to the Flavian to Trajanic period (from 52.32 and 88.24), and a single fragment of a stamp from of Severus I, from 52.77, *c* AD 65-95. The appearance of form 18/31 is consistent with such dating.

Les Martres de Veyre sherds are all tiny fragments and flakes, apart from a form 33 cup stamped by Billicedo from 52.77. All are datable to the Trajanic period, *c* AD 100-120.

The Lezoux ware includes six sherds from form 37, five datable to the Hadrianic to early Antonine period (from 26.7; 37.74; 52.53; 60.10), and one footring of Antonine date (29.4). Three stamps occurred (see below), all datable to the Antonine period, the latest dated *c* AD 155-185.

There are none of the known later second century forms apart from the 31R, first appearing *c* AD 160, and no mortaria, while the stamps indicate *c* AD 185 as the latest date. The overall dating of the samian is therefore from the Flavian period, through to the Antonine period, *c* AD 185.

Table 5: Samian forms by source

Fabric	Form	Sherds	Weight (g)	Comment
SAMSG	18	1	6	Rim
SAMSG	18/31?	1	5	Rim
SAMSG?	18 OR 18/31?	2	3	Rims chip/flake
SAMSG	27	5	14	-
SAMSG	37	2	29	-
SAMSG	-	4	7	-
<b>sub-total</b>		<b>15</b>	<b>64</b>	
SAMCG	18 OR 18/31	3	8	Rims
SAMCG	18/31 OR 31	18	92	11 rims
SAMCG	27	1	30	Rim/wall
SAMCG	30 OR 37	1	1	-
SAMCG	31	18	246	6 x 31?; 4 rims
SAMCG	31 OR 31R?	1	8	Ftrg only
SAMCG	31R	3	58	1 definite
SAMCG	33	13	67	inc 1 vess MV; 6 rims
SAMCG	35 OR 36	1	1	Chip part rim
SAMCG	36	2	11	Rim
SAMCG	37	5	40	-
SAMCG	38?	1	9	Flange frag only
SAMCG	42	1	4	Rim
SAMCG	BD	26	103	1 vess MV?
SAMCG	-	37	83	4 prob MV
<b>sub-total</b>		<b>131</b>	<b>761</b>	
<b>Total</b>		<b>146</b>	<b>825</b>	

SAMSG = Samian southern gaul

SAMCG = Samian Central Gaul

MV = Les Martres de Veyre

#### POTTERS' STAMPS

*B Dickinson*

Catalogue of stamped vessels (underlined letters in stamps are ligatured):

[BI]LLICEDOFE on form 33(?): Billicedo of Les Martres-de-Veyre, Die 3b. The potter certainly worked at Les Martres, and the fabric of this piece confirms this. The stamp has also been found at Lezoux, but the pot in question was not demonstrably made there. The fabrics used at Les Martres by Billicedo belong to the Trajanic range. *c* AD 100-120. Context 55.

[ECVLI]AR•F on form 33: Peculiaris of Lezoux, Die 5a (Curle 1911, 238, 72). This stamp is normally found on forms not made at Lezoux after *c* AD 160, such as 18/31, 18/31R and 27. It is known from Carzield and Newstead, and on form 27 from Wallsend. However, it appears occasionally on form 80, and so the die should have still been in use after AD 160. *c* AD 145-170. Context 66.

SABI[NIANI] on form 31: Sabinianus iii of Lezoux, Die 1b. The die from which this stamp comes was used at the Terre-Franche kilns at Vichy, but it was almost certainly also used at Lezoux, to judge by the Stanion pot, and others with the same stamp. The forms associated with it are 31, 31R and 38. *c* AD 155-185. Context 53.

[S]ENII [•M] on form 33: Senea of Lezoux, Die 1a (Dannell 1971, 315, 88, under Senila). Although Antonine, this stamp has not been found on any of the later forms of that period, except on a possible 31R. Another of Senea's stamps occurs on form 27 and in a group of burnt samian from TÁC (Hungary) which is taken to have been destroyed in the Marcomannic Wars. *c* AD 140-170. Context 64.

[OFSEVE]RI on form 15/17 or 18: Severus i of La Graufesenque, Die 7aa. This is one of Severus iii's least-common stamps, and there is no internal dating evidence for it. He occasionally stamped pre-Flavian forms, but his output is almost entirely Flavian and his stamps frequently occur on military sites in Britain founded in the 70s, such as Chester and York. *c* AD 65-95, but for this piece, AD 70-95. Context 52

Catalogue of illustrated Roman pottery (Figs 17 and 18)

- 1 Beaker – poppy head, (BKPH), greyware (GRY9), 2nd century, context 55
- 2 Out-turned rim jar (JO), greyware (GRY4), 3rd century?, context 27
- 3 Beaker – bag-shaped (BK BAG), Lower Nene valley colour-coat wares (LNVCC), context 15
- 4 Beaker – cornice rim (BKCOR), Central Gaulish colour-coat (CGCC), 2nd century, context 37
- 5 Bowl – imitation form Dr.33 (B33), grog wares (GROG), 2nd century, context 37

- 6 Flagon – ring-necked (FR), miscellaneous white wares (WT), 2nd-3rd century, context 37
- 7 Bowl – bead and flange-small (BFBS), silty black with mica inclusions (London ware) (BLKSM), 2nd-3rd century, context 31
- 8 Bowl – flat-topped rim (BHFT), dense sandy and hard fired (BLK), 2nd century, context 52
- 9 Grog wares (GROG), (BG225), 2nd century, context 60
- 10 Jar – neckless (JNL), grog wares (GROG), 2nd century, context 54
- 11 Double channel-rim (lid seated) jar (JLSD), grog wares (GROG), 2nd century, context 54
- 12 Double channel-rim (lid seated) jar (JLSD), grog wares (GROG), 2nd century, context 66
- 13 Jar – large (JL), greyware (GRY21), 2nd century, context 66
- 14 Dish – rounded out-turned rim (DRR), Black burnished ware – local copy (BB1C), mid 2nd century, context 53
- 15 Grog wares (GROG), (BHET), mid 2nd century, context 53
- 16 Greyware (GRY11), (VESS), 2nd century, context 88
- 17 Oxford white mortaria (MOOX-W), (R), AD 240-400, context 15
- 18 Narrow-necked jar (JNN), burnished grogged ware, Claudio/Neronian (AD 45-60s), 1984 watching brief

## OTHER ROMAN FINDS

*T Hylton*

*with D Mackreth, A Chapman, H E M Cool, M Curteis and P Middleton*

### INTRODUCTION

In total the excavations produced 148 individual and group recorded small finds, including some of post-medieval date. Finds dating to the Roman period were recovered from all phases; most were located within stratified deposits, while small numbers were recovered from subsoil/topsoil deposits or are unstratified. Although the majority of finds are undiagnostic fragments and nails, there is a small range of artefacts that provide a brief insight into some aspects of life at the settlement. These include items for personal use and a small group of tools, which provide evidence for spinning, sewing, possible leather working and the processing of grain. They are published as individual types within four major functional categories. Miscellaneous and unidentified objects have been considered by material type. The categories are tabulated below along with the quantities recovered (Table 6).

All the copper alloy and iron objects (including nails and small fragments) were submitted for X-ray. This was undertaken by Mehmet Ozgenc and Glynis Edwards of the English Heritage Centre for Archaeology. This not only provided a permanent record, but it enabled identification and revealed details not previously visible. Twelve objects with mineral preserved organic remains adhering to their surfaces were chosen for further investigation. With the exception of one wooden knife handle, most of the organic material was not directly associated with

Table 6: Finds quantified by functional category

Functional category	Phase					
	Ph 1	Ph 2	Ph 3	Ph 4	Ph 5	topsoil
<i>Personal Possessions</i>						
Costume and jewellery	1			3	1	1
Recreational objects	1					
<i>Equipment and furnishings</i>						
General ironwork					1	
Nails (inc. 2 hob nails phase 4)	8	1	10	22	17	
Glass	7		5	15	2	3
Hones/sharpeners	1					
Misc. tools	2		1	1		
Querns				3	1	
<i>Coins</i>						
				11		3
<i>Miscellaneous and unidentified</i>						
Copper alloy			1	4		
Iron	5	1	1	7		
Lead				4		
Bone	1					
Stone	1			1		1
<b>Total</b>	<b>27</b>	<b>2</b>	<b>18</b>	<b>71</b>	<b>22</b>	<b>8</b>

the objects (Jacqui Watson, English Heritage Centre for Archaeology pers com).

Small numbers of finds, 27, were located within deposits pre-dating building construction. These were mainly associated with a large depression over which the building had been constructed; it is probable that these finds were discarded along with the domestic refuse, which had been used to backfill the feature. There is a dearth of artefacts, two, relating to the construction of the building (Phase 2), while larger numbers, 20, were recovered from deposits associated with its occupation (Phase 3). The majority of finds, 71, were recovered from post-occupation demolition deposits overlying the footprint of the building (Phase 4). Finally small numbers of finds (22) were recovered from an activity area sited to the west of the main structure (Phase 5) and within later deposits together with objects of medieval and post-medieval date.

#### PERSONAL POSSESSIONS

This category comprises small portable items that would have formed part of a person's general attire, either worn as jewellery, or held by an individual for personal use.

##### BROOCHES

*D Mackreth*

(This is a shortened version of the original report, which may be seen in the archive.)

**Iron brooch** (Fig 19, 1). Only the upper bow and the head survive. In poor condition, the head was formed by beating out the metal and then rolling it to form wings which housed the axis bar of the hinged pin. Although no trace of the slot for the pin can be easily see, this is almost certainly due to the corrosion. The alternative interpretation is that this is not a brooch and no other function comes easily to mind.

Allowing this to be a brooch, it belongs to a type, either in iron or copper alloy, which, by its general distribution, is Durotrigan: well over three quarters of iron ones of this and the chief variant, mentioned below, come from the homeland of that tribe. A secondary distribution favours Hertfordshire and Northamptonshire. The dating is fairly clear: from c10 BC – AD 20 (Partridge 1981, 135, fig 87, 11) to the middle of the first century (Fulford and Timby 2000, 325, fig 1349, 10).

**Copper alloy brooch** (Fig 19, 2). The form of the plate is circular with six insignificant equally-spaced projections. In the middle is a circular hole for some kind of applied central feature. The only other feature of note is a recessed ridge around the periphery on each side of which are marks suggesting that the final form was achieved using a tool. The hinged pin was housed between a pair of lugs. There may be slight traces of a tinned finish.

Exact parallels are not really to be expected. The design recalls a main variant in a large and eclectic family which shares projections, peripheral recessed ridges and holes in the middle. Their distribution is overwhelmingly south-eastern with the Fosse Way military zone forming the north-west boundary. They arrive with the Roman

army; at least none has so far been recovered from a pre-Conquest deposit. The dating of the main family is: 20/25-43/5 (Clifford 1961, 184, fig 36, 6) through to middle Flavian times, 71/4-86 (Cool and Philo 1998, 51, fig 13, 99, 100

**Copper alloy brooch** (Fig 19, 3). The pin is hinged as in the last. The form is that of a shallow dome surrounded by a hollow. On the surface of the dome are two rows of triangular cells having remains of enamel whose colour is too far gone to be sure that it conformed with the normal scheme for this kind of brooch: red alternating with blue. The circular form has four projections. Those at the top and bottom are more prominent and hide parts of the lugs for the pin and the catch-plate. Those on each side are short spikes..

This is a common form and this is a typical example. There may be variations in detail, including a range with cusped borders, but all hang together in as cohesive a manner as could be wished. The distribution is of interest: it favours the east side of England and the area of manufacturing may have been East Anglia. The family was made in large numbers and so there are examples from all over Roman Britain, but the basic pattern is not seriously disturbed. The sites producing the dating belie the true distributions and are a reflection of difficulty in dating isolated second-century finds on ordinary rural sites. The dating of all varieties ranges from 75-120 (Woodward *et al* 1993, 123, fig 62, 46) to the middle of the second century: c143-65 (Christison 1901, 405, plate A,2).

