



Northamptonshire Archaeology

Excavation at Stanion Roman Villa, Brigstock Road,
Northamptonshire, April to July 2010



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OASIS REPORT FORM

PROJECT DETAILS		
Project name	Stanion Roman Villa	
<p>Northamptonshire Archaeology undertook an archaeological excavation as part of a proposed development of a waste recycling facility. The excavation revealed a late Iron Age boundary and two timber roundhouses associated with iron smelting. These were succeeded by a small Roman villa in the late 1st to early 2nd century, a building partly excavated in 2002. In the later 2nd century two further buildings, which probably functioned as ancillary ranges, were constructed. The original villa building was demolished during the same period or just afterwards and it seems likely that this was part of a wider expansion and modification of the villa complex, most of which lay to the north. To the east a stone-built roundhouse was constructed. A driveway defined by parallel ditches led to a partially metalled road. In the 3rd century a working yard to the south of the buildings included a post-built aisled barn with oven, a large malting oven, stone-lined wells and water cistern. The ancillary buildings, the processing area and the driveway appear to have gone out of use by the late 3rd century, when a series of ditches, some utilised for animal stock control, were created and an oven was inserted into the demolition deposits of one of the buildings. The site appears to have been abandoned in the 4th century AD. During the medieval period the site was unoccupied; but a small amount of medieval pottery recovered from the building rubble suggests robbing of the villa for stone, probably between 900-1100. Medieval cultivation was shown by remnants of ridge and furrow.</p>		
Project type	Excavation	
Site status	None	
Previous work	Excavation 2002, Geophysical Survey 2010	
Current land use	Tree Plantation	
Future work	Unknown	
Monument type/period	Roman buildings and agricultural features	
Significant finds	Roman pottery, monumental stone, statuette	
PROJECT LOCATION		
County	Northamptonshire	
Site address	Brigstock Road, Northamptonshire	
Study area	c1 ha	
OS Easting & Northing	SP 924 869	
Height OD	67.07 AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology	
Project brief originator	Northamptonshire CC	
Project Design originator	CgMs Consulting	
Director/Supervisor	Jason Clarke, Jim Burke	
Project Manager	Mike Dawson (CgMs Consulting), Anthony Maull and Tony Walsh (NA)	
Sponsor or funding body	CgMs Consulting	
PROJECT DATE		
Start date	April 2010	
End date	July 2010	
ARCHIVES	Location (Accession no.)	Content (e.g. pottery, animal bone etc)
Physical	NA offices	Pottery, animal bone, metalwork, flint, stonework, tile
Paper		site records
Digital		PDF
BIBLIOGRAPHY		
Title	Journal/monograph, published or forthcoming, or unpublished client report	
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**EXCAVATION AT STANION ROMAN VILLA, BRIGSTOCK ROAD
NORTHAMPTONSHIRE
APRIL TO JULY 2010**

Abstract

Northamptonshire Archaeology undertook an archaeological excavation as part of a proposed development of a waste recycling facility. The excavation revealed a late Iron Age boundary and two timber roundhouses that may have continued in use to the late 1st century AD. This early activity was related to iron smelting on an industrial scale. In the late 1st century there was minor rebuilding in stone and by the early 2nd century a small villa with tessellated pavements had been constructed. This building had been partly excavated in 2002. In the later 2nd century two further buildings, which probably functioned as ancillary ranges, were constructed. The original building was demolished during the same period or just afterwards and it seems likely that this was part of a wider expansion and modification of the villa complex, most of which lay to the north. To the east a stone-built roundhouse was constructed. A driveway defined by parallel ditches led to a partially metalled road.

In the 3rd century a working yard to the south of the buildings included a post-built aisled barn with oven, a large malting oven, stone-lined wells and water cistern. The ancillary buildings, the processing area and the driveway appear to have gone out of use by the late 3rd century, when a series of ditches, some utilised for animal stock control, were created and an oven was inserted into the demolition deposits of one of the buildings.

The site appears to have been abandoned in the 4th century AD. During the medieval period the site was unoccupied; but a small amount of medieval pottery recovered from the building rubble suggests post-Conquest robbing of the villa for building stone. Medieval cultivation was shown by remnants of ridge and furrow.

1 INTRODUCTION

1.1 The circumstances leading to the excavation

Between April and July 2010 an archaeological excavation was carried out by Northamptonshire Archaeology (NA) on land off Brigstock Road, near Stanion, Northamptonshire (NGR SP 924 869; Fig 1). The work was carried out prior to the construction of a waste recycling facility. The proposed development comprises the construction of new buildings and provision of hard standing. During the topsoil/subsoil stripping a soil bund was constructed along the northern and eastern edges of the development area, which was intended to preserve any archaeological buildings *in situ*.

The work was undertaken on behalf of CgMs Consulting for their client and follows a Written Scheme of Investigation (WSI) prepared by CgMs Consulting (Dawson 2010) which was agreed by the Northamptonshire County Council Archaeological Advisor.

1.2 Topography and geology with Steve Critchley

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

The underlying natural geology of the area comprises mainly 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.

Regular furrows, remnants of the medieval/post-medieval open field system of ridge and furrow agriculture, crossed the site and had truncated some of the archaeological features, particularly those to the south where the topsoil and subsoil were not so deep. A tree plantation was created at some time between 2002 and 2010. The drilled planting holes for the trees were 0.90m in diameter and deep enough to penetrate to archaeological levels and cause damage, especially to the villa buildings at the north of the site. As well as the pits that contained trees, there were further rows of pits drilled to take trees, but which were unused and backfilled.

1.3 The archaeological context

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 of the site 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 (HER 2537/0/0; Fig 54). Perhaps because these finds were not precisely located by the Royal Commission neither appeared on the Northamptonshire Historic Environment Record (HER) 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 1979, 135).

The course of the Gartree Road, a long distance route from Godmanchester to Leicester (Margary Route 57a), passes Stanion to the south. Excavation of a bridge carrying the road over the Nene to the east dated the original construction to the 1st century AD (Fig 54). The HER records indistinct cropmarks approximately 400m south of the site and the known and probable course of a Roman road, aligned north-east to south-west, which appeared to pass to the east of Stanion villa (HER 6701/1). The HER (HER 6166/0/1) also notes evidence of Roman iron working, 125m to the north-west of the site (in fact, the finds were located along a stretch of roadworks and the nearest were approximately 75m from the site and less than 50m from the known extent of the buildings). This was investigated 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 (Fig 2; Appendix 1; Tingle 2008).

Further evidence of Roman settlement in the area includes an area of Roman pottery, tiles, limestone rubble and human bone 2km to the south-west (HER 2550; RCHM 1979). A small excavation found evidence of timber and stone buildings dating to the 2nd century. The settlement also lies just to the east of the same road on which Stanion lies. There are further reports of tile and building stone found in the parish, indicating widespread settlement across the landscape. Evidence of charcoal-burning platforms in the area of Geddington Chase (to the south of the site) may date to the Roman and medieval periods and would have been vital for the iron-working industries in the vicinity (HER 6697/1).

Two aerial photographs (NCC Photo Number 9286/033 & 9286/034) (Tingle 2008, fig 5) taken in 1996 and held in the HER 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 a rectangular building measuring approximately 10m by 30m.

In 2002 part of a Roman villa was unexpectedly revealed, together with ancillary structures during the course of topsoil stripping prior to the construction of a composting facility immediately west of the current development area (Figs 1 & 2 and Tingle 2008). The main villa building was constructed in the later 1st 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 suggested 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. A small amount of box-flue tile suggested 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, its fills containing sherds of amphora, partially articulated cow skeletons and the skeleton of a raven.

In the late 2nd or early 3rd centuries 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. Very small quantities of 4th-century pottery indicate that there was some later activity nearby.

In 2010 and immediately prior to the current excavation, a magnetometer survey covering c 1ha was undertaken by Northamptonshire Archaeology, which was severely restricted by tree cover. The results indicated a magnetically noisy area with very little pattern within the area of investigation. However, a 20m wide band of more bland data was identified parallel and south of Brigstock Road, indicating an edge to the noisy, possibly debris-filled area.

2 AIMS AND OBJECTIVES

The original aims and objectives were stated in the Specification prepared by CgMs Consulting (Dawson 2010).

The principal objective of the archaeological excavation was to determine and understand the nature, function and character of any important archaeology on the site in its cultural and environmental setting.

The aims of the excavation were:

- To determine the presence, date, character, integrity, state of preservation and depth of burial of any archaeological deposits;
- To examine the site in its relation to its environment, economy, land use and development from the prehistoric to post-medieval periods;
- To examine evidence from the site for palaeo-environmental and/or economic development.

The subsequent assessment and updated project design (Clarke *et al* 2010) demonstrated that the excavation produced sufficient evidence to answer the original research objectives. Further specific objectives were added in light of the assessment.

The *Archaeological Resource Assessment and Research Agenda for Roman period in the East Midlands* (Taylor J, in Cooper 2006, 137-160) identifies the need for further research into the nature of Roman rural settlement and the perceptions, roles and inter-relationship of its inhabitants, and also the need for improved understanding (for all periods) of the character of the rural environment.

- To determine the nature and extent of human activity on the site prior to the construction of the villa buildings;
- To determine the methods and materials used in the construction of the various buildings;
- To determine the form and use of the buildings and how this may have changed through time;
- To determine the circumstances of the abandonment of the buildings and any subsequent re-use of the site;
- To examine ancillary structures, specifically to seek palaeo-botanical evidence for agricultural practices associated with the villa;
- To examine evidence for the 'zoning' of functions within the site;
- To explain the presence of neonatal burials and the adult burial, within the context of the villa;
- To provide information on the economic status of Romano-British rural settlement which may indicate subsistence or market economy;
- To provide information relating to changes of economic status between the Late Iron Age and the Early Romano-British period to assess the extent to which the conquest effected patterns of production.

3 THE EXCAVATION OF THE VILLA

The site was continuously occupied from the early 1st century AD until the 4th century (Table 1). The position of the villa on a south-facing slope, as well as its proximity to Harper's Brook in the valley and the availability of building stone probably influenced its location and is the type of location favoured by many villas (Smith 1997). The slight ridge upon which the buildings were constructed was characterised by a series of shallow ponds, most of which seem to have had a natural origin, having probably been formed by springs.

The villa complex was situated adjacent to a local road or track which, to the north, connected it to the villas at Great Weldon, 3.5km away, and the recently discovered villa at Prior's Hall, some 5km away. This track may have also provided access to the large-scale Roman iron-working industry concentrated in the Rockingham Forest, particularly around Laxton. To the south, across Harper's Brook, the track crossed the Gartree Road, an important thoroughfare which dates from the 1st century AD. This road linked the villa to the *civitas* capital *Ratae Coritanorum* (Leicester) 40km to the north-west and the small town of Titchmarsh about 10km to the south-east. The track also continued southwards, possibly as far as another small market town at Kettering (Fig 54).

Table 1: Summary of site development

Date	Activity
Late Iron Age (early-late 1st century AD)	Late Iron Age ditch (possible enclosure) Timber Roundhouses 1-2 Iron smelting debris associated with roundhouses
Early Roman (late 1st century AD)	Pond to west accumulating silts Stone roundhouse 3 Rectangular building pre-dating building 1
Roman (late 1st-2nd centuries AD)	The construction of the villa (building 1, over pond silts) The addition of the ancillary buildings (2 & 3) Droeway and stone-built Roundhouse 4 The demolition of the original villa range (building 1)
Roman (late 2nd-3rd centuries)	The possible construction of a larger villa (not located) Buildings 2 & 3, retained, with new timber range Building 4, to the east The rectangular enclosure with aisled barn and agricultural processing, to the south Metalled road to east
Late Roman (late 3rd-4th centuries)	Ancillary buildings out of use Ovens in enclosure stay in use Oven cut through demolition and floor of building 3 Metalled road retained
Late 4th century	Abandonment of the villa
Medieval and post-medieval	Pre and post-Conquest stone robbing The medieval field system



The site, looking north-east. Building 1 in the foreground Fig 3

3.1 The late Iron Age/early Roman activity (1st century AD)

The earliest feature was a linear ditch curving northwards to the east and perhaps forming part of a large sub-rectangular enclosure (Figs 2 and 4). The settlement does not appear to have been created before the early 1st century AD, with late Iron Age pottery found in the primary ditch fills. Much of the remainder of the Iron Age pottery was residual in later features, suggesting that the focus of early activity lay beyond the excavated area.

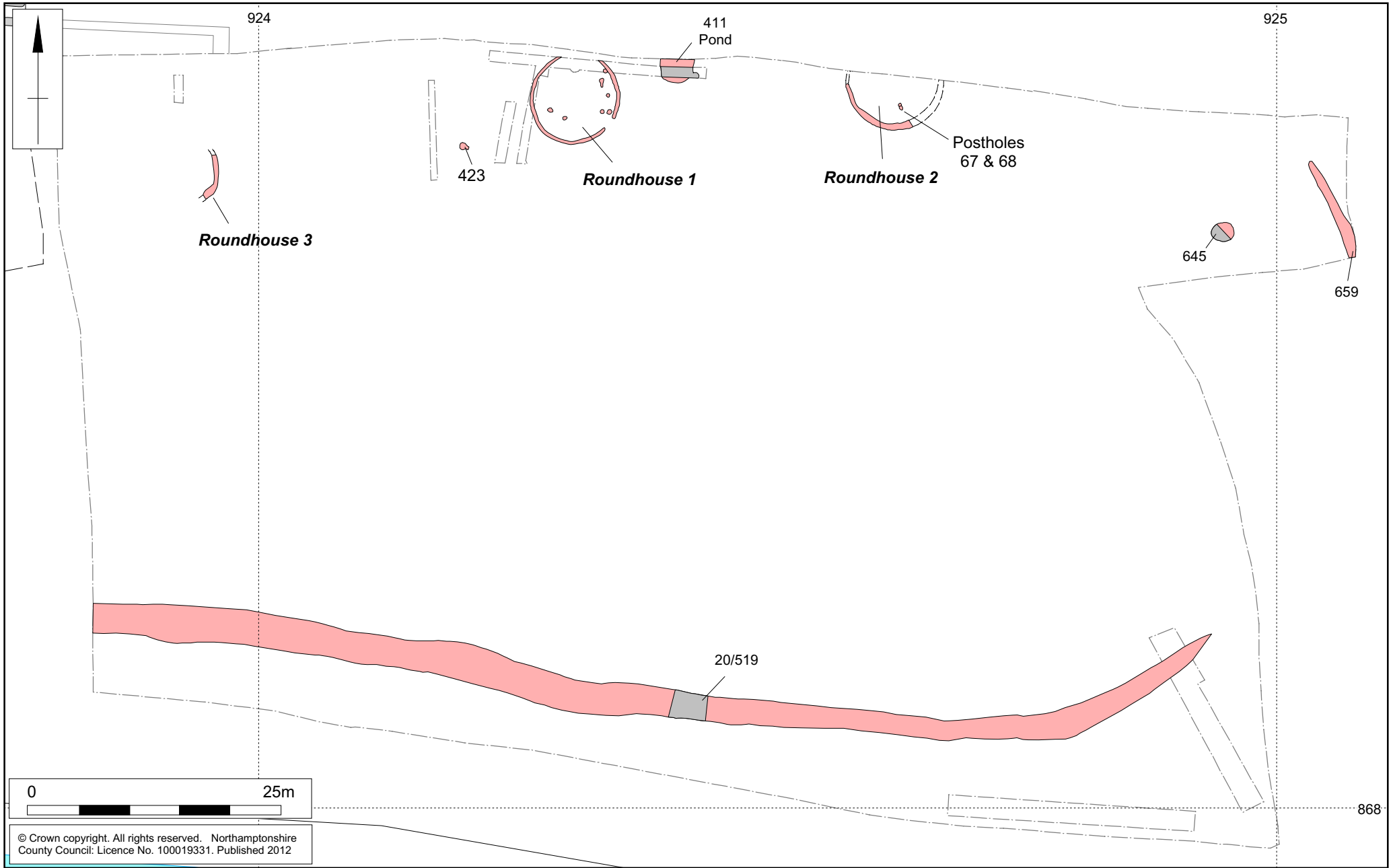
A group of three roundhouses were constructed in the mid-1st century AD. There were few other surviving contemporary features. While some may have been truncated by later activity, settlement in this form may have only existed for a relatively short period of time.

This phase also saw exploitation of the local Northamptonshire Ironstone, with evidence of iron smelting being undertaken nearby. A series of quarry pits to the north-east of the current excavation may have been the source of the ironstone.

Scale 1:500 (A4)

The early Roman activity (1st century AD)

Fig 4



The possible enclosure

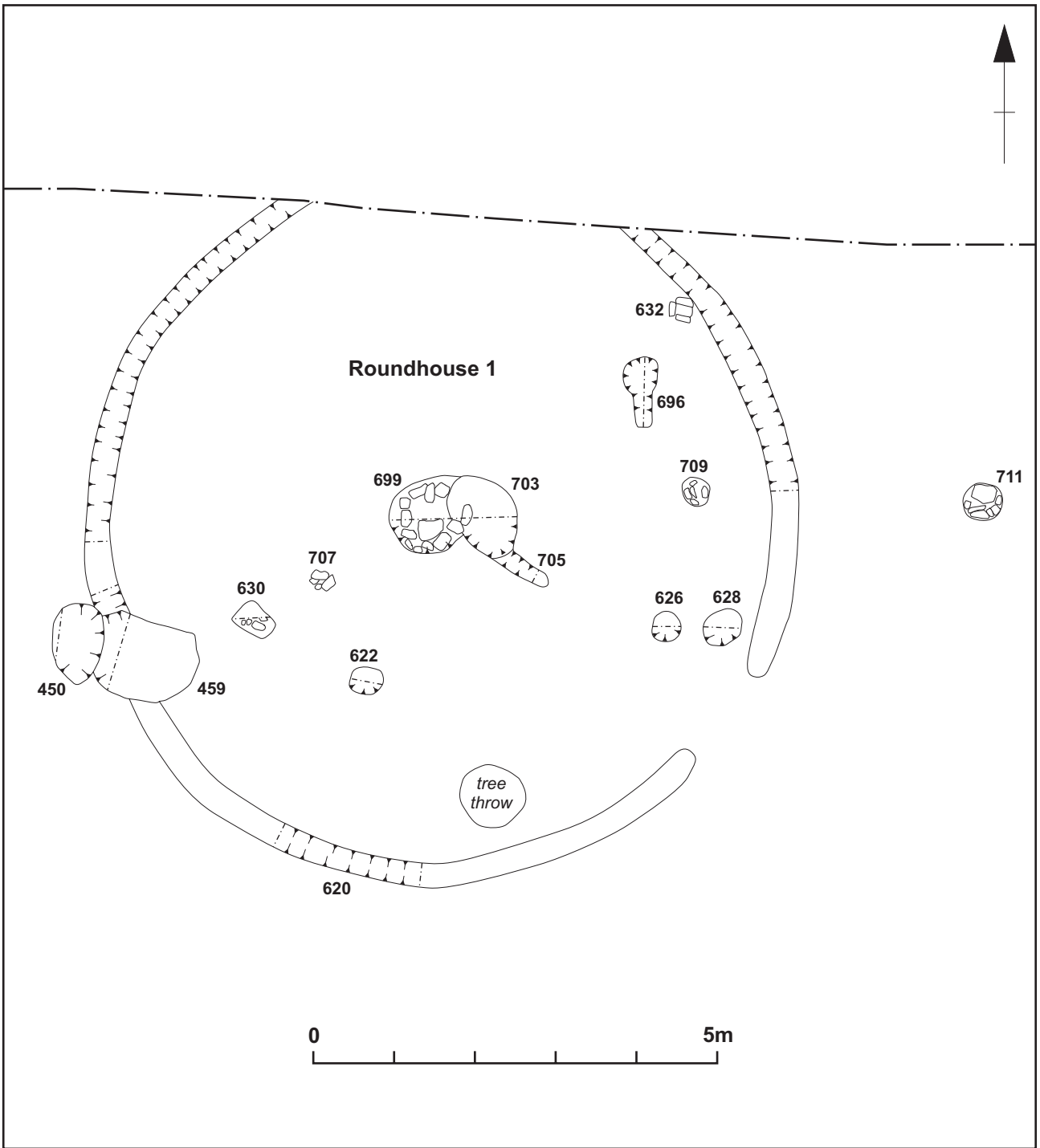
A substantial ditch, [20]/[519], aligned east-west, was 2.8-3.7m wide by up to 0.9m deep with a wide U-shaped, though slightly stepped, profile (Figs 2, 4, 5 and Fig 16). It lay 21m north of, and parallel to, Harper's Brook, although to the east it started to curve northwards. The lower fills of the ditch were composed of mottled orange-brown silty clays, suggesting the ditch was seasonally waterlogged and silted up relatively quickly, probably due to seasonal flooding of the brook. Late Iron Age pottery from the fills probably dated to the early 1st century AD and included sherds from a small thumb pot. There was little evidence of cleaning out or modification to the ditch, but pottery and other finds, including a copper alloy armlet, from the upper fills of the ditch dated to the mid-2nd century. These finds suggest that it was maintained up until this period, probably remaining as a relict landscape feature for much longer. A bank or hedge may have also defined the boundary.



The southern arm of the enclosure ditch [20], looking west Fig 5

There was part of another substantial ditch [659] aligned north-west to south-east and at least 3.40m wide and 1.10m deep with a wide V-shaped profile, although it became narrower and shallower towards the terminal to the north (Figs 4, 16 and 18; [659]). It had been dug through a layer of sandy ironstone which may have filled a former pond. The primary fill of the ditch was orange-mottled grey silt which contained pottery dated to the 1st century AD. On the western edge of the ditch were a series of limestone slabs, possibly laid down to provide hard standing. While the primary fill contained few inclusions, the upper fills contained large pieces of limestone suggesting that the ditch was deliberately backfilled. Finds included pottery dating to the 2nd century as well as the largest assemblage of slag found on site including tap slag, furnace slag and a furnace bottom.

If the ditches formed part of an enclosure, it would have been at least 120m long and 60m wide. There was no evidence of a western arm either within the 2002 or 2010 excavation, although much of the archaeology to the west of the villa building had been severely truncated. A possible eastern entrance into the enclosure was at least 5.00m wide, although there was no opposing ditch terminal within the excavated area. A shallow pit [645] located 10m to the west of the possible enclosure entrance, was 2.3m in diameter and 0.27m deep (Fig 18). Pottery from the primary fill dated to the 1st century AD. A complete furnace base was found in the upper fill, which also contained pottery dating to the mid-2nd century.



Scale 1:75 (A4)

Plan of Roundhouse 1 Fig 6

The roundhouses were positioned in a roughly east to west alignment and between 20m and 30m apart. The central roundhouse, Roundhouse 1, was the least truncated.

Roundhouse 1

Roundhouse 1 was defined by a ring gully [620] 8.0m in diameter with a south-east facing entrance 1.20m wide (Figs 2, 4 and 6). It overlay an irregularly-shaped hollow, possibly a natural pond. The ring gully was up to 0.30m wide and 0.15m deep, although it had been somewhat truncated by the later buildings (Fig 7). There was no modification or recutting of the gully, suggesting that the roundhouse was not a long-lived structure. Pottery from the fill of the gully dated to the Iron Age and early Roman periods, up to the late 1st century AD. A deposit of slag from the gully included furnace and tap slag from a smelting furnace.

There were a number of postholes and post-pads within the ring gully. Two postholes were located close to the entrance and may be the remains of a porch ([626] and [628]; Fig 6). The remaining features may have been internal structural elements, although there was little form in their arrangement. A central hearth [699], up to 0.90m in diameter with a dish-like profile, was lined with limestone.

The hearth was later cut by an oven [703], 1.00m long and 0.75m wide, oval in plan with a narrow stokehole extending from its southern edge. The oven was filled with ash and charcoal, sealed by a layer of heat-affected clay, probably derived from the collapse of the superstructure. There was a further smaller oven [696] close to the eastern edge of the roundhouse. Pottery within the fills of both ovens dated to the 2nd century, perhaps suggesting they were contemporary.

A possible hearth [423] lay 7.00m to the south-west of the roundhouse (Fig 4). Although no pottery was retrieved from the feature, it lay beneath layer [30], a possible midden layer laid down prior to the construction of Buildings 2 and 3 and sealing all earlier features. It was 0.60m in diameter and 0.10m deep with a small stokehole to the east. The fill was composed of ash and charcoal. No charred seeds or industrial waste was present, suggesting it had a domestic purpose.



Roundhouse 1, gully [620] and posthole [632], sealed beneath layer [30] Fig 7

A pond [411], at least 6m in diameter and 0.80m deep, lay 5.0m to the east of the roundhouse and seems to have been in existence during this first phase of occupation, although it is not known whether it was a natural feature or one deliberately created to water livestock or for industrial purposes (Figs 4 and 16, Pond 411). The primary fill was light grey silty sand with few inclusions. It was overlaid by a dark brown almost peat-like layer containing charcoal, bone and pottery dating to the 2nd century. The nature of this fill suggests a waterlogged, anaerobic environment. One of the later pond fills comprised a continuation of a grey silty clay make-up or midden layer [30] laid down in the mid-2nd century prior to the construction of Buildings 2 and 3. Thereafter, the pond seems to have survived as a hollow until the demolition of the later buildings in the 3rd/4th centuries since its uppermost fill is formed by a continuation of the demolition layer [29].

Roundhouse 2

Located c 20m to the east of Roundhouse 1 was a possible second roundhouse, defined by a truncated curving gully, 0.34m wide and 0.06m deep (Fig 4). Only the south-west quadrant of the gully was present. To the north were two intercutting postholes [67 and 68], although the relationship between them could not be defined. The fills of both were light brown sandy clays with occasional limestone packing. Pottery from the fills dated to the Iron Age. Both features were truncated by the later driveway.

While late Iron Age roundhouses were often maintained well into the Roman period, it is unusual to find evidence of timber-founded roundhouses being constructed after the end of the Iron Age, even though native traditions of construction persisted for longer in this part of the county (Flitcroft and Taylor 2004).

Roundhouse 3

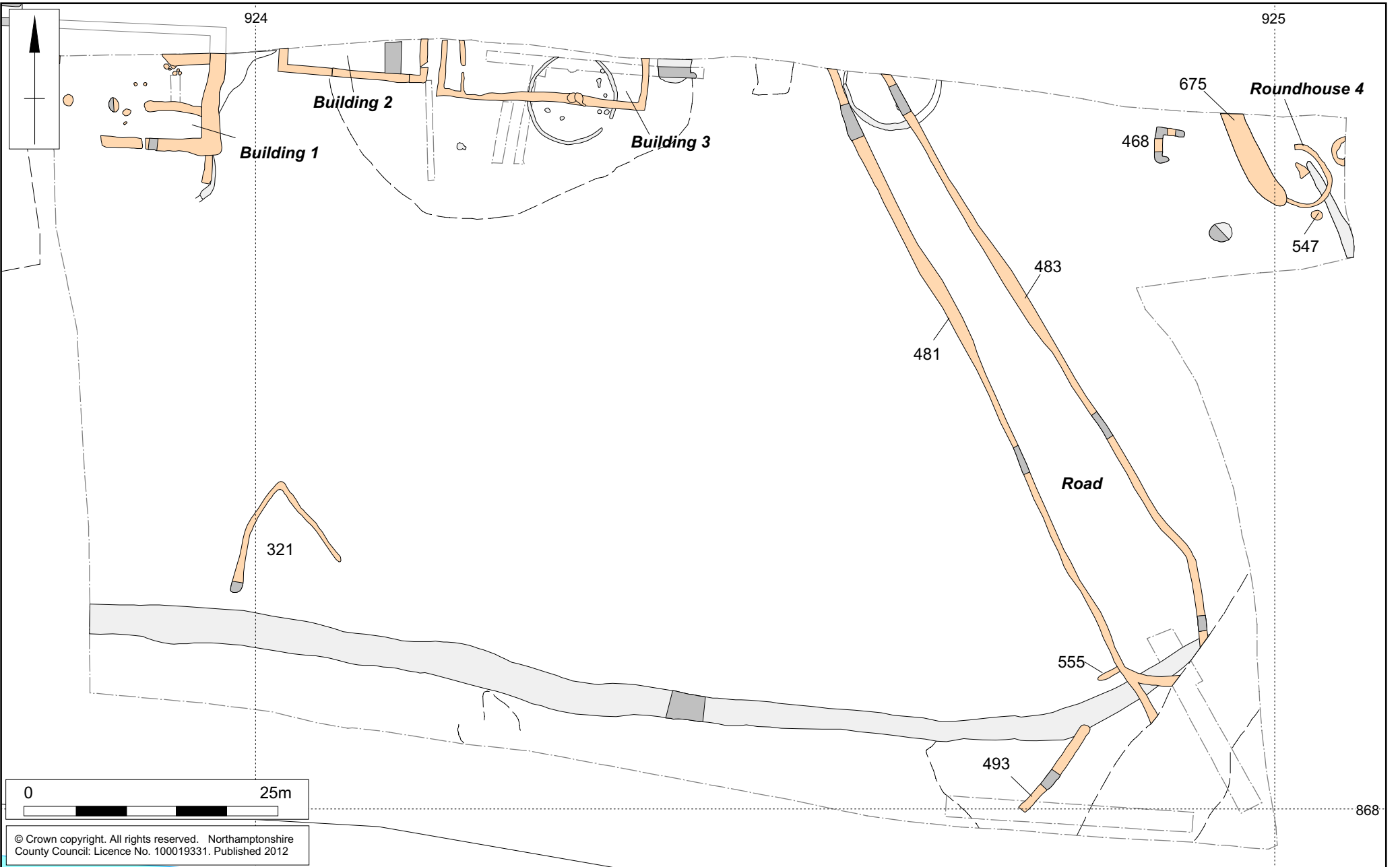
In the north-west corner of the site was the heavily truncated south-east arc of a possible stone-built roundhouse. The remains consisted of a single foundation course of pitched limestone, 0.50m wide, bonded with clay (Figs 4 and 9; [77]). The wall was set in a very truncated construction trench, 0.60m wide and 0.10m deep. Too little of the structure remained to accurately estimate its diameter, but it may have been of similar size to Roundhouses 1 and 2 to the east. No internal features were present. Pottery from the structure dated to the mid-2nd century, but was likely to be intrusive from later features.

A further pond, gullies and a layer of cobbles were found during the earlier excavation to the west, located some 20m from Roundhouse 3 (Tingle 2008). They all appeared to date to the mid to late 1st century. Charred plant remains from the pond fill suggested that spelt was the principal crop during this phase, with wheat, hulled barley, peas, Celtic beans and oats constituting secondary crops. Evidence suggested some of the spelt crop was being grown on the damp soils along the valley bottom (Carruthers 2008).

Scale 1:500 (A4)

The development of the Roman villa (2nd century)

Fig 8



3.2 The development of the Roman villa (2nd century AD)

The major buildings

The transformation into a villa estate appears to have been undertaken in a piecemeal fashion. An early, possibly single-celled, stone building dating to the late 1st century, replaced Roundhouse 3, but had a short-life span before it was demolished to make way for the more substantial villa building, Building 1, in the early 2nd century.

Building 1 formed the eastern 18m of the building previously excavated in 2002 (Figs 8 & 9). The building is of a simple plan, aligned east-west and measuring 33m long by 12m wide. The previous excavation found a room to the west, 8m long and 7m wide with a possible corridor to the north, both partly built down into underlying pond deposits. The current excavation found no features to suggest a similar division of the internal space, although this end of the building had suffered much greater truncation. A group of substantial postholes aligned east to west may indicate there was an alternative division of space within the eastern end of the building. It bears some similarity to the group of villas classified as hall houses by Smith (1997), which in their simplest form comprised a single large room open from ground to roof. The foundations of the eastern part of the building were constructed from mortared limestone rubble and were much wider than the foundations of the western part of the building, which were constructed from pitched limestone.

The eastern part of the building may have formed an original, basic aisled hall and the room to the west formed a later improvement. Evidence for tessellated pavements and possible small mosaics were found in both the corridor and room in the western part of the building, while no such *in situ* elements were found in the eastern end, perhaps indicating that the areas in the western part of the villa were of a higher status. A similar building found at Harringworth was 28m long and 12.4m wide with evidence of dividing walls at the western end of the building and post-pads for possible aisle posts along the northern wall (Jackson 1981). Painted wall plaster found in the western part was thought to support the assumption that the building was part domestic and part agricultural.

The exact chronology of the development of Building 1 remains somewhat enigmatic, partly because the two phases of excavation never linked and partly because the truncation of the eastern side of the building was much more severe. However, the results of the current excavation broadly confirm the earlier chronological evidence, with the pottery assemblage suggesting that the building went out of use in the late 2nd- early 3rd centuries and was then systematically dismantled. Much of the stonework was probably used in later building projects.

The large enclosure ditch constructed in the previous phase may have been utilised as a boundary for the villa precinct and there was some evidence that the enclosure ditch was partially redefined during this period (Ditch [675], Fig 18).

Two further buildings (2 and 3) were probably constructed some time prior to the demolition of Building 1 during the later 2nd century. Although the full dimensions of neither building are known, Building 2 was 15m long and at least 4m wide and Building 3 was 20m long and at least 5.50m wide; both were on east to west alignments as was Building 1. There was no evidence in either building of high status fittings or decoration, such as painted wall plaster, tessellated pavements or mosaic floors. However, Building 3 had a corridor along its western side. There was evidence in both buildings of limestone flag and mortar floors.

At a similar time a small stone-built roundhouse, 4, with a central hearth was built to the east. About 1.5m to the north-east was a stone-lined well. Although similar buildings were commonly utilised for agricultural or industrial purposes on comparative sites, there was no clear evidence for either at Stanion.



Scales, plan 1:100, sections 1:25 (A3)

Composite plan showing Building 1 Fig 9

The reasons behind the demolition of the first phase of the villa are unclear; on other villa sites it is not unusual for there to be several phases of modification or elaboration to the main buildings, often involving the complete demolition of the preceding phase. At Weldon the first phase of building was destroyed by fire. There was, however, no evidence for a replacement villa building within the excavated areas. Clearly, Buildings 2 and 3 to the east were not of an equal status and therefore not direct replacements. It is possible that a more substantial building was constructed to the north and Buildings 2 and 3 may have formed separate ranges to the later villa building. It is possible that the unlocated mosaics found during the 19th century may have been associated with a later phase of villa building. There have also been reports of *in situ* tesserae being found in boundary ditches to the north of Brigstock Road and a watching brief in 1984 found evidence of a possible building on the course of the current road (F1 and F4; Fig 2 and Appendix 1).

3.3 Building 1, the 2nd-century villa range



Building 1 and earlier phases, looking north Fig 10

Early 2nd century

A stone rectangular building appears to have directly replaced Roundhouse 3 (Figs 9 and 10). Only the northern and eastern walls, [74] and [79], remained but the building was at least 7.4m long and 6.5m wide. The walls both consisted of a single rubble foundation course of roughly finished limestone, up to 1.1m wide, bonded with lime mortar and clay. No interior partitions or features remained, suggesting it was just a single-celled building. This building had a short life span and deposits overlying the wall suggest that it was demolished in the 2nd century, probably during the first decades of the century. This suggests that the development of the site may have been gradual, with this first rectangular stone building constructed while Roundhouse 1 to the east was still in use.

Building 1

The eastern wall [70] was 10m long, but continued beyond the edge of excavation to the north (Figs 8, 9 and 10). It lay directly over part of the eastern wall of the earlier building. The foundation trench [71] for the wall, 1.70-2.00m wide and 0.29-0.54m deep was steep or vertical-sided, while the base sloped to the east.

The substantial foundations entirely filled the foundation trench and comprised two courses of limestone rubble bonded with cream-coloured lime mortar. Some of the limestone pieces in the base of the foundation trench were scorched, suggesting they

may have been reused from elsewhere; there was also burnt clay within the trench. The wall curved slightly to the east to the north.

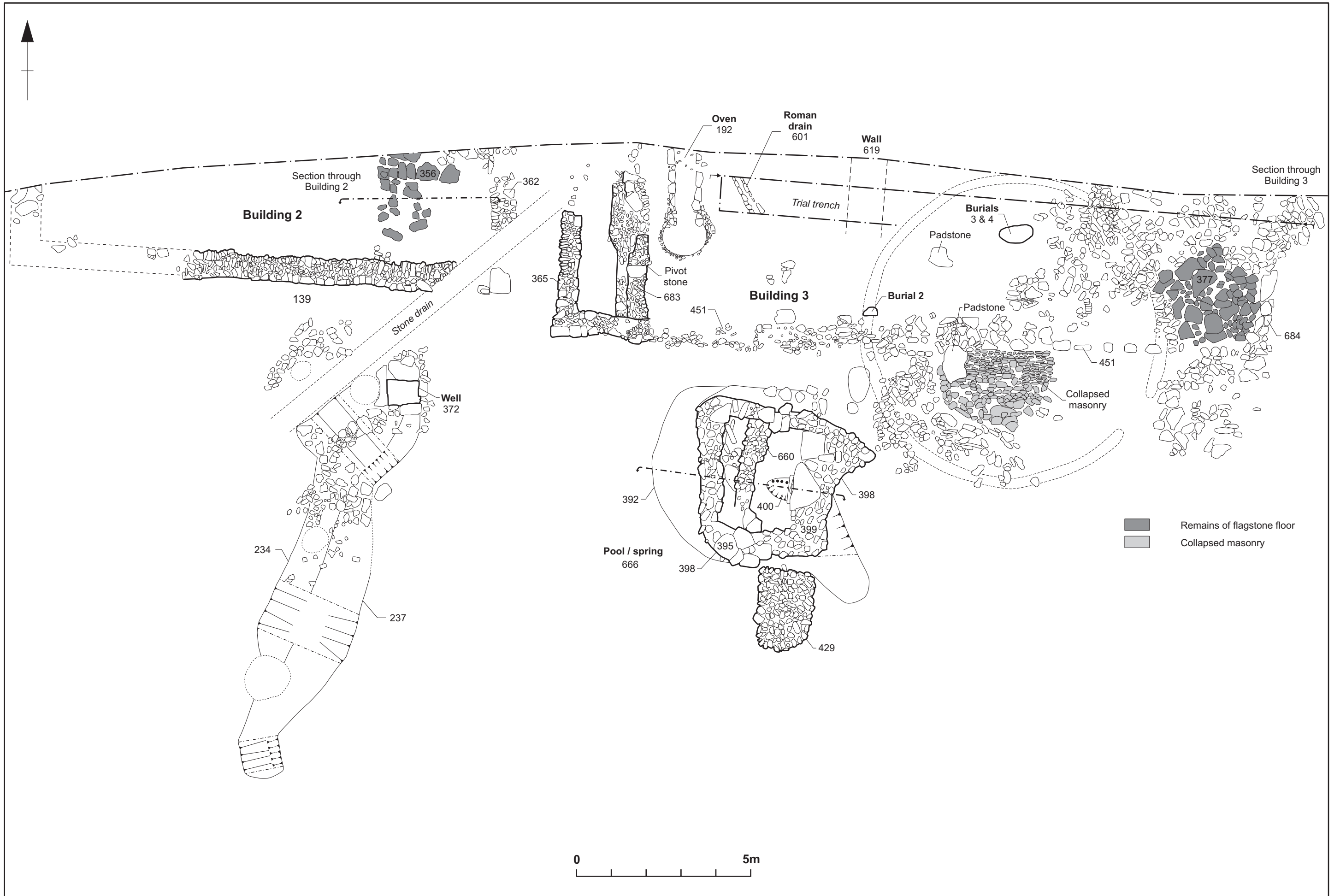
The southern wall [72], 10.00m long and 0.6-0.70m wide, was considerably less substantial than wall [70]. It was also heavily truncated and at the eastern end only a single course of masonry survived, again comprising limestone rubble. To the west it had been completely removed during demolition or later activity.

There was a small fragment of possible wall [110] in the north-west corner of the site (Fig 10). It comprised a single course of rubble limestone foundation up to 1.50m wide. It may have been the continuation of the wall dividing the rooms and the corridor found during the 2002 excavation.

Four postholes aligned east to west, and coincident with the northern wall of the earlier building, may indicate an internal partition (Fig 9). Postholes [11] and [14] were substantial, containing post-packing. Postholes [94] and [97] were not so large, perhaps because the remains of the earlier wall foundations provided adequate support for the posts. The posts would have created an aisle nearly 3m wide. All four of the postholes contained material introduced during demolition including painted wall plaster, tesserae and lead. The painted wall plaster was similar to the fragments found during the earlier excavation, suggesting the walls were simply decorated. The mix of small and large tesserae found indicate that there were simple tessellated floors with perhaps small inset mosaics of finer quality (known as *emblemata*), although because none were found *in situ* in this end of the building it is not possible to determine in which part of the building they originated. A posthole found during the earlier excavation contained similar finds and, though interpreted as a possible door-jamb, may actually have formed part of the northern aisle ([44]; Fig 9). It was located 3m south of the northern wall and continued the alignment of the internal wall separating the room and corridor.

There were a cluster of postholes inside the building and cut through levelling layer [565]. No dating was recovered from any of them and most did not form a coherent pattern, although posthole [588] was on the predicted alignment of the northern aisle. It is possible that they post-dated the demolition of the building.

The eastern side of the corridor house appears to have been considerably more truncated than the part excavated in 2002, with no *in situ* floors or other internal features. Very few tesserae and no painted wall plaster were found outside the area of Building 1.



Scale, plan 1:100, section 1:50 (A3)

Plan of Buildings 2 & 3, well [372] and pool/ spring [666] Fig 11

3.4 Buildings 2 and 3 (later 2nd century AD)

Buildings 2 and 3 were probably constructed at around the same time in the later 2nd century, possibly as a part of a wider modification and enlargement of the villa estate (Figs 8 and 11).

The buildings were built into a series of layers, some of which appeared to be consolidation layers. The most extensive was a layer of grey silty clay [30] observed beneath both buildings and extending over 11.0m to the south. It contained large quantities of occupation debris and the large sherds of pottery within the layer suggest that it may have been built up during the earlier phases of settlement and perhaps infilling pond areas. Further more localised layers were also observed within the buildings. Around Building 2 a consolidation layer [359], overlying layer [30], was up to 0.30m deep and composed of firm grey-brown silty clay containing pottery dating to the late 2nd century (Fig 17; Building 2, section). Layer [359] may have provided a firmer surface for the floor levels. The foundation trenches of the buildings were all cut through both layers, but during the later demolition these layers were disturbed and later 4th-century material was deposited. However, reliable dating evidence recovered from areas sealed beneath walls suggests that the buildings were probably constructed in the later 2nd century.

Building 2, the western range

Building 2, c 5m east of Building 1, was defined by its western, eastern and southern walls with the remainder unexcavated and preserved *in situ*. It measured 15m long by at least 4m wide (Fig 11). A simple two-bay plan would suggest a width of c 8m. The western end of the building had been severely truncated and much of the structure lay beyond the northern limits of excavation, so the function and form of the building remains uncertain.

Despite being partially truncated by a post-medieval stone drain, the eastern end of the southern wall [139] was the best preserved (Figs 12 and 17, Elevation of south wall in Building 2). The basal courses of the foundations, up to 1.12m wide and 0.56m high, comprised two courses of limestone laid in a herringbone pattern with no clear bonding. The lower course was made up of small pieces of limestone, while the stones in the upper course were much larger. Above the foundation there were up to three courses of surviving wall, which was inset on the northern inner face by 0.20m. The outer face of the wall comprised rough-faced coursed limestone, while the inner face comprised further courses of pitched limestone. The core of the wall was filled with smaller pieces of limestone in a sandy matrix. There were substantial structural quoins at the south-eastern corner of the building (Fig 12).

The foundations of the eastern wall [362], up to 0.86m wide and 0.23m high, were also laid in a herringbone pattern but were poorly formed compared to wall [139]. The courses above were inset on the inner western face by 0.10m and comprised two courses of faced, flat-laid limestone, over which lay a course of pitched limestone.

At the eastern end of the building there was an area of roughly-split, flat-laid limestone floor surface [356], approximately 3.20m long and 3.00m wide, laid on a bed of sandy mortar [357]. The mortar layer overlay the foundation courses of the walls. Some of the mortar layer and the limestone flags were scorched red, either indicating that there had been a fire in the building (although there was no evidence of scorching on any of the walls) or that there had been a hearth or oven nearby. A sample from a layer overlying the foundations contained evidence of considerable quantities of charred grain and chaff, suggesting partially processed grain was stored in the building.

The western corner of the building was heavily truncated by a medieval furrow.



The interior of Building 2, looking south Fig 12

Building 3, the eastern range

Building 3 lay to the east of Building 2, separated by a narrow alley 1.35m wide, and also extended beyond the limit of excavation (Fig 11). The building was probably rectangular in plan, aligned east-west and measured 20m long by at least 5.50m wide. A three-bay arrangement might suggest a width of some 8m. The walls at the western end of the building had survived to a few courses high, but the eastern walls had been more comprehensively robbed in antiquity and little remained but the displaced demolition rubble. There was no definitive evidence of doorways in any of the external walls.



The western end of Building 3, looking south Fig 13

The southern wall foundations [451] comprised up to two courses at the western end of the building, up to 1.00m wide and 0.35m deep. The lowest course was pitched limestone, while the upper course comprised flat-laid, faced limestone with a rubble core, bonded with a sandy mortar. There were substantial quoins on the south-western corner. A possible threshold in the southern wall lay just over 9.00m from the western end of the building where a large padstone, 1000x600x300mm, was located just outside the building.

The western wall foundation [365], truncated by a post-medieval drain to the north, survived to three courses high, up to 0.70m wide and 0.50m deep. The lowest course again comprised pitched limestone, with flat-laid limestone above and another course of pitched limestone above that.

The foundations of the eastern wall [684] had been extensively robbed in antiquity. The foundation trench had been excavated through the grey silty clay layer [30] and was up to 0.73m wide and 0.42m deep with steep edges and a flat base. A large piece of limestone at the base may have been the remains of a flat-laid limestone foundation.

There was a corridor, 1.60m wide, at the western end of the building. The internal wall [683] had foundation courses up to 0.80m wide comprising at least two courses of rubble limestone bonded with creamy mortar. The single surviving upper course was inset on the western side by up to 0.40m and comprised large blocks of simply dressed limestone up to 500x350x200mm. A pivot stone *in situ* indicated the position of a door into the main part of the building. Though there was no evidence of a threshold, there was a gap of 1.50m between the larger stones.

The building may have been further divided into smaller rooms. A possible internal wall aligned north to south was observed in section (Figs 11 & 17, Building 3, section). A construction cut [619] was 1.30m wide and 0.22m deep with a shallow concave profile, but little remained of the wall itself. The wall would have created a western room 6m wide. The area of limestone flags at the eastern end of the building may have delineated a further room also about 6m wide. It is possible therefore that there were three bays of roughly equal dimensions.

Flooring in the eastern part of the building comprised large limestone flagstones [377], some set into a sand and mortar bedding layer [692] up to 0.11m thick, others laid directly on to layer [30]. In the western end of the building there were a series of compact layers of light yellow-brown and light pink sand, up to 0.20m deep, which may have been laid down as bedding layers, although there was little indication what type of floor lay above them.

Below the sand bedding layers at the western end lay a drain [601] made of stones pitched edge to edge to form a V-shape (Fig 14). It was up to 0.30m wide and 0.36m deep and aligned north-west to south-east at an oblique angle to the building, exiting the building to the south and terminating 3.30m thereafter. The drain cover was made of smaller pieces of limestone.



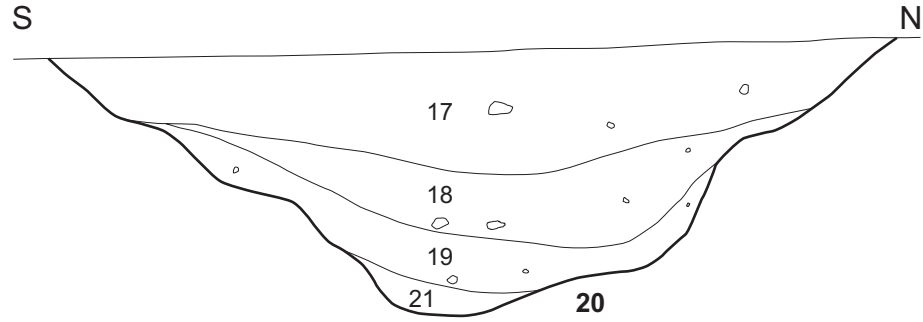
Drain [601] in Building 3 Fig 14

The remains of three infants were buried within the building (Figs 15 and 53). The graves of all three had been cut through floor layers. Two of the burials were in the same grave and may have been twins. Both had died at or shortly after birth. Infant burials in the Romano-British period seem to be found most frequently in service areas, such as kitchens and other places where agricultural products were processed (Perring 2002), perhaps indicating the function of Building 3.

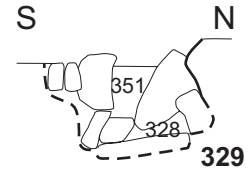


Burial 4, cut through mortar layer [692] in Building 3 Fig 15

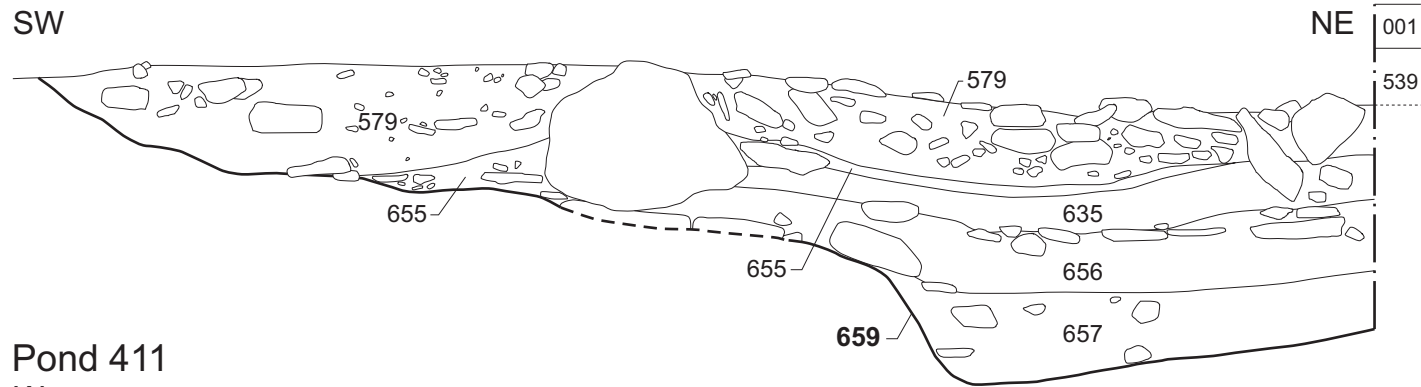
Enclosure ditch 20



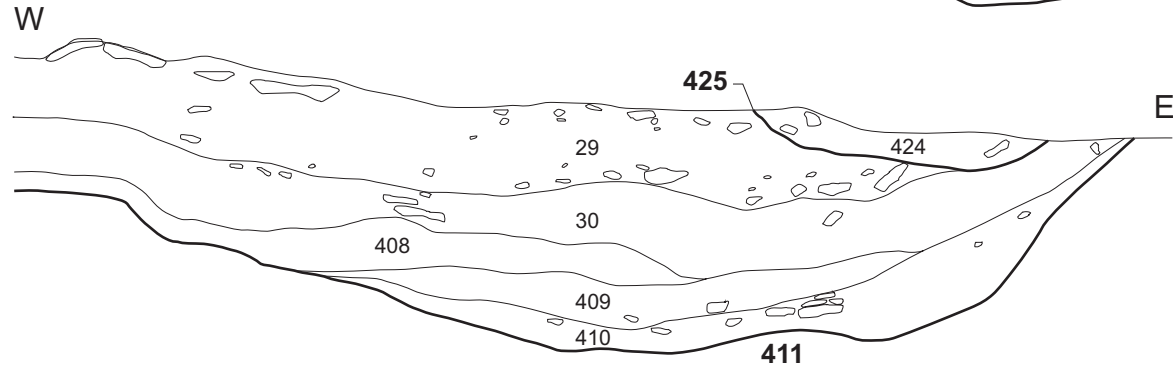
Posthole in aisled barn



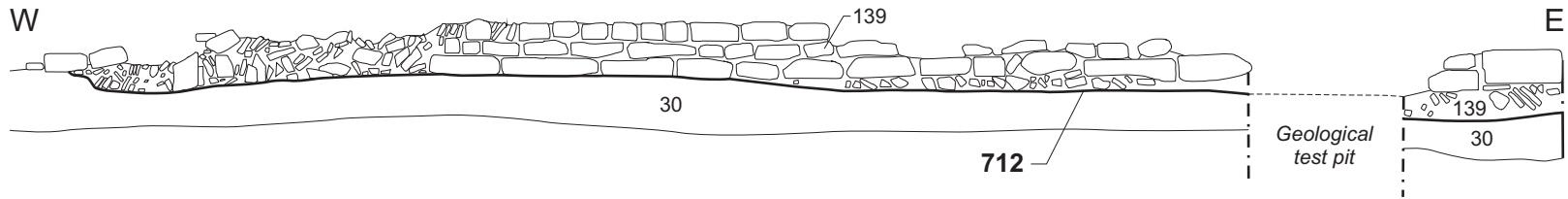
Ditch 659



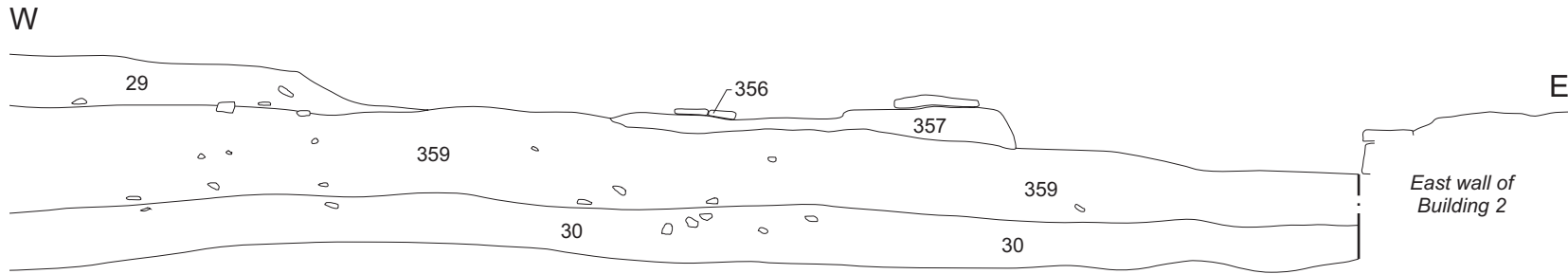
Pond 411



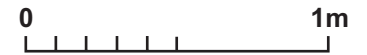
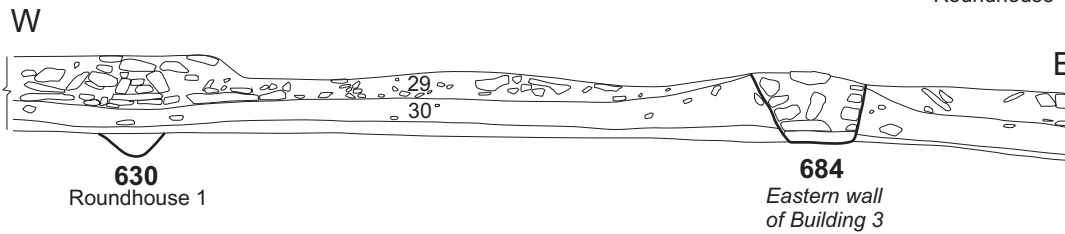
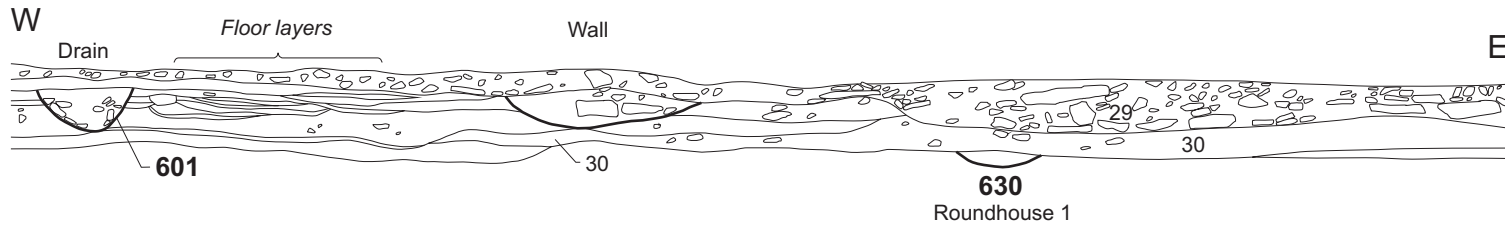
Elevation of south wall in Building 2



Building 2, section



Building 3, Section



There was a fragment of collapsed masonry south of wall [451], 3.20m wide and 2.10m long, in which regular courses of limestone could be observed (Fig 11). The wall fragment had clearly expanded as it had collapsed. When standing the wall would have comprised coursed rubble, indicating that the superstructure of the building was of stone, rather than of timber. Further random rubble spreads lay to the east, though much of the demolition rubble was concentrated within the building. It has been suggested that the presence of complete portions of collapsed masonry, such as that found at Stanwick and Meonstoke, indicates deliberate demolition of a building rather than dilapidation (Keevill 1994).

3.5 The droveway and road

East of Building 3 was a droveway, 4.0m wide at its north end expanding to 12.0m wide at the south, defined by two converging ditches, aligned north-east to south-west with evidence of re-cutting at the north end (Fig 8). The droveway ditches were 0.50-0.90m wide and 0.05-0.23m deep, in general becoming wider and shallower to the south. The fills were leached light grey-brown silty clays, indicating that the ditches had silted up naturally. Despite being located away from the main areas of settlement, there was a considerable amount of pottery in the fills and while much of it dated to the 2nd century, the presence of a 3rd-century coin may suggest that most was residual.

To the south the droveway ditches were overlain by a road aligned north-east to south-west (Fig 8). It is probable that the road and droveway were in use at the same time, although later resurfacing of the road and damage caused by repeated flooding of Harper's Brook had obliterated all evidence of its earliest phases. The droveway may have been used to channel livestock from areas to the north of the villa towards the road.

3.6 Roundhouse 4

Further extensive levelling or consolidation layers were laid down in the north-eastern corner of the site during the 2nd century. The layers were up to 0.40m deep in parts and seem to have been used to backfill a hollow. They were composed of dark brown silty clays and contained pottery dating up to the mid-late 2nd century. Layer [579] at the south of the area contained large amounts of limestone (Figs 8, 16, Ditch [659] and 18). Some of the layers were very similar to the natural geology of the area and it is possible that they may be spoil derived from quarrying being undertaken in the area.

Subsequently, a ditch [675], aligned north-west to south-east, up to 1.60m wide and 0.60m deep with a wide U-shaped profile, was cut through the layers (Fig 18). Its terminal was almost opposite the original enclosure terminal. Pottery from the ditch fills dated entirely to the 2nd century, suggesting it was perhaps a short-lived feature. It is possible that it formed a redefinition of the original enclosure ditch, although ditch [659] to the east appears to have been backfilled by this date.

A short time afterwards, probably in the late 2nd century, the ditch was backfilled and a small stone-built roundhouse was built, c4.0m in diameter with a possible north-west facing entrance. The construction trench for the foundations was up to 0.70m wide and 0.40m deep with steep edges and a flat base. Where the wall survived it was up to 0.50m wide and comprised at least two course of limestone rubble, with larger pieces of flat-laid limestone above. No bonding material was evident. An almost complete poppy beaker was found among the foundation stones and may have been a formal act of deposition, perhaps a foundation offering. The trench was backfilled with firm dark grey-brown silty clay.

There was a floor of creamy-coloured mortar over which lay a further possible floor of compacted clay. A central hearth [673], about 1m wide and 2m long, had been cut

through the floor layers and had been lined with pieces of limestone, most of which exhibited signs of scorching. The eastern part of the hearth had slumped into the earlier ditch [659].