##### ILLUSTRATED FINDS (Fig 19)

- 1 Iron brooch, only the upper bow and the head survive. Durotrigan, from c10 BC – AD 20 to the middle of the first century. SF22, u/s
- 2 Copper alloy brooch, AD 20/25-43/5 through to middle Flavian times, 71/4-86, SF15, layer 2
- 3 Copper alloy brooch, AD 75-120 to the middle of the second century c143-65. SF106, u/s

##### FINGER RING

Part of a penannular finger ring (not illustrated) was recovered from a Phase 1 mixed deposit (52) underneath the demolition rubble (15). The finger ring has been manufactured from a single strand of circular-sectioned wire (1mm thick). The terminal folds back on itself and broadens to form a stylised devolved serpent's head (not illus). Although incomplete the small fragment which survives represents a crude example of Johns Type Biv (1997, 36), a style of finger ring comprising snakes head terminals with one or more coils in between which fit round the finger. Such representations on items of jewellery are common during the Roman period and represent health and healing, rebirth and the spirits of the departed (Johns 1998/2000, 7). For a discussion on bracelets and rings in the form of snakes see Johns 1996 (334) and 1997 (34-37).

##### ARMLETS

Fragments from two copper alloy armlets were recovered from demolition deposits (context 15), they are represented by forms commonly found on Roman

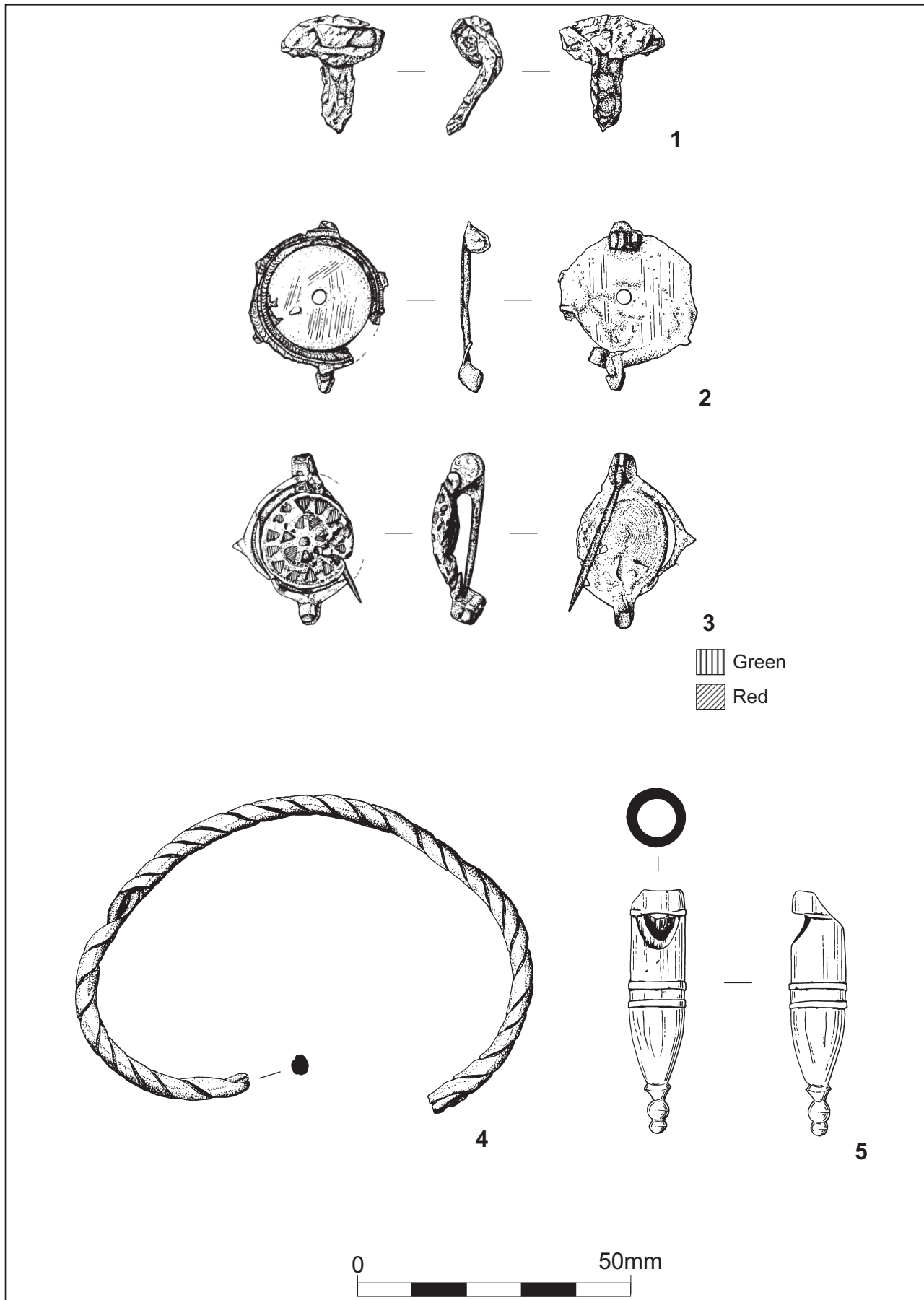


Fig 19 Roman and post-medieval finds

settlement sites in the third and fourth centuries. One is a 'cable' bracelet and comprises three strands of circular-sectioned wire, twisted together in an anti-clockwise direction and then hammered to secure the individual strands (Fig 19. 4). This type may be paralleled by examples from Gadebridge Park Villa, Hemel Hempstead (Neal 1974, fig 61, 164-69) and Bancroft Villa, Milton Keynes (Hylton and Zeepvat 1994, fig 141, 76).

The other is a small fragment (SF 26) from a parallel-sided armlet with a D-shaped cross-section it is decorated with alternating V-shaped notches on the outside edge (not illus) and the X-ray reveals that there are two small centrally placed circular indentations (dots), suggesting that the motif resembles a crudely executed form of 'wave crest' decoration, as seen on fourth-century armlets from Colchester (Crummy 1983, fig 44, 1703 and 1704) and Shakenoak (Brodrick *et al* 1973, fig 54, 191).

#### ILLUSTRATED ARMLET (Fig 19)

- 4 Copper alloy. Incomplete, four fragments (three joining), no terminals. Three D-sectioned strands of wire twisted together in an anti-clockwise direction and then hammered. Thickness 4mm. SF 30, context 15, Phase 4, demolition deposit

#### PINS

There are two pins, one is manufactured from copper alloy and was recovered from demolition deposits over lying the floor of the Villa (Phase 4) and the other one is made from bone and was located within the fill of the corn drier. Both examples are furnished with simply decorated heads.

The head of the copper alloy pin is ornamented with a single horizontal groove sited at the top of the shaft (not illus); although stylistically plain, the pin appears to correspond with Hilary Cool's Type 5, with simple grooved heads (1990, 157).

The bone pin displays similarities to a group of pins from Fishbourne Villa with lathe turned heads terminating in a conical projection (Cunliffe 1971, 16-24), it also equates to Crummy's Type 2 (1983, fig 18) which are simply ornamented with a tiny reel and cone surmounted on a reel and groove (not illus). Hilary Cool in her typology of metal pins (1990) identifies the similarities between her Type 5 metal pins and Crummy's Type 2 bone pins and suggests that both types were predominantly in use in the first and second centuries (*ibid* 157).

#### RECREATION

A single ceramic roundel/counter is formed on a pottery sherd, with the broken edges ground down to form a roundel 26mm in diameter and 8mm high. It is in a hard-fired grog-tempered fabric that dates to the mid to late first century. Similar examples are known from Colchester (Crummy 1983, fig 98, 2449). Ceramic roundels are often recovered from Roman sites and they may have had any number of uses, including reckoning counters or gaming pieces, see Crummy 1983 (93).

#### BUILDING EQUIPMENT

Considering the nature of the site, there is a distinct lack of objects which may have formed part of or been attached to the original villa structure. With the exception of a single split spike loop, only nails are represented. The split spike loop was recovered from the fill of a pit (context 29, pit 30, Phase 5), it would have been used for attaching rings and fittings. For similar examples see Manning 1985 (plate 61, 39-46).

A total of 57 nails was recovered from Phases 1-5, including two hobnails that presumably derive from footwear. A small number of nails was recovered from deposits pre-dating the construction of the villa (Phase 1), no nails were located within Phase 2 deposits and ten nails were recovered from layers associated with the mortar floor surfaces (Phase 3). The majority of nails were recovered from Phase 4 (22 nails) and Phase 5 (17 nails) deposits. There are two discrete groups of nails, ten were recovered as a group in demolition deposits (Phase 4) and 11 were found in an oven, together with a quantity of metal working debris (Phase 5).

Of the total number, 30% (17 nails) are of indeterminate form, with their heads missing etc, the remainder have been classified according to Manning's Type series (1985, 134ff). The majority of the identifiable nail types are Manning's Type 1B (53%), which range in recorded length from 33-90mm. The majority clustered between 40-55mm and were presumably used for furniture or light structural fixings. Other types include large structural nails, possibly for securing major timbers (Type 1A, 2%), nails with T-shaped heads (Type 3, 7%), nails with 'L' shaped heads (Type 4, 2%), nails lacking a distinct head (Type 5, 2%), nails for upholstery (Types 7, 2%) and hob nails (Type 10, 3.5%).

#### TOOLS

There are tools associated with textile working, possible leather working and the processing of grain, most probably for domestic consumption. There are two items associated with textile working, a spindle whorl for hand spinning and a needle used for sewing.

The spindle whorl was recovered from a layer of domestic refuse (context 50, Phase 1). It has been manufactured from the base of a pedestal beaker in an oxidised fabric, possibly Oxford ware. The broken edges of the base have been pared down to form a disc and there is a centrally placed perforation, which is waisted, indicating that it had been drilled from both sides. Bases from ceramic vessels are often reused as spindle whorls, for a discussion of these, see Crummy 1983 (67).

The sewing needle was recovered from a mixed deposit (52) under demolition rubble, although complete (c 123mm), it is damaged. The head is squared and there is a small eye set within an elongated groove (not illus), stylistically it conforms to Crummy's Type 3 needles which date to the third and fourth centuries (1983, 67). Similar needles have been recorded at Stonea, Cambridgeshire (Jackson 1996, fig 108, 32-37).

A double-pointed awl measuring 78mm in length was recovered from demolition deposits (context 15, Phase 4). The terminals are separated by an expanded central section



and stylistically it resembles Manning Type 4B awl, which has a tapering square-sectioned tang (1985, 40). Awls of this type were generally used for leather working.

Other objects worthy of note include iron wedges and a piece of stone utilised as a sharpener. Two possible wedges measuring from 45–47mm in length were recovered, one from Phase 3 (37) and the other from Phase 4 (15). Wedges had any number of uses, large examples were driven into the timber causing it to split along the grain (cleaving), while smaller wedges may have been used to secure structural fittings and heads of hafted tools. Finally an oval sectioned length of stone displaying patches of wear and longitudinal facets may have been utilised as a sharpening stone for tools (not illis).

#### QUERNS AND MILLSTONES

##### *A Chapman*

There are fragments from four querns and millstones. All have been manufactured from quartz rich sandstones ranging from fine to medium and medium to coarse grained stones, one rich in feldspar. All of these may be categorised as Millstone Grit.

The assemblage includes a near complete, and apparently unused, lower stone from a rotary quern, 500mm in diameter, which came from pit (39), next to the malting oven. The other pieces are all from the demolition rubble over the building (3 and 15). A small fragment from an upper stone retains part of a handle socket, and the grinding surface has almost worn through to the base of the socket, indicating that it had been used to the maximum possible degree.

The other two fragments come from millstones, which indicate the presence either of a watermill on the adjacent Harper's Brook or an animal-powered mill. A small irregular fragment is from a stone up to 68mm thick. A larger fragment is from a well-used upper stone, up to 50mm thick, with a dimpled grinding surface. The back and two edges of the surviving fragment had been reused as a sharpening stone, so it is not possible to accurately estimate the diameter of the original millstone, but it is clearly well in excess of 600mm.

#### LEAD

Only four pieces of lead were recovered from Roman contexts, all are undiagnostic and were recovered from Phase 4 demolition (context 15) or rubble (context 3) deposits. They include one piece of folded lead sheet and three molten nodules. The paucity of lead fragments on the site is surprising as it was such an important material in building, this together with the dearth of structural fittings may suggest that many of the internal and

external fittings may have been removed and recycled after abandonment.