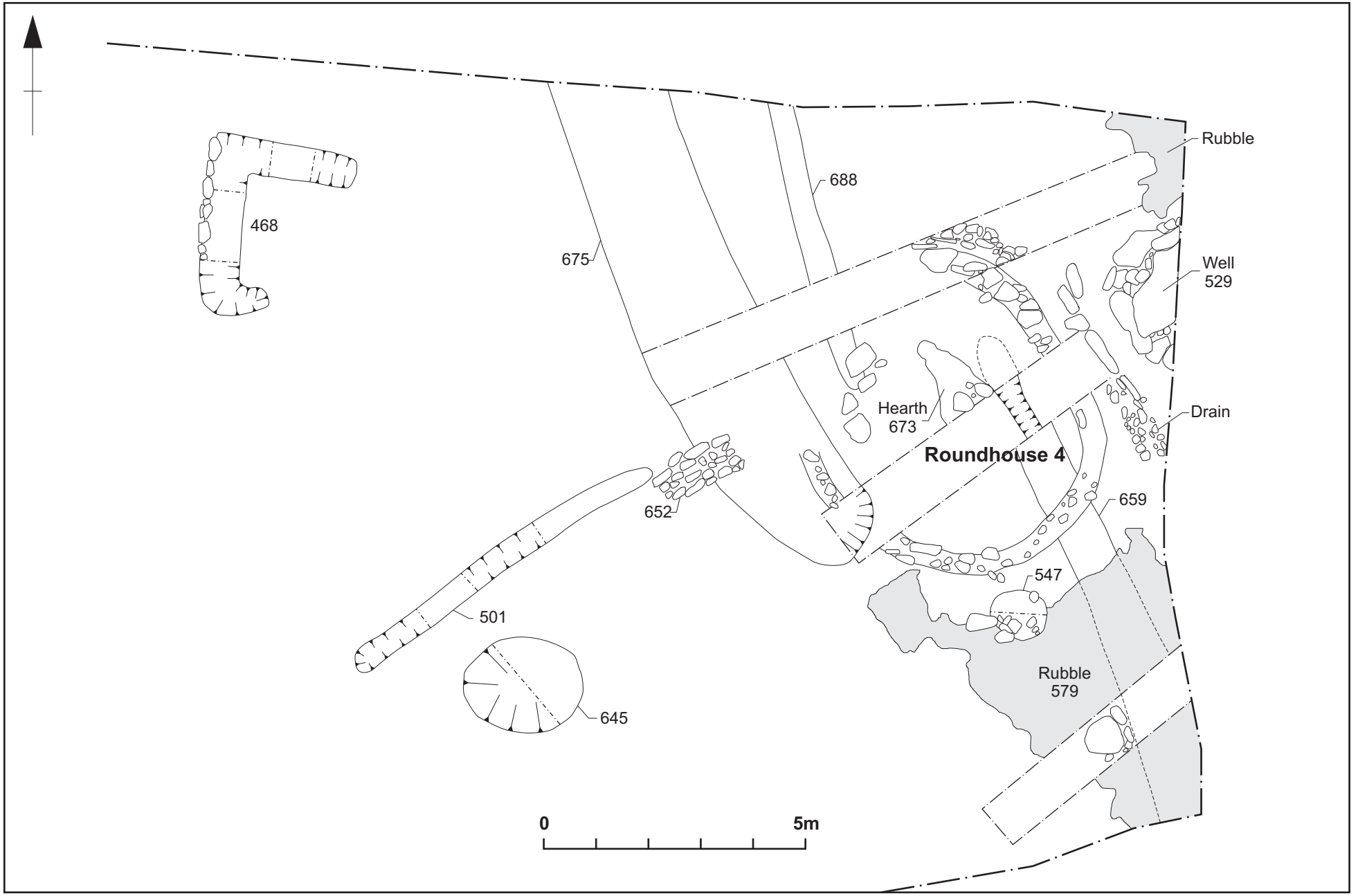
In the yard area to the south was a small pit [547], which contained burnt material. There was no *in situ* burning, so it was probably waste from the roundhouse hearth. Immediately to the east was a possible drain, at least 4.00m long and 0.50m wide, constructed from pitched limestone forming a V-shaped section, although it was very truncated. To the north-east of the roundhouse was a stone-lined circular well [529] which was at least 1.50m in diameter, although much of it lay outside the excavated area. Pottery from the lowest excavated fill dated to the 2nd century. The activity in this area was particularly dense and clearly extended to the east of the site.

To the north-west was a shallow gully [468] forming two sides of a rectangle, 3.40m long and 2.75m wide. The gully was up to 1.00m wide and 0.10m deep and had a wide U-shaped profile. A single course of unbounded limestone lay against the western side of the feature, suggesting it may be the remains of a small stone building.

Gully [501], aligned north-east to south-west, was 6.80m long, 0.40m wide and 0.19m deep with a narrow U-shaped profile. To the east was a further narrow gully [688] on a perpendicular alignment. Between the two lay a defined area of unbounded flat-laid limestone pieces [652]. No dating was recovered from any of the features, but it is possible they may have formed the remains of a timber-framed building post-dating the roundhouse.

Scale 1:100 (A4)

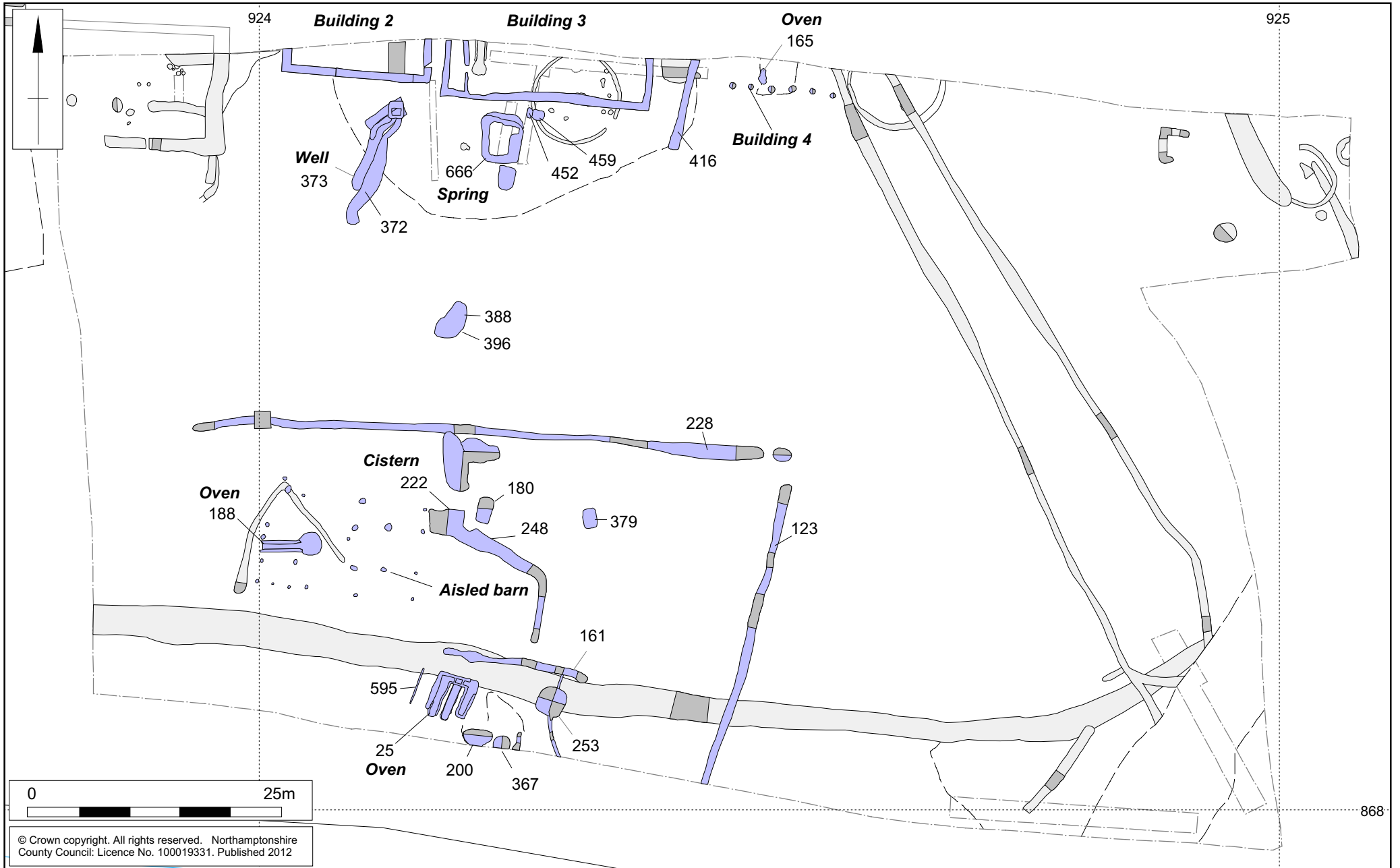
Plan of Roundhouse 4 and surrounding features Fig 18



Scale 1:500 (A4)

Agricultural activity (late 2nd/3rd centuries)

Fig 19



0 25m

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3.7 Agricultural activity and Building 4 (late 2nd - 3rd centuries AD)

Building 1 was demolished during this period, but Buildings 2 and 3 remained in use. Just south of Building 2 a well was constructed and south of Building 3 a natural spring was enclosed by a stone wall (Figs 11 and 19). A possible aisled building, Building 4, was constructed to the east of Building 3. Within the building lay an oven.

The southern arm of the large enclosure ditch had ceased to function as a boundary and a crop processing area was cordoned off from the rest of the site by a rectangular enclosure. This contained an aisled barn with drying oven; at least two further drying ovens outside the barn, and a stone-lined cistern with associated gullies.

The area as a whole appeared to form part of a large working courtyard to the villa complex, the main function of which appears to have been crop processing and associated activities. No boundaries to the courtyard have been found, the building ranges may have been the northern boundary and Harper's Brook the southern boundary. Apparently 'empty' areas within the courtyard may have been utilised for functions leaving little archaeological evidence. Millstones found across the site might suggest that a water mill was located on the brook.

Areas within the courtyard

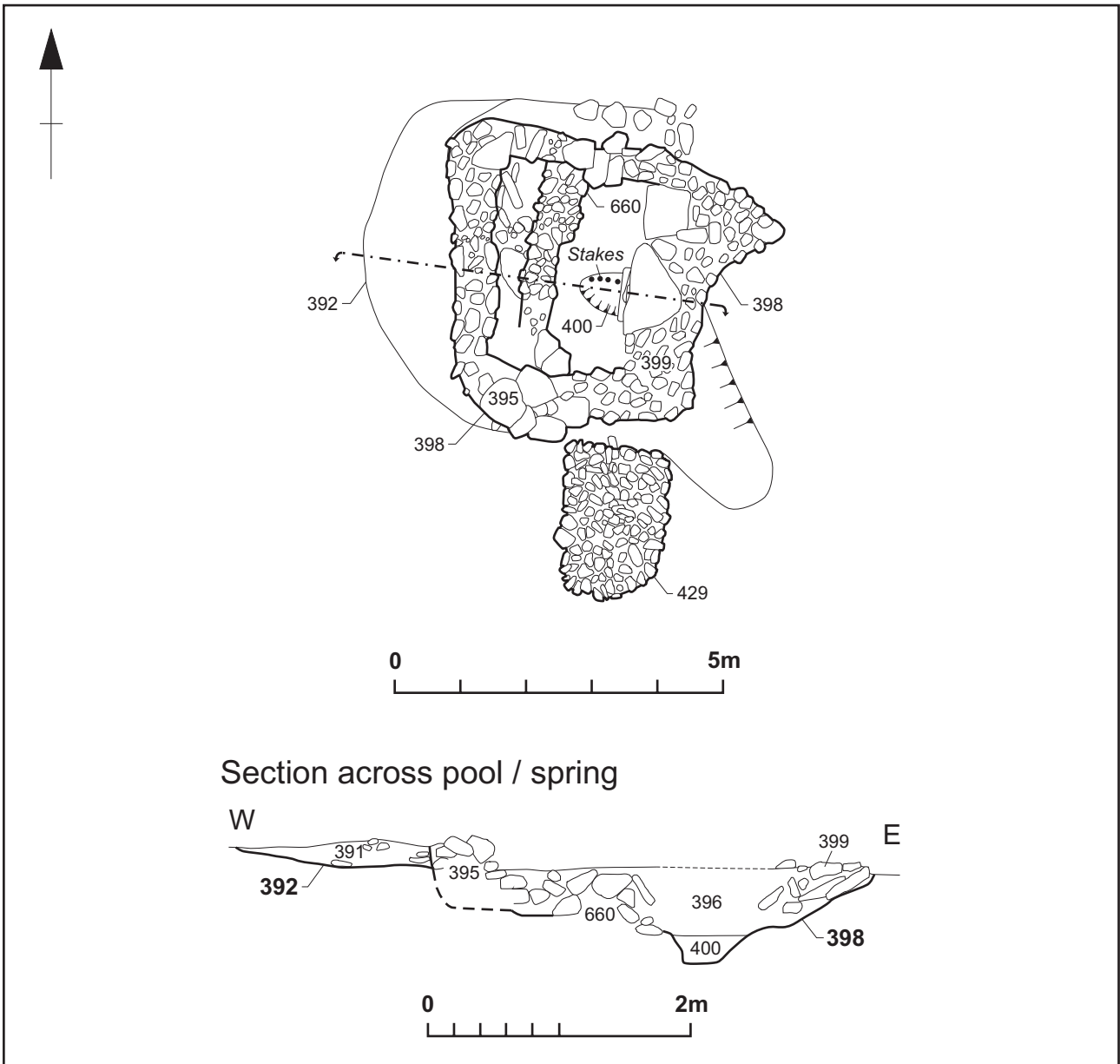
Spring/pool [666]

A natural spring appears to have lain about 6.00m to the south of Building 3 (Figs 11 and 20). Water from the spring had formed a natural hollow [392], which was later defined by the excavation of a large square pit. The pit [398] was about 4.20m wide and 0.50m deep with gradual edges and a slightly concave base. In the base of the pit was a small sump, 1.00m wide and 0.75m deep with steep edges and a flat base. A line of circular stakes were driven into the natural gravels around the sides of the sump, four remained *in situ* (Fig 20). Each was up to 44mm in diameter and survived to 370mm long, sharpened to a point. Other small unidentifiable pieces of wood were also present. Their function is uncertain but they may have supported a small wooden platform. The disuse fills of the hollow [392] through which the pit was cut dated to the late 2nd-3rd centuries, indicating the pool was created sometime during the early 3rd century.

The western, northern and southern edges of the pit were defined by a step or ledge, 0.50-0.80m wide and 0.40m deep. A limestone rubble foundation bonded with cream coloured mortar was laid on the base (Fig 20; [395]). The resulting three-sided structure was 3.50m wide and 4.00m long with slightly rounded corners. There was no evidence for its superstructure. A further internal wall [660], 0.65m wide and 0.40m deep, was aligned north to south and crossed the centre of the pit. It was constructed from limestone rubble and cobbles with no apparent bonding.

At the western edge of the pit was a wall of limestone rubble with no bonding. On the eastern side three courses of reused architectural stone and limestone rubble formed a platform [399]. A horizontally-laid fragment of column, 900mm long and 240mm in diameter, formed the base, above which sat three squared blocks of limestone, up to 400x200x160mm. The top was formed by a large flat-laid slab of limestone, 1320mm long by 800mm wide and 120mm thick (Fig 20). To the north lay a further large slab of limestone.

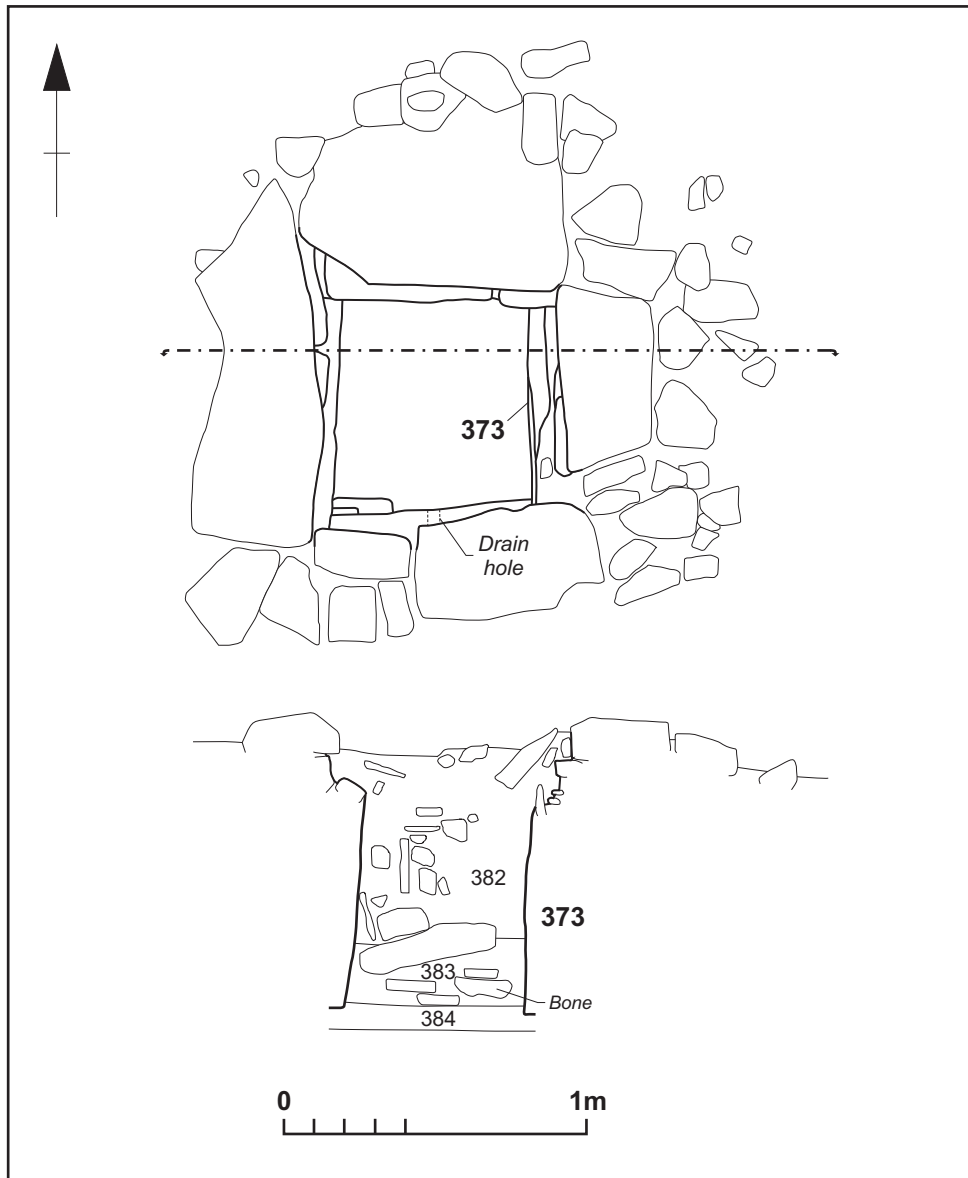
The function of the structure may have been to retain water from the spring in a shallow pool. Although the base of the pit was not lined with anything to aid retention, the natural clays would have probably functioned sufficiently. There was no evidence of a run-off gully or channel from the pool, although a shallow depression extended from the south-east corner.



View of spring with column base, looking east



View of spring with stakeholes, looking north



Scale 1:25 (A4)

The square stone-lined well [372],
looking north Fig 21

Immediately to the south was a limestone surface [429], 2.40m long and 1.50m wide, constructed of a single layer of flat limestone fragments. A number of possibly contemporary postholes lay on the north-eastern side of the pool, although no form could be discerned.

Well [372]

A square stone-lined well [372], 2.00m square at the top and 0.91m deep, was located 2.00m to the south of the Building 2 (Figs 11 and 21). The base of each of the four walls was formed from a single large slab of limestone, up to 750mm wide by 810mm long and 100mm thick, each probably re-used from an earlier phase. Tooling marks were visible on all the slabs and wide longitudinal grooves had been cut into the front face of the northern stone, and the southern stone had had a small hole drilled through c 200mm from the top of the stone, probably a drain-hole. Above the slabs were two courses of limestone rubble. Some of the stone appeared to have been worked and may have been taken during the demolition of Building 1. Larger stones were used on the northern and western sides of the well-head, perhaps indicating the side from which the water was drawn. At the base of the well was a layer of yellow-brown limestone grit, possibly a deliberate layer to filter the water. The earliest fill was dark grey-black silty clay with frequent large pieces of limestone. The fill probably accumulated during the use of the well and contained pottery dating to the 3rd and 4th centuries. The upper, disuse fill was grey-brown silty loam also containing frequent limestone rubble and contained pottery dating to the 4th century.

A run-off gully [234], aligned south-west to north-east, was 8.00m long, and up to 2.60m wide and 0.42m deep with a broad U-shaped profile (Fig 11). It was later re-cut by gully [237], 11.0m long with steep edges to a flat base. Pottery from the fills of both gullies dated to the 3rd century. Close to the well the gully was filled and overlaid by large amounts of limestone rubble deriving from the demolition/collapse of Building 2.

Building 4, possible aisled barn

To the east of Building 3, a row of six postholes, 10m long, were aligned east to west and may have formed the southern side of a building (Fig 19). They cut through levelling layers similar to those found beneath the stone buildings and dated to the mid-2nd century. The postholes were between 0.43-0.70m in diameter and 0.11-0.34m deep with vertical or steep edges and a flat base. The fills were dark grey-brown loam and all contained remnants of post-packing with one also containing a large post-pad at the base. Pottery from the postholes dated to the 3rd century. Two further postholes to the south may be associated. However, no further postholes were observed.

Possibly lying within the building was an oven [165], 1.50m long and 0.80m wide, but heavily truncated (Fig 19). It was constructed from flat laid pieces of limestone which were overlaid by fragments of burnt clay, which may be the collapsed superstructure. The limestone and clay was burnt to a pink colouration which suggests that the oven was operated at a relatively low heat. The remains of a possible surface [166] lay to the west of the hearth/oven. No dating was recovered from either feature, although they overlaid 2nd-century deposits.

The rectangular enclosure

A rectangular area was defined by ditches to the north and east with the brook probably forming the southern boundary (Fig 19). It appeared to be open to the west. Northern boundary ditch [228] was c 56m long, up to 0.80m wide and 0.50m deep. At the western end it had almost vertical sides with a narrow concave base, but to the east it was very shallow, probably truncated. It was filled by mid brown sandy clays with occasional orange mottling. Pottery from the ditch dated to the late 2nd to 3rd centuries.

The eastern boundary ditch [123] was at least 30m long but extended south beyond the limit of excavation. It was up to 1.10m wide and 0.26m deep with steep sides and a wide flat base. An adult inhumation had been placed in the northern terminal of the eastern ditch (Fig 52). The remains were probably male and exhibited signs of osteoarthritis, indicating that he was of some age at the time of death. The skeleton had been badly plough-damaged. It is not clear if this was a deliberate closure event, or an example of the isolated burial using the ditch for convenience. Pottery from the enclosure ditches dated to the 3rd century and included sherds of Lower Nene Valley colour-Coat.

A pit, 0.90m from the eastern ditch terminal, may indicate the presence of a controlling gate, limiting access (Fig 19).

The aisled barn and associated features

The enclosure contained a number of features associated with agricultural activities, including a further aisled barn, malting ovens and a water tank or cistern.

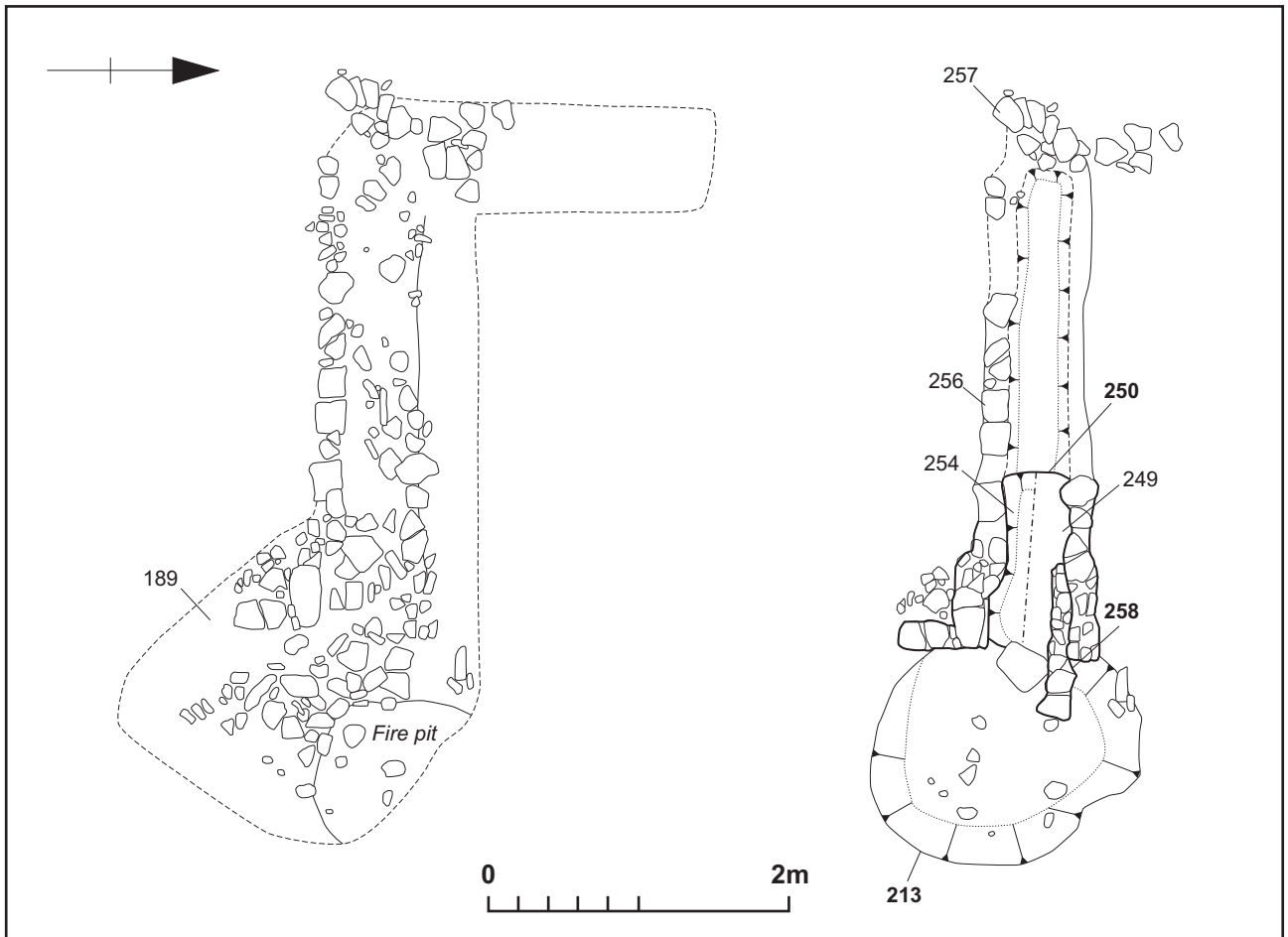
In the western part of the enclosure was a rectangular aisled barn, 15.5m long by 9m wide (Fig 19). The nave was c 3.50m wide and the aisles were between 1.80-2.30m wide. The post settings generally consisted of postholes, 0.30-0.64m in diameter and 0.06-0.20m deep, with varying profiles. The depth of survival indicates substantial truncation to the building, probably by later ploughing; many of the post-packing stones had also been partially knocked by the plough.

The post-settings were not evenly distributed within the building and were more concentrated in the south-western corner, while those to the north were larger and more widely spaced. The outer settings nearly all contained a large flat piece of limestone at the base of the posthole to act as a post-pad, while the inner aisle posts were less substantial and contained just post-packing. Some of these postholes retained post-pipes 0.15-0.17m in diameter. Most of the aisle posts were paired, between 2.2m and 2.8m apart. Where posts were not paired or where there were large gaps between pairs it is likely that the post settings have been lost to truncation.

There was no evidence for post replacement or modification to the barn. Although there was no evidence for an entrance, the presence of the oven and water tank at the gable ends makes it likely that any entrances would have been in the long sides of the barn. A single posthole within the nave may be the remnants of an internal partition, but there were no other recognisable features to suggest that the barn was divided into separate areas. No floor surfaces had survived. The largest group assemblage on site of *tegula* and *imbrex* roof tiles were found in disuse fills of features associated with barn (the oven and water cistern) suggesting that it may have been tiled.