#### THE ROMAN VESSEL GLASS

##### *H E M Cool*

The Roman vessel glass fragments found during the excavations are summarised by Phase and colour in Table 7. The colour of the glass has a chronological significance. Blue/green glass was in use during the first to third centuries whilst bubbly light green glass is typical of the fourth century. As the table makes clear the assemblage is predominantly fourth century and relates to post villa activities.

The material from the pre-villa contexts of Phase 1 consists in the main of undiagnostic body fragments, though one (SF 126 from context 50) is the body fragment of a first to second-century hexagonal bottle (Price and Cottam 1998, 198). The base fragment no. 7 also comes from a Phase 1 context but it is probably intrusive as it is made of the bubbly light green glass typical of the fourth century.

The material that was found stratified in the Phase 3 contexts was also relatively undiagnostic. The light yellow brown colour of two fragments (SF 124, 138; context 37) would suggest a first to mid-second-century date. The same context produced a fragment from either a hexagonal or a square bottle (Price and Cottam 1998, 194) which can only be dated to the broad first to mid-third-century period. The unstratified square bottle base no. 1 could have originally been associated with either the pre-villa or villa occupation. The design on the base is not a particularly common one in Britain, but another square bottle of similar size with this design is known from Southgate Street, Gloucester (unpublished), unfortunately also from a residual context.

It is likely that much of the fourth-century light green bubbly glass from the Phase 4 contexts comes from one or two vessels, but interpretation is made difficult by the fact that they have been heavily burnt. The fragments catalogued as nos. 3 and 6 here are consistent with coming from a large funnel-mouthed jug (for general type see Price and Cottam 1998, 163). These normally have curved handles. Angular reeded handles such as nos. 4 and 5 are more typical of fourth-century cylindrical bottles (see for example Price and Cottam 1998, 204). Such bottles also had funnel mouths like no. 3. Many of the less diagnostic fragments (eg 108, 109) show traces of optic blowing, a typical decoration on the jugs. It is perhaps appropriate to note that though the material is melted, there is no evidence that this was deliberate so that it could be reworked and it seems more likely to be either accidental or the result of rubbish disposal.

Table 7: Roman vessel glass fragments by phase

Colour	Phase 1	Phase 3	Phase 4	Phase 5	Phase 6	Total
Blue/green	3	1	3	1	-	8
Yellow/brown	1	2	-	-	-	3
Bubbly light green	1	-	69	-	1	71
<b>Total</b>	<b>5</b>	<b>3</b>	<b>72</b>	<b>1</b>	<b>1</b>	<b>82</b>

## CATALOGUE OF VESSEL GLASS

*Blue/green*

- 1 Square bottle; lower body and base fragment. Base design - circular moulding with concave-sided square internally. Moulding diameter 52mm, base width 70mm. SF 131, context 88
- 2 Body fragment; slightly convex-curved retaining parts of three vertical ribs. Dimensions 27 x 22mm, wall thickness 2.5mm. SF 128, context 52

*Light green bubbly*

- 3 Jug rim fragment. Funnel mouth with fire-rounded rim edge; horizontal trail below rim edge. One edge slightly heat affected. Rim diameter 75mm. SF 111, context 15
- 4 Jug handle fragment; upper part of angular reeded handle retaining part of trail below rim edge. Dimensions 43 x 30mm. SF 110, context 15
- 5 Jug handle fragment, three joining fragments also 4 chips. Wide straight handle with simple lower attachment, possibly reeded, now heavily burnt and distorted. Present length 115mm, maximum width 80mm. SF 114, context 15
- 6 Jug base fragment. High pushed-in base ring, probably originally with hollow tube at end; now melted and distorted. Dimensions 54 x 42mm. SF 112, context 15
- 7 Concave base fragment. Dimensions 27 x 13mm; wall thickness 2mm. SF 123, context 26

## THE ROMAN COINS

*M Curteis*

There is a comparatively small sample of fourteen Roman coins from which few conclusions can be drawn. One coin, a contemporary copy of the falling horseman type of Constantius II (354+) was recovered from context 37, a layer below demolition rubble, possibly dating to phase 3. The majority come from context 15, a mixed layer connected to phase 4. The latest coin from this context is a coin of Valens, providing a *terminus post quem* of 364-78. There are two coins from context 3, which consisted

of rubble also pertaining to phase 4. The latest of these coins is also Valentinianic (367-75), giving parity with the dating of phase 4 in context 15. Three coins were recovered from the subsoil (context 2).

## CERAMIC TILE

Seventy-two fragments of ceramic tile, weighing 9.74kg, were recovered. Small quantities came from Phase 1, while larger amounts were recovered from the demolition deposits (Phase 4) and ancillary features lying outside the villa (Phase 5). In addition a small number of abraded fragments were recovered from topsoil deposits (Phase 6). Much of the assemblage is fragmentary and displays minimal signs of abrasion.

The bulk of the material comprises identifiable fragments (86%), which can be divided into two broad functional groups: roofing tile and hypocaust tile. The remaining 14% comprises small fragments which are difficult to identify with any certainty. Examination of the fabrics (by eye) indicates that three main fabric types are represented, although there may be slight variations within each type.

- 1) Sandy fabrics with varying quantities of fine-medium sand, which are generally orange in colour. May be hard fired with a distinct blue/grey core. This type is predominant.
- 2) Shell-tempered fabrics containing abundant crushed fossil shell and fired to a buff/brown colour. A similar fabric has been recorded at Quinton (Friendship-Taylor 1979, 121ff). Friendship-Taylor suggests that it displays similarities to the material produced at the Harrold Kilns in Bedfordshire (Brown 1974, 9).
- 3) Sandy fabric with varying amounts of fine-medium sand, tendency for the clays to be 'joggled', sparse white inclusions.

Roof tile makes up 43% of the total by weight. It is represented by fragments of 16 *tegulae* and three *imbrices*, all three fabric types are represented. Twelve fragments of tile join together to form part of a *tegula* measuring 280 by 260mm, they were recovered from a

Table 8: Roman tile types

Context	Tegula		Imbrex		Box flue		Structural		Indeterminate	
	No	Wgt (g)	No	Wgt (g)	No	Wgt (g)	No	Wgt (g)	No	Wgt (g)
1	2	448	1	40	1	91	1	293	3	321
8	-	-	-	-	11	888	-	-	4	120
15	2	521	-	-	2	195	-	-	2	50
27	-	-	-	-	2	133	-	-	8	468
31	-	-	-	-	-	-	9	636	-	-
37	-	-	2	100	1	219	-	-	-	-
52	-	-	-	-	-	-	3	970	-	-
53	1	850	-	-	-	-	2	620	1	128
60	-	-	-	-	-	-	-	-	2	306
66	-	-	-	-	-	-	1	124	-	-
86	11	2219	-	-	-	-	-	-	-	-
Totals	16	4038	3	140	17	1526	16	2643	20	1393

hearth (86) together with the base of an amphora. The remainder of the tile was scattered throughout the site.

#### TEGULA

There is a distinct variation in the shape and thickness of the flanges present, illustrating slight variations in manufacturing technique, knife-trimming, hand soothed etc. Six different shapes were observed, more or less paralleling some of those illustrated by Brodribb (1987). The range includes flanges with flat tops, sloped-tops, rounded and even one that tapers from the base to a rounded point, terminating in line with the outside edge of the *tegula*.

Evidence for the fastening of *tegula* to keep them in place is provided by one perforated fragment (Fabric 2). The hole, positioned 20mm from the top edge and the flange, has been drilled from both sides, after firing. Similar examples have been recorded at Bancroft Villa (Williams and Zeepvat 1994, 120) and Piddington, Northamptonshire (Brodribb 1987, 10).

Four fragments retain worn patches of maroon and dark red paint, on one example the paint only survives close to the flange, where it would have been protected from weathering by the *imbrex*. In general the remains of paint occur on buff-coloured grog-tempered fabrics (Fabric 3) which are pale in colour. Excavations at Verulamium produced a number of pale yellow tiles which had been deliberately painted red. Numerous sites in the Midlands have produced evidence for the use of coloured paints on roof tiles, including Bancroft Villa, Milton Keynes (Williams and Zeepvat 1994, 119) and Croughton Villa (Mills 2008), for further examples see (Brodribb 1987, 137).

Although the assemblage is fragmentary, there are vestiges of grooved indentations on three *tegulae* fragments. One fragment is furnished with two parallel grooves running obliquely across the tile, it is possible that this is part of a makers mark, which are commonly recorded on fragments of *tegula*.

#### IMBREX

There are a small number of fragments from twenty *imbrices* weighing just over 0.7kg. The survival rate of this type of tile appears to be low, perhaps due to its shape and the thinness of its walls. All three fabric types are represented and one fragment is furnished with a combed wavy line pattern running along the length of the tile.

#### HYPOCAUST TILE

There are six fragments of box flue, identified by the presence of keying lines on the exterior surface. Two distinct manufacturing techniques have been used to execute the keying lines, combs furnished with seven and eight teeth, had been used to create curved and straight striations, and a roller-stamp, creating parallel, flat bottomed channels (Brodribb 1987, 109ff).

Finally there is a small quantity of structural tile. These fragments are small and generally display signs of having been subjected to heat, it is difficult to determine if they are fragments of *pilae* or sub-floor tile.

#### TESSERAE

A total of 657 tesserae were recovered from eight individual deposits, with a few further examples from the topsoil. The majority were recovered from demolition and rubble debris (Phase 4). Within the assemblage three sizes are represented, small (*c* 10 x 10mm) which predominate, medium (*c* 20 x 20mm) and large (30 x 30mm – 35 x 35mm). There are four different colours; red, blue/grey, white and yellow/buff, and as is the norm different materials have been used to represent the colours:

Red tessera: reused ceramic tile and burnt sandstone  
 Blue tessera: off white/ blue/grey limestone  
 White: limestone  
 Yellow/buff: sandstone

#### THE WALL PLASTER

*A Chapman*

A total of 2.7kg of wall plaster was recovered, much of it still retaining painted surfaces. The material comprises numerous small fragments usually with a maximum dimension of some 20-20mm. The largest group, 1.7kg, came from context 15, the demolition rubble. The second largest group, a further 0.5kg, was from context 43, the fill of a substantial posthole (Fig 8, 44), which appeared to have held a door post set on the southern wall of the northern corridor.

The material provides only a few indications of the nature of the decorative scheme from which it was derived. Three colours are present: white, red, varying from a pale orange to dark red, and black. The majority of pieces display only a single colour, with white the most common, although some display linear edges between separate colour blocks, typically white and red or white and black. Two pieces show narrow red stripes, 7mm wide, on a white ground. The general indication is therefore that the material comes from panels with a white background, outlined by frameworks of red stripes, and bordered in red and black.

The plaster was submitted for analysis of the pigments used, see below.

#### RAMAN SPECTROSCOPIC ANALYSIS OF PAINTED WALL PLASTER SAMPLES

*P Middleton*

#### METHOD

Twenty-seven samples from five different contexts were examined in this preliminary analysis. The analysis was carried out at Bradford University, under the direction of Prof. H G M Edwards, using FT-Raman spectroscopy and raman spectroscopy with 785nm wavelength.

The samples were heavily contaminated with soot and clay, and this presented certain problems in obtaining clear spectra, as well as resulting in large fluorescence problems (Table 9).

#### RESULTS

The palette of colours is limited to three: red, grey and white. However, by mixing, a range of 49 colours was

Table 9: Quantification of analysed painted wall plaster samples

Context	Total fragments excavated	Total samples analysed
8	1	1
15	46	10
37	13	4
43	49	11
60	1	1

achieved, with 'red' presented within a colour range from light pink to dark red/purple. Carbon [1310, 1560 cm] is present in almost all samples, in many cases as a result of contamination, but carbon was also certainly used as a darkening agent, whilst calcite [1086, 713, 282 cm] was added to lighten tones. Calcite and carbon were mixed together to produce grey. Some of the white pigment spectra exhibited carbon bands, but these are interpreted as later contamination.

A broad band [centred on 780 cm] appeared with many samples, of all colours, although it was stronger in association with lighter colours. This is assigned to a limewash putty, commonly found on Roman villa sites and is probably best seen as a wall preparation, applied before the coloured pigments.

Four samples are of particular interest in the intensity of the dark red/purple colour achieved. Context (60) and context (15.1) samples both exhibit the characteristic bands [227, 247, 294, 413, 503 and 615 cm] associated with haematite. The strength of the spectra and the presence of band 247 cm suggest that this may be identified as the pigment *caput mortuum* (de Oliveira *et al* 2002). This pigment has also been encountered on recent analysis of samples from Rushton, Northamptonshire (Edwards *et al* 2002). Samples from context (8) and context (43), although superficially similar, present different spectra, assigned to haematite in the case of (8) and to a mixture of iron oxides in the case of (43.1).

## DISCUSSION

Although the range of pigments in use appears to have been modest, great ingenuity was employed to produce a range of colour for the decoration of the villa at Stanion. The presence of *caput mortuum* is significant, particularly in the light of its recent discovery at Rushton. Its identification in a context assigned to Phase 1 of the villa building (sample 60) is particularly worthy of note. In contrast, the sample assigned to Phase 2 (sample 43.1), seems to imitate the colour through a complex mixing of a number of iron oxides and without the benefit of the original 'recipe'. This may reflect the availability of a specialist painter in the first instance.

## METALWORKING DEBRIS

### *A Chapman*

A total of 4.0kg of metalworking debris was recovered from 14 contexts. However, the majority of the assemblage, 2.9kg, came from a single deposit, context 15, the demolition rubble, while the other contexts produced only the odd fragment or two each.

The material is very mixed. There are some small

fragments of tap slag, but the majority comprises irregular lumps of miscellaneous vesicular slag. Some pieces have a single convex surface with fired clay adhering, indicating that they come from broken up furnace or hearth linings. A single small piece, from context 1, the topsoil, has a sausage-shaped projection 18mm in diameter probably resulting from the use of a metal rod to open up holes within a furnace opening to allow the slag to run out. A few pieces of lighter, vesicular fuel ash slag are also present.

The presence of some tap slag would suggest that smelting had been carried out somewhere on the site, while the miscellaneous slag could derive from either smelting or secondary smithing. The small quantity recovered and its fragmentary state suggest that it is secondary within its context and that any metalworking furnaces and hearths, and the large quantities of debris that would be produced by their use, must have lain some distance away within another part of the villa complex.

Although none of the material was available for examination, the quarry pits excavated in 1984 apparently contained quantities of slag, although the nature of the material is not further defined in the surviving notes, as well as some small 'furnace bottoms', and it was assumed by the excavators that the pits had been for the quarrying of ironstone for iron smelting.

The combined evidence does suggest that iron smelting may have been a significant economic activity of this small villa.

## MEDIEVAL AND POST-MEDIEVAL FINDS

### *T Hylton*

Medieval and post-medieval artefacts were recovered from topsoil and subsoil deposits. There is one medieval object, a plain, tongue-shaped, two-piece strap-end dated to the thirteenth to fourteenth centuries, for a similar example see Pritchard 1991 (fig 86, 611). Post-medieval finds include a finely crafted bone whistle, two heel irons and a slate pencil.

## THE BONE WHISTLE

*Dr G Lawson, Cambridge Ancient Music Research Project*

This is clearly a pocket whistle with a very loud and shrill pitch. Not a sheepdog-whistle in the modern farming sense, which requires more pitch-control. A personal, more general purpose blast-whistle, like an old police whistle (but higher-pitched). Maybe a gamekeeper's call? The methods of voicing, with the characteristic D-shaped sound-hole and the now-missing block were not well established before about AD 1000, and this looks a lot later even than that. A late date is also suggested by its good condition, unless it is very recent, ie nineteenth century, it would require a very benign topsoil environment to allow such good preservation.

## ILLUSTRATED WHISTLE (Fig 19)

- Whistle, bone. Lathe turned with D-shaped sound hole. Cylindrical with circular cross-section, tapered with a terminal knop. Exterior surface ornamented with a raised linear motif. Length: 44mm diameter: 10mm. SF 82, context 1, topsoil

## ARCHAEOMAGNETIC DATING

*P Linford*

Two features were subject to Archaeomagnetic analysis. These comprised burnt material, interpreted as a hearth on the tessellated floor of the villa, and burnt deposits within the corn drier (28/32). The analysis has shown that, whilst both had been exposed to sufficient heat to acquire thermoremanent magnetisation, the directions of magnetisation measured in individual samples were extremely scattered. In the case of the possible hearth on the tessellated floor the scattering was so marked that it must be concluded that the fired clay was not fired *in situ* but was redeposited after it had been heated.

Some of the samples from the corn drier were magnetised in similar directions, although the majority were highly scattered. Demagnetisation measurements suggest that the firing temperature of the feature was relatively low, but this fact alone would not account for the degree of scattering observed. Disturbance during the time since the feature acquired its TRM is the most likely explanation. It is thus not possible to deduce a reliable date for the last firing of the feature but an approximate estimate can be obtained by subjectively choosing to accept only those seven samples which tend to have similar TRM directions. The date obtained suggests that the corn drier was last heated during the period spanned by the first centuries BC and AD.

## THE ANIMAL BONE

*K Deighton*

### METHOD

A small assemblage, two archive boxes, of animal bone was recovered by hand, although bone recovered from wet sieving is also included in the analysis. Sample sizes

varied with context but were typically between 20 and 80 litres. Residues of 3.4 mm and 1mm were scanned. The material had been previously assessed (Deighton 2004a) under the guidance of Polydora Baker at the Centre for Archaeology (CfA) English Heritage.

Quantification follows Halstead after Watson (1979) and uses minimum anatomical element (Minau). The following were recorded for each element: context, anatomical element, proximal fusion, distal fusion, side, preservation, fragmentation, butchery evidence and sex (where appropriate). Vertebrae and ribs (with articulating ends) were counted and noted as small or large ungulate but not included in quantification. Partial skeletons are not included in quantification in order to avoid over-representation. Pathology is described after Baker and Brothwell (1980) and fusion follows Silver (1969). Ovicaprid teeth were aged after Payne (1973). Butchery is after Binford (1981). Measurements follow von den Driesch (1976).

## RESULTS

### PRESERVATION

The occurrence of butchery was low, as was burning, although there was apparently a higher incidence within the material from the ancillary features beyond the building (Phase 5). Skinning was noted on horse bones. Canid gnawing was moderate at 22.4%, but no evidence of bone digested by canids was noted. There was a single instance of rodent gnawing. Fragmentation was fairly high (only 31.5% of bones were whole), although no fresh breaks were recorded and the surface condition was good. Some material from the well (89) exhibited brown staining and exfoliation consistent with waterlogging and rapid drying out. The largest concentration of bone is seen in the dumped occupation debris beneath the building (Phase 1).

### TAXONOMIC DISTRIBUTION

Table 10: Species by phase, by number and (percentage)

Phase	horse ( <i>Equus</i> )	cattle ( <i>Bos</i> )	Sheep/goat ( <i>Ovis/capra</i> )	pig ( <i>Sus</i> )	dog ( <i>Canid</i> )	deer ( <i>Cervus sp.</i> )	chicken ( <i>Gallus</i> )	Raven ( <i>Corvus corax</i> )	Total
1	5 (5.6)	22 (24.7)	49 (55)	6 (6.7)	3	1	3	-	<b>89</b>
2	-	-	4	-	-	-	-	-	<b>4</b>
3	-	-	-	-	-	-	-	-	
4	1	3	3	4	-	-	-	-	<b>11</b>
5	1 (2.5)	6 (15.3)	26 (66.6)	5 (12.8)	-	-	-	1*	<b>39</b>
<b>Total</b>	<b>7</b>	<b>31</b>	<b>82</b>	<b>15</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>143</b>

\*Partial skeleton

Table 11: Bone from sieved samples by phase

Phase	Sheep/goat ( <i>Ovis/capra</i> )	pig ( <i>Sus</i> )	Small bird (Passerine)	Small mammal	amphibians	Total
1	-	-	1	3	-	<b>4</b>
5	4	2	-	13	1	<b>20</b>
<b>Totals</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>16</b>	<b>1</b>	<b>24</b>

## AGEING

The evidence for neonates is an ovicaprid femur from Phase 1 and a *Bos* metacarpal from Phase 5. Only five sheep mandibles were available for ageing from Phase 1, of which four could be assigned to a wear stage (one was 0-2 months, one 1-2 years and two were 8-10 years). One sheep mandible from Phase 4 cannot be assigned to a single age class and of three from Phase 5, one is not assigned, one is 2-6 months and one 2-3 years. A canine mandible has adult dentition present but unworn which could suggest an animal of over 7 months.

## MEASUREMENTS

*Definition of measurements used in following tables:*

M1=breath of proximal articulation (bp)

M2=breath of distal articulation (bd)

M3=greatest length (GL)

M4= Smallest width of shaft (Sc)

*Alternative measurements (shown in brackets next to measurements)*

Dip= Diagonal of proximal end

Did= Diagonal of distal end

Dd= Depth of distal end

L= Length of Metacarpal

BG=Breadth of glenoid cavity

GLP= greatest length of Glenoid process

SLC=Smallest length of scapula neck

GLi=Greatest length of lateral half

GLm=Greatest length of medial half

DLS= diagonal length of sole

Table 12: Raven bone measurements (mm)

Element	Meas.1 (bp)	Meas.2 (Bd)	Meas.3 (GL)	Meas.4 (SC)
Humerus	23.5	18.2	90	6.7
Ulna	-	10.7 (Did)	-	4
Radius	-	6.7	-	1.2
Carpometacarpus	13	14 (Did)	66	59.6(L)
Tibio-tarsus	-	7.8 (Dd)	-	2.5
Tibio-tarsus	9.5 (Dip)	-	-	-
Tarso-metatarsus	11	7	64	3.5

Table 13: Cattle bone measurements (mm)

Context	element	M1	M2	M3	M4
50 (Phase 1)	Phalanx1	-	29	6.1	-
51	radius	52	54.7	21	190
52	astragalus	-	39	63.5 (GLi)	56.8 (GLm)
52	astragalus	-	46	73	61.1
52	Phalanx1	32.5	28.7	5.6	-
52	metatarsal	-	49	-	21.5
54	Phalanx3	-	-	65(DLS)	-
62 (Phase 2)	Phalanx2	25	21.5	35	-
62	metacarpal	62	62	-	182

Table 14: Sheep bone measurements (mm)

Context	element	M1	M2	M3	M4
52 (Phase 1)	tibia	-	22	-	-
53	Phalanx1	9	7	31.5	-
64	radius	28	-	-	-
83	metacarpal	19.7	-	-	-
29 (Phase 5)	calcaneum	-	-	46	-
29	femur	40.3	-	-	-
88	tibia	-	20.5	-	-

Table 15: Pig bone measurements (mm)

Context	element	M1	M2	M3	M4
21 (Phase 5)	scapula	-	-	35(GLP)	-
27	Phalanx3	-	-	32.5(DLS)	-
31	Phalanx2	15	-	21	-

Table 16: Horse bone measurements (mm)

Context	element	M1	M2	M3	M4
66 (Phase1)	metacarpal	39.5	-	-	17
52	Phalanx1	51	-	-	-

Table 17: Dog bone measurements (mm)

Context	element	M1	M2	M3	M4
53 (Phase1)	Ulna	18	-	-	-
53	Radius	12.1	-	-	-
53	Scapula	-	10.2 (BG)	19 (GLP)	14 (SLC)

## SKELETONS

Four partial skeletons were recovered from the fill of a well in Phase five. These were three cattle and a raven. The raven skeleton consisted of a wing, a skull, and lower leg bones.

The cattle skeletons were distinguished from each other by their differing surface conditions. Skeleton 1 with mid brown staining consists of atlas, axis, four cervical vertebra, four thoracic vertebra and four ribs. The vertebral centrums were unfused but present. Two right maxillary tooth rows were also present with the same staining. It seems possible that one was associated with the other remains. Skeleton 2 consists of a light brown partial skull (frontal bone) with left occipital condyle; the sutures of the skull are unfused. Matching right and left maxillary tooth rows or a solitary right maxillary tooth row could be associated, as could a mandibular ramus and a right horn core with a fresh break. The final animal consists of a pair of mandibles with light brown staining; flaking of the deciduous fourth premolar (d4) is present and worn and the third molar (m3) is erupting which suggests an animal of between 18 and 30 months. A right horn core could be associated. Less certain is the association of a left tibia with any of the remains. This has a fusing proximal articulation (damaged) while the distal articulation is unfused.