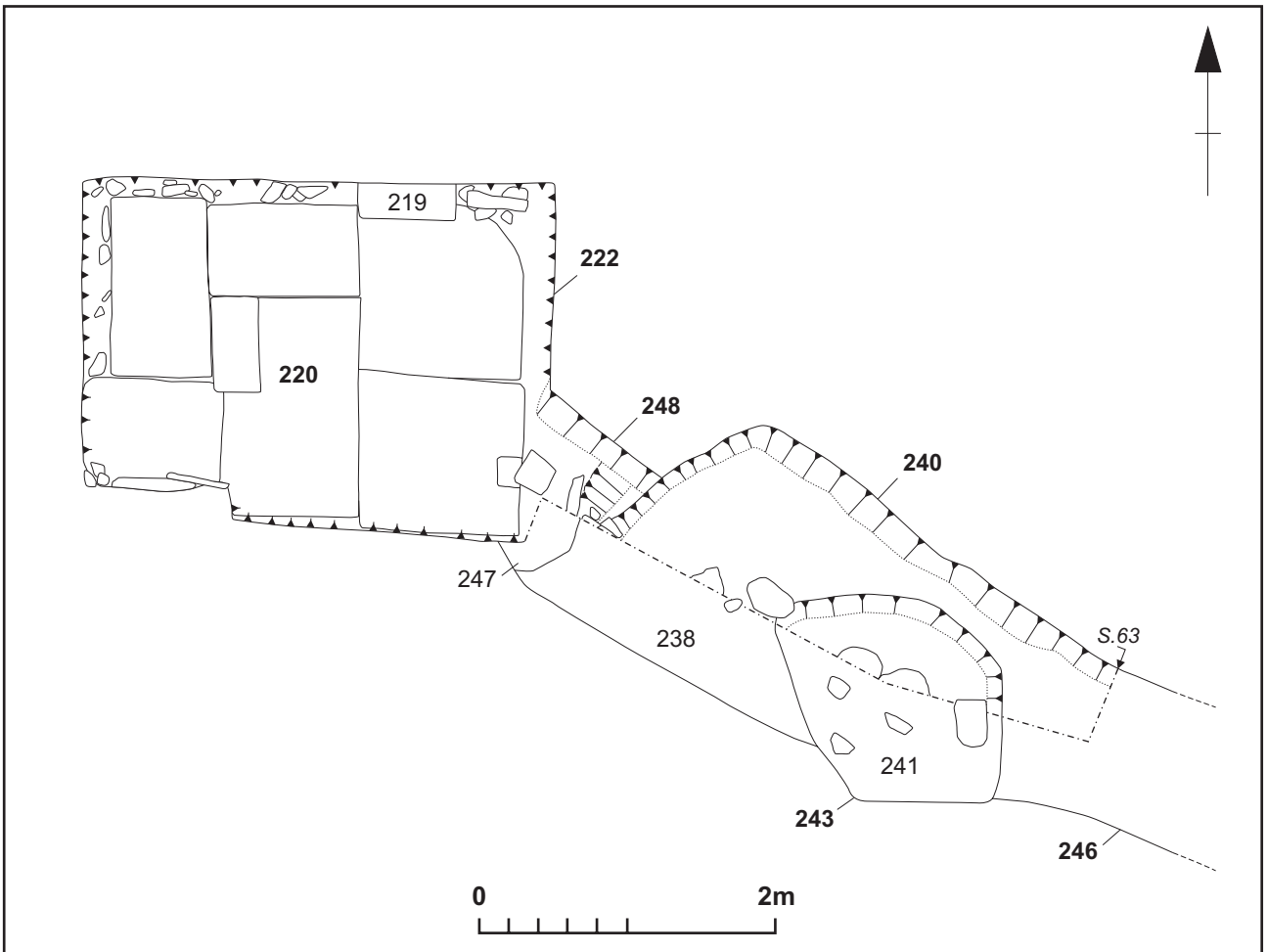
T-shaped oven [188]

Within the western part of the nave were the truncated remains of a possible T-shaped oven [188], the west end of which appeared to butt up against the western wall of the barn (Fig 22). It comprised a narrow stone-lined flue 3.20m long and up to 0.40m wide with up to two courses of roughly-faced, flat-laid limestone blocks bonded with clay surviving at the eastern end of the flue, where it opened into a circular stokehole, 1.5m in diameter.



Scale 1:50 (A4)

The oven [188] within the aisled building, looking west Fig 22



Scale 1:50 (A4)

The water tank/ cistern [220] and channel [248] Fig 23

To the west, the very truncated remains of the end wall [257] suggested it may have been constructed of pitched limestone, but further evidence for a possible transverse channel had been lost.

The most intense burning seems to have taken place within the first 1.5m of the eastern end of the flue, where a clearly defined area of scorching of both the clay floor and stone walls was evident [250]. The fire appears to have been set here rather than in the stokehole [213], which seems to have been where the ash was raked out. The upper, disuse fills of the oven contained pottery dating to the 4th century. Grain from the feature was particularly poorly preserved, possibly as a result of a catastrophic fire, and there is little information regarding its function. A similar feature in an aisled barn at Orton Hall Farm was interpreted as a cooking-hearth with a substantial above-ground structure (Mackreth 1996).

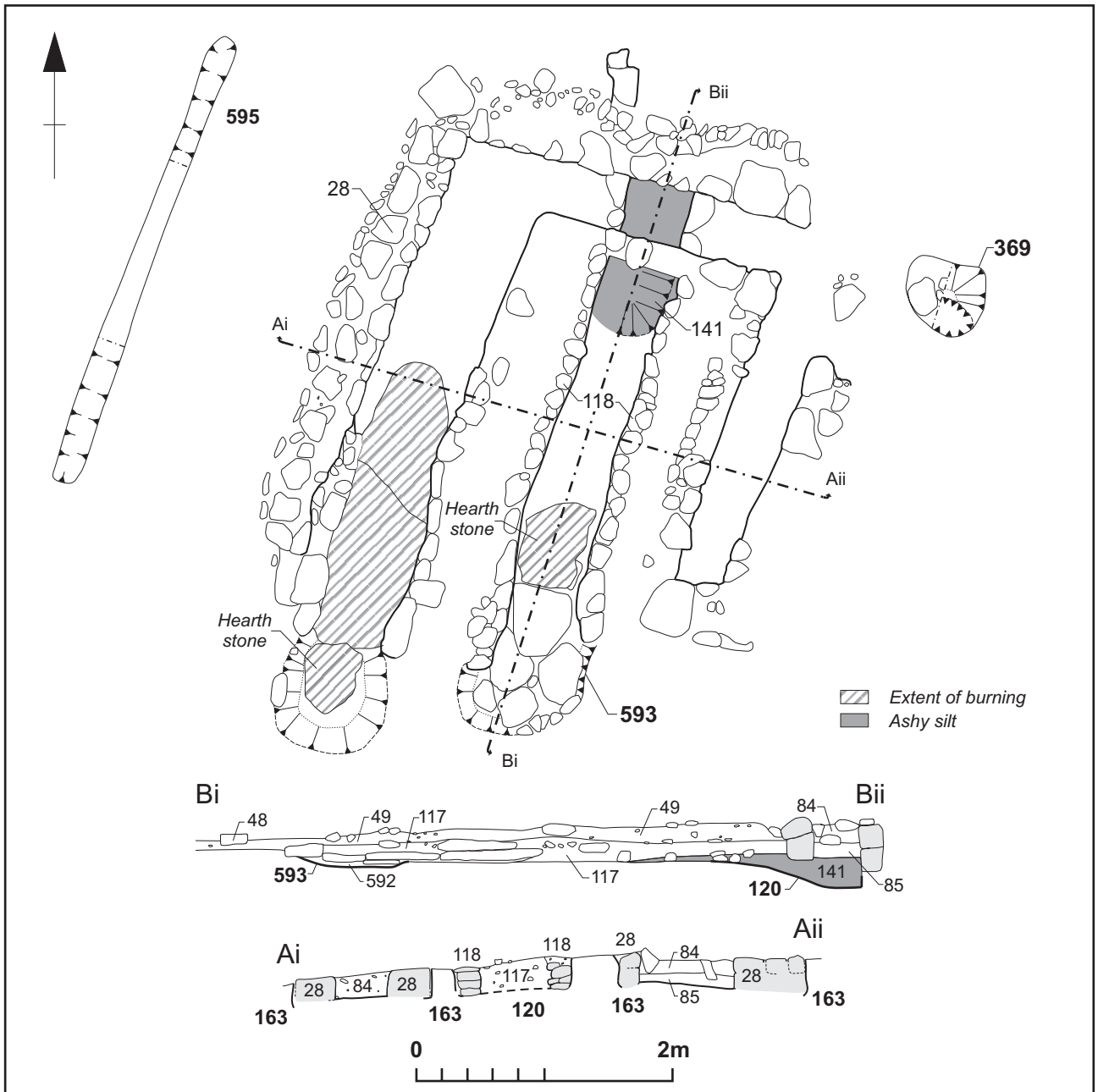
The water tank/cistern [220]

At the north-eastern end of the barn, and likely to have been contemporary, was a square pit with vertical sides and a flat base, 3.2m long by 2.2m wide and 0.4m deep ([222], Figs 19 and 23). The base and sides of the pit had been lined with tightly fitting limestone slabs measuring up to 1450mm x 940mm, although many of the stones from the sides had been lost. Though the slabs were irregularly-sized they had squared corners and edges. Some retained grooving on the surface of the stone as a result of being chiselled into shape. They had been bonded with clay. The dark silty disuse fill of the pit contained pottery dating to the 3rd century as well as animal bone and large pieces of stone, presumably resulting from its collapse. At the south-eastern corner of the pit was a narrow channel [248] with vertical sides and a flat base, 1.00m long, 1.15m wide and 0.34m deep (Fig 23). It opened out into a broader, deeper gully [240], aligned south-east to north-west, before turning to the south and terminating. There were frequent pieces of limestone and tile, including a complete box flue tile within the fill of the gully, as well as a large amount of cereal chaff.

The proximity of the pit to the aisled barn may suggest that water was gathered from the barn eaves and it functioned much as a water tank or cistern. Very similar features have been found at Weedon Hill, Aylesbury (Wessex Archaeology 2007, 20 and fig 3) and at Stanground, Peterborough (Taylor *et al* 2011, 42). At Aylesbury, the tank was found in association with a timber-framed building within which was a possible malting oven. It was suggested that the pit formed a malting tank where grain was soaked so that it would sprout, prior to being malted. The stone base was thought to keep the water clear of silt and to make the process of removing the sprouted grain easier. At Stanground they have been interpreted as settling tanks.

The narrow channel would have functioned as a run-off for the water contained in the cistern, perhaps released once the grain had sprouted. It is possible that the tile or stone found in the gully was used as a sluice gate. The large amounts of cereal chaff also found in the gully may be the result of draining the water from the tank prior to removing sprouted grain.

To the south of the cistern run-off was a gully [161], up to 0.70m wide and 0.23m deep, aligned east to west. The fill contained varying quantities of charcoal and burnt clay, probably refuse from the malting ovens to the south, as well as large pieces of limestone, including two joining fragments of a perforated stone drain cover (Fig 48). A narrow slot led from the gully south to pit [253], 3.20m in diameter and 0.55m deep, with steep edges and a flat base. There were several large slabs of limestone in the base. The primary silting fill was mottled orange-brown sandy clay, while the upper fill was dark brown ashy silt, probably dumped refuse from the malting oven to the west. A further shallow gully, aligned north to south, exited the pit at the south and probably led to Harper's Brook.



A shallow sub-rectangular pit [180] lay 1.5m to the east of the water tank, 2.6m long, 1.45m wide and 0.16m deep, filled with very fine silty clay (Fig 19). Some 9.00m further to the east lay a very similar pit [379]. Further shallow, intercutting pits lay to the north. A posthole cut the earlier pit. The function of these features is unknown.

The malting oven and associated features

Malting oven [25]

Towards the south and overlying the southern edge of the late Iron Age ditch, was a large drying/malting oven (Figs 19 and 24, [25]). Initially, the oven was probably T-shaped with a stokehole at the south. Although the shorter cross-flue had been largely destroyed by later modification, the end wall partly survived within the northern wall of the later oven as a single thickness of pitched limestone in its northern face.

The main flue was aligned north to south, 4.10m long and up to 0.60m wide (1.00m including the walls). The walls [118], up to 0.15m wide, were constructed from a single thickness of stone laid against the sides of the construction trench. The lower two courses were of pitched limestone and above was a single surviving course of rough-faced stone bonded with mortar. The stokehole [593] at the south was lined with stone with scorched surfaces. A primary fill (141), representing the last use of the oven, lay within a hollow at the northern end of the flue and comprised ashy silt and charcoal, but very few charred seeds. A charcoal-rich deposit found beneath the hearth stones (592) was similarly lacking in cereal remains. Pottery from the fill could only be broadly dated to the Roman period. There was no evidence of any superstructure.

The oven was subsequently modified and enlarged to create a U-shaped oven, 5.40m long and 4.00m wide, with a stone-lined flue channel around three sides. The walls [28] were constructed of rough-faced coursed limestone, apart from a preserved section of pitched limestone of the earlier structure in the northern wall, bonded with creamy coloured lime mortar. The exterior northern and western flue walls were two courses thick, 0.40-0.50m wide, and the interior and exterior eastern flue walls were a single course thick, 0.25-0.30m wide. The stokehole was situated at the south-west, where a single large stone comprised the hearth. The floor of the flue was soot-blackened and burnt for 2.5m into the structure, indicating the 'draw' of the hot gases from the fire into the flue. The lower fill (85) of the oven contained large amounts of charcoal and was rich in charred cereal remains, particularly wheat but also including some oats and barley, as well as brome seeds. No germinated grain was observed. Two pieces of cornice or drip mould came from the upper fill (84) of the oven, both of which were scorched, suggesting that they may have been part of the oven superstructure. It is possible that they were taken from Building 1. The 4th-century Roman pottery from the fills indicates that the oven was still in use or at least still partially upstanding at this date. An intrusive sherd of Saxon pottery came from the lower fill, probably introduced through medieval ploughing.

A narrow beam-slot [595], 1.50m to the west of the oven and aligned parallel with its western wall, was 3.60m long, 0.22m wide and 0.04m deep (Figs 19 and 24). The fill contained fragments of charcoal and burnt clay as well as a nail. Although there was no dating evidence, it is likely that it was associated with the oven, probably forming a lean-to or shelter against the western side of the malting oven. It may have been used for storing wood convenient to the stokehole. A posthole [369] lay at the north-eastern corner of the oven

Pits and ditch terminal

South-east of the square malting oven there were two pits and the terminal of a ditch perhaps forming part of a complex of features largely beyond the limits of excavation (Fig 19). An oval pit [200], 2.00m in diameter and 0.10m deep, appeared to have a narrow gully or flue extending out from the south side, although this was almost entirely beneath the edge of excavation. The primary fill was largely composed of charcoal and

a few large pieces of heat-affected limestone. The upper fills of the pit and possible flue contained large amounts of limestone rubble, possibly collapsed superstructure. It is possible that this was the remains of a small oven. Two fragments of upper millstone were found in the pit fill.

Immediately to the east was a further pit [367], sub-square in plan and at least 1.60m in diameter, although much of it lay beyond the edge of excavation. The fill was dark grey sandy silt with orange mottling and some limestone. The terminal of a shallow gully, aligned north-south and extending south, lay 0.30m to the east of the pit. These features suggest that the agricultural activity associated with the villa extended further south, although the proximity of Harper's Brook must have limited the type of activity undertaken.

The pottery recovered from the drying ovens and cistern dates to the late 2nd to early 3rd centuries, contemporary with the enclosure ditches.

3.8 Abandonment and re-use (late 3rd- 4th centuries)

This phase saw the general decline and abandonment of the 'villa' complex. Demolition of the stone buildings created a large spread of demolition rubble within a silt matrix, layer [29], sealing Buildings 2 and 3 and the wells (Fig 25). The crop processing area and possibly the driveway were also abandoned. Following the general demolition an oven was inserted within the western side of Building 3. During this phase a series of linear and curvilinear ditches were established within the western area and the south-eastern parts of the site around the possible fording area. The ditches were possibly utilised for stock control.

Oven

An oven [192] was constructed in the western room of Building 3 through the demolition layers and blocking the former entrance from the corridor (Fig 26). It had a circular stoke-hole [190] and a stone-lined flue [191]. The flue was 0.75m wide internally, 0.32m deep and at least 2.50m long, although it extended northwards outside the excavated area. It may have been the southern part of a T-shaped oven/dryer. The sides of the flue were lined with three courses of flat laid limestone c 400x230x90mm in size. The stokehole was 1.20m long, 0.90m wide and 0.20m deep with steep edges and a concave base.

The base of the flue and stokehole was lined with large slabs of limestone (226), black with soot in the flue, scorched grey with heat in the stokehole. Immediately above the limestone base was a layer of dark black silt and charcoal (204), probably the remnants of its last usage. Pottery from this layer dated to the 4th century. Charred grain from (204) included whole spelt spikelets and spikelet forks, suggesting grain was being processed and stored in the spikelet, an uncommon practise by the late Roman period. Some of the wheat grain had germinated, suggesting that either spoilt grain was being used to fuel the oven or that it was deliberately germinated as part of the malting process.

Road

At the south-east corner of the excavation was a road [637], aligned north-east to south-west, probably approaching a fording area at Harper's Brook to the south (Fig 25). The road was up to 10m wide and comprised compacted yellow-orange sandy gravel overlain by limestone rubble, including worked stone and querns, covered by layers of silt derived from flooding of the ford to the south. No roadside ditches were observed, although this may have been due to the proximity of the ford. It is likely that the road was in use for much of the preceding period, although the truncated nature of the road precluded any more refined dating.

This is likely to be the road identified in the Historic Environment Record (Fig 54). It crosses the Gartree Road 700m to the south and continues south-west until at least Weekley. To the north it changes course slightly to become more northerly aligned. To the north it continues to Deene. The road passes the villa at Great Weldon and the recently discovered villa at Priors Hall, where a section was excavated (Jones 2011). The road here was similar in that it did not appear to have any flanking ditches and was constructed of limestone, gravel and slag.

A number of intercutting curvilinear gullies around the metalled area may have functioned both as drainage to control water from the intermittent natural springs to the north away from the approach to the ford, and to indicate the route across. The morphology of the ditches may also suggest that they may have functioned as animal pens or used for temporary stock control, adjacent to the brook (Fig 25). Curvilinear ditch [437] was 24m long, 1.30m wide and 0.41m deep. The primary fill was dark grey-brown sandy silt, probably resulting from flooding of the brook, and contained the remains of a coin mould. Ditch [584] formed a later redefinition, but was only 1.00m wide and 0.30m deep. No finds were retrieved from the ditch. To the east another curvilinear ditch [474] was 0.4m wide and 0.14m deep. There were further shallow ditches and gullies in the eastern part of the site. All attest to the gradual decline in activity, with the area appearing to revert to pasture or arable land.

In the west, and partially overlying Building 1, was the north-east corner of an enclosure [91] extending 5m east-west and returning to the south for 28m (Fig 25). Although the ditch fills contained a large amount of pottery dated to the early-mid 2nd century, this appears to have been residual, since 4th-century coins were also found in the fill. A single foundation course of wall [72], Building 1, remained intact in the base of the ditch. Large amounts of building rubble were present in the fill in this area. Ditch [442], 7.4m to the east, was also aligned north to south. The arrangement of the ditches may indicate a new droveway with entrances approaching the brook (Fig 25). This may indicate that the former droveway approach was becoming too wet to function, and the higher ground to the west was preferred.

3.9 Re-evaluation of the 1984 watching brief results

The descriptions, plans and sections of the features observed during the 1984 watching brief are included as an appendix to the report (Fig 2; Appendix 1). Observations of archaeological features along the new cut of the Brigstock Road extended for over 400m from a point immediately north of the villa site eastwards. There was a varying density of Roman features along this entire stretch of road and it is likely that many of them are directly associated with the villa complex.

Immediately north of the recent excavation was an area of limestone slabs and rubble, at least 17m long and 12m wide. A trench dug at the south side of this spread found a possible robbed wall foundation aligned roughly north to south. The orientation of the rubble spread may indicate the remains of a building aligned perpendicular to Buildings 2 and 3.

A thin layer, or layers, of limestone rubble (F8 on Fig 2) exposed during the watching brief may correspond to the road [637]. A single possible roadside ditch, aligned roughly north to south, was also observed.

3.10 Later land use and activity

Extensive demolition layers were found overlying Building 1 (layer 80), Buildings 2 and 3 (layer 29) and the large malting oven. All the layers contained some of the largest assemblages of pottery and other finds from the site but were very mixed. There did not appear to be any continued occupation of the site after the 4th century, but sporadic looting of the building remains seems to have taken place during both the late Saxon and medieval periods with small quantities of pottery from both periods. Pottery dating from the 9th to 14th centuries was found in some of the demolition layers associated with Buildings 1 and 3.

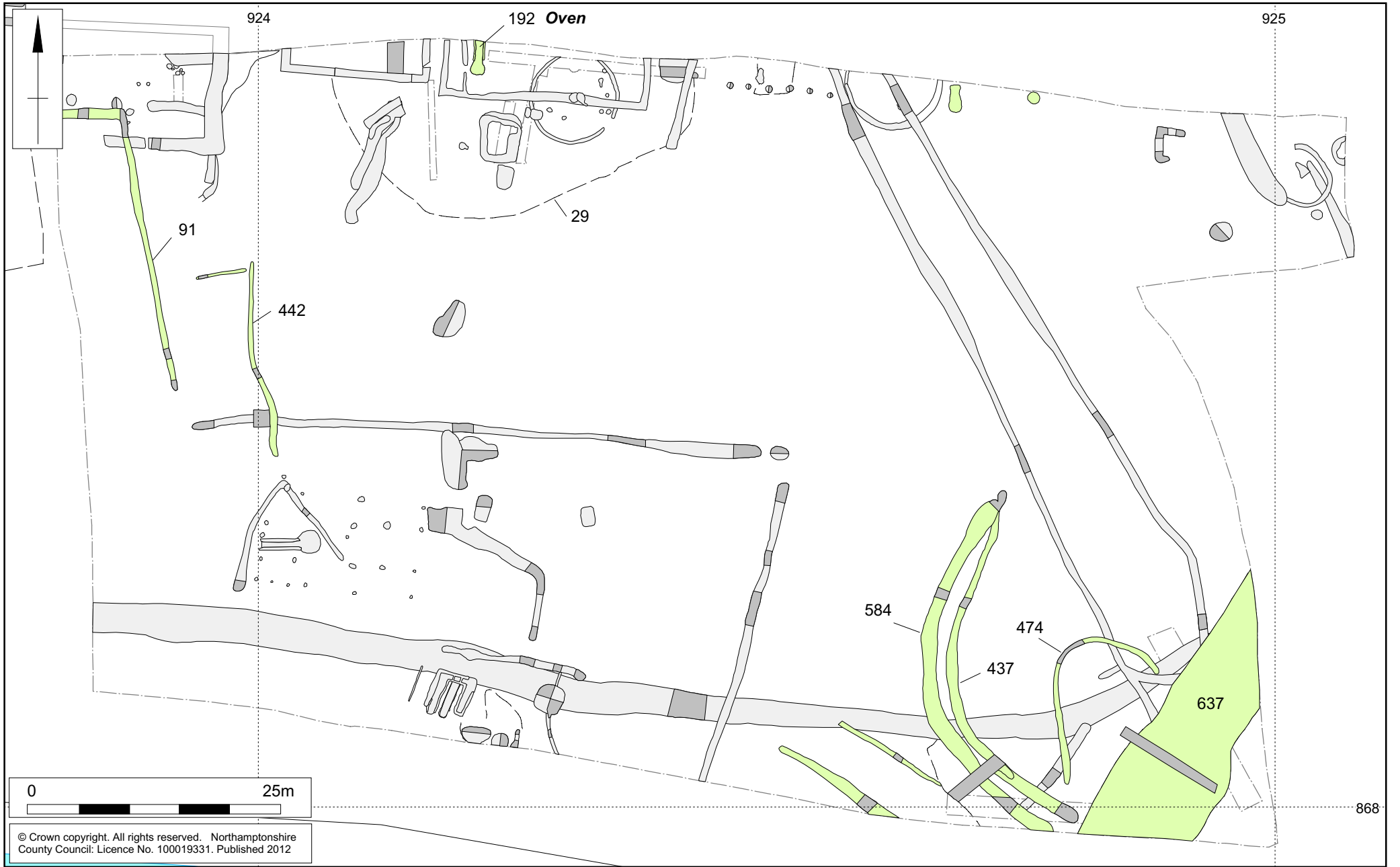
There was also remnant medieval ridge and furrow field cultivation and a series of stone-lined drains on a general north south alignment, falling to the south towards Harper's Brook. Aerial photographic evidence shows that the site was pasture until the late 20th century, with ridge and furrow earthworks still prominent.

The most recent use of the site was for tree cultivation which caused severe truncation to the archaeological deposits, and in places removing key stratigraphic relationships.

Scale 1:500 (A4)

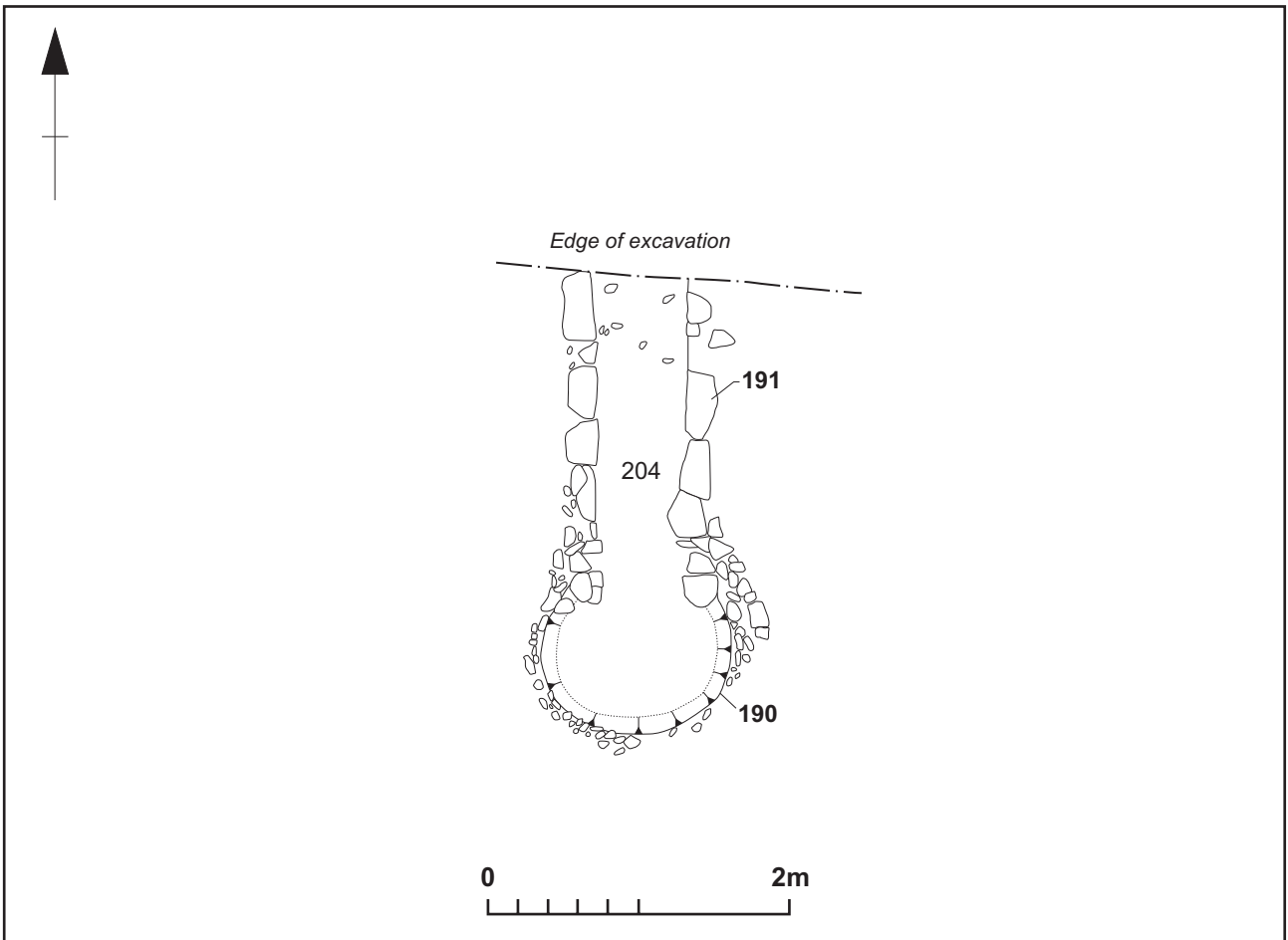
Abandonment and re-use (3rd/4th centuries)

Fig 25



0 25m

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Scale 1:50 (A4)

Oven [192] within demolished Building 3 Fig 26

4 THE FINDS

4.1 Worked flint by Yvonne Wolframm-Murray

Fifteen pieces of worked flint were recovered as residual finds from Iron Age, Roman, buried soil and topsoil contexts. The flint comprised ten flakes, three blades, one core, and one end/side scraper.

The condition of the assemblage was good. The flints showed varied post-depositional edge damage, ranging from small edge spalls to battered and crushed edges. Patination was present on the majority of the assemblage, ranging from grey-white to mottled white to a complete white colour. Accidental burning of the flint was evident on one flake in the form of thermal fracturing.

The raw material is a vitreous flint of light to mid coloured greys and browns. There is also a small component of a more granular grey 'chert'-like flint. Cortex is present on the dorsal surface on the majority of the assemblage and typically off-white and light to grey and brown in colour with a generally smooth, rolled and weathered surface. The raw material was likely to have been derived from terrace and glacio-fluvial deposits.

A single platform blade core was recovered from the Roman demolition layers of Buildings 2 and 3. The majority of flints recovered consisted of waste flakes and blades. These comprise ten flakes, of which four were broken, and three broken blades. A flake with cortical striking platform and one squat flake were also present in the assemblage. One end/side scraper comprised the only retouched tool in the assemblage. This piece had semi-abrupt to abrupt retouched on the convex distal end and some additional retouch on the lateral edge. Patinated edge damage on the edges may indicate utilisation.

Technological characteristics of the assemblage suggest a broadly Neolithic date with a possible early to mid late component in the form of the cylindrical blade core and the end/side scraper. Just under half of the worked flints were retrieved from a buried soil under the Roman features.

4.2 The Iron Age pottery by Andy Chapman

A small quantity of hand-built Iron Age pottery, 26 sherds, weighing 235g, probably from no more than eight vessels, was recovered from the linear ditch [20]/[519] and a posthole [67].

The majority of the sherds contain quantities of crushed shell, ranging from sparse fine shell, measuring no more than 1mm, to dense large shell, measuring up to 7mm, which occur in a thick-walled vessel that also contains pellets of grog. The vessels have dark grey cores with brown to grey-black surfaces, with the exception of the thick-walled vessel containing grog, which has an oxidised orange surface.

Table 2: Quantification of Iron Age pottery

Context/feature	Sherds	Weight (g)	Sherd families	Comments (Fabrics)
19/20, linear ditch	10	20	1	Small 'thumb' pot (Shell, 10)
513/519, linear ditch	8	195	3	(Shell, 5: Grog/shell 3)
66/67, posthole	8	20	4	(shell, 8)
Total	26	235	8	Shell, 23 sherds Grog/shell, 3 sherds

The sherds from linear boundary ditch [20] are from a small thumb pot. It has a simple rounded rim and the walls are 3mm thick at the rim and 6mm thick on the base. Only

fragments survive, but it appears to have been small and round-bottomed, perhaps 80mm in diameter by c40mm deep.

The largest group is from another section of the linear ditch, [519], from an upper fill. This contains part of a flat base and a sherd with a grey-black core and surfaces, with a smoothed outer surface. There are also three sherds from a thick-walled vessel, 13mm thick, with a grey core and inner surface and an oxidised orange outer surface. This vessel also contains both shell and grog inclusions. It is this jar that provides the best dating evidence. The rest of the assemblage could only be broadly attributed to the middle to late Iron Age, but the thick-walled jar is characteristic of late Iron Age assemblages, probably into the early 1st century AD.

There are only a few small body sherds from posthole [67].

A further 24 sherds (379g) of Iron Age pottery were redeposited in Roman contexts. All are handmade shelly or limestone-tempered wares. A simple vertical rim with finger-tipping on the upper surface came from driveway gully [483] (485).

4.3 Roman pottery by Jane Timby

A total of 8,476 sherds of pottery weighing c168kg was recovered with an estimated vessel equivalence (EVE) of 14,830.

In general terms the assemblage is in very good condition, reflected in an overall average sherd weight of 19.8g. There are several instances of multiple sherds from single vessels within and probably across contexts. Surface treatments have generally been preserved, although some of the colour-coated wares have lost their surfaces.

The pottery was rapidly sorted into broad fabric groups based on inclusions present, the frequency and grade of the inclusions and the firing colour. Known regional or traded wares were coded following the system advocated for the National Roman reference collection (Tomber and Dore 1998). Local wares were coded following a system developed by the author for other assemblages studied in the region based on colour and main inclusion type (Timby 2005; 2009; 2012) to ensure some compatibility.

The sorted assemblage was quantified by sherd count and weight for each recorded context. Rims were recorded to form type and measured for diameter and estimated vessel equivalence (EVE). The resulting data was entered onto an Excel MS spreadsheet a copy of which is deposited with the site archive. A fully quantified summary of the Roman pottery can be found in Table 3. In the following report the assemblage is described chronologically with a brief description of the fabrics and associated forms. The pottery is then discussed, first in the context of the site and second within its regional context.

Table 3: Summary of the Roman pottery

	Fabric	Description	No	% No	Wt (g)	% Wt	EVE	% EVE
IMPORTS	LGF SA	South Gaulish samian	195	2.3	1600.5	1.0	448	3.0
	MON SA	Montans Central Gaulish	4	-	41.5	-	7	-
	LEZ SA	samian	236	2.8	2360.5	1.4	536	3.6
	MDV SA	Les Martes de Veyre	7	0.1	129	0.1	12	0.1
	EGSAM	East Gaulish samian	16	0.2	386	0.2	98	0.7
	SAM	unassigned samian Central Gaulish black	1	-	7	-	-	-
	CNG BS	slip	4	-	11	-	33	0.2
	BAT AM	Baetican amphorae	123	1.5	12718.3	7.7	17	0.1
	GAL AM	Gallic amphorae	4	-	263	0.2	-	-
REGIONAL	COL CC	?Colchester colour-coated ware	1	-	2	-	-	-
	DOR BB1	Dorset black burnished ware	8	0.1	107	0.1	39	0.3
	MAH WH	Mancetter-Hartshill mortaria	28	0.3	4056	2.5	164	1.1
	OXF RS	Oxon colour-coated ware	2	-	8.5	-	-	-
	OXF WH	Oxon whiteware	1	-	22	-	-	-
	VER WH	Verulamium whiteware	8	0.1	248	0.2	100	0.7
	VER WHM	Verulamium whiteware mortaria	3	-	209	0.1	5	-
Nene Valley	LNVC	Lower Nene Valley colour-coated ware	766	9.1	10075.5	6.1	1542	10.4
	LNRE	Lower Nene Valley greyware	354	4.2	6071	3.7	626	4.2
	LNREM	Lower Nene Valley greyware mortaria	1	-	40	-	7	-
	LNWH	Lower Nene Valley whiteware	258	3.1	2878.5	1.7	569	3.8
	LNWHM	Lower Nene Valley whiteware mortaria	43	0.5	2452	1.5	104	0.7
	UNV WHM	?Upper Nene Valley whiteware	1	-	59	-	-	-
LOCAL grog-tempered	BOX GR	burnt oxidised/pink grog-tempered	216	2.6	4351.5	2.6	617	4.1
	BW GR	black grog-tempered ware	36	0.4	1537	0.9	39	0.3
	BWH GR	burnt whiteware grog-tempered	556	6.6	10934	6.6	1114	7.5
	BWN GR	brown hm grog-tempered	150	1.8	5797	3.5	141	0.9
	BWNSAGR	brown sandy with grog	4	-	86	0.1	11	0.1
	GY GR	grey grog-tempered oxidised/pink grog-tempered	41	0.5	1458	0.9	25	0.2
	OX GR	oxidised/pink grog-tempered	195	2.3	5095	3.1	295	2.0
	WH GR	white grog-tempered grog and shell-tempered	424	5.0	12101	7.3	725	4.9
Calcareous	GRSH	hm and wm shelly ware	22	0.3	1259	0.8	32	0.2
	SHELL	black ware with sparse shell	1471	17.4	39008	23.7	1983	13.3
	BWSH	black ware with sparse shell	15	0.2	347	0.2	59	0.4
	BWLI	black ware with sparse limestone	7	0.1	91	0.1	10	0.1
	BWSALI	black sandy with sparse limestone	7	0.1	78	-	20	0.1
	BWMICLI	black micaceous ware with limestone	2	-	69	-	-	-
	BWNLI	brown ware with limestone	3	-	30	-	-	-

STANION VILLA

	Fabric	Description	No	% No	Wt (g)	% Wt	EVE	% EVE
	BUFFSALI	buff sandy with limestone	1	-	9	-	-	-
	GYLI	grey with sparse limestone	7	0.1	131	0.1	49	0.3
	GYLIGR	grey with sparse limestone and grog	3	-	21	-	-	-
	GYFLI	fine grey ware with limestone	2	-	25	-	5	-
	OXLI	oxidised with sparse limestone	6	0.1	133	0.1	-	-
Sandy	BOX SY	burnt oxidised sandy ware	52	0.6	536	0.3	44	0.3
	BWH SY	burnt whiteware sandy	49	0.6	873	0.5	148	1.0
	BWSY	black sandy ware	600	7.1	8228	5.0	1257	8.4
	BWNSY	brown sandy ware	8	0.1	132	0.1	3	-
	GREY	miscellaneous other grey wares	99	1.2	1036.5	0.6	101	0.7
	GYSY	grey sandy wares	1882	22.3	22592.5	13.7	3128	21.0
	OXID	oxidised sandy ware	68	0.8	813	0.5	163	1.1
	PNK SY	pink sandy ware	13	0.2	75	-	27	0.2
	WH SY	white sandy ware	57	0.7	745	0.5	109	0.7
micaceous	BW MIC	black micaceous ware burnt oxidised	71	0.8	536	0.3	63	0.4
	BOXMIC	micaceous ware	1	-	4	-	-	-
	GYFMIC	fine grey micaceous ware	2	-	15	-	13	0.1
	GWMIC	micaceous grey ware	2	-	31	-	35	0.2
	LON FW	London-type ware	71	0.8	603.5	0.4	109	0.7
	OXIDMIC	micaceous oxidised wares	9	0.1	116	0.1	20	0.1
unknown	BWMISC	misc black wares	6	0.1	97	0.1	18	0.1
	BUFF	buff sandy ware	11	0.1	90	0.1	32	0.2
	BWF	black fine ware	1	-	14	-	7	-
	CC	misc colour-coated wares	4	-	15	-	-	-
	GYF	fine grey ware	15	0.2	184	0.1	54	0.4
	MICOX	mica-slipped oxidised ware	48	0.6	519	0.3	-	-
	OXIDF	fine oxidised wares	66	0.8	309	0.2	22	0.1
	WSOXID	white-slipped oxidised ware	56	0.7	730	0.4	109	0.7
	WWF	fine white wares	1	-	2	-	-	-
	WW	misc whitewares	3	-	27	-	-	-
	MISC	miscellaneous unclassified	7	0.1	19	-	-	-
Total			8434	100	164648	100	14894	100

Description of Roman fabrics and forms

Samian: In total some 459 sherds of samian weighing 4524.5g and with 1101 EVE were recorded. Collectively the samian accounts for 5.4% by count of the Roman assemblage and can be split into 43.1% South Gaulish, 53.1% Central Gaulish and 3.5% East Gaulish. The sherds are moderately well preserved with an average sherd weight of 9.8g. Table 4 summarises the forms identified based on EVE.

Table 4: Summary of samian forms by EVE

Fabric	Form	EVE
LGF SA	15/17	1
	18	163
	18 or 18/31	20
	27	79
	29	7
	33	20
	35	18
	36	48
	35/36	12
	37	30
	67	47
	cup	2
	MON SA	?18	5
	?30	2
LEZ SA	18/31-31	29
	27	6
	31	150
	33	179
	36	15
	37	91
	?37	30
	79	12
	80	10
	Curle 15	3
	bowl	10
Total		989

The South Gaulish assemblage includes at least eleven decorated sherds from six vessels: five bowls Drag 37, one in the Montans fabric, and one small jar Drag 67. There are also at least five stamped sherds (S1-S5) with a sixth base showing just the edge of the cartouche.

The Central Gaulish assemblage includes at least six stamped sherds (S6-S11) and 18 decorated pieces although most of these are quite small. Five vessels have drilled holes for lead rivet repairs which are still extant on three vessels: one from a demolition layer in Building 3; a dish Drag 31 from pond [411], and a decorated bowl Drag 37 (SF 312) from wall [365], Building 3. The other two vessels with rivet holes are both decorated bowls Drag 37. One cup, a Drag 33 from well/spring [666], has a small cross graffiti scratched onto the carination (Fig 27). The East Gaulish assemblage is quite small but includes another decorated bowl Drag 37 in worn condition with two lead rivet repairs from ditch [135] (Fig 31).

Thus the range of samian present is quite extensive both in terms of quantity and vessel types with a chronological range extending from the Flavian period through to the Antonine period and possibly into the early 3rd century.

Potters' stamps

S1. Cotto OFCOTT[Dish. SG. Polak (2000), catalogue no. C147. AD 70-100. Layer [168], beneath oven/hearth [165]

S2. Germanus GERMANIOI SG. Eight joining sherds from the base of a dish, probably Drag 18. Polak (2000) catalogue no. G19. AD 65-80. Enclosure ditch [159] (167)

S3. Modinitus? MODINIT F[SG. Pond 411 (407)

S4. Sulpicius.]VLPICIV Drag 18. La Graufesenque. Polak (2000), catalogue no. S179. This potter probably started work in the seventies continuing until the end of the century, c AD 70-100. Droveaway ditch [33] (34)

S5.]IIVI Full reading uncertain. SG. Layer [30]

S6. Buturrus? BVTIURRI impressed on the base of a Drag 33 cup. Les Martres-de-Veyre. Demolition layer [80], Building 1.

S7. CALAVA CG. AD 125-35. Layer [30]

S8. PR [] Incomplete. CG cup Drag 33. Construction cut [284], (215) for oven [188]

S9. VE [] Incomplete. CG. Subsoil (539)

S10. [] IM Incomplete. CG. Layer (405)

S11. Faintly impressed stamp. Illegible. CG. Possible floor layer (196), building 3.

Illustrated samian

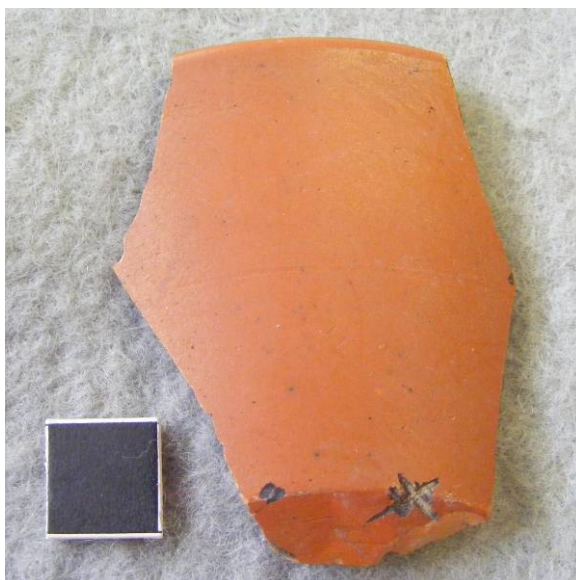
Fig 27: Sherd from a samian cup Drag 33 with a post-firing graffiti in the form of a cross etched on the carination. Fabric: LEZ SA. Pit [398]

Fig 28: Draped figure. Drag. 30/ 37. Similar to Oswald (1936-7) 923 in the style of Libertus. Lezoux. Trajanic-Hadrianic. Layer (359)

Fig 29: Mask. Drag. 37. Similar but not exact to Oswald (ibid) 1330, a design used by several potters. Lezoux. Trajanic-Antonine. Layer (692)

Fig 30: Animal running to left, probably a panther. Drag. 37. Lezoux. Layer (30)

Fig 31: Several sherds from a much worn bowl which has at least two circular rivet holes through the walls. The decoration includes sea-monsters similar to Oswald (ibid) 45 and 47 which are in the style of Avitus. East Gaulish: Blickweiler. Antonine. Ditch 135 (136)



Sherd from samian cup with post-firing graffiti (Scale 10mm) Fig 27



Samian sherd showing draped figure (Scale 10mm) Fig 28



Samian sherd showing mask (Scale 10mm) Fig 29



Samian sherd showing animal running to left (Scale 10mm) Fig 30



Several sherds from a much worn samian bowl decorated with sea monsters
(Scale 20mm) Fig 31

Central Gaulish black-slipped ware (CNG BS) (Tomber and Dore 1998, 50). Four small sherds from beakers from consolidation layer [602] and demolition layer [109]. The two sherds from the former are from a cornice-rim beaker with roughcast decoration.

Baetican amphora (BAT AM) (ibid 84). A substantial group of 123 sherds of Baetican olive-oil amphorae were present. Most of the pieces appear to be from the globular-bodied Dressel 20 form but there are a few thinner bodysherds more likely to be from the Haltern 70 form which was also made in Baetica, Southern Spain. A group of 20 sherds from layer [590] appear to have come from a re-used vessel where the neck has been broken off and the shoulder break smoothed over. These amphorae types were imported from the 1st to 3rd centuries AD and are the commonest to occur on British sites.

Gauloise amphora (GAL AM) (ibid 93). Four bodysherds probably from a Gallic wine amphora were recovered from layer [692].

Regional

Colchester colour-coated ware (COL CC2) (Tomber and Dore 1998, 132). One very small sherd from a roughcast decorated beaker was recovered from pond [411].

Dorset black burnished ware (DOR BB1) (ibid 129). Limited to just eight sherds, which include a 2nd-century jar and flat-rim bowl from layer [604] and hearth pit [673] respectively. In addition there are two plain-sided dishes and a conical flanged-rim bowl from well [372] dating to the later Roman period.

Mancetter-Hartshill white ware mortaria (MAH WH) (ibid 188ff). Some 27 sherds have been allocated to the Mancetter-Hartshill potteries with nearly all the sherds having the slightly sandier fabric and mixed trituration grits typical of the period before c AD 140/150. Several of the rim sherds confirm to Gillam (1970) type 238 with the overhanging flange (Figs 33 and 38.11), others with a dropped bead.

There are at least three stamps – two broken and illegible. The third, from sub-floor layer [692], Building 3, is impressed to the right of the spout and reads GRATINVS (Fig 38.5). This potter was active in the period AD 130-50. Similar vessels by the same pottery have been found at Wroxeter (Hartley 2000) and Water Newton (Perrin 1999, 134). One vessel from layer [590] has a rivet repair hole through the body wall.

Oxfordshire wares (OXF RS; OXF WH) (Tomber and Dore 1998, 174; 176). Oxfordshire products were sparse restricted to a single white ware and two sherds of colour-coated ware.

Verulamium white ware and mortaria (VER WH) (ibid 154). A small group of eight bodysherds, probably flagon and three mortaria sherds. One flagon is a ring-necked

form (Fig 38.3) typical of the Flavian-Trajanic period from ditch [576]. One mortarium sherd is burnt whilst the vessel from rubble [579] is worn from use.

Nene Valley wares (LNV RE; LNV CC; LNVWH) (ibid. 117-9). *Lower Nene Valley colour-coated wares* (LNV CC) form the third most common component of the Roman assemblage accounting for 9.1% by sherd count. The date of the earliest production of colour-coated wares is not known precisely but the industry appears to have become fairly well established by the later 2nd century (Perrin 1999, 87), when the principal products were beakers, flagons and boxes. The assemblage here is quite diverse with a range of forms marginally dominated by beakers, 25.7% by EVE but closely followed by jars at 22.1% which are more typical of the later Roman period. Dishes and bowls account for 14.7% and 16.5% respectively and decorated boxes for 8.5% (Fig 38.7 and 38.8). The dishes are mainly straight-sided with rounded or triangular rims or plain-rimmed but there are a few copying samian forms, in particular flanged wall bowls as Drag. 38 and flanged rim dishes as Drag 36. The bowls are dominated by flanged-rim conical forms typical of the 4th century, accompanied by less common types. The remaining 12.5% comprises box lids, and single examples (rim) of a jug, disk-necked flask and ring-necked flagon. The beakers appear to be dominated by indented types with curved or funnel-necked rims. Most are plain but a few have rouletted decoration or vertical barbotine scales. There is just one sherd clearly from a 'hunt cup' showing the elongated snout of a dog from layer [602].

Lower Nene Valley grey ware (LNV RE) account for 4.2% of the total Roman assemblage. This industry established by the second quarter of the 2nd century continued through until the late 3rd or early 4th century (Perrin 1999, 78). The vessel repertoire is dominated by jars, which account for 53.2% EVE of the ware category, the commonest forms being everted simple or rolled rim types. Some vessels have ridged necks. Dishes and bowls make up 19% and 14.7% respectively, whilst beakers account for 12.9%. The latter mainly comprises indented or poppyhead forms (Fig 38.2), the former occasionally with single vertical lines of barbotine scale decoration.

Lower Nene Valley white ware (LNV WH) are less well represented compared to the other products from this industry accounting for 3.6% by sherd count. One or two of the vessel forms may be colour-coated wares with no surviving surfaces. Jars account for 10% EVE, bowls for 1.4%, beakers for 1.2%, flagons for 71.6% and mortaria for 15.6%. The flagons are dominated by ring-necked type with expanded upper rings typical of the 2nd century but a variety of other types are present probably dating to the 2nd and early 3rd centuries after which they do not seem to have been made.

Also of note is a bodysherd with a stamped boss from layer [30] which may possibly have been a colour-coated ware and a hollow boss outlined in red paint (Fig 36). The mortaria include flanged, beaded rim types dating to the 2nd century through to reeded flange and hammer-head types more typical of the 3rd and 4th centuries. One vessel from gully 403 has red painted decoration on the flange (Fig 32).

?*Upper Nene Valley white ware*. Burnt mortarium flange with part of a double-line potter's stamp on the flange]IDIAC /] II [(Fig 37). This is possibly the potter Vediacus (Hartley 1984, 289, no. 99) who was active in the mid 2nd-century (AD 140-180) and was probably based in the Upper Nene Valley. Several of his stamps have been documented from sites in the Hertfordshire- Northamptonshire area.

Local wares: grog-tempered

The grog-tempered category of wares can be divided into two main groups: sandy grog-tempered wares and handmade grog-tempered storage jar. The local sandy grog-tempered wares, although in essence one group, have been divided into seven sub-fabrics based on colour. This is to allow some future understanding as to whether the colour distinction has any chronological or functional patterning or perhaps reflects the work of different potters.

Sandy grog-tempered wares. The seven subgroups defined include burnt oxidised ware (BOX GR); oxidised ware (OXGR); burnt white ware (BWHGR); white ware (WHGR), grey ware (GYGR), brown slightly sandier ware (BWNGR) and black grog-tempered ware (BWGR). Collectively the group accounts for 17.5% by count, 21.4% by weight of the total assemblage. Within the group white wares with a blackened exterior (BWH GR) are the most frequently found followed by white grog-tempered ware (WHGR). The term 'grog' is used loosely as the paste contains largely rounded to sub-angular clay pellets, which may occur naturally. Vessels are dominated by jars which account for 95% of the eve's including lid-seated and necked, everted rim forms (eg Fig 38.6). The remaining 5% comes from large bowls (eg Fig 38.4). Of particular note is a flat disc (Fig 38.10) in a grogged oxidised fabric with blackened edges suggesting burning. A similar item featured in the assemblage from Victoria Park, Irchester (Timby 2012). In terms of diameter the jars range from 100mm through to 400mm with 43% of the measurable vessels having a diameter of 150-160mm. Several of the jars were sooted from use. Whilst most of the vessels are plain a few sherds have surface combing and one sherd stabbed decoration.

Grog and shell-tempered (GR SH). A small group of 22 sherds, mainly from handmade jars. Vessels include two large storage jars and two jars with triangular rims. One vessel has a combed finish and is decorated with a row of stab marks. It is probably a 1st-century ware with the greatest number of sherds from sub-floor layer (692), Building 3.

Local wares: sandy

The sandy wares to some extent mirror the grog-tempered wares in that the divisions made for some of the groups have been primarily based on firing colour rather than any other distinguishing characteristics. As with the grog-tempered wares some vessels have been deliberately blackened on the exterior, giving a burnt oxidised ware (BOX SY) and a burnt white ware (BWHSY); in addition there are black, orange, pink and grey sandy wares. The group overall accounts for 33.6% by count, 20.8% by weight. The grey wares form the largest component accounting for 22.3% of the total recovered assemblage and thus the most common fabric.

The range of forms is considerably more diverse than the grog-tempered wares. The jars dominate accounting for 56.5% eve with lid seated varieties bring the most common. Dishes account for 14.3%; bowls 17.8% and beakers 7.3%. The remaining 4.1% comprises lids, a jug, flask and flagon. The beakers include girth beakers, poppyhead and indented forms. A small number of sherds have rusticated decoration. A small oxidised bowl with rouletted decoration is probably copying a Drag 37.

Local wares: micaceous fine sandy wares

A small but distinctively micaceous fine ware group with examples in buff, oxidised, grey and black fabrics. The largest group is that colloquially known as 'London ware' (LON FW) with a fine, black, silky fabric. Vessels include copies of samian bowls Drag 30 and 38, often with impressed concentric and rouletted decoration a jar and a flat rim bowl (Fig 38.9). Amongst the oxidised wares is a small beaker and in the grey wares, various dishes (Fig 38.1).

Local wares: shelly

The shelly wares (fabrics SHELL, BWSH), collectively account for 17.6% by count, 23.9% by weight. In addition to the shelly wares there is a range of wares with sparse shelly or oolitic limestone tempering all present in minor amounts. Shelly wares are extremely common in this area from the Iron Age through to the later Roman period and beyond. The assemblage is very much dominated by jars, in particular, lid-seated and triangular-rim forms and large storage jars. There are a small number of bowls / dishes including a single plain-walled example and four flanged-rim late Roman types.

One base from gully [180] (associated with the water tank) has six spaced holes made after firing.

A small group of distinct black wares with sparse coarse fragments of fossil shell (BW SH) includes two everted rim jars and a flat-rimmed dish.

Unknown

Buff sandy ware (BUFF). A small group which includes a beaker, jar, a bowl imitating the Drag 30 form with red-painted decoration (Fig 33) and a dish. These wares probably formed part of the output of the Nene Valley potters.

Miscellaneous colour-coated ware (CC). Four sherds of an unknown colour-coated ware were recovered from layers [29 and 360]. The fabric was hard and sandy with a white interior and pink exterior with a red colour-coated finish.

Mica-slipped oxidised ware (MIC OX). A small group of 48 bodysherds, mainly from indented beakers, with 32 sherds, probably from a single vessel, recovered from demolition layer [23], Building 1. Probably 2nd century in date and from a local specialist production.

Fine grey ware (GYF). A small group of fine, grey wares including jars, bowls, curved wall dishes and hemispherical flanged bowls.

Grey ware with a red core (GREY). A very well-fired medium to dark grey ware with a red-brown inner core. Vessels include everted rim jars, indented beaker and trefoil-mouthed jugs (Fig 34).

Comment on fabrics and forms

In summary the assemblage recovered from the 2010 excavations is very much dominated by local fabrics which can broadly be split into four groups: shelly wares, sandy wares, grog-tempered and products of the Lower Nene Valley. Imported samian is moderately well represented, accounting for 5.4% count of the overall assemblage, but other continental imports are conspicuous by their absence, being restricted to four sherds of Central Gaulish black-slipped ware. Amphorae also form a very modest component of the assemblage with the most common types to be found on British Roman sites present, namely Baetican olive oil containers and Gallic wine amphorae. The status of both the imported table wares and the amphorae is reflected in the fact that several of the former were repaired with lead rivets to prolong their use and one of the latter vessels was re-used.

Table 5 summarises the individual forms recorded from the site on the basis of EVE. Coarse ware jars dominate the group accounting for 54.3% overall followed by bowls/dishes at 16%. Imported fine wares, probably used as tableware or as display items overall account for 10.3% whilst the local colour-coat 'replacements' account for 10.9% suggesting in very general terms a fairly consistent proportion of fine wares to coarse wares through time although with slightly different emphasis of forms.

Table 5: Individual forms by EVE

	Form	% EVE
Fineware (samian)	bowl	2.6
	dish	3.2
	cup	2.2
British fineware	jar	2.3
	bowl/dish	3.5
	box	0.9
	lid	0.2
	beaker	2.9
	flask/flagon	1.0
	jug	0.1
Coarsewares	amphora	0.1
	bowl/dish	16.0
	jar	54.3
	beaker	3.3
	flagon	4.5
	flask	0.2
	jug	0.4
	mortaria	1.9
	lid	0.3
	Total		100.0

Site discussion

Ceramic phase 2 (late 1st-early 2nd centuries)

The earliest Roman assemblages appear to be those from ditch [659] which provisionally dates to the later 1st century and layer beneath oven [165] for which a Flavio-Trajanic date is likely. The ditch produced 27 sherds weighing 635g, mainly local grog, shelly and sandy wares accompanied by three sherds of South Gaulish samian. The layer produced 59 sherds (1017g) amongst which were six sherds of South Gaulish samian including stamp S1 dated AD 70-100. Posthole [14] is also probably of early 2nd century date with two London-ware bowl sherds imitating Drag 30 forms and a sherd of Lezoux samian.

Ceramic phase 3 (2nd century)

The greatest amount of activity appears to date to the 2nd century with some 32 deposits and 26 features dating to this period on the basis of the pottery. The enclosure ditch appears to be stratigraphically early but only produced 22 sherds of very mixed pottery with later prehistoric, Roman, four putative Saxon sherds and some possible medieval fragments. The Roman pottery includes LNV RE and BWH GR which would suggest that if the other sherds are seen as intrusive the fill cannot date much before the second quarter of the 2nd century. Ditch [493] produced 12 unfeatured sherds amongst which were Lezoux samian and LNV WH also of mid-late 2nd century date.

Ring ditch 1 below Building 3 produced a small assemblage with 11 sherds of later 1st or 2nd century date. Ring ditch 2, which also appears stratigraphically early, produced eight sherds amongst which were two LNV CC pieces again intimating a later 2nd century date. The limestone-constructed Roundhouse 4 produced 40 sherds suggestive of a mid 2nd-century date.

Other features which appear to belong to this phase of activity include pond [411] which produced a large assemblage of 520 sherds (9055g). The group is quite diverse comprising 28% grog-tempered ware and 39% sandy ware and 11.5% shelly ware. Of particular note is the quantity of samian present, 11% by sherd count. Other sherds of note include a piece of DOR BB1 and two very small sherds of LNV CC. The pond

appears to have been abandoned by the later 2nd century. Another moderately large assemblage was recovered from ditch [576]; 137 sherds comprising 44.5% shelly ware, 21% grog-tempered and 34% sandy with three sherds of samian giving a *terminus post quem* in the mid 2nd century. Smaller assemblages were recovered from oven [200], and pits [644] and [645]. Ditch [555], cut by the western driveway ditch, yielded just five sherds a mixture of shelly ware and grey sandy ware. Other features with in excess of 20 sherds which appear to date to this phase include hearth [673] and ditch [375].

The two parallel driveway ditches produced 199 sherds. Most of the pottery came from a single excavated section with 181 sherds most of which came from the bodies of two LNV WH flagons likely to date to the 2nd or early 3rd centuries. Also present is samian stamp S4 dated AD 70-100. Further LNV WH flagon and a sherd of MAH WH mortaria came from the western driveway ditch which also produced a 3rd-century coin. This would suggest that a significant proportion of the assemblage may be residual.

A number of deposits appear to date to this phase. Those layers with particularly large assemblages in excess of 100 sherds include layers beneath Building 3 [614, 620, 692 and 693] and Roundhouse 4 [672]. Most of these layers have moderately large sherds; the average sherd size for [620], for example, is 35g, whilst that for [672, 692 and 693] average around 28g. This might indicate dispersed midden deposits rather than deliberately laid make-up levels or demolition layers where a greater level of fragmentation might be expected.

Ceramic phase 4 (late 2nd-3rd centuries)

Pottery dating to the later 2nd-3rd centuries is also well presented on the site. Many of these features show an increased presence of LNV CC but earlier material continues to be present. Belonging to this phase are ditches for the rectangular enclosure of the crop-processing area, which produced 745 sherds. Of note is a 3rd-century ridged wall LNV WH mortarium and several sherds from a white grog-tempered jar, several sherds of LNV CC including a bowl, box and beaker and the repaired East Gaulish samian bowl (D4).

Curvilinear ditches [437] and [584], although quite sparse in finds, also appear to belong to this phase along with pits [379], [388], [450] and [459], cistern [222] and pits [392] and [398] associated with the spring. Several layers produced pottery; those with in excess of 100 sherds including [167, 175, 360, 539 and 540]. Sherd fragmentation rates varied quite considerably across these from just 10.7g in [167] to 34g in [539]. Layer [590] produced 30 sherds of Baetican amphora from a re-used vessel.