Table 18: Species by bone element for Phase 1

Element	<i>Equus</i> horse	<i>Bos</i> cattle	<i>Ovis/capra</i> Sheep/goat	<i>Sus</i> pig	<i>Canis</i> dog	<i>Cervus</i> deer	<i>Gallus</i> chicken
Scapula	-	1	1	-	1	-	-
P. humerus	-	1	-	-	-	-	-
D. humerus	-	1	1	-	-	-	-
P. radius	1	1	5	3	-	-	-
D. radius	1	1	4	3	-	-	1
Ulna	-	1	1	-	1	-	1
P. metacarpal	1	-	1	-	-	-	1
D. metacarpal	1	-	2	-	-	-	-
Pelvis	-	-	-	-	-	-	-
P. femur	-	1	2	-	-	-	-
D. femur	-	-	2	-	-	-	-
P. tibia	-	-	5	-	-	-	-
D. tibia	-	2	5	-	-	-	-
Calcaneum	-	2	1	-	-	-	-
Astragulus	-	2	-	-	-	-	-
P. metatarsal	-	2	2	-	-	-	-
D. metatarsal	-	2	2	-	-	-	-
Phalanx1	1	4	1	-	-	-	-
Phalanx2	-	-	-	-	-	-	-
Phalanx3	-	1	-	-	-	-	-
Mandible	-	-	7	-	1	-	-
Atlas	-	-	-	-	-	-	-
Axis	-	-	1	-	-	-	-
Horncore	-	-	-	-	-	1(antler)	-
Teeth	-	-	4	-	-	-	-
P. metapodial	-	-	1	-	-	-	-
D. metapodial	-	-	1	-	-	-	-
<b>Total</b>	<b>5</b>	<b>22</b>	<b>49</b>	<b>6</b>	<b>3</b>	<b>1</b>	<b>3</b>
<i>Percentage</i>	<i>5.9</i>	<i>26.2</i>	<i>58.3</i>	<i>7.1</i>	<i>3.6</i>	<i>1.2</i>	<i>3.6</i>

## PATHOLOGY

Two instances of interdental attrition were observed on ovicaprid mandibles. One mandible has an uneven wear pattern on the first molar and interdental attrition, also with possible evidence for an abscess on the mandibular bone. This latter suggests gum disease or infection.

## DISCUSSION

The assemblage consists largely of the major domesticates, with ovicaprids as the dominant species. Cattle, sheep/goat, pig, chicken were all utilised as food. The horse was used for traction and transport although the possible evidence of skinning could suggest the use of hides. Dogs were kept for herding, hunting, security and as companion animals and canid gnawing on bones attests to the presence of dogs as well as the actual canid bones.

Little reliance on wild species is suggested. As deer is represented in Phase 1 by a single tine only, this could suggest the collection of shed antler for working rather than hunting or even the import of this material to site. The presence of the raven in the fill of the well (Phase 5) could be the result of pest control or accidental death. The partial cattle skeletons in the well could be butchery waste, the spinal column having been stripped out of a carcass for example. The presence of bone suggests the

well had fallen into disuse and was used for rubbish or was deliberately backfilled.

Temporal comparisons are difficult and their value is limited due to the small size of the assemblage and its uneven distribution across the phases. However, this uneven distribution could be an indication of activity. Indeed it appears to confirm the interpretation of structural evidence. The relative concentration of material in Phases 1 and 5 suggests an area of rubbish disposal. For Phase 1 bone could either have been dumped as refuse into the possible pond area or incorporated in the backfill. For Phase 5 the bone could suggest that ancillary activity included the butchery of animal carcasses. In fact, the presence of a corn dryer and charred cereal in this phase could imply that a more diverse range of agrarian produce was processed here. The lack of remains from Phase 3 suggests butchery and rubbish disposal took place elsewhere during villa occupation.

Comparisons between Phases 1 and 5 show sheep are the dominant species, followed by cattle. Cattle appear to decline through time. Phase 1 has the greatest range of species, however, the significance is difficult to interpret without further evidence. Some animals had been present in Phases two and four, however, their numbers are too small for comparison or comment.

Comparisons between sites are only possible in broad terms of the species present and the percentages of

domesticates again due to the small size of the assemblage. Comparisons with other small assemblages show varying patterns. For example at Wootton villa (Deighton 2004c) and in Roman levels at Oundle (Deighton 2004b) sheep also dominate. Croughton villa (Deighton 2003a) has equal numbers of cows and sheep whereas *Bos* appear to be the predominant species at Wootton Fields School (Deighton 2003b). Stanwick Redlands farm (Davis 1997) also shows a predominance of cattle, followed by ovicaprids. The larger assemblages at Latimer (Hamilton 1971) and Shakenoak (Cram 1973) villas show lower percentages of sheep and higher of cattle and of pigs. Cattle skeletons in wells are not uncommon for example in the late Roman well from Scole (Baker 1998).

A local example of a raven found on a Roman site was at Park Street, Towcester (Eastman 1980) where two raven ulnas were recorded. The presence of the species at Stanion villa could be the result of pest control or the accidental death of a species, which is not unusual on habitation sites. Eastman (1980) also suggests the birds may have been kept as pets. A ritual explanation should not be ruled out as the bird was associated with the Celtic war goddess. This mythical association possibly has its genesis in the species habit of feeding on carrion, therefore resulting in its presence at battle sites.

### THE SHELL

*G Campbell*

Excavation produced a small assemblage of 69 marine or freshwater shells from 17 contexts, from Phases 1 to 6.

The principal shell recovered was oyster: 35 upper (right) valves and 28 bases (left valves). All were common oysters (*Ostrea edulis*), and almost all were irregular: curved, lengthy, and sharply distended, either anteriorly or posteriorly in about equal numbers. Most shells were thick (the bases putting on growth to keep the shell edge away from the sea-bed) and aged (in some cases very aged). The irregularity and thickness together indicated the great majority of the shells came from beds where oysters were crowded together in the natural manner, without active management to achieve consistent and rapid growth, and with fishing irregular and infrequent. This was confirmed by a base shell from context 29 which had settled and grown on the upper shell of a neighbouring oyster. The exceptions were the examples from context (64), gully [65] predating the villa, which were regular in shape. Fouling organisms were quite common (about half the bases), but all were burrowing worms (probably *Polydora*), a common pest. Oyster shells were distributed through all phases. Most were too broken to measure, or to observe knife-marks caused by opening. Although some were quite large (estimated at over 100mm), most were surprisingly small (about 50mm). Overall, the occupants of the villa consistently imported oysters of low quality (and presumably low in price), aged (and therefore less palatable), smallish, and easily fished (and therefore unrepresentable and heavy to transport for the meat contained).

The few mussels were common Atlantic mussels (*Mytilus edulis*), discarded on the site during Phase 1 and intermittently thereafter. As these have a short shelf-life, the site must have had good transport connections with the sea throughout the Roman period.

A single valve of fresh-water mussel (probably *Anodonta complanata*) was found in the Phase 1 deposit 66. This is an edible mussel found in some parts of some slow-moving rivers, and shows this resource was known as a food source to the inhabitants.

Many of the shells recovered were from terrestrial gastropods (common garden snails, mainly *Cepea* and *Helix*), sometimes in quite large numbers. None were the Roman or apple snail *H. pomatia* (the usual snail for escargot). While these snails are edible and might be food remains, it is more likely that these are snails that clustered together to over-winter or survive summer droughts.

Almost half of the deposits that produced shells (eight of the 17) pre-dated the construction of the villa wing (Phase 1), probably because this was the time during the occupation of the site when discard was most likely into the excavated area. Virtually all of the shells came from deposits which would be expected to contain rubbish, such as pit fills and layers. There were only three deposits where it would be unusual to find shells: the primary fill of the pond; the doorpost fill (43) (where the shell was intentionally placed as packing, or the post includes domestic rubbish); and corn-drier fill (27) (which includes post-use domestic rubbish).

The range and nature of the shells recovered are not unusual for the type of site during the period. The indications are of poor quality oysters and close connections with the sea.

### THE CHARRED PLANT REMAINS

*W J Carruthers*

#### INTRODUCTION

During the excavations an environmental sampling programme was carried out on site under the guidance of Jim Williams (English Heritage, East Midlands Regional Scientific Advisor), resulting in the processing of 40 samples using standard methods of floatation. The samples were assessed by Gill Campbell (E.H. Centre for Archaeology) and, following recommendations in the report, nine samples were selected for full analysis. This report discusses the results of that analysis.

#### RESULTS

A list of the taxa present in the samples is presented in Table 19. Nomenclature and most of the habitat information was taken from Stace (1997). Cereal identifications follow Jacomet (1987). Ellenberg's indicator values were used to provide information about weed ecology (Hill *et al*, 1999).

#### Key for Table 19

cf. = uncertain identification; + = occasional; ++ = several; +++ = frequent; +1s = plus one sprouted grain

#### Habitat Preferences

A = arable; C = cultivated; D = disturbed/waste; E = heath; G = grassland; H = hedgerow; M = marsh/bog; R = rivers/ditches/ponds; S = scrub; W = woods; Y = waysides/hedgerows; a = acidic soils; c = calcareous soils; n = nutrient-rich soils; o = open ground; w = wet/damp soils; \* = plant of economic value



Table 19: List of plant Taxa

	Sample	34	26	35	37
	Context	53	54	66	82
CEREAL GRAINS					
<i>T. aestivum/turgidum</i> (free-threshing wheat grain)	cf.1		2	6	-
<i>Triticum dicoccum/spelta</i> (emmer/spelt grain)	16		153+10s	58	-
<i>Triticum</i> sp. (indeterminate wheat grain)	3		73	5	-
<i>Hordeum vulgare</i> L. emend. (hulled barley grain)	3		12	15	-
<i>Hordeum</i> sp. (indeterminate barley grain)	10		13	16	-
cf. <i>Secale cereale</i> L. (cf. rye grain)	-		-	-	-
<i>Avena</i> sp. (wild/cultivated oat grain)	3		6	4	-
<i>Avena/Bromus</i> sp. (oat/chess grain)	3		27	11	-
Indeterminate cereal grain	21		202	114	-
CEREAL CHAFF					
<i>Triticum</i> sp. (free-threshing wheat rachis frag.)	1		-	-	-
<i>T. dicoccum</i> (emmer glume base)	-		cf.3	-	cf.1
<i>T. spelta</i> L. (spelt glume base)	114		197	45	-
<i>T. spelta</i> L. (spelt spikelet fork)	3		3	1	-
<i>T. spelta</i> L. (spelt rachis fragment)	8		-	-	1
<i>T. dicoccum/spelta</i> (emmer/spelt glume base)	136		163	53	-
<i>Triticum dicoccum/spelta</i> (emmer/spelt spikelet fork)	39		20	2	7
<i>Triticum dicoccum/spelta</i> (emmer/spelt rachis fragment)	2		-	-	-
<i>Hordeum</i> sp. (barley rachis fragment)	3		-	2	-
<i>Avena</i> sp. (oat awn fragment)	++		+	++	-
Detached cereal sprouts	++		++	++	-
Cereal sized culm node	-		-	+	++++
OTHER ECONOMIC PLANTS & WEEDS					
<i>Ranunculus acris/repens/bulbosus</i> (buttercup achene) CDG	2		3	-	-
<i>Corylus avellana</i> L. (hazelnut shell fragment) HSW*	1		4	1	-
<i>Agrostemma githago</i> L. (corn cockle seed frag.) A	-		1	-	-
<i>Fallopia convolvulus</i> (L.)A.Love (black bindweed achene) AD	-		-	-	-
<i>Polygonum aviculare</i> L. (knotgrass achene) CDO	-		1	-	2
<i>Rumex acetosella</i> agg. (sheep's sorrel achene) GaE	-		-	-	-
<i>Rumex</i> sp (dock achene) CDG	13		84	22	6
<i>Malva</i> sp. (mallow seed) CDGH	-		-	1	-
<i>Viola</i> sp. (violet seed) GDH	-		-	-	-
<i>Thlaspi arvense</i> L. (field pennycress seed) AD	1		-	-	-
<i>Rosa</i> sp. (rose seed) HSW*	-		-	-	-
cf. <i>Pisum sativum</i> L. (cf. garden pea) *	-		2	1	-
cf. <i>Vicia faba</i> var. <i>minor</i> (cf. Celtic bean fragment) *	-		-	1	-
<i>Vicia/Lathyrus</i> sp. (small weed vetch/tare seed) CDG	1		2	-	-
<i>Medicago lupulina</i> L. (black medick fruit) GD	-		-	-	-
<i>Trifolium/Lotus/Medicago</i> sp. (clover/trefoil/medick seed) CDG	11		28	25	8
<i>Linum usitatissimum</i> L. (cultivated flax seed) *	-		-	-	-
<i>Hyoscyamus niger</i> L. (henbane seed) Dn	-		1	-	-
<i>Lithospermum arvense</i> L. (field gromwell nutlet) ADGo	13		43	8	1
<i>Galeopsis tetrahit</i> (common hemp-nettle nutlet) CD	1		-	-	-
<i>Plantago lanceolata</i> L. (ribwort plantain seed) G	-		4	2	-
<i>Odontites verna/Euphrasia</i> sp. (red bartisia/eyebright seed)	-		9	9	-
<i>Rhinanthus</i> sp. (rattle achene) G	-		2	4	-
<i>Galium aparine</i> L. (cleavers nutlet) CGHo	3		25	5	-
<i>G. verum</i> L. (lady's bedstraw nutlet) Gc	-		-	-	1
<i>Sambucus nigra</i> L. (elder seed) CDn	-		1	-	-
<i>Tripleurospermum inodorum</i> (L.)Sch.Bip. (scentless mayweed achene) CD	-		6	3	-
cf. <i>Centaurea</i> sp. (cf. knapweed seed frag.) CDG	-		1	-	-
<i>Lapsana communis</i> L. (nipplewort achene) CDGH	-		2	-	-
<i>Eleocharis</i> subg. <i>Palustres</i> (spike-rush nut) MPGw	-		6	2	-
Cyperaceae cf. <i>Schoenoplectus</i> sp.(cf. bulrush nut)	-		1	2	-
<i>Carex</i> sp. (lenticular sedge nutlet) wGMP	1			1	1
<i>Carex</i> sp. (trigonous sedge nutlet) wGMP	1			2	1
<i>Lolium</i> -type (grass caryopsis) CG	26		44	9	1
Poaceae (indeterminate grass caryopsis) GCD	24		25	26	2
<i>Bromus</i> sect. <i>Bromus</i> (chess caryopsis)ADG	2		203	64	2
Grass-sized stem fragments	-			+	-
<b>Totals</b>		<b>466</b>	<b>1391</b>	<b>530</b>	<b>34</b>
volume of soil processed (litres)		20	70	60	10
<b>charred frags per litre</b>		<b>23.3</b>	<b>19.9</b>	<b>8.8</b>	<b>3.4</b>
Approximate ratio grain:chaff:weed seeds		2:10:3	1:1:1	2:1:2	-