Ceramic phase 5 (late 3rd-4th centuries)

The latest features on the site dating to the later 3rd-4th centuries include the animal stock control ditch [91] cutting abandoned Building 1. The ditch contains a very high percentage of early to mid 2nd-century material, but also produced 4th-century coins. Ovens [25] and [188] and oven [192] also date to the 4th century. Oven [188] produced some 59 sherds of which 66% were LNV CC; whilst oven [192] also had several LNV CC jars and a beaker and a late shelly flanged bowl. Other late features include pits and ditches near the cistern, the stone-lined well south of Building 2 and curvilinear ditches around the area of the ford. The buried soil and demolition layers in and around Buildings 2 and 3 produced some very large assemblages with some 28% of the whole assemblage coming from five deposits, [109/29], [30/453/602/614/620], [80], [157] and [196/604]. Deposit [30] would seem slightly problematical in that it is the buried soil deposit into which the walls of Buildings 2 and 3 are cut. Whilst it has a significant quantity of mid to late 2nd-century material present it also has later wares suggesting later disturbance which has created a chronologically mixed assemblage of pottery. Layer [29/109] alone produced some 1171 sherds weighing 27kg; an average sherd weight of 23g. One noticeable feature of all these assemblages, not only deposit [30], is the diverse range of material present chronologically spanning the 2nd to 4th

centuries. Lower Nene Valley colour-coated ware and shelly ware, both later products account for 13% and 14.4% by weight but samian is also still well represented accounting for 5.6% despite the fact it is mainly of later 1st-2nd century date and other early wares such as London-type ware are also well represented.

General discussion

Previous work at the site of the Roman villa identified activity dating to the later 1st century whilst earlier work carried out in 1984 has suggested a mid-1st century AD origin for the occupation (Tingle 2008). The work carried out in 2002 suggested that the villa building was constructed in the later 1st century and abandoned in the late 2nd or 3rd century. Fourth-century pottery although present was sparse. The 2002 season of work produced a smaller assemblage of 3150 sherds of pottery (Friendship-Taylor 2008, 108), less than half that from the 2010 work.

Table 6: Comparison of Roman pottery assemblages 2002 and 2010

Fabric	Stanion 2002		Stanion 2010	
	No	No %	No	No %
Samian	153	4.9	459	5.4
Amphora	251	8.0	127	1.5
Lower Nene Valley colour-coat	161	5.1	766	9.1
Lower Nene Valley grey ware	39	1.2	354	4.2
Various grey wares	1077	34.4	1985	23.5
Mica-slipped ware	15	0.5	48	0.6
London-type ware	23	0.7	67	0.8
Grog wares	625	19.9	1435	17.0
Shelly/calcareous wares	271	8.6	1524	18.1
Oxford mortaria	8	0.3	0	0.0
Oxford colour-coated ware	6	0.2	2	0.0
Other	505	16.1	1667	19.8
Total	3134	100.0	8434	100.0

Table 6 compares the assemblages from the two archaeological interventions using the fabric breakdown used in the 2008 report which only quantifies by sherd count. Although quite a crude comparison it is clear that both assemblages are well supplied with samian, 4.9% of the 2002 group, compared with 5.4% in 2010. Other broad concordances can be made in the proportions of grog-tempered wares, and specialist fine wares such as mica-slipped ware and London-type ware, but for the other categories identified there is quite a discrepancy between the two assemblages. Shelly wares, for example only accounted for 8.6% of the 2002 assemblage compared with 18.1% here; Nene Valley colour-coated ware was also less prevalent. The number of named traded wares identified is considerably less for the 2002 group. This would in part seem to be a reflection of the chronology; there appears to be a much larger later component to the 2010 assemblage compared to 2002 although a starting date in the last quarter of the 1st century seems to apply to both assemblages.

Table 7: Comparison of Stanion Roman pottery with nearby sites

Fabric	Description	Higham			
		Stanion % Wt	Ferrers % Wt	Oundle % Wt	Irchester % Wt
Samian	South Gaulish samian	1.0	*	*	*
Samian	Central Gaulish samian	1.6	3.9	1.7	4.8
Samian	East Gaulish samian	*	*	-	-
CNG BS	Central Gaulish black-slipped ware	0.0	*	-	-
MOS BS	Moselle black slip	0.0	*	-	-
BAT AM	Baetican amphorae	8.0	*	1.0	5.6
GAL AM	Gallic amphorae	*	*	-	-
DOR					
BB1	Dorset black burnished ware	*	*	*	*
HAD OX	Hadham oxidised ware	0.0	*	-	-
MAH					
WH	Mancetter-Hartshill mortaria	2.3	*	-	-
Oxford	all Oxfordshire wares	0.0	*	*	*
VER WH	Verulamium whiteware	0.0	*	*	-
VER					
WHM	Verulamium whiteware mortaria	*	*	1.6	-
GROG	all grog-tempered	26.9	19.5	4.5	25.9
LNVC	Lower Nene Valley colour-coated ware	6.4	12.4	-	9.7
LNV WH	Lower Nene Valley whiteware	1.9	2.9	3.3	*
LNVC	Lower Nene Valley whiteware				
WHM	mortaria	1.8	4.1	*	*
SHELL	shelly/ calcareous wares	25.2	47.6	25.0	28.7
SANDY	oxidised and reduced sandy wares	25.7	31.9	33.4	39.0
	black fine micaceous ware/				
BWFMIC	London-type	*	*	-	*
MICA	mica-slipped wares	*	*	*	-
GLAZE	British glazed ware	-	-	*	*
Other	other wares	*	*	*	3.0
Total		100.0	100.0	100.0	100.0

* Present but less than 1%

Table 7 compares the Stanion 2010 assemblage with those recently analysed from the nearby sites at Higham Ferrers (Timby 2009); Oundle (Timby 2004) and Victoria Park, Irchester (Timby 2012). Despite the apparently high proportion of samian present at Stanion accounting for 5.4% sherd count, 2.7% weight, suggesting a moderately high status occupation, it is notably less than that from Higham Ferrers at c 4% (by weight) and Irchester at 4.9% which may be reflecting the difference between a rural focus compared to the more urban level of occupation at the latter two locations. Moreover, the proportion of decorated samian at Stanion is quite low, another characteristic which appears to have a direct link to site type/status (Willis 2004). There were several incidences of repair to the samian vessels at Stanion, particularly decorated bowls; a similar bias was observed at Higham Ferrers (Timby 2009, 149). A slightly higher incidence of South Gaulish samian at Stanion may reflect its earlier origins. Although there are odd sherds of continental fine ware and amphorae at all the sites these are generally quite limited in quantity and range. The amphorae are dominated by Dressel 20 olive oil type with small amounts of Gallic wine amphorae from Stanion and Higham Ferrers. In terms of regional imports small quantities of Dorset black burnished ware, Verulamium white ware, Oxfordshire products and Mancetter Hartshill were being marketed in the region but the quantities are small. Similarly most of the sites have

more locally produced fine specialist wares such as glazed ware, mica-slipped ware and London-type black wares although no examples of the former have been noted at Stanion to date.

Illustrated pottery (Figs 32-38)

- Fig 32: Hammer-head flanged mortaria with red-painted decoration. Fabric: LNV WH. Gully [403]
- Fig 33: Bowl copying Drag 30 decorated with a red-painted trident motif. Fabric: CREAM. Pit [450]
- Fig 34: Trefoil mouthed, handled jug. Well-fired grey ware with a red core. Fabric: GREY. Pit [459]
- Fig 35: Mortarium as Gillam 238. Rivet repair hole through the wall. Fabric: MAH WH. Layer [590]
- Fig 36: Bodysherds with a hollow boss which has been outlined in red paint and a pushed out boss with stamped decoration. Fabric: LNV WH. Layer [30]
- Fig 37: Burnt mortarium flange with a broken double-line stamp] IDIAC/] III-IT This is probably from the workshop of Vediacus. His kilns have not been found but the distribution suggests a source in the Upper Nene Valley. Date: AD 140-80 (Hartley 1984, 289, no 99). Subsoil
- Fig 38.1: Small handmade dish in a grey micaceous, sandy ware. Fabric: GYMIC. Ditch 34 (33)
- Fig 38.2: Almost complete poppyhead beaker with faintly applied diamond-shaped panels of barbotine dot decoration. Fabric: LNV RE. Context (503)
- Fig 38.3: Flared rim, ring-necked flagon; single-handled. Fabric VER WH. Ditch 576 (571)
- Fig 38.4: Deep bowl with a beaded rim. Slightly pitted on the lower interior surface? from use. Fabric: OXGR (slightly sandy version). Fill (646)
- Fig 38.5: Flanged mortarium (Gillam 238) with the stamp GRATINVS to the right of the spout. AD 130-50. Fabric: MAH WH. Layer (692)
- Fig 38.6: Lid-seated jar with a sooted exterior. Fabric: BWHGR. Layer (693)
- Fig 38.7: Grey colour-coated box with rows of infilled chevrons. Fabric: LNV CC. Pit 450 (449)
- Fig 38.8: Red-brown colour-coated box with roulette decoration. Fabric: LNV CC. pit 450 (449)
- Fig 38.9: Bowl imitating Drag 30 decorated with lines of rouletting. Fabric: LONFW. Subsoil (539)
- Fig 38.10: Fragment of a flat circular disk with a blackened edge. Fabric BOXGR. Subsoil (540)
- Fig 38.11: Mortarium as Gillam 238. Fabric: MAH WH. Subsoil (540)



Hammer-head flanged mortarium, with red painted decoration (scale 20mm) Fig 32



Bowl with red-painted trident motif (scale 20mm) Fig 33



Trefoil mouthed, handled jug (scale 20mm) Fig 34



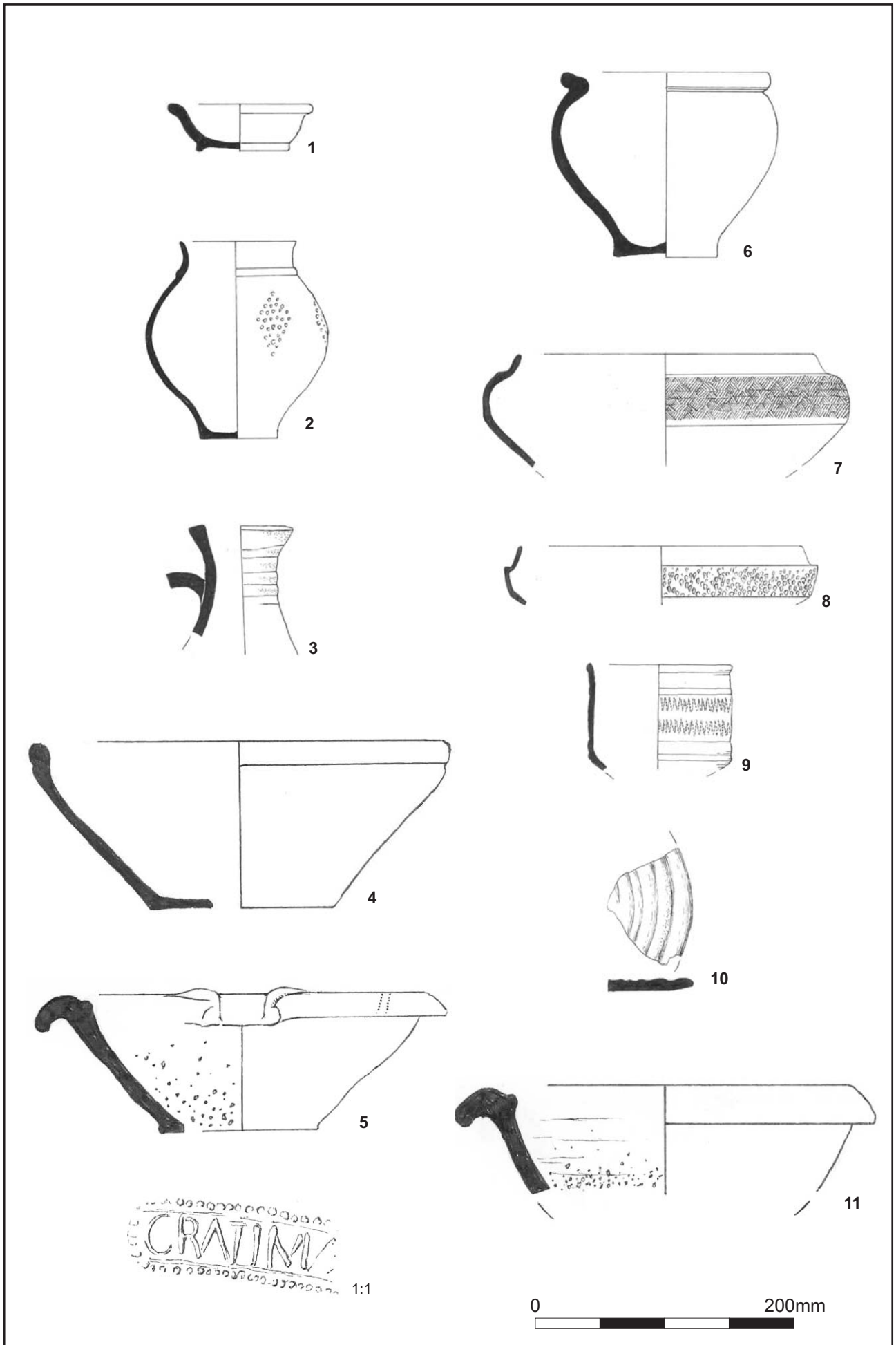
Mortarium with rivet repair hole through the wall (scale 20mm) Fig 35



Bodysherds with a hollow boss which has been outlined in red paint (left) and a pushed-out boss with stamped decoration (right) (scale 20mm) Fig 36



Burnt mortarium flange, with stamp, probably Vediacus (scale 10mm) Fig 37



Scale 1:4 (A4)

The Roman pottery, 1-11 Fig 38

4.4 Other finds by Tora Hylton, Ian Meadows and Donald Mackreth

In total 208 individual or group recorded small finds were recovered, providing a total number of 261 individual objects in eight material types (Table 8). Of that number 225 (83%) were recovered from stratified deposits, while the remaining 36 (17%) were recovered from subsoil deposits or are unstratified.

The majority of individual or group recorded Roman finds, 162, were recovered from stratified deposits, in addition 11 objects which stylistically date to the Roman period were recovered from subsoil and 11 are unstratified.

There are two distinct concentrations of finds, in the occupation/demolition deposits which overlay the footprint of Buildings 1-3 to the north and in the vicinity of the corn drier to the south. The assemblage is dominated by nails, which make up 42.9% of the total number. Other finds represented include a range of personal and household items, which together with those recovered previously (Tingle 2008), provide an insight into the nature of occupation (Table 9). Excepting the presence of the marble statuette, which is of intrinsic importance, the assemblage may be compared to assemblages recovered from other rural villa sites in the east Midlands.

Table 8: Other Roman finds quantified by material type

Material	Total
Silver	1
Copper alloy (ex. coins)	49
Iron objects	110
Lead/lead alloy	17
Shale	1
Stone	1
Glass	25
Ceramic	1
Bone/antler	3
Total	208

Table 9: Other Roman finds quantified by functional category

Functional category	Number of finds
Personal possessions	
Costume and jewellery (inc. brooches)	20
Toiletry/surgical equipment	4
Hob nails	10
Equipment and furnishings	
<i>Building equipment</i>	
General ironwork	2
Nails	112
Household equipment	6
Knives	2
Vessel glass	25
Miscellaneous and unidentified	
Copper alloy	20
Iron	28
Lead	11
Stone	1
Bone	2

Personal possessions

by Tora Hylton

This category comprises small portable items which would have formed part of a person's attire, either worn as jewellery, as part of their dress, or toiletry items held by an individual for personal use. The finds include seven brooches (reported on by Donald Mackreth, below), two armlets, a bone pin, a range of beads and a small group of items for toilet/pharmaceutical use.

Armlets

There are two copper alloy armlets which represent types commonly found on Roman settlement sites. A complete penannular armlet was recovered from the substantial late Iron Age ditch, near to the ford. It is cast, with a D-shaped cross-section and the ends terminate in stylised serpent's heads (Fig 39.1). The physical features are emphasised by motifs on the head and there is a flat narrow border around the head. The hoop is ornamented with marginal grooves and the space between is partially decorated with a punched motif. The armlet displays signs of excessive wear and measures 65mm in diameter, indicating that it would have been for use by an adult. Serpents are common symbols in the Roman period; they signify health, healing, rebirth and the spirits departed (Johns 1998, 2000); a 2nd-3rd century date for similar armlets has been suggested by Johns (1996, 334).

Part of an armlet with a flat rectangular cross-section 'ribbon-strip type' was recovered from demolition deposits overlying Buildings 2/3. It is decorated with close-set punched ring-and-dot motifs and it displays similarities to an example from Butt Road Cemetery (Crummy 1983, fig 45, 1708), which dates to c320-c450 AD.

Pins

Part of a bone pin was located in the fill of the pond west of Building 3. It comprises a circular-sectioned shank surmounted by a conical head with three turned grooves below. Typologically it displays similarities to Crummy's Type 2 (1983, fig 18, 162), a form pre dating c 200AD. A similar pin was recovered previously from Stanion Villa (Tingle 2008, 118).

Beads

Eight beads came from stratified Roman deposits; one made from shale/jet and seven made from glass. The shale/jet bead was under the floor of Building 3. Although incomplete, one side has sheared off, what remains suggest that it would have been biconical in shape. The exterior surface of the bead is extremely abraded and it lacks the lustre and polish common with beads manufactured from jet, therefore it is probably shale.

The glass beads, presumably for use on necklaces and armlets, are in a variety of forms: gadrooned (melon), annular, biconical, oblate and cylinder, in a number of colours; dark blue, natural/green and red in translucent glass; light blue in opaque glass. Four of the beads came from the corridor of Building 3, and one each from the well east of Roundhouse 4, the well/spring and the yard surface near Roundhouse 4.

Mounts

Just one decorative strap-mount was recovered, from topsoil deposits. The mount is pelta-shaped with a curved profile and two integral studs protrude from the underside (Fig 39.2). Mounts of this type are not uncommon, they date to the 2nd/3rd centuries and similar examples have been recovered from Richborough (Wilson 1968, plate XXXVII, 128, 129; plate XXXVIII, 130).

Hobnails

There are 10 shoe hobnails. Typologically they equate to Mannings Type 10 (1985, fig 32) with domed heads. Some have clenched terminals indicating that they have been used.

Toiletry equipment

There is a small group of items which are for toilet or pharmaceutical use. These include a pair of tweezers, two toilet spoons and a scoop-probe.

The tweezers are unstratified and they would have been used for the removal of unwanted facial and body hair (Crummy 1983, 58). They are manufactured from a copper alloy strip folded in half lengthways. The bow is pronounced and would have effectively held the tension, the arms are parallel-sided (length c 65mm, width 6mm) and curve out towards the blades which are chamfered.

Two complete toilet spoons (*ligula*) were recovered from deposits associated with Building 3, one from the floor and one from demolition deposits overlying the footprint of the building. Such items are common finds on Roman sites, for similar examples see those recovered from Stonea (Jackson and Potter 1996, fig 109, 46-52).

The scoop-probe (*cyathiscomele*) was recovered from a gully south of Building 2 (Fig 39.3). Although not complete, most of the scoop is missing. Similar examples have been recorded from Colchester, Essex (Crummy 1983, fig 63) and Stonea, Cambridgeshire (Jackson and Potter 1996, fig 109, 44).

The ligulae and scoop-probes are multi-purpose instruments which could have had any number of uses from extracting cosmetics from flasks and small pots (Crummy 1983, 590), and applying cosmetics and ointments to pharmaceutical and medical uses Jackson and Potter 1986, 157-158.

Illustrated finds (Fig 39)

- 1 Penannular armllet, copper alloy, 65mm diameter, 2nd-3rd centuries. Late Iron Age ditch 509 (519)
- 2 Decorative strap-mount, pelta-shaped, copper alloy, 2nd/3rd centuries. Topsoil
- 3 Scoop-probe, copper alloy. Gully 431 (430)

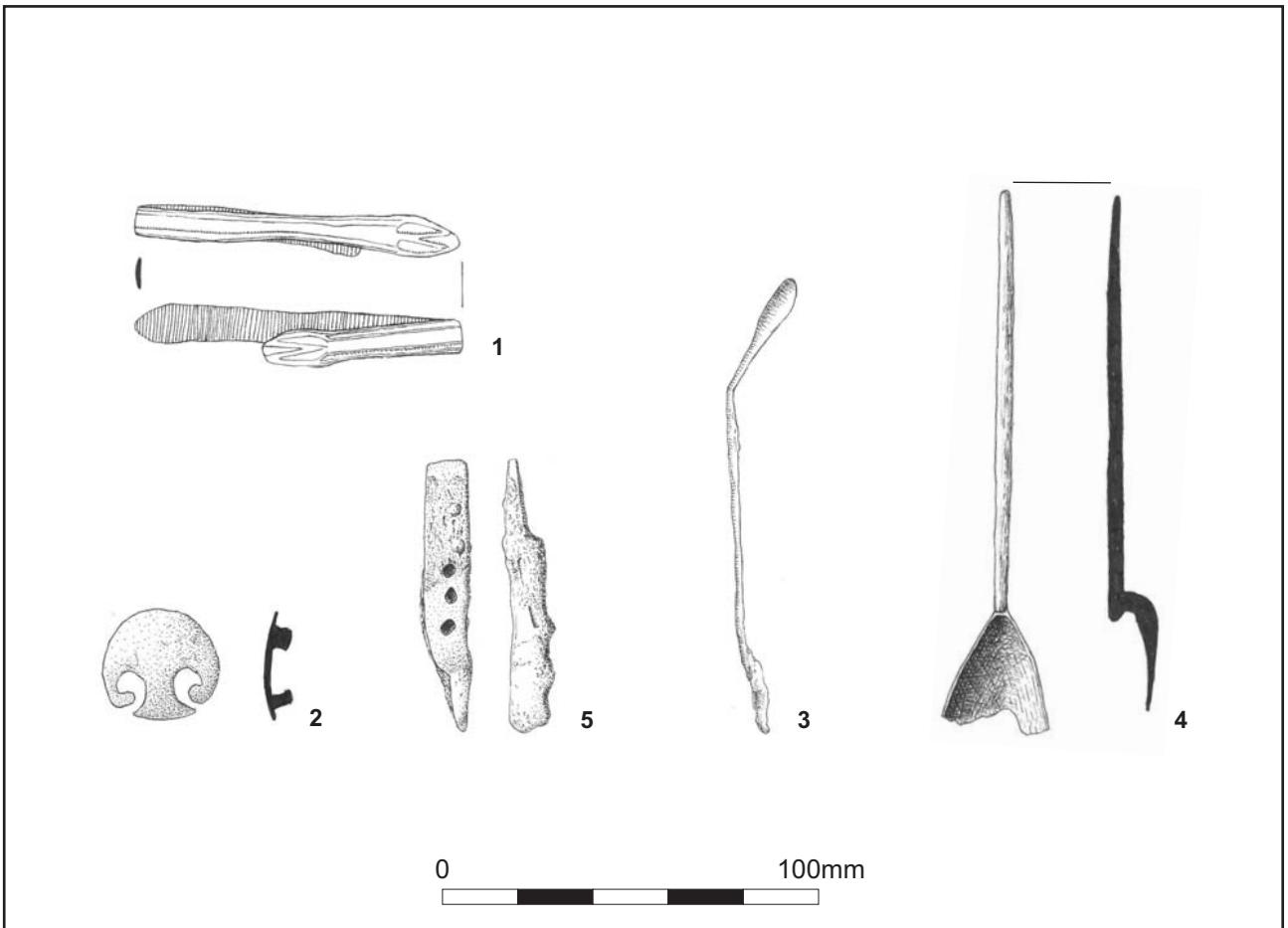
Equipment and furnishings

With the exception of a large number of nails, there are only two items which may have formed part of or been attached to the villa building. These include a loop-headed strap and a staple. The loop-headed strap was recovered from the floor of Building 3. Such items would have been used for attaching rings and fittings. For similar examples, see Manning 1985 (plate 61, R39-46).

Nails

A total of 112 nails were recovered, 105 came from archaeological deposits, while seven came from subsoil. Of the nails recovered from archaeological features, 36% were recovered from deposits associated with Buildings 1, 2 and 3. The remaining 64% were recovered from ditches, pits, postholes and other features.

Forty-nine nails (44%) are of indeterminate form, with heads missing etc, the remaining 63 nails retain their heads. Where possible the nails have been classified according to Mannings Typology (1985, fig 32). The majority of the identifiable nail types are represented by Type 1b (77%) which have a flat sub-circular head and were presumably used for furniture or light structural fixings. Other types include large structural nails with triangular-shaped heads (Type 2) possibly for securing major timbers; nails with T-shaped heads (Type 3) and nails lacking a distinct head (Type 5). In addition there is one example of a nail with a large domed head measuring c 15mm in diameter; nails of this type would have been used for upholstery (Type 8).



Scale 1:4 (A4)

The Roman finds, 1-4 Fig 39

Household equipment

There is a small collection of artefacts that would have been for domestic or household use. They include a spoon, a tang/attachment plate, a key, a lock bolt, and 25 pieces of vessel glass.

A complete but damaged pewter spoon was recovered from the well/spring south of Building 3 (Fig 39.4). A similar example manufactured from silver is known from Colchester (Crummy 1983, fig 73, 2014). Spoons of this type first came into use in the 2nd century and continued in use beyond the 4th century (Lloyd-Morgan 2000, 349).

Illustrated finds (Fig 39)

4 Pewter spoon, 2nd century to 4th centuries. Well/spring 666

A square-sectioned tang with an integral triangular attachment plate suitable for a metal bowl/pan and part of a possible handle from a padlock key (cf Manning 1985, plate 43, O74). was recovered from demolition deposits overlying Buildings 2/3.

A complete copper alloy lock bolt from a slide lock was recovered from under the floor of Building 2. A similar example with crudely executed circular perforations has been recorded at Fishbourne (Cunliffe 1971, fig 50, 137).

Finally a copper alloy stud and a copper alloy nail were recovered from the corridor of Building 3. Both have circular convex heads, designed to protrude beyond the surface and therefore they would probably have been used for decorative purposes.

Glass

There are 25 fragments of Roman vessel glass, recovered from 14 individual deposits. The three colours are blue-green, yellow-brown and colourless with a greenish tinge. Fragments of blue-green glass (x 18) which date from the 1st to 3rd centuries dominate the assemblage. Identifiable pieces include bottle rims and bases datable to the 1st - 2nd centuries (Price and Cottam 1998), and the rim of a plain cylindrical cup and two body sherds decorated with a single horizontal trail, a style of decoration used from the 2nd-4th centuries.

Miscellaneous and unidentified

Tools

A range of tools reflecting textile and possibly leather working have been recovered previously from Stanion Villa. This time the tools include two blade fragments from single-edged knives from demolition deposits overlying Buildings 2/3, a rubbing stone from silting deposits above the ford and a triangular-shaped stone utilised as a rubbing stone from the corridor in Building 3. In addition, a worked sheep metatarsal (pers com Karen Deighton), was recovered from Ditch 134. The bone displays signs of extensive wear, the surfaces are highly polished and at either end (c 45mm apart) there are four marked grooves, one on each face. Similar examples have been recovered from the late Iron Age and Roman site at Quinton, Northamptonshire (Friendship-Taylor 1979, fig 70, 555-557) and Dr J P Wild has postulated that they may have been used during the manufacture of textiles (ibid 1979, 154).

Lead

Eleven pieces of lead were recovered, nine from Roman contexts, two unstratified. Over 1kg of amorphous fragments was recovered from the fill of posthole within the confines of Building 1, together with numerous pieces of painted wall plaster (1,400g).

Fragments of lead sheeting (offcuts) were recovered from the buried soil near Building 2 and pit within Building 3. Finally there are two weights, a biconical weight located in silt deposits above the ford, and a semicircular weight with a flat top and U-shaped iron suspension loop.

Brooches by Donald Mackreth (as discussed with Ian Meadows)

- SF29 (u/s) A fragment of the head of a trumpet brooch, of possibly poor grade silver. It has been further decorated with two silver studs one of which is now broken/missing. This type of brooch has a west midland distribution and dates to the first half of the 2nd century (DFM pers comm).
- SF36 (u/s) A small Colchester derivative type brooch complete with pin. A common type with a date range of 70-100 AD (DFM pers comm).
- SF41 (u/s) A Colchester derivative brooch fragment comprising one wing and part of the bow. The wing preserves part of a simulated spring and rear hook. This type of brooch has a distribution of Norfolk and the western edge of the fens. 60-80/90 AD (DFM pers comm).
- SF114 (30) An enamelled plate brooch, the surface comprising an outer raised edge around a blue enamelled zone, a further raised section and a central oval. It is unclear whether there are S-stamps on the inner margin. This piece would benefit from cleaning to facilitate closer dating. If there were S-stamps it would belong to the later 2nd century to early 3rd century (DFM pers comm).
- SF118 (127) An Almgren 101 British type preserving none of the original repousse. Late 2nd to early 3rd century in date (DFM pers comm).
- SF173 (175) A Colchester derivative (Harlow type) brooch 50-70/80 AD.
- SF239 (u/s) A headstud type brooch from the first half of the 2nd century.

Coin mould by Ian Meadows

A fragment of a coin mould (SF262) came from the terminal of a curvilinear ditch [437] near the approach to the ford (Fig 40).

This single valve from a two-part mould for a coin survived as three joining pieces representing nearly the complete coin. The small missing portion comprising 10mm of the circumference indicated the position of the casting gate. The piece comprises fine white sandy clay material shaped into a rough disc 24.5mm across and between 5-3mm thick. There is an impression of a coin in both faces surrounded by a flat raised border 3mm wide and about 0.5mm high.

One impression is clearly the obverse of a coin displaying a radiate crowned head, looking left on the mould, around which a few letters are visible. The only legible group comprise]TRICV[which could only come from coins of Tetricus, in this case Tetricus I (270-3). Coins of Tetricus are frequently found as forgeries both cast from original issues and as crude copies.

The other side of the mould is clearly the reverse of a coin displaying a single centrally positioned standing figure but, unfortunately, it was too poorly defined to identify who/what it was a representation of. None of the reverse legend could be discerned. Moulds of this type are known from a number of sites including Edington in Somerset, Wroxeter in Shropshire and Castor in Cambridgeshire.



The coin mould (Scale 10mm) Fig 40

The Roman coins by Ian Meadows

The previous excavations of the western part of the site produced fourteen Roman coins, the current excavations produced a further 83 coins, one of which was a worn post-medieval flan, and many were recovered unstratified (Appendix 2). It was striking as a group how corroded and illegible the coins were, perhaps as a consequence of the high level of moisture present in the soils as reflected by the incidence of springs. Of the 83, only 29 (35%) were sufficiently well preserved to allow close dating and only 27 examples (32%) could be identified down to a specific emperor. The eight coins for which a mint could be identified were produced at London, Cyzicus, Trier, Ticinum, Siscia and Rome.

The assemblage contained examples of coins from the late 1st century to the 3rd quarter of the 4th century with 61 (73%) dating to the 3rd or 4th centuries. As is often the case the early coins were generally very worn, suggesting a period of circulation before their loss and so cannot be used to identify precise dates. The later coins with their smaller size and probably shorter circulation life may be of more use. All the coins, with two exceptions, a base silver Antoninianus of Gallienus (253-68 AD) and a Denarius of Domitian (81-96 AD), were copper alloy.

The coins, if used as an indicator of presence on or near the site, suggest that low level activity was present in the 2nd century with a peak of activity from the mid 3rd century to the later 4th century, with a possible hiatus in the late 3rd century.

Clearly, the presence of coins suggests coin use amongst the occupants of the villa and the identification of a coin mould suggests that they were also engaged in producing unofficial coins, perhaps to satisfy a shortfall in the available coin. No products of the mould were identified in the recovered coin assemblage.

4.5 Marble statuette by Martin Henig

The statuette of a nude female figure was carved in fine grained, crystalline marble, white with a bluish tinge which is typical of stone from the Carrara quarries (Dr Susan Walker of the Ashmolean Museum pers comm). Only a part of the figure is preserved, consisting of the torso up to the navel and down to the pudenda. The legs have been sheared off but scars remain showing that while the left thigh was raised, the right was lowered. The subject was evidently crouching, her lower right leg bent back under the thigh. Her buttocks are prominent and well formed with subtly concave cheeks on the side, as a result of muscular action supporting her body. Apart from a very small modern scar all the breaks are old and at waist level especially the break shows signs of exposure to the elements. It is clear that the statuette was highly polished but again

exposure may have removed some of the shine. The breakage took place in Antiquity and from its nature it cannot be ruled out that this was the result of possibly Christian iconoclasm (see below).



The marble statuette, (scale 50mm), and probable similar pose to the Lely Venus (Wikipedia) Fig 41

Dimensions: Height of fragment 70mm. Width at widest point 80mm; width at waist 70mm; Depth at waist 45mm; depth at buttocks 60mm.

It is clear that the figure represented Venus squatting and perhaps washing herself, a type which has been attributed to *Doidalsas* who worked in the 3rd century BC, on the uncertain basis of a reference in Pliny's *Natural History* to a statue of Venus bathing by an artist of that name in the *Porticus Octaviae* (NH XXXVI, 35). Scholars are divided as to whether the original of work represented by the Stanion fragment is by this artist (who may have been Bithynian) or by another, perhaps Pergamene, sculptor (Robertson 1975, 556-7, plate 178a).

The type was popular in Antiquity and famous in the Renaissance and beyond. Amongst examples of various sizes are examples in the Uffizi, Florence, the Museo Nazionale Romano, Rome, the Prado, Madrid and the Louvre, Paris, the last from the *frigidarium* of the baths at Saint-Romain-en-Gal (Haskell and Penny 1975, 321-3 ill. 171; Andrae 2001, 81-82, Abb.40, plates. 32, 33). These measure respectively 780mm, 1070mm, 640mm and 1390mm. By contrast the Stanion statuette when complete can be estimated to have been no more than 260mm in height, and is clearly related to other miniature sculptures in marble which graced private residences and were sometimes also presented to religious establishments.

In Britain figurines of Bacchus have been found at the Spoonley Wood villa, Gloucestershire, standing 420mm in height. Nearer in size to the Stanion figure is the Bacchus group from the late (probably post Mithraic) phase at the Walbrook mithraeum at 343mm and an earlier seated Mercury figure from the mithraeum at 254mm (Henig 1993, no 1, plate 1; Shepherd 1998, 189-191, no X59, figs 221, 222 and 169-70, figs 188, 189). The last two and perhaps all three are of Carrara marble. Other marble figurines are attested by fragments from villas at Woodchester in Gloucestershire and Bancroft villa, Milton Keynes amongst other places (Henig 1993, 3-4, nos 2, 4 and 6, plates 2, 3).

Such imports into Britain could have come in as early as the 2nd or 3rd centuries, evidently so in the case of the Mercury statuette from the Walbrook mithraeum, but others are later in date or, if earlier, were employed in 4th-century villas to express the owner's classical education, his culture or even his pagan faith (Stirling 2005). The

Walbrook Bacchus group is probably 4th century in date as is, for example, the group of Venus with erotes and a triton from the late Roman villa at Petit Corbin near St Georges-de-Montagne, Aquitaine, a villa which some have linked to Ausonius' villa *Lucaniaca* (Gazda 1981, 125-178; Stirling 2005, 34 fig.7), or the small statue of Aphrodite (Venus) removing her sandal from the villa of Sidi Bishr, east of Alexandria in Egypt (Hannestad 1994 123-126; Stirling 2005, 100-101 fig 49).

Not enough remains to date the Stanion statuette. The treatment of the eyes or hair might well have been informative. But although it was unstratified, the site certainly saw considerable activity in Late Antiquity as attested by coins, and this is by far the most likely period for it to have been admired and perhaps venerated. Most sculpture in Britain is of native stone, limestone in Northamptonshire, and a work in Italian marble, even a small one would have been both exotic and an expensive rarity. The owner was very likely aware that he or she owned a version of a famous masterpiece from the Greek past. The statuette's subject matter, Venus at her toilet, would have rendered it suitable for the baths if the villa had a bath-suite, but it could equally have graced a niche or formed the centre-piece of a house-shrine. The breaks look fairly deliberate and it is tempting to think that perhaps even as late as the 390s it was broken up as a result of Christian iconoclasm at a time when Christianity was perhaps making headway in Britain. Although, from the official point of view, such statuary as this would have been regarded as harmless save when it became an object of religious veneration (Stirling 2005, 158-163), that would not have precluded a villa owner from discarding an object which for him (or her) had come to be regarded as hateful or at least as a redundant idol.

4.6 Millstones, querns and mortar by Andy Chapman

The site has produced a small collection of stones used for milling. Four of these are in Millstone Grit, including both millstones and querns, while a further two are in finer-grained sandstone that may also be Millstone Grit. There is a single stone in Old Red Sandstone from the Forest of Dean (Table 10).

There is part of an upper millstone (SF186) in a coarse-grained Millstone Grit. Only the central part survives of a stone in excess of 85mm thick with a central eye 120mm in diameter (Fig 42). The eye is surrounded by a collar, which is only slightly raised with respect to the rest of the stone, but accentuated by a broad encircling groove, 260-310mm diameter. The upper surface of the stone has sparse broad dimples, while the grinding surface has been lost, possibly due to lamination along a thin bed of coarser grit. The stone was in excess of 600mm diameter.

There are two fragments in a finer sandstone, but possibly also Millstone Grit (SF187 and 188), which are from stones up to 120mm thick, with furrowed grinding surfaces (Fig 43). The furrows are spaced at 20mm and 24mm intervals, centre-to-centre. Both stones have diameters of 600-700mm. The fourth fragment of millstone (SF207) is from a broken-up bottom stone at least 750mm diameter and 163mm thick. The grinding surface comprises concentric grooves at 15mm centre-to-centre.

Three of these millstones are not particularly large as, at 600-700mm, they are on the border between querns and millstones in terms of diameter, but the thicknesses, 85mm and 120mm, indicate that they are small millstones rather than large querns. Stones of these diameters and thicknesses would not have been hand rotated, and they are most probably from an animal-powered mill. A further millstone, with concentric grooving on the grinding surface is at least 750mm in diameter and 163mm thick, and appears to come from a larger powered stone.

There is also part of a flat-topped upper stone, (SF308) from a quern in a fine-grained Millstone Grit. This stone is 420mm in diameter, with a large eye, 75mm diameter, which is surrounded by a recessed collar, 300mm wide; although the eye/collar and the

circumference are some way off being concentric. The concave grinding surface is worn smooth and tapers from 38mm at the circumference to only 8mm thick at the eye. There is also part of a bottom stone, (SF310) from a rotary quern of slightly smaller diameter, 360mm, also in Millstone Grit. Part of a small bi-conical spindle socket survives. The grinding surface is not heavily worn and retains dimpled tooling.

There is a near complete lower stone (SF273) in Old Red Sandstone from the Forest of Dean (Fig 44). This particular stone is very fine-grained and hard, with only sparse quartz pebbles scattered through the matrix, typically 10-15mm diameter and none larger than 25mm diameter (Shaffrey 2006). This stone had been damaged along part of the circumference in antiquity, and was split into three parts during excavation. The stone is 400mm in diameter and has a bi-conical spindle socket, 16-26mm diameter. The inner part of the domed grinding surface is worn smooth, while dimples survive on the outer part.

Table 10: Geologies and dimensions of querns and millstones

Fill/cut (SF No.)	Geology	Diameter % of stone	Thickness (mm)	comments
45, layer east of 25 (186)	Coarse sandstone (Millstone Grit)	Upper stone >600mm, 15%	>85mm Eye: 120mm diam	Collar surface lost Fig 42
197/200 (187)	Fine sandstone (Millstone Grit?)	Upper stone 600-700mm <5%	>40mm	Fragment furrowed
199/200 (188)	Fine sandstone (Millstone Grit?)	Upper stone 600-700mm, 5%	120mm (near circumference)	furrowed surface, Fig 43
30, layer (207)	Medium sandstone (Millstone Grit)	>750mm	163mm	Concentric grooves
620/ (308)	Medium sandstone (Millstone Grit)	Upper stone 420mm, 20%	8-38mm Eye: 75mm diam	Smooth surface
604, layer (310)	Medium sandstone (Millstone Grit)	Lower stone 360mm, 30%	37-57mm	Smooth surface
157, road (273)	Fine sandstone (Old Red Sandstone, Forest of Dean)	Lower stone 400mm, 90%	15—70mm Spindle socket 28mm diam	Smooth/ Dimpled, Fig 44



Fragment of upper millstone (SF186), showing the central eye and collar (Scale 50mm) Fig 42



Fragment of millstone (SF188), showing the furrowed grinding surface (Scale 50mm) Fig 43



Rotary quern bottom stone in Old Red Sandstone (SF273) (Scale 50mm) Fig 44

Discussion

The small collection of stones from Stanion villa include three examples perhaps 700mm in diameter and up to 120mm thick, which attests to the presence of a powered mill. Most of the millstones are only slightly larger than the querns but there is part of a single larger stone, in excess of 750mm diameter and 163mm thick. An animal-powered mill may have been sufficient to operate all of these, but given the nearby stream the presence of a watermill cannot be excluded. Hand-turned flat-topped rotary querns, typical of the Roman period (Watts 2002, 33-38), were also used. Millstone Grit is the most common stone type, and was used both for millstones and querns, while there was at least one quern in Old Red Sandstone from the Forest of Dean.

A stone mortar

There is about 15% of a shallow stone mortar in fine-grained sandstone, probably local ironstone, from the demolition layer over Buildings 2 and 3 (SF50). It was formed on a roughly-squared slab, up to 80mm thick, of which one corner survives. The shallow bowl of the mortar is c450mm in diameter, meeting the edges of the block, and up to c50mm deep, but the centre has been lost. The grinding surface is covered with dense shallow dimples, and is worn through use.

4.7 The metalworking debris by Andy Chapman

A total of 19.92kg of metalworking debris was recovered from 27 contexts. Nearly half of the contexts (13, 48%) produced less than 100g of material, typically just one or two individual pieces of debris derived from secondary deposition. A further eight contexts contained quantities of up to 750g and five contexts contained just over 1kg of material, but these larger groups too are still a product of secondary deposition. Three contexts (629, 643 and 657) produced good primary deposits of material, a total of 14.3kg (72% of the total by weight).

The nature of the debris is consistent throughout in comprising mixed deposits of undiagnostic ferrous slag, probable furnace slags and fragments of tap slag. The overall composition can be characterised by describing the three largest groups.

The fill of Roundhouse 1 ring gully, lying beneath Building 3, produced 1.90kg of material comprising irregular lumps of furnace slag and a small amount of tap slag. The consistent appearance of the group suggests that it might be the debris derived from cleaning out the interior of a smelting furnace, perhaps before reuse.

The fill of a circular pit, [645] south-west of Roundhouse 4 produced 1.88kg of material, the bulk of which comprises a complete furnace bottom, circular, 150mm in diameter by up to 40mm thick, weighing 1.45kg (Fig 45). The under surface is smooth and convex, 110mm diameter at the base, and the upper surface is concave. This is likely to derive from the cleaning out of a smelting furnace for reuse, the under surface was still increasing in diameter, indicating a furnace diameter of at least 200mm.



Complete furnace bottom from context (643) (Scale 50mm) Fig 45

By far the largest group is the 8.5kg of furnace slag and tap slag from the primary fill of the late Iron Age ditch, [659] overlain by Roundhouse 4. The group includes smaller irregular fragments of furnace slag and a near complete furnace bottom, 170mm diameter by 50mm thick, with some charcoal fuel impressions on the under surface. There is also a large dense block of tap slag and smaller pieces of tap slag. Of particular interest are two joined cylinders of tap slag, 15-20mm diameter, which had accumulated within successive tapping holes at the base of a furnace (Fig 46). This group of material is consistent with it deriving from the dismantling of a furnace and the associated tapping pit, perhaps before rebuilding.



Tap slag from the tapping holes of a smelting furnace (Scale 50mm) Fig 46

The ironworking debris recovered from Stanion villa indicates that iron smelting was carried out on the site at no great distance from the excavated area. A few primary deposits of furnace slag and tap slag derive from the cleaning out and/or the dismantling of what were probably cylindrical shaft furnaces, at least 200mm in diameter. The other deposits are a background scatter of material derived from secondary deposition, and are indicative of the quantities that would have been lying about in the vicinity of the villa building. Smelting was probably being carried out on an industrial scale, and larger primary deposits of slag are likely to lie nearby, beyond the excavated area. The quantities of slag recovered from a large quarry pit, prior to road construction in 1984 to the north-east of the villa, are probably associated with this activity (Tingle 2008, 99-100). In the excavation of the western end of the villa in 2002, 4.0kg of metalworking debris was recovered as secondary deposits, and showed a similar range to the material found in 2010 (Chapman 2008).

While it is possible that some of the undiagnostic slags derived from smithing hearths, there is no specific evidence to indicate that secondary smithing was being carried out on the site, in particular, no smithing hearth-bottoms have been identified within the assemblage.

Of the three primary deposits, the ring ditch lay beneath the easternmost building, Building 3, while the pit and ditch lie in the north-eastern corner of the excavated area, with the ditch pre-dating the circular stone structure. These contexts are all dated to the 1st-2nd centuries AD, pre-dating the villa buildings. They indicate that the focus of activity lies within the eastern part of the site, with further evidence lying unexcavated to the immediate north of the excavated area.

A copper-alloy working crucible

Part of the rim and body of a circular crucible (SF67) was recovered from a layer over the metallurgy of the ford. The fabric is light grey and hard, up to 17mm thick, with the inner and outer surfaces, to a depth of 4mm, laminating with respect to the core. There is a cluster of green copper oxide within the fabric, and inner surface of the crucible is iron-stained. The crucible has a simple rounded rim, slightly thinner than the body, with an internal diameter of 120mm. It was a simple open bowl form, perhaps 50mm deep, but the bottom is missing. While the shape is similar to later medieval crucibles, the size would be appropriate for a Roman date (EH 2001, fig 22). It indicates that the casting of small copper-alloy objects was being undertaken.

4.8 Architectural stone by Ian Meadows

A total of 22 pieces of building stone were recovered from ten contexts.

Two pieces of cornice or drip mould came from the fill (84) of the flue of malting oven 25. The first comprises five joining and one loose piece of fossiliferous oolitic limestone. The pieces were all scorched pink except for the loose piece, which was scorched grey. The loose piece (105x70x80mm) preserved part of the moulding. The larger pieces were 110mm thick and flat on both surfaces; one, the possible upper face, was weathered smoother and the other, the possible lower face, still bore fresh scutch chisel marks. The same or similar tool had been used to dress the moulding which comprised a fillet 40mm deep projecting 20mm beyond the top of a cavetto 50mm deep and 40mm tall which terminated in a simple square section cut back (Fig 47). The piece as a whole, 500mm long, probably formed part of a cornice or drip mould.



Cornice or drip mould (Scale 250mm) Fig 47

The second comprised six non-joining pieces of scorched fossiliferous limestone. Most preserve part of a single weathered dressed face and one, the largest piece, preserves part of a moulding comprising a 25mm thick fillet which projected 15mm beyond the upper edge of a cavetto which extended at least 60mm backwards. The largest piece is 200 x 160mm and 105mm thick.

Two joining fragments of fossiliferous limestone were found in a ditch [286] near the oven 25 (Fig 48). The pieces came from a perforated slab at least 325 x 250mm and up to 80mm thick, unfortunately no complete side survived. Three complete and three partial holes through the slab were present, each was a different size and there was no evidence they had been arranged in straight rows. The holes were about 50mm across in the upper surface tapering down to 30-40mm. Their irregular shapes indicated they had been chiselled out, not drilled, suggesting this is a vernacular stone drain cover.



The perforated limestone drain cover (Scale 50mm)

Fig 48

A single piece of fossiliferous oolitic limestone 160x250mm and up to 70mm thick had been used as packing in one of the aisled barn postholes. Both of the long sides were dressed to form a near flat face and a simple moulding along one of the narrow ends. The moulding comprises a fillet 30mm thick above a cavetto 70mm deep and 40mm.

There was a possible pivot stone amongst the demolition debris over Building 3, comprising an irregular sub-rectangular block of fossiliferous limestone 185x150mm and 100mm thick. Two of the faces had been crudely dressed flat. In the upper face an oval trough 100x85mm and 50mm deep was present. Whilst possibly a pivot hole its irregular shape and uneven surface would appear to be at variance with such a usage.

An *in situ* pivot was found in Building 3, a short tapering cylinder of fossiliferous limestone 170x120mm at the base and 160mm tall. In the upper face, which was broken and scorched, a small socket 55mm in diameter and 35mm deep was present. This small socket would have been the pivot and part of the inner face of the socket was worn smooth through use. The small size of the socket might suggest it was an internal door rather than a heavy external door.

Two pieces of worked stone were found in association with the spring/pool south of Building 3. The first comprises two joining and two non-joining fragments of fossiliferous oolitic limestone. The two joining pieces have a D-shaped cross section, the curved surface of which is dressed fully whilst the flat surface is only crudely finished. The piece is 90mm thick and 140mm wide. The curved surface is asymmetrical and slightly undercut along one edge. It is possible this piece was a capping stone or part of a pilaster.

A coarsely dressed column of fossiliferous limestone 0.90m tall was broken at one end and preserved a 100mm lap joint at the other. The piece has a subcircular cross-section that in places becomes increasingly sub square. It is probable the piece was formerly a square lintel that had been re-used as a column and re-dressed at that time with a chisel/adze. It had subsequently been used as part of the platform in front of the spring/pool. At the lap joint end the column is 250mm wide but at the broken end it narrows to 200x190mm.

A right-angled corner was all that survived of a sarcophagus or trough of fossiliferous limestone found in deposits overlying the road [637]. The piece is 360mm long, 290mm wide and 160mm deep with the two sides each between 70-75mm thick. The trough is flat-bottomed and up to 120mm deep, the underside of the piece is quite rounded suggesting the piece may have been moved about, indicating it had been a trough rather than a sarcophagus which would normally have had a flat base.

4.9 Building materials by Pat Chapman

Ceramic tiles

The assemblage of 358 tile sherds weighs 51.5kg (Table 11). These are predominantly body sherds with 77 diagnostic roof tiles and box flue tiles, with at least 14 recognisable floor/brick tiles, although quite a few fragments of those could come from one tile. This is a primary demolition or collapse deposit, the sherds are often large with some joins. About a third of the assemblage is made in a shellyware fabric, another large group is made from hard fine sandy fabric in shades of orange with a broad grey core, and the remainder from coarse sandy orange, fine silty pale orange and a few overfired sherds.

The 33 flanged *tegula* roof sherds include one almost complete but broken example in a shellyware fabric from the fill of the malting oven stoke pit (Fig 49). It is 390x310mm and 20mm thick. Quite a few *tegula* sherds have cutaways, the notch on the underside of the tile to fit over the tiles underneath. These notches can vary in form, but these are either angled at the bottom before emerging vertically at the top or are just vertical. A typology by Peter Warry (2007) suggests that this type is dateable to between 160-260AD.



Tegula roof tile (scale 80mm) Fig 49

There are no complete curved *imbrex* roof tiles in this group of 27 sherds, however, joining sherds have provided measurements for the curve. One *imbrex* is 65mm wide and 53mm high internally, another is 100mm wide by 65mm high. There are no obvious ridge tiles.

All 17 box flue tile sherds are decorated with a broad comb design, usually curving, including the almost complete rectangular box flue, from the south-east corner of the cistern (Fig 50). This tile is 255mm long, 150mm broad by 90mm wide and 15mm thick and made in a shellyware fabric.

Fragments of 14 floor or brick type tiles survive, 38-45mm thick where measurable. The largest tile, at least 58x60mm is 60mm thick, made from a dark brownish-grey fabric with a cow's hoof print on the top (Karen Deighton pers comm; Fig 51).



Box flue tile from the gully leading to the cistern (scale 80mm) Fig 50



Floor tile with cow's hoofprint (scale 80mm) Fig 51

The fabrics tend to be found in groups, concentrations of either shellyware or sandy wares in particular contexts. There are also particular large groups of tiles in some contexts.

Slate and stone tile

The remains of four slate tiles come from the fill of the stoke pit of the malting oven within the barn. Three are bluish-grey; one sherd might be the bottom edge of a rectangular tile 190mm wide and c 25mm thick; another sherd is an almost complete but broken small rectangle, 220x105mm and c 18mm thick, which could have been used down the edge of the roof; the other sherd is small but has the remnant of a peghole 6mm in diameter. The fourth slate is dark grey with purple highlights and was originally a triangle, c 30mm thick, in excess of 165mm in height, with a base c 280mm wide, a type used along the eaves.

One complete dark grey slate tile was recovered from the well south of Building 3. It is a diamond shape, 390mm long by 315mm wide with a maximum thickness of 30mm. There is no perforation surviving, the only place one could be is on the damaged corner, which would mean the tile would have hung on the short axis. It is possible that it might not have been used as a roofing material, but had some other use.

From the demolition layers in Buildings 2 and 3 were parts of possibly reused tiles including a small fragment of fossiliferous limestone; a small fragment of fine-grained limestone, 8mm thick and small fragments of scorched sandstone, 17mm thick.

Tufa

A lump of probable tufa, 140mm long, roughly triangular in section 100mm by 100mm but sloping to one end, weighing 1.6kg, comes from the fill of a posthole within Building 1. It is unusually heavy, but has frequent tiny holes, clusters of tiny granules and random stones and pebbles in the matrix.

Mortar

Tiny fragments of white mortar, weighing only 17g, comes from the fill of a posthole within Building 1 and the fill of the ring gully of Roundhouse 1.

Table 11: Quantification of ceramic tiles

Context/feature, type	No	Wt (g)	Comment
7 / 8, ditch	1	22	Imbrex
27 / wall	1	202	Tegula
29 / layer	13	1372	Tegula x 3, imbrex
30 / layer	13	780	Body
43 / subsoil	13	510	Body
44 / subsoil	17	186	Body
45 / pit 200	28	4275	Tegula x 3 imbrex
69 / layer	2	416	Body
80 / demolition layer over Building 1	12	1063	Tegula, flue, floor
89 /91, ditch	1	146	Floor
109 / layer	20	1265	Tegula x 3, imbrex x 3 Flue, Floor
117 / flue fill	2	52	Body
124 / ditch 123	9	913	Flue x 3
141 / ash layer in malt oven 25	1	39	Flue
143 / 146, ditch	2	168	Body
150 / 153, ditch	8	1315	Tegula x 2, imbrex
157 / silt in fording area	16	1795	Floor x 2, flue
175 / building 3 corridor	2	387	Flue
181 / 182, ditch	12	525	Flue
189/ subsoil	5	116	Body
196/ layer	3	415	Flue
197/ pit 200	3	669	Body
204/192 oven	1	5066	Floor with cow hoof imp
205/206, pit	4	1575	Imbrex, flue, tegula
209/210, pit	8	1615	Flue, tegula, imbrex x 4, floor
212/213, oven 188	7	3612	Tegula complete
214/188, oven	1	485	Tegula
218/221, cistern	23	4387	Tegula x 4, imbrex x 3, floor
238/240, pit	16	3095	Tegula, flue x 2, imbrex x 4
239/240, pit	5	4878	Flue complete + 1 tegula, imbrex x 2
241/243, pit	6	649	Tegula, imbrex
251/253, pit	1	189	Body
252/252, pit	1	219	Body
334/335, aisled building	1	184	Body
375/376, ditch	2	164	Body
396/398, spring/pool	8	824	Tegula x 2, flue
402 /gully 403	2	396	Imbrex
417 / ditch 418	3	475	Imbrex
419 / ditch 421	3	257	Imbrex
420 / ditch 421	2	166	Tegula
427 / pit 428	3	162	Body
430 / gully 431	1	41	Body
439 / ditch 440	6	824	Imbrex x 2, tegula, floor
441 / ditch 440/442	1	130	Body
467 / beam-slot 468	32	1234	Floor x 3, tegula
506, layer	1	128	Body
571 / ditch 576	2	128	Tegula
580 / driveway gully 558	3	672	Tegula, floor
607 / stone drain 601, building 3	23	2674	Floor, probably just 2 tiles
661, layer	5	410	Floor
672, layer	2	101	Body
674 / hearth 673, stone roundhouse	1	273	Body
Totals	358	51484	

Fired clay

There are only 72 fragments of fired clay, weighing 1283g. These are mainly small pieces scattered in small groups throughout 21 contexts. They are either sub-rounded in a fine silty or sandy clay or irregularly-shaped sandy clay. One piece has a wattle impression, a few fragments are cindery and slightly vesicular from exposure to high temperatures, and a few pieces could be debris lining from a structure. It is probable that some pieces were associated with the iron smelting conducted nearby.

4.10 Tesserae by Tora Hylton

In total c 216 stone and ceramic individual *tessera*, weighing nearly 7.5kg, were recovered from 23 individual deposits. None of the pieces were *in situ*, all were recovered as individual or group finds from the fills of postholes, ditches, miscellaneous features or demolition/rubble deposits overlying Buildings 1 and 3.

The *tesserae* have been cut from pieces of limestone, sandstone and ceramic tile. Diagnostic features surviving on those manufactured from tile indicate that pieces of box flue, *tegula* and *imbrex* were reused. Two sizes of *tessera* are represented, small (c 12x12x9mm) and large (30x30–35x35mm), evidence for the quality of mosaics present. There are 210 large *tesserae*: 92 limestone, 77 tile and 41 burnt limestone/sandstone and one yellow sandstone. The five small *tesserae* comprise three in an off-white limestone and two in tile, their presence alludes to a finer quality of mosaic.

Different material was used for each colour as follows: red: reused ceramic tile and burnt sandstone; blue: off white/ blue/grey limestone; white: limestone; yellow/buff: sandstone.

4.11 Painted wall plaster by Tora Hylton

The excavation produced in excess of 150 small individual fragments of painted wall plaster (total 1,450g) recovered from the fills of two postholes within Building 1. The plaster is extremely fragmentary and none of the pieces measure more than 100mm square. The condition of the plaster is not good, most fragments display signs of excessive abrasion, but its presence, however fragmentary, denotes a structure of some quality. The surface of the plaster is fairly smooth and well finished, although on some fragments striations from the brush strokes are evident.

The predominant colour is grey; other colours include white, maroon, red and pale pink. The decorative schemes represented attest to single coloured expanses in grey and maroon and combinations of colours in the form of bands and stripes (in grey, white and red) and simple maroon coloured brush strokes on a grey background. The backing of the painted wall plaster appears to be generally uniform, with most of the fragments backed with a hard, coarse pink sandy fabric with grit, chalk and ground tile inclusions. The pieces are generally backed with up to c 17mm, although the majority appear to be between 10-12mm of plaster.

4.12 Late Saxon and medieval pottery by Iain Soden

Thirteen sherds of late Saxon and medieval pottery were discovered from demolition rubble south of Building 1 and within Building 3, the upper fill of the ditch of the rectangular enclosure and the fill of a curvilinear ditch near the ford area (Table 12). The wares, weighing in total 264g, were all fragmentary, being secondary depositions, and date from the late Saxon and medieval periods.

These have been related where possible to the Northamptonshire County Ceramics Type Series (CTS), which assigns each fabric or type a 3-digit identifying code in addition to a common name where one exists.

The individual products of each context were as follows:

- CTS 100 Early St Neots-type Ware (c900-1100)
- CTS 302 Reduced sandy coarseware (c1100-1400)
- [No type] Early Stamford Ware (c900)

These occur as follows:

Table 12: Quantification of late Saxon and medieval pottery

Context type	89 Building 1	196 Building 3	320 rectangular enclosure	473 ditch	Total
	<i>no/wt (g)</i>	<i>no/wt (g)</i>	<i>no/wt (g)</i>	<i>no/wt (g)</i>	<i>no/wt (g)</i>
CTS 100	7/206g	-	2/9g	2/26g	11/243g
CTS 302	-	1/20g	-	-	1/20g
Early Stamford	-	-	1/1g	-	1/1g
Context date	12th century	12th century	14th century	9th-10th centuries	
Total	7/206g	1/20g	3/10g	2/26g	13/264g

Of note are the sherds of St Neots-type ware. Those, in particular from context (89), include examples from very large, chunky vessels of indeterminate form, in which the ubiquitous shelly inclusions are poorly crushed and 'arranged' haphazardly.

In this characteristic the sherds are redolent of Middle-Late Saxon Maxey-type wares, although they are considerably tidier than the wholly haphazard shell temper in hand-built Maxey wares. This characteristic suggests, however, that the pottery might for the most part belong to the earlier part of the St Neots-type tradition and be hand-made, finished, at best, on a slow wheel. Unfortunately no early vessel forms are present to corroborate this and a later rim in more mainstream St Neots' livery dates the context to the post-Conquest, medieval period.