## MARTIN TINGLE

Table 19: List of plant Taxa (continued)

	Sample	12	11	5	10	4
	Context	8	22	31	42	29
<b>CEREAL GRAINS</b>						
<i>T. aestivum/turgidum</i> (free-threshing wheat grain)	-	-	-	3	3	3
<i>Triticum dicoccum/spelta</i> (emmer/spelt grain)	1	4	27	158+1s	49	49
<i>Triticum</i> sp. (indeterminate wheat grain)	-	-	4	8	1	1
<i>Hordeum vulgare</i> L. emend. (hulled barley grain)	7	98	32	18	72	72
<i>Hordeum</i> sp. (indeterminate barley grain)	4	28	15	4	7	7
cf. <i>Secale cereale</i> L. (cf. rye grain)	-	-	-	2	-	-
<i>Avena</i> sp. (wild/cultivated oat grain)	-	Cf.1	19	8	12	12
<i>Avena/Bromus</i> sp. (oat/chess grain)	-	-	12	17	39	39
Indeterminate cereal grain	-	95	168	257	263	263
<b>CEREAL CHAFF</b>						
<i>Triticum</i> sp. (free-threshing wheat rachis frag.)	-	-	-	-	-	-
<i>T. dicoccum</i> (emmer glume base)	-	-	-	2	-	-
<i>T. spelta</i> L. (spelt glume base)	1	1	7	390	85	85
<i>T. spelta</i> L. (spelt spikelet fork)	-	-	-	1	5	5
<i>T. spelta</i> L. (spelt rachis fragment)	-	-	2	1	-	-
<i>T. dicoccum/spelta</i> (emmer/spelt glume base)	-	-	12	257	7	7
<i>Triticum dicoccum/spelta</i> (emmer/spelt spikelet fork)	-	-	-	9	2	2
<i>Triticum dicoccum/spelta</i> (emmer/spelt rachis fragment)	-	-	-	1	1	1
<i>Hordeum</i> sp. (barley rachis fragment)	-	-	5	2	8	8
<i>Avena</i> sp. (oat awn fragment)	-	-	++	+	-	-
Detached cereal sprouts	-	-	-	++	-	-
Cereal sized culm node	-	-	-	-	-	-
<b>OTHER ECONOMIC PLANTS &amp; WEEDS</b>						
<i>Ranunculus acris/repens/bulbosus</i> (buttercup achene) CDG	-	-	1	1	-	-
<i>Corylus avellana</i> L. (hazelnut shell fragment) HSW*	-	-	1	-	1	1
<i>Agrostemma githago</i> L. (corn cockle seed frag.) A	-	-	-	3	-	-
<i>Fallopia convolvulus</i> (L.)A.Love (black bindweed achene) AD	-	-	1	1	-	-
<i>Polygonum aviculare</i> L. (knotgrass achene) CDO	-	-	2	1	2	2
<i>Rumex acetosella</i> agg. (sheep's sorrel achene) GaE	-	-	-	3	5	5
<i>Rumex</i> sp (dock achene) CDG	-	-	17	15	59	59
<i>Malva</i> sp. (mallow seed) CDGH	-	-	-	-	-	-
<i>Viola</i> sp. (violet seed) GDH	-	-	-	-	2	2
<i>Thlaspi arvense</i> L. (field pennycress seed) AD	-	-	-	-	-	-
<i>Rosa</i> sp. (rose seed) HSW*	-	-	-	-	1	1
cf. <i>Pisum sativum</i> L. (cf. garden pea) *	-	-	-	-	1	1
cf. <i>Vicia faba</i> var. <i>minor</i> (cf. Celtic bean fragment) *	-	-	-	-	-	-
<i>Vicia/Lathyrus</i> sp. (small weed vetch/tare seed) CDG	-	-	-	4	30	30
<i>Medicago lupulina</i> L. (black medick fruit) GD	-	-	-	-	1	1
<i>Trifolium/Lotus/Medicago</i> sp. (clover/trefoil/medick seed) CDG	-	1	7	1	9	9
<i>Linum usitatissimum</i> L. (cultivated flax seed) *	-	-	-	2	-	-
<i>Hyoscyamus niger</i> L. (henbane seed) Dn	-	-	-	-	-	-
<i>Lithospermum arvense</i> L. (field gromwell nutlet) ADGo	-	-	3	6	10	10
<i>Galeopsis tetrahit</i> (common hemp-nettle nutlet) CD	-	-	-	-	-	-
<i>Plantago lanceolata</i> L. (ribwort plantain seed) G	-	-	1	1	3	3
<i>Odontites verna/Euphrasia</i> sp. (red bartisia/eyebright seed)	-	-	-	-	-	-
<i>Rhinanthus</i> sp. (rattle achene) G	-	-	-	-	-	-
<i>Galium aparine</i> L. (cleavers nutlet) CGHo	-	-	6	4	11	11
<i>G. verum</i> L. (lady's bedstraw nutlet) Gc	-	-	2	-	6	6
<i>Sambucus nigra</i> L. (elder seed) CDn	-	-	-	1	-	-
<i>Tripleurospermum inodorum</i> (L.)Sch.Bip. (scentless mayweed achene)CD	-	-	-	-	-	-
cf. <i>Centaurea</i> sp. (cf. knapweed seed frag.) CDG	-	-	1	-	-	-
<i>Lapsana communis</i> L. (nipplewort achene) CDGH	-	-	-	-	2	2
<i>Eleocharis</i> subg. <i>Palustres</i> (spike-rush nut) MPGw	-	-	1	-	1	1
Cyperaceae cf. <i>Schoenoplectus</i> sp.(cf. bulrush nut)	-	-	5	2	-	-
<i>Carex</i> sp. (lenticular sedge nutlet) wGMP	-	-	2	-	-	-
<i>Carex</i> sp. (trigonous sedge nutlet) wGMP	-	-	2	-	-	-
<i>Lolium</i> -type (grass caryopsis) CG	1	-	5	12	9	9
Poaceae (indeterminate grass caryopsis) GCD	-	-	6	9	4	4
<i>Bromus</i> sect. <i>Bromus</i> (chess caryopsis)ADG	-	3	10	25	7	7
Grass-sized stem fragments	-	-	++	+	+++	+++
<b>Total:</b>		<b>14</b>	<b>231</b>	<b>392</b>	<b>1232</b>	<b>782</b>
volume of soil processed (litres):		20	30	40	20	?
charred frags per litre:		<b>0.7</b>	<b>7.7</b>	<b>9.8</b>	<b>61.6</b>	<b>?</b>
Approximate ratio grain:chaff:weed seeds		-	10:++:	11:1:3	5:7:1	10:2:3

## DISCUSSION

## STATE OF PRESERVATION AND SPROUTING

The state of preservation of most of the charred plant remains was reasonably good. The survival of husks (paleas and lemmas) on many of the hulled barley grains, and the fairly intact state of the spelt glume bases indicated that little surface abrasion or redeposition had occurred. The main reason for cereals being unidentifiable was distortion, vacuolation and fragmentation such as often occurs during charring, particularly in spelt wheat and bread-type wheat. However, some additional distortion was observed in grains that had sprouted. Detached sprouts and grains that had 'caved in' following germination were present in four of the samples, primarily in Phase 1. As evidence of sprouting was not frequent in any of the samples, it was not possible to determine whether this was deliberate sprouting to produce malt, or sprouting due to damp storage conditions. The scant evidence suggests the latter, although examples of the use of spelt to produce malt are known for the Roman period (eg Catsgore, Hillman 1982). Unfortunately very little charred plant material was recovered from the oven fill, flue 29 (context 28), but it may have been used to produce malt at least some of the time. In her review of Roman corn driers in Britain, Van der Veen (1989) found that 28% produced some evidence to suggest that they may have been used to produce malt.

*Phase 1*

Deposits dated to this phase were associated with activity pre-dating the construction of the villa building. They occurred in a depression that may once have been a pond. The upper fills of this area produced large quantities of pot and an ashy, dark soil, suggesting that it may have been used as a midden prior to the construction of the villa building.

Four samples from this phase of occupation were fully analysed. These consisted of four layers that were rich in charred plant remains from a variety of sources. Although the main crop plants were similar in all of the samples, differences in the type of waste represented can be seen when ratios of grain to chaff fragments to weed seeds are examined (G:Ch:W; see bottom of Table 19).

Sample 34 (context 53, primary fill of pond) was richer in chaff fragments and weed seeds than cereal grains, indicating that burnt cereal processing waste was present (G:Ch:W = 2:10:3). Since burning can change the G:Ch:W ratio, destroying more chaff than cereal grains (Boardman & Jones 1990), this waste material may originally been much richer in chaff fragments before it was burnt. Identification of the grain and chaff fragments indicated that spelt wheat was the principal crop present, with small amounts of hulled barley, bread-type wheat and oats (indeterminate wild or cultivated). These minor cereals probably represented volunteer plants from crops that had previously been grown on the land. Alternatively mixed waste from several crops, perhaps including some hay, may have been present. As many of the weeds can grow in grasslands as well as cultivated fields it is not possible to be certain from where the weed seeds had originated. Where cereal crops follow a grass ley or are

sown into a newly ploughed meadow this is even more of a problem.

Sample 26 (context 54, primary fill of pond) also consisted primarily of spelt wheat, but this time the higher proportion of grain to chaff suggested that unthreshed spikelets may have been burnt, since the ratio was roughly 1:1. Alternatively, cereal processing waste and spoilt grain could have been burnt together. Since very small weed seeds such as clover-type (*Trifolium/Lotus/Medicago* sp.) and dock (*Rumex* sp.) were frequent in the assemblage, the latter explanation may be more likely. When ears of hulled wheat are processed up to the spikelet stage (perhaps prior to storage as spikelets; Hillman 1981), it is easy to remove small weed seeds using a relatively large meshed sieve. Only large weed seeds such as chess (*Bromus* sect. *Bromus*) are likely to remain with the spikelets in the sieve.

Chess, an arable weed thought to have been introduced into Britain with spelt (Godwin 1975), was particularly numerous in this sample, outnumbering emmer/spelt grains. Although there is no evidence that chess was cultivated as a crop in its own right during the Iron Age and Roman periods, the fact that it is sometimes abundant in spelt crops (eg a fourth-century enclosure ditch sample from Prickwillow Road, Ely; Carruthers 2003) suggests that it may have been tolerated as a weed and possibly even seen as a useful addition to the crop.

Other crops represented in this assemblage were bread-type wheat, oats (wild or cultivated) barley and possible emmer wheat. Emmer had largely been replaced by spelt on most sites in southern England by the Roman period. Since less than 1% of the glume bases at Stanion were emmer or possible emmer, the remains could represent relict plants persisting within the fields of spelt. One additional food represented was possible pea (cf. *Pisum sativum*), a leguminous plant which would have been useful in helping to restore fertility to the soil. Peas are not commonly found prior to the Saxon period, but this is probably mainly due to problems of preservation by charring.

Sample 35 (context 66, primary fill of pond) produced a similar type of assemblage to sample 26, in that it contained similar quantities of grain, chaff and weed seeds (G:Ch:W = 2:1:2). Once again, spelt wheat was dominant, and weeds such as chess and clover-type legumes were frequent. Both pea and Celtic bean were present, and small amounts of hulled barley, bread-type wheat and oats were recovered. As with sample 26, this deposit may have received burnt material from a variety of sources.

Sample 37 (context 82, fill at margins of pond) produced a very different assemblage, consisting primarily of charred straw fragments and culm nodes ('joints' in the stem). The few identifiable seeds present amongst the straw indicated that it was probably from a spelt crop that had grown on damp soil (providing that the seeds had all come from the same source), since a spelt glume base, spike-rush seeds and a variety of sedge nutlets were present. Arable crops may have been grown along Harper's Brook to the south of the villa, on the fertile alluvial soils. This type of waste would have been removed from the crop in the first stages of processing. It

is rarely preserved archaeobotanically, as it usually burns away leaving few traces (Boardman and Jones 1990). It is also a useful resource for fodder, bedding and thatching, so is less likely to be burnt as waste.

As a whole, the Phase 1 samples indicated that spelt was the principal crop in the later first century, prior to the construction of the villa building. Since several types of processing waste were present in the area and the remains were fairly abundant, the crops were likely to have been grown locally. At least some of the crops were being grown on damp soils along the valley bottom. Bread-type wheat, hulled barley, peas, Celtic beans and probably oats were amongst the other crops being grown. There was no evidence that exotic fruits and spices were being imported, although admittedly this type of evidence is less likely to become preserved by charring. However, native hedgerow fruits and nuts were probably being gathered to supplement the diet, as hazelnut shell fragments and an elderberry seed were recovered.

#### Phase 4

Unfortunately no samples relating to the direct use of the villa were available for study. Two samples from burnt areas probably associated with the demolition of the building were examined; sample 11 (context 22/23, burnt deposit on tessellated floor) and sample 12 (context 8, burnt deposit in shallow hollow, 16). Neither of them was particularly productive, and both consisted of grain with very few contaminants. In contrast to the Phase 1 samples, hulled barley was the principal crop. A few emmer/spelt grains and one possible oat were the only other cereals present. These burnt remains could have been the waste from fodder being fed to the occupants' horses or livestock, or it could have been consumed by the occupants themselves. If so, it represents a change in the diet and a lower status meal than spelt or bread wheat. Since virtually no chaff and very few weeds were present, there was no evidence from this phase that cereal cultivation was taking place locally. The cereals could have been brought onto the site as processed grain.

#### Phase 5

This phase relates to features outside the villa, including a corn drier/oven, associated pits, a hearth and a well. Unfortunately, although the flue of the corn drier was 100% sampled it produced very few charred plant remains. Only a few poorly preserved emmer/spelt grains and a spelt glume base were preserved in an identifiable state. However, samples from the fill of the northern channel of the oven (sample 5, context 31 in 32) and from the fill of a pit cut by the oven (sample 10, context 42 in pit 47) and a further pit (sample 4, context 29 in pit 30) produced reasonable concentrations of charred cereal remains that probably originated from the oven. Samples 5 and 4 consisted primarily of cereal grains, most of which were hulled barley. When charred, barley produces fewer chaff fragments per grain than spelt wheat, so the larger numbers of grains in these samples in relation to chaff fragments could be due to the dominance of barley.

Sample 10 from pit 47, pre-dating the oven, contained frequent emmer/spelt grains and spelt chaff fragments indicating that either spelt spikelets or mixed cereal processing waste and grain were present. Despite the stratigraphic relationship, the very high concentration of charred plant material in this sample (>61 fragments per litre of soil processed) suggests that they had originated from the oven/kiln, and may have been dumped on top of the pit fills which they have subsequently contaminated.

All three samples probably represent sweepings from the oven, in which case ash from the fuel and any cereals that had become charred accidentally would have become mixed together during redeposition. Fuel residues from ovens are often rich in chaff fragments and weed seeds, since cereal processing waste was a useful source of fuel for ovens and kilns (Van der Veen 1989).

Most of the evidence from Van der Veen's review of Roman ovens indicated that spelt or spelt and barley were the main crops being dried in the ovens. This fits in with the evidence from Stanion, as both hulled barley and spelt were the main cereals present in the samples. Since both cereals require parching to remove the husks, this was likely to have been one use to which the oven was regularly put. Barley that was being used for fodder would not have required parching unless it had been harvested damp. In this case it may have been dried prior to storage to avoid spoilage. Barley may also have been used for human consumption during hard times, or for specific dishes. There was no evidence that it was being used for malting, but this is another possibility.

Additional crops represented by smaller numbers of charred remains were bread-type wheat, emmer, oats, possible rye, peas and flax. All of these crops are typical of the period, particularly in central and southern England (Murphy 1997, Greig 1991). Flax is fairly common on Roman sites (Greig 1991). It is likely to have been grown on the damper soils in the valley bottom as it requires a moist root-run. There is some indication that oats were more frequent in the Phase 5 samples than the Phase 1 samples, but too few samples were analysed to be certain. One difference between the two phases that was a little clearer was the increase in indicators of nutrient-poor soils. Sheep's sorrel (*Rumex acetosella*) grows primarily on poor, acidic, sandy soils. It was not present in the Phase 1 samples but occurred in two of the Phase 5 samples. Other poor soil indicators such as vetch/tare (*Vicia/Lathyrus* sp.) and lady's bedstraw (*Galium verum*) seeds were more frequent in the Phase 5 samples. It is possible that the apparent increase in barley cultivation in the Phases 4 and 5 samples was due to some loss in fertility of the local soils, due to intensive cultivation of more demanding crops such as bread-type wheat and spelt wheat during the occupation of the villa. The number of samples examined for this report was too few to draw definite conclusions, but this hypothesis could be investigated if further excavations were undertaken in the area.

There were no other obvious differences in weed taxa through the phases; damp ground taxa were present in small quantities and chess and *Lolium*-type grass seeds were fairly frequent, as in Phase 1. It is likely that both of

these arable weed grasses were primarily contaminants of spelt crops, since fewer were present in the barley-dominated samples. Hedgerow fruits and nuts continued to be exploited, as indicated by the recovery of hazelnut shell fragments, an elderberry seed and a rose seed (*Rosa* sp.). There was no evidence for the importation of exotic fruits and nuts, or the cultivation of an ornamental garden, as on the villa estate at Rectory Farm, Godmanchester (Murphy 1997).

#### COMPARISONS WITH OTHER SITES AND CONCLUSIONS

Very few villa sites have been investigated in detail for archaeobotanical evidence. The small second to fourth-century Roman farmstead at Glapthorne Road, Oundle (Carruthers 2004) produced a very similar range of charred cereal remains, including spelt processing waste and burnt grain or spikelets. The only differences between the charred assemblages at Oundle and those at Stanion were that there was less evidence for the cultivation of barley and slightly more evidence for the persistence of emmer as a minor crop at Oundle. However, at Oundle a well provided useful additional waterlogged environmental evidence, plus seeds of coriander, possible dill, flax, opium poppy and cotton thistle. This suggests that imported spices may have been present at Stanion, but they were not preserved because no waterlogged deposits were available for study.

Larger scale investigations carried out during the A120 road construction scheme in Essex, produced very similar evidence of extensive spelt cultivation on an early Roman farmstead. No exotic foods were present in a waterlogged ditch, although there was evidence for flax processing. Concentrated spelt processing waste was also found on the middle and late Roman sites along the A120. The main differences between the various sites related to the weed taxa, which indicated that some sites were damper than others and some were growing crops on poorer soils. The minor crops were identical to those at Stanion, and hedgerow fruits and nuts were being consumed.

The Roman settlement and later Roman farmstead at Stonea in the Cambridgeshire fens both produced the same range of crop plants as at Stanion, with spelt again being the dominant cereal present (van der Veen 1991). However, lentil was present in both phases of occupation, and fig was found in the earlier, higher status settlement.

The Roman period is remarkable in the uniformity of its arable production across south and central England. There are clearly still unanswered questions, however, concerning the availability of imported foods, and waterlogged deposits such as wells, cess pits and ditches should be given high priority when sites are being sampled. This includes sampling for pollen as well as plant macrofossils, as this could help to detect exotic species. In addition, much more detailed environmental sampling is required on villa sites, in the hope that evidence of garden plants may also be recovered.

## DISCUSSION

It cannot be overstated that the excavations at Stanion examined only a small part of the villa complex as it appears on aerial photographs and consequently, what was revealed of the form, function and chronology of the excavated area may not apply to the entire complex.

#### THE STANION VILLA

The site at Stanion is situated in a valley adjacent to Harper's Brook, a tributary of the River Nene, which it joins near Islip 11kms to the south-west.

Occupation appears to have begun at around the mid-first century AD, perhaps centred on a major timber building. By the end of the first century there had been a major expansion, centred on the creation of a stone-built villa. This comprised a simple strip building some 30-35m long, with a corridor along the northern side, facing uphill, and a suite of rooms to the south. The only room investigated had contained painted wall plaster and a plain tessellated floor, perhaps with a small central decorative mosaic that has been lost. The corridor had been furnished with a similar plain tessellated floor. The adjacent room, which lay at the very edge of the excavated area, appeared to possess no elaborate furnishings. A small quantity of box-flue tile does suggest that at least one room had been provided with a hypocaust, but none of the recovered building material would suggest the presence of a bath house.

This was therefore a fairly small establishment that appears not to have been subject to any major refurbishments in the century or so in which it was occupied, with abandonment occurring at around the end of the second century.

To the west of the building vestiges of associated activities survived, including a pit oven lined with part of an amphora and roof tiles, a corn drier and associated pits, together with a stone-lined well. The economic base of the settlement was further defined by a rich assemblage of charred seed for the fills of a pond sealed beneath the villa, and therefore related to the original first-century settlement. At this time the dominant cereal was spelt, but the assemblage also included a much wider range of crops, including bread-type wheat, hulled barley, peas, Celtic beans and probably oats, and with the native hedgerows represented by hazelnut shell fragments and an elderberry seed. The range of crops found at Stanion Villa further adds to the body of evidence, which indicates the uniformity of arable production across south and central England during the Roman period.

There is less evidence from the second century, but the corn drier was used primarily for drying barley, although there was no evidence that this was malted barley, with chaff and charred spelt present in the mixed charred debris that appeared to be remnants of the flue used to fire the oven.

In addition, large quarry pits to the north of the villa, found in 1984, and smaller amounts of iron slag, including tap slag, from around the villa suggest that iron smelting had played a significant part in the economy of the site.

### THE NEIGHBOURING ROMAN-BRITISH SITES

There are at least eight Romano-British sites in the area, most of which were discovered by surface collection on land to the south of the Stanion villa (RCHME 1979, 135). This distribution is almost certainly affected by the widespread ironstone quarrying that has taken place to the north of the site, which would have removed all traces of human activity.

The eight Romano-British sites listed by the RCHME (1979, 135), are characterised by scatters of pottery with building stone and roofing material. One of these (SMR no 2544/0/2) situated 750m south of the Stanion villa is also associated with finds of iron slag. The course of the Gartree Road from Leicester to Godmanchester passes close by, if not actually through this site before crossing the River Nene approximately 10kms to the south-west. From there, river transport would have linked the site with the small towns of Ashton, to the north and Irchester to the south (Fig 20). A second road crosses the Gartree Road close to this location proceeding within 100m of the Stanion villa. This road is observed further north within 75m of the Weldon Villa and possibly links to a known road that passes through Laxton in the direction of Ermine Street, 4kms north of Durobrivae.

### COMPARISON WITH NEIGHBOURING VILLAS

Within Northamptonshire, only four villas have been substantially excavated; at Great Weldon (3.5km north of Stanion), Stanwick (17km south of Stanion), Redlands Farm (17km south of Stanion) and Piddington (35km south-west of Stanion). Of these, the villa at Great Weldon is not only the closest, but also shares many characteristics with the Stanion villa, such as its early chronology and its association with iron production.

The villa at Great Weldon has been known of since 1738 and was excavated between 1953–56 (Smith, Hird and Dix 1988-9). No late Iron Age or first century pre-Roman material was found during the excavation suggesting that occupation began in the Flavian period with a rectangular, stone-founded, four roomed building measuring 25.6m by 7.92m. To the north of this structure, a layer of calcined clay from the base of a furnace indicated the preparation of ironstone for smelting and large pieces of iron cinder were incorporated into the foundations of later buildings. The early building was destroyed by fire *c* AD 200 and replaced by one nearly twice as long with a corridor and a small bath suite. Immediately adjacent to this, a separate, circular stone-founded building with a burnt clay floor was constructed during the second century or later. During the fourth century, the main building was extended and embellished with geometric mosaics. The bath suite was enlarged and an enclosed courtyard constructed. On the north side of this was a fourth-century barn that was twice destroyed by fire. The presence of a hoard of 230 coins within a fire damaged room suggests that at least this part of the building was unoccupied at some time after *c* 350 AD. Repairs to the mosaics indicate continuing occupation elsewhere in the building and the coin sequence continues to the end of the fourth century.

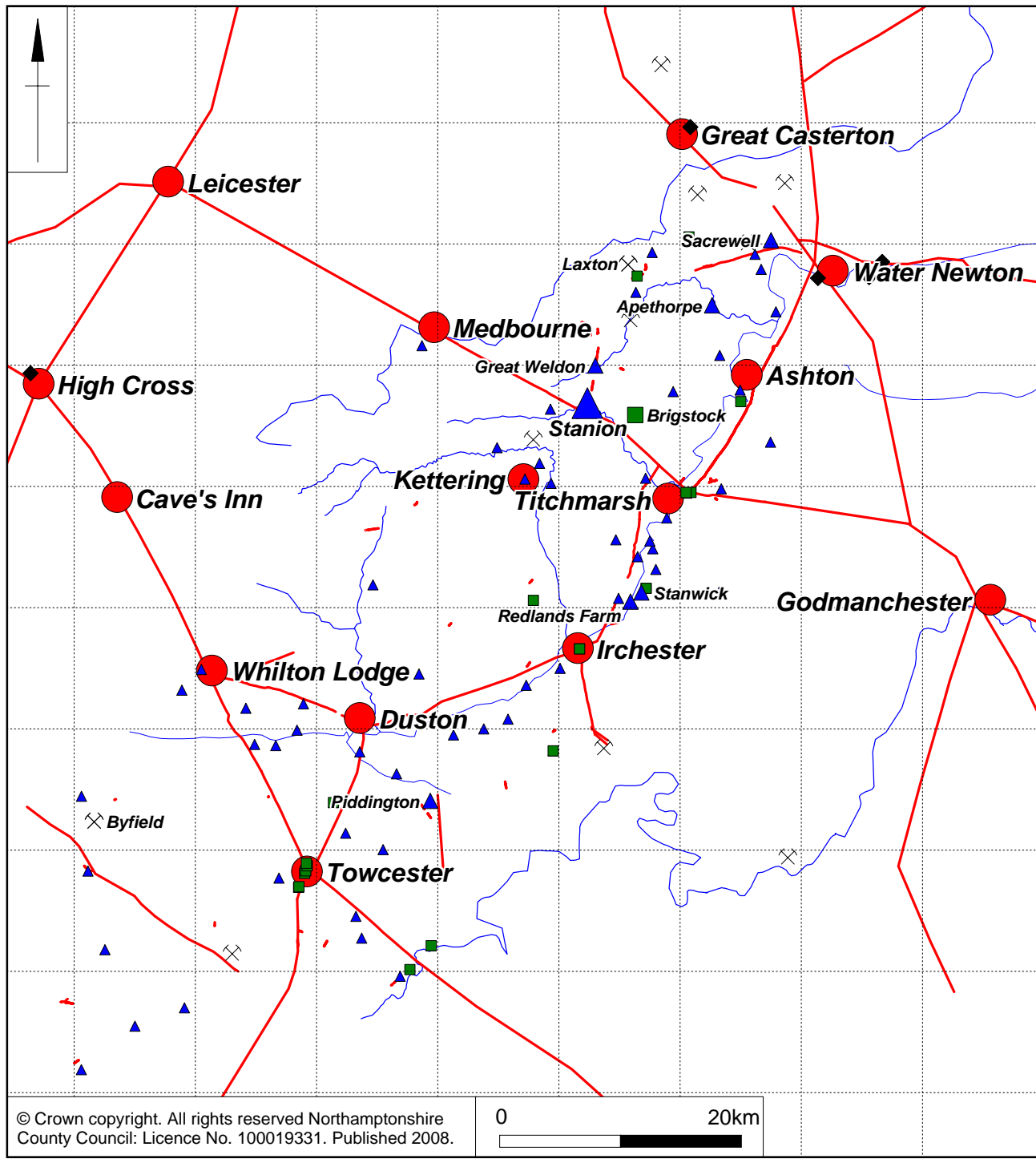
The Great Weldon villa was constructed and occupied at approximately the same time as the site at Stanion. Both sites lack evidence of continuous occupation from the late Iron Age, a feature common to other Midland villas, including Apethorpe (RCHME 1979). While the beginning of the third century marks the end of the occupation of the excavated area at Stanion, it is a period of re-building at Great Weldon which leads on to further embellishment in the fourth century. Both villas were constructed in close proximity to roads and are associated with early iron smelting.

The villas at Piddington and Stanwick have yet to be fully published, although interim reports show both similarities and significant differences between these sites and the Stanion villa (Dix 1986-7: Friendship-Taylor 2003). Piddington and Stanwick seem to have developed from late Iron Age occupation, an element absent at Stanion. At Stanwick, the buildings continued to be occupied and embellished into the fourth century, while Piddington followed a similar development as a winged corridor villa until its abrupt abandonment in the late third century, after which occupation on the site seems to continued in small individual family units. This apparently sudden change in site status resembles the sequence from Stanion although in the latter case, they took place in the early third century.

### IRONWORKING AND VILLAS IN THE EAST MIDLANDS

The importance of Ironworking in the East Midlands during the Roman period has recently been reviewed, emphasising its importance despite the lack of research comparable with the Weald and the Forest of Dean (Condron 1997; Bellamy *et al* 2000-1; Schrüfer-Kolb 2004). Evidence for early ironworking in the Rockingham Forest around Stanion was noted from the eighteenth century when Morton described extensive scatters of slag at Gretton and Fineshade, although it was not until the nineteenth century that their association with Roman artefacts was recognised (Bellamy *et al* 2000-1,109). Perhaps the most dramatic evidence for the development and the scale of early Roman iron production came from the excavations at Laxton (10kms north of Stanion), where a row of late first century furnaces was found of a type previously unknown in this country, and capable of an unusually large output (Tylecote & Jackson 1988; Crew 1998).

An examination of the Northamptonshire SMR showed there to be 77 sites within a 20km radius of Stanion which had shown evidence of Roman iron working, most of which are found on the ironstone deposits to the north-west of Stanion. Iron smelting is not frequently observed at villa sites, although this may simply reflect the limited areas that are usually excavated. At Sacrewell (20kms north-west of Stanion) a winged corridor villa, occupied from the mid second to the late fourth century, was associated with eight ironworking furnaces (Challands 1974, 13). Unlike Stanion, the ironworking appears to date from the fourth century and to have taken place when at least some of the building was unoccupied. Condron (1997) considered Sacrewell unusual 'in the close association between dirty polluting iron smelting



- Roman roads
- Roman towns
- ▲ Roman villas
- Roman temples
- ◆ Roman forts
- ⊠ Roman mineral extraction sites

Fig 20 Location of Roman towns and roads

and a high status residence'. However, this perhaps reflects more recent negative associations with industrial processes. At Piddington, iron smelting seems to have occurred within 200m of the villa complex and in a

recent gazetteer of Roman iron production sites in the East Midlands, over 30 villas (and possible villas) appear associated with iron smelting (Schrüfer-Kolb 2004, 145-166). The association of villas with iron smelting is seen

by Schrüfer-Kolb as resulting from their both requiring access via roads and waterways to markets in small and major towns and they are not regarded as having a significant role in the marketing of iron in the East Midlands (2004, 106).

#### FORMAL DEPOSITION AT STANION

The excavations at Stanion revealed instances in which the deposition of artefacts appears to be part of a formal behaviour unrelated to the simple disposal of waste. Within one of the quarry pits to the north of the villa, an almost complete vessel was recovered with an unusual burnished surface decorated with rouletting and incised motifs (Fig 18, 18) The vessel is of a novel type, probably contemporary with the early samian and the Hod Hill brooch. Although otherwise complete, the base of the pot had been intentionally removed, prior to it being placed in the middle of a quarry pit and covered with 'a powdery mass of small natural limestone, very clean' (P Foster pers comm).

A complete poppy beaker (Fig 11 and 17, 1) was found beneath the spread of cornbrash that sealed the infilled deposit that underlay the villa building.

The deposition of amphora fragments and partly butchered cattle skeletons in the well could simply represent the disposal of domestic waste, but this seems unlikely. Because the well had been uncovered and partially excavated after the main excavation had concluded, it is not possible to precisely relate the faunal and ceramic remains. The presence of the remains of a raven may represent simple rubbish disposal of a wild carcass or of a deceased pet or be a 'closure' activity. The apparent placing of animals into wells, as a prelude to their deliberate backfilling has been observed elsewhere in eastern England, with one nearby example at Oundle (Maull & Masters 2004).

#### CONCLUSION

The evidence from Stanion shows there to have been activity on the site from the late first century in the form of ironstone quarrying and smelting. The unprecedented early development in iron production at Laxton that then fails to develop may have parallels at Stanion. Whether the excavated area represents the earliest phase of occupation on the site is unclear. The association between the building and nearby ironstone quarrying and iron smelting at a time when other industrial sites were functioning indicates that the villa was not simply the centre of an agricultural estate. It is unclear why the Stanion villa ceased to be a high status residence in the early third century, while nearby the Weldon villa continued to prosper.

There is virtually no evidence to suggest the nature of any activity on the site during the late Roman period. There is a small assemblage of fourth-century pottery from the site which is associated with contexts post dating the occupation of the villa and a pit next to the corn drier. Coins of the second half of the fourth century tend to be more plentiful but overall the sample is too small to make firm generalisations. They may, however,

indicate human activity that could be more than simply economic, since they include two issues by Maxentius with the *Chi-Rho* monogram on the reverse. One of these coins has concretions on the obverse face only, suggesting that it might have been fixed to a surface in order to display the early Christian symbol. Re-use of an object to emphasise the *Chi-Rho* monogram was seen on the font found in a villa bath house at Rushton, 8 kms south-west of Stanion, which had been folded and then perforated, perhaps to aid suspension (Looker 1998-9, 163). It is also worth noting that another of the only five known baptismal fonts with *Chi-Rho* monograms was found in a well next to a blacksmiths shop in Ashton 12 kms east of Stanion (Guy 1977).

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