A single orange-bodied sherd in a fine soapy ware may be from the early Stamford tradition (Mahany Fabric A/Kilmurry Fabric E/F) but this is very tentative as it is abraded and its surfaces rubbed smooth.

A further nine sherds, weighing 99g, of hand-built Saxon ware was present. The sherds include two pieces with an organic temper; three shelly; three with quartz and sandstone and one with faceted quartz sand, limestone and sandstone. The sherds are associated with four contexts: ditch [20] with four sherds (organic and shell); the flue of malting oven [25]; demolition layer (80) and subsoil. None of the pieces are featured or decorated.

Together these sherds suggest that the site had been visited occasionally, for removal of suitable building stone for possible use in the nearby settlement of Stanion, probably in the period c 900-1100.

5 FAUNAL AND ENVIRONMENTAL EVIDENCE

5.1 The adult burial by Sarah Inskip

A male, middle to old-aged, was excavated from the northern terminal of a ditch dated to the 3rd century (Fig 52). The skeleton was highly fragmented due to ploughing. Despite this, it was still possible to observe that the individual suffered from extensive osteoarthritis with eburnation present at the wrist, hips, neck and the foot. All lower molars were lost *ante mortem* and there was evidence of an inflammation on the right tibia. The location of the burial in the ditch away from living areas is unsurprising considering Roman beliefs about the dead and pollution but it is uncertain as to whether the burial represented a deviant or convenient location to bury the deceased.

Methods

Age and Sex

The methods used to estimate age and sex in the individual from Stanion Villa were those outlined in the Standards (Buikstra and Ubelaker 1994) and additional information from the Guidelines to the Standards for Recording Human Remains (Brickley and McKinley 2004). Severe ploughing damage has rendered the use of the normal indicators of age impossible for the Stanion burial. The oscoxae and skull were severely fragmented. Age estimation was therefore based on the evidence for progressive degeneration of the skeleton such as the presence of osteoarthritis, antemortem tooth loss and exostosis.

Preservation and completeness

Preservation was scored according to the amount of cortical bone available for macroscopic analysis (see Table 13). For comparability, equivalent Behrensmeyer (1978) scores are also provided in Table 13.

Table 13: Skeletal preservation categories

Preservation	% cortical surfaces remaining	Behrensmeyer (1978) weathering scale
Excellent	≥ 95%	Stage 0
Good	60 – 94%	Stage 1
Fair	<60	Stages 2 – 3
Poor	≤25%	Stages 4 – 5

Overall skeletal completeness was scored following the ranges: >75%, 75 – 50%, <50% - 25% and <25%.

Results

Preservation: Good; Completeness: 50 – 75%; Age: Middle – Old; Sex: ?Male

The estimation of sex was limited to the examination of a few pieces of skull fragments. The mastoids, morphology of the mandible and the supraorbital margin all scored 4 (probably male). Sexually dimorphic regions of the oscoxae were not present.

The fact that this individual had substantial osteoarthritis distributed throughout the skeleton is evidence of advancing age. Eburnation (pathognomonic for osteoarthritis) was present in the hip, neck and the right wrist. Many of the other joints had changes that can be attributed to osteoarthritis but do not quite meet the criteria of Rogers and Waldron (1995). Extensive osteoarthritis with eburnation was present on all of the observable cervical vertebrae except the atlas (C1). The apophyseal facets of the cervical vertebrae have been comprehensively remodelled with extensive osteophytosis surrounding the joint margins (Grade 3). Just three mid thoracic vertebrae were observable, of which two of these had eburnation on the apophyseal facets. The apophyseal facets of the lumbar vertebrae were unobservable.

Further evidence of advanced age comes from the dentition. Although no teeth were found with the individual and the maxilla is fragmented and all but absent, the mandible is still observable. All of the mandibular molars and premolars have been lost prior to death and the alveolar bone is completely healed. Mays (2010, 76) explores how in populations with non-western (processed) diets (arguably more akin to the past), individuals with half or more of their teeth missing are likely to be over 50 years of age.

Use of muscles result in bony changes at the site of muscle attachment. This is known as exostosis. The older an individual is, the more they will have used their muscles and these have been shown to be related to age by various MSM studies (eg Weiss 2003). Sk1 has widespread exostosis on the majority of the long bones.

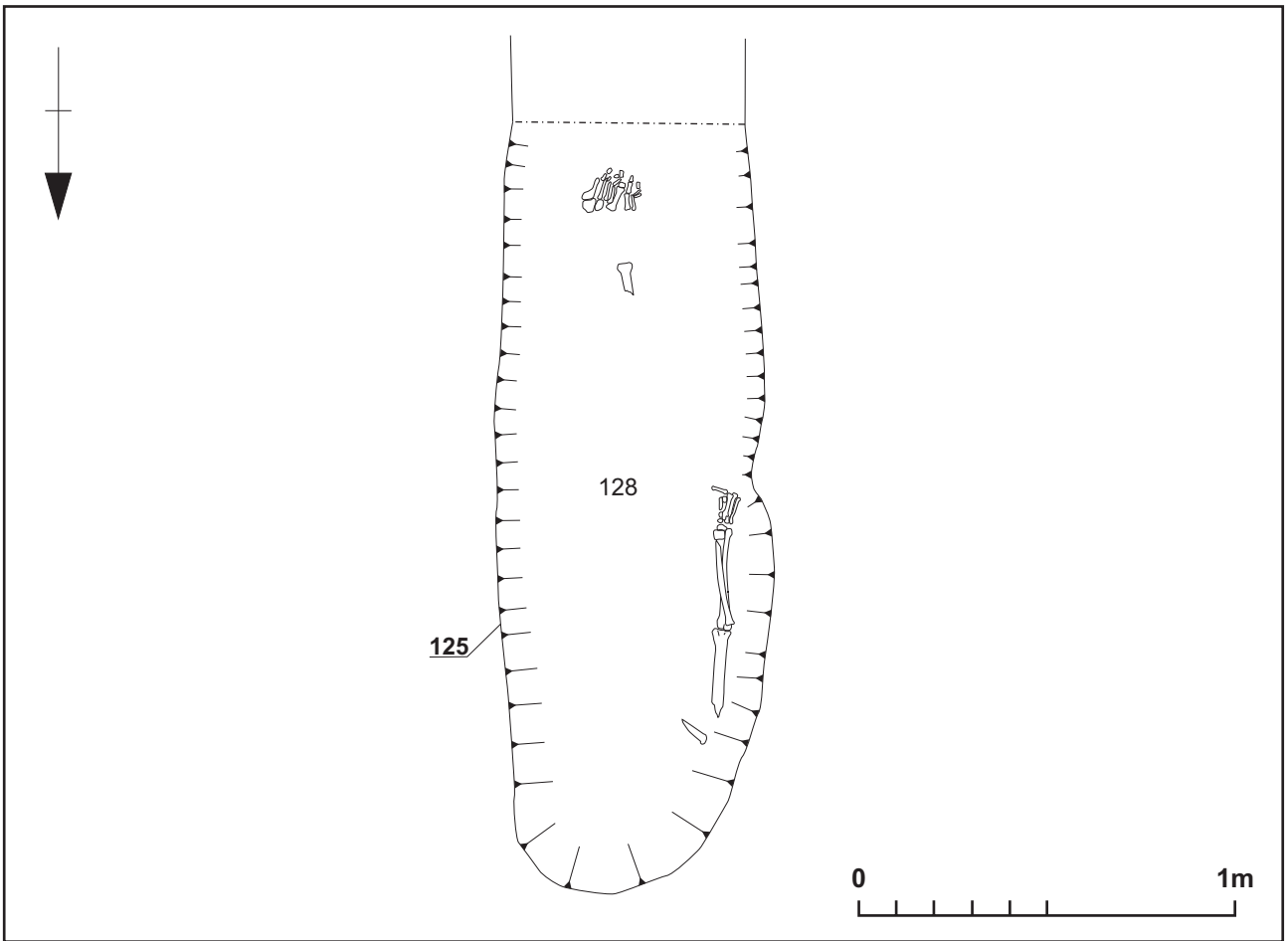
A large oval patch of periostitis was identified on the proximal third/midshaft of the right tibia. Unfortunately the lesion extended on to another fragment of tibia which is now absent. New bone growth (woven bone) and remodelled (lamellar) bone were both identified. This suggests that the lesion was active at time of death, but multiple episodes of inflammation may have occurred. Periostitis on the tibia is common for two reasons, but both of which relate to the bones proximity to the surface. It is postulated that some bacteria prefers the cooler area of the anterior tibia created by the proximity of the bone to the surface (Roberts and Manchester 2005, 172). Second, it is a common area for trauma (eg knocking the shin) causing damage to the periosteum. It is difficult to speculate whether the origin was infectious or traumatic, but the fact that multiple episodes of bone growth have occurred may suggest an infectious aetiology to the lesion.

Discussion and conclusion

This individual had a long life. Evidence for this was found through the extensive osteoarthritis and antemortem tooth loss in addition to the widespread exostosis. Other than osteoarthritis the only other observable pathology was that of a probable non-specific infection on the right tibia. As is common in palaeopathology, it was not possible to identify a cause of death in this individual. Sk1 shared much in common with a male also found in a ditch from Washington Road in Suffolk who had extensive exostosis, tooth loss and neck and hand osteoarthritis.

Appearing in the mid-2nd century (Keegan 2002, 3), inhumation became the dominant burial rite in Roman Britain by the end of the 3rd century (Hope 1999, 5). It is not uncommon for isolated Roman burials or fragments of human bone to occur in ditches (Philpott 1991, 232, Taylor 2010, 93). Similar examples can be found at Thetford (Atkins and O'Connor 2010), Manchester (Gregory 2007, 188), Dunstable (Matthews 1981), and Uffington (Piggot and Piggot 1940). A number of trends are seen here at Stanion. The first is the position of the body away from the main living areas of the villa. This is thought to relate to Roman ideas about the dead and pollution (Hope 1999, 57). The second is that of interment of bodies in ditches particularly boundary ditches. Accordingly, it is not unusual to find a Roman burial in this type of context.

Philpott (1991, 232) expresses that burial in ditches in Rome was reserved for criminals and common in Roman Britain. However, akin to the burial at Washington Street, no evidence for *ante mortem* cut marks was found on any of the bones. The extensive ploughing damage has also made it impossible to know whether the burial was in an unusual posture (eg prone). Assuming that an individual is an outcast is problematic and Philpott (1991, 232) highlights that burial in this manner may also reflect low status. As such, it is not possible to speculate whether the burial of Sk1 in a ditch represents some kind of deviant burial or just a convenient and safe place to bury the deceased individual.



Scale 1:20 (A4)

The adult burial Fig 52

5.2 The infant burials by Andy Chapman

Three infant burials were recovered from pits cut through the floors of Building 3, while some partial remains came from a soil layer (Table 14, Fig 53).

Burial 1 (Layer 29)

This comprises only parts of the vault of the skull of an infant. The thickness of these fragments would suggest an age near full term, but lacking other bone elements the age cannot be more closely defined.

Burial 2 (183) Grave 185

About half of the skeleton is present with the bones well preserved, although the long bones, apart from the femurs, are broken. The lower legs are missing, as well as parts of the upper limb bones, the maxilla and mandible, although there are some loose teeth, and the pelvic bones are also missing. The length of the femur suggests an age of 36-38 weeks (Schaefer 2009, 264), which is slightly premature (given a normal gestation period of 40-42 weeks), but well beyond the 28 weeks for a potentially viable foetus.

Burial 3 (502) Grave 552

The skeleton is largely complete and well preserved, although parts of a few long bones are missing as well as most of the pelvis and some parts of the skull, which is crushed and fragmented. The length of the femur and other long bones suggests an age of 40 weeks (Schaefer 2009, 264, 284, 171 & 188), indicating that the individual was full term and died at or around birth.

Burial 4 (550) Grave 552

The skeleton is virtually complete with all but one long bone unbroken, although much of the left pelvis and the shoulder blades are missing and the skull is crushed. The right mandible survives, but no teeth were recovered. This is the largest of the infants with the femur and other long bones at the upper end of the lengths for an age of 40 weeks (Schaefer 2009; 264, 284, 171 & 188), leaving no doubt that this infant died at or around birth, perhaps even slightly after.

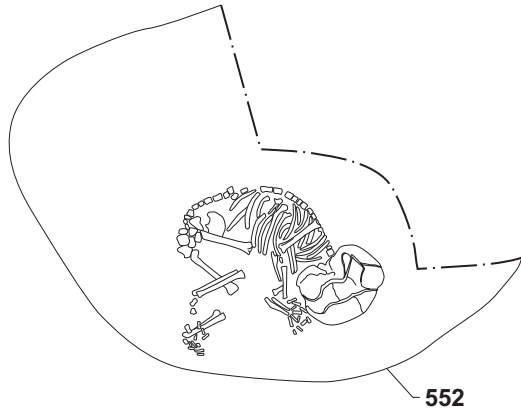
Table 14: Metric data for infant burial long bone lengths

Burial	Femur (mm)	Tibia (mm)	Humerus (mm)	Radius (mm)
Burial 1 (layer 29)	--	--	--	--
Burial 2 (183)	66.0	--	--	--
Burial 3 (502)	76.5	66.0	65.5	49.5
Burial 4 (550)	79.5	71.0	68.0	56.0

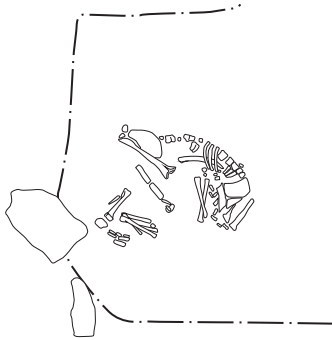
Discussion

Burials 3 (502) and 4 (550) lay closely adjacent and both are full term, with one slightly larger than the other. It is therefore possible that these may have been twins who died at or shortly after birth, perhaps due to problems during delivery. Burial 2 (183) was premature by some 2-4 weeks and may have been either a still birth or a premature baby who did not survive. The other remains can be placed only at or around full term as only skull fragments survived.

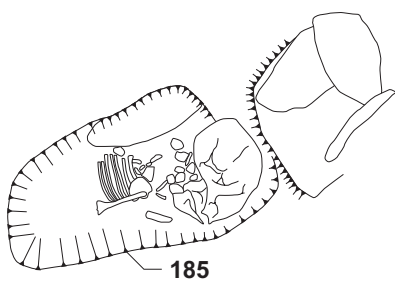
Burial 4



Burial 3



Burial 2



5.3 The animal bone by Karen Deighton

A total of 67kg of animal bone was collected by hand during the course of excavation.

The material was sorted into recordable and non-recordable fragments. Identification was aided by Schmid (1972), and downloads from the Max Planck institute for large mammals, Lawrence and Brown (1973) for small mammals and Serjeantson and Cohen (1996) for birds. Prummel (1987) was consulted for neonates of the major domesticates. Quantification followed Halstead after Watson (1979) and used minimum anatomical element (Min AU). The following were recorded for each element: context, anatomical element, taxa, proximal fusion, distal fusion, side, preservation, fragmentation, modification, butchery evidence and sex (where appropriate). Vertebra and ribs (with articulating ends) were counted and noted as small or large ungulate but not included in quantification as their multiple numbers introduce bias. Recording of fusion followed Silver (1969). Ovicaprid teeth were aged after Payne (1973), cattle teeth after Halstead (1985) and pig teeth after Bull and Payne (1982). Recognition and recording of butchery is after Binford (1981). Recording of sexing data for pigs followed von den Driesch. Pathology is described after Baker and Bothwell (1980).

Preservation

Canid gnawing was moderate for all phases (ranging between 13-20%), but could have resulted in preservation bias towards larger elements of larger taxa (Table 15; Payne and Munson 1985). The frequency of evidence for burning was low (Table 15). Fragmentation was moderate to heavy for all phases (Table 17). Abrasion was low. Evidence for butchery was low which could be due to obscuring by post taphonomic processes (such as canid gnawing) and is largely consistent with chopping (Table 18). A number of cattle metapodia had been split lengthways which usually indicates marrow extraction. Worked bone was restricted to a cattle metapodial with the distal condyles sliced off at an angle on opposing sides to create a wedge and the smoothing of a red deer antler tip.

Table 15: Canid gnawing

Phase	Phase 1	Phase 2	Phase 3	Phase 4
Number	3	33	64	52
Percentage	13	19.5	18	20

Table 16: Burning

Phase	Phase 1	Phase 2	Phase 3	Phase 4
Number	-	3	2	1
Percentage	-	1.7	0.5	0.4

Table 17: Fragmentation

	Phase1	%	Phase2	%	Phase3	%	Phase4	%
Whole	7	30.5	34	25	79	28.5	52	27.7
Some shaft missing	3	13	23	16.9	47	17.6	35	18.7
End +shaft	4	17.3	22	16.3	39	14.5	33	17.5
Cylinder	2	8.7	30	22	25	9.4	25	13.2
Splinter	6	26.1	23	16.9	50	18.8	35	18.7
End only	-	-	-	-	13	4.7	1	0.5
End splinter	-	-	4	2.9	11	4.1	7	3.7
Fresh break	1	4.4	-	-	2	2.4	-	-
Total	23		136		266		188	

Table 18: Butchery

Phase	Phase 1	Phase 2	Phase 3	Phase 4
Chopped	1	1	5	7
Percent	-	-	-	-
Dismembering	-	-	-	1
percent	-	-	-	-
Knife marks	-	2	8	8
percent	-	-	-	-
Total	1	3	13	16
Percent	1.9	1.7	3.6	6.3

Taxa present

The assemblage was dominated by cattle (Table 19). Sheep and horse were also seen in significant numbers. Smaller numbers of pig, chicken, dog, deer and a cat were also present.

Table 19: Summary of taxa present by phase and relative percentages

Taxa	Phase 1	%	Phase 2	%	Phase 3	%	Phase 4	%
Horse	1	1.9	12	7.1	39	10.7	13	5.1
Cattle	26	51	56	33.1	196	53.8	138	54.3
Sheep/goat	18	35.3	80	47.3	49	13.5	77	30.3
Pig	5	9.8	10	5.9	53	14.6	15	5.9
Red deer	-	-	-	-	2	0.5	-	-
Roe deer	-	-	-	-	1	0.25	-	-
Dog	-	-	3	1.7	11	3	5	1.9
Cat	-	-	-	-	-	-	1	0.4
Domestic fowl	1	1.9	-	-	5	1.3	4	1.5
Small bird	-	-	-	-	-	-	1	0.4
Bird indet	-	-	6	3.3	-	-	-	-
Field vole	2	3.8	-	-	1	0.25	-	-
Rodent	1	1.9	-	-	-	-	-	-
Small mammal	2	3.8	2	1.2	1	0.25	-	-
Amphibian	1	1.9	-	-	6	1.6	-	-
Total	51		169		364		254	

Ageing and sexing

Evidence for aging consists of epiphyseal fusion, tooth eruption and wear and the presence of neonates. See Tables 20-24 for tooth eruption and wear in major domesticates. Dog was restricted to a mandible with an in-wear carnassial (therefore a young adult animal) from demolition layer [29] (Phase 4). Neonates were spread thinly through the phases (Table 23). Unfortunately not enough data per phase were available for kill-off patterns of sheep/goat, cattle and pigs to be studied in any detail. Evidence for sexing was only available from pig canine teeth (as pelvises of the major domesticates were too sparse and often too fragmentary to categorise) and was thinly spread through phases 3 and 4 (Table 24) and suggests more males were killed off than females.

Table 20: Sheep/goat, tooth eruption and wear

Fill / cut	Phase	Element	Side	Age class	Age
007 / ditch 8/91/230	4	mandible	left	D+	1-2years+
018 / ditch 20/519	1	mandible	left	C+	6-12months
29, layer	4	mandible	left	D	1-2years
29, layer	4	M3	left	F	3-4years
29, layer	4	mandible	right	C+	6-12months
30, layer	4	mandible	right	H	6-8years

STANION VILLA

Fill / cut	Phase	Element	Side	Age class	Age
30, layer	4	mandible	left	D+	1-years
30, layer	4	M3	left	E	2-3years
30, layer	4	M3	left	G	4-6years
33 / driveway ditch 34	2	mandible	right	D	1-2years
43, subsoil	subsoil	M3	left	E	2-3years
66 / posthole 67	2	M3	right	E	2-3years
109, layer	2	mandible	right	I	8-10years
109, layer	2	M3	right	B+	2-6months
157, layer	4	mandible	right	E	2-3years
175, layer building 3		mandible	right	H	6-8years
175, layer building 3		mandible	left	C	6-12months
175, layer building 3		mandible	right	D	1-2years
196, layer building 3	2	mandible	left	D+	1-2years
288 / ditch 289	3	mandible	left	D+	1-2years
382 / well 373	3	mandible	left	D+	1-2years
382 / well 373	3	M3	right	I	8-10years
407 / pond 411	3	mandible	right	D	1-2years
417 / ditch 418	4	M3	left	D	1-2years
417 / ditch 418	4	mandible	left	D+	1-2years
417 / ditch 418	4	mandible	left	G	4-6years
453, layer	2	M3	right	E	2-3years
540, subsoil	Subsoil	mandible	right	I	8-10years
540, subsoil	Subsoil	mandible	left	D+	1-2years
572 / ditch 576	2	mandible	left	I	8-10years
575 / ditch 576	2	D4	left	B+	2-6months
579, rubble	2	mandible	left	I	8-10years
692, layer	2	M3	?	I	8-10years

Table 21: Cattle, tooth eruption and wear

Fill / cut	Phase	Element	Side	Age class	Age
29, layer	4	mandible	right	D+	18-30months
29, layer	4	mandible	right	D+	18-30months
29, layer	4	mandible	left	I	Senile
29, layer	4	mandible	right	H	Old adult
109, layer	4	mandible	right	G	Adult
109, layer	4	mandible	right	E	30-36months
109, layer	4	M3	right	G	Adult
109, layer	4	D4	left	B+	1-8months
174 / gully 173,	3	M3	right	G	Adult
175, layer	3	mandible	left	G	Adult
175, layer	3	mandible	left	I	Senile
175, layer	3	mandible	left	B+	1-8months
175, layer	3	mandible	left	E	30-36months
180 / pit 179	3	mandible	left	I	Senile
182 / gully 181	3	mandible	left	D	18-30months
182 / gully 181	3	mandible	right	C	8-18months
206 / gully 205	3	M3	left	G	Adult
210 / gully 209	3	D4	?	B+	1-8months
221 / cistern 218	3	mandible	right	C+	8-18months
192 / oven 224	4	mandible	left	G	Adult
379 / pit 378	3	D4	right	B+	1-8months
388 / pit 387	4	mandible	left	D	18-30months
398 / pit 396	3	mandible	left	D+	18-30months
407 / pond 411	3	M3	right	I	senile
396 / pit 398	3	mandible	right	I	Senile
396 / pit 398	3	mandible	right	G	Adult
396 / pit 398	3	mandible	right	G	adult
402 / gully 403	3	mandible	right	I	Senile
402 / gully 403	3	mandible	left	D+	18-30months
419 / ditch 421	4	mandible	right	G	adult
449 / pit 450	4	mandible	right	D+	18-30months
527 / ditch 528	2	mandible	left	C	8-18months
539, subsoil	Subsoil	mandible	left	C	8-18months
571 / ditch 576	2	M3	right	G	Adult
604, layer building 3	3	M3	right	G	Adult

Fill / cut	Phase	Element	Side	Age class	Age
643 / pit 645	1	M3	right	G	Adult
661, layer		mandible	right	G	Adult

Table 22: Pigs, tooth eruption and wear

Fill / cut	Phase	Element	Side	Age class	Age
18 / ditch 20/519	1	M3	?	A	0-7weeks
29, layer	4	Mandible	left	D	13-22months
30, layer	4	Mandible	right	F	Young adult
117 / flue 120	3	Mandible	right	A	0-7weeks
170 / ditch 171	3	Mandible	left	C	6-13months
218 / cistern 221	3	Mandible	?	C	6-13months
407 / pond 411	3	Mandible	both	E	22months+
409 / pond 411	3	Mandible	both	C	6-13months
409 / pond 411	3	Mandible	both	C	6-13months

Table 23: Neonates by phase

Taxon	Phase 1	Phase 2	Phase 3	Phase 4
Cattle		4	1	2
Sheep/goat	1		1	5
Pig			9	2
Total	1	4	11	9

Table 24: Pig canines by phase

Taxon	Phase 3	Phase 4	Total
Male	6	2	8
Female	3		3
Total	9	2	11

Measurements

Unfortunately too few measurements were available to draw any conclusions regarding stature.

Discussion

Preservation overall suggests rapid burial after initial deposition, for example moderate canid gnawing. Burning was not a preferred method of disposal. Fragmentation suggests some compaction in the soil.

Spatial distribution for phase 1 where the material occurs largely in ditches suggests these were used for rubbish disposal.

The taxa present are those common for both Iron Age and Roman sites. Cattle dominate phases 1, 3 and 4 with relative frequencies of 51%, 53.8% and 54.3% respectively. The taxa was utilised for milk, meat, traction and hides. Horn was also used. Although no kill-off patterns could be established due to the paucity of data, the apparent predominance of teeth from older animals suggests cattle were slaughtered once all other uses had been exhausted. Sheep are the dominant taxa in phase 2 with a relative frequency of 47.3%. The animal was utilised for milk, meat and wool, however, without more ageing data it is not possible to establish which or what combination of strategies was used on the site. Pigs are the second most common in phase 3 (more frequent than sheep/goat), the third most common in phases 1 and 4, and the fourth most common in phase 2. It should be remembered that pig remains are particularly subject to preservation bias (Stallibras 1985). Pigs were husbanded for meat. Tooth wear shows all individuals were young when slaughtered, probably at the point where meat yield and fodder consumption were in equilibrium. Sexing data suggests sows were reserved for breeding, while males were slaughtered. Their presence suggests the utilisation of nearby woodland for pannage. Dogs were seen in low numbers in Roman phases only. They were used for guarding, herding, hunting as

well as meat and fur. There is some evidence of dogs as companion animals in Roman times (although no particularly small animals (ie lap dogs) were noted from the assemblage) and as status animals in Iron Age and Roman Britain. Canid gnawing on bones also suggests the presence of dogs as well as their physical remains. No butchery was noted on dog bones. Red and roe deer are seen in phase 3 only. Antler fragments only are present, however, in the case of roe deer, these appear to have been removed from the skull, with the burr still firmly attached to the cranium, rather than shed, which indicates the animals were hunted and the meat utilised rather than the gathering of shed antler.

Horses were used for transport, meat and hides and were often a symbol of status. They are present in all phases. No butchery was noted on horse bones. Domestic fowl were used for meat, eggs and feathers and appear in low numbers in phases 1, 3 and 4. Cat appears in phase 4 only, and shows no evidence of butchery. Although possibly feral cats were useful around farmsteads for pest control and their pelts were utilised. Amphibians (most likely frogs) could suggest the presence of water although they could be intrusive. Field voles could also be intrusive, although they are not unknown as a comensial taxon.

Bodypart analysis (using Brain 1981 for preservation and Binford 1978 for meat utility; see Appendix 3) could be undertaken for cattle and sheep in phases 2, 3 and 4 only and pig in phase 3. In phase 2, meat utility (Graph 1) follows the general low – high trend for sheep/goat but falls off at femur, a poorly preserved element, troughs are seen at phalanges 2 and 3, astragalus and calcaneum. Again, poor preservation could account for this as these are small elements which are easily lost if the context is not sieved and can be destroyed by canid gnawing. In comparison to the preservation index for this taxon a peak is seen at tibia which is possibly explained by its high meat utility value. In conclusion, it seems whole sheep carcasses were dealt with on site with the possible addition of hind limb joints. For cattle during this phase no coherent pattern can be discerned for either index (see Graphs 1 and 4) other than an unexpected peak is seen at phalanges in the preservation graph. This lack of coherence is possibly the result of the small number of body parts available for analysis for cattle in this phase.

For phase 3, utility for cattle (Graph 2) follows the general low-high trend. For preservation (Graph 5) for cattle, peaks are seen at proximal radius, scapula and proximal femur all of which are high utility. These results could suggest the assemblage, for cattle at least, during this phase was generated as a result of kitchen or consumption waste which suggests at some point the aisled barn and related features were used for domestic waste disposal. However peaks are also seen at distal radius and phalanges which have fairly poor utility. Again no coherent patterns can be detected for sheep/goat and pigs, possibly due to the small numbers involved.

During phase 4 both cattle and sheep/goat remains follow the general high to low trend in comparison to the preservation index, although anomalous peaks are seen in cattle data at metacarpal and proximal femur. (The proximal femur anomaly could be explained by its high meat utility.) On the whole, data suggest that whole carcasses were dealt with during this phase in association with the features concerned (ie the assemblage is the result of primary butchery). This assumption fits with the interpretation of features as relating to stock control at this period.

Unfortunately evidence for butchery (Table 18) was too slight to determine any specific patterns, although a predominance of chopping suggests butchery to have been heavy handed.

Interphase comparisons are tentative due to the small amount of material from certain phases. A similar range of taxa was seen for all phases. The assemblage from phase 1 is considerably smaller than the other assemblages, which could be significant as it suggests less activity during the Iron Age. The largest amount of bone came from

phase 3, which is unsurprising as this phase relates to the aisled barn and related activities. The growth in the relative percentages of cattle (from 33% in phase 2 to 53.8% in phase 3) and horse numbers seen in phase 3 could be related to the presence of the aisled barn and evidence for crop processing. The by-products of crop processing could provide cattle fodder to support the increase in stock and horses could be used to aid stock control. Again the continuation of the high percentage of cattle in the following phase (54.3%) could be related to the presence of features related to stock control. A small assemblage was recovered from previous excavations (Deighton 2008) which produced a similar range of taxa (with the exception of Raven) and here sheep were always the dominant domesticate.

For intersite comparisons the Iron Age phase contains only 45 domestic taxa so is not really suitable to make comparisons at all. Hambleton (1999) suggests an NISP of at least 300 for comparisons to be valid, therefore for the Roman phases, 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. In other small local assemblages the reliance on cattle and sheep/goat and cattle (with always smaller numbers of pigs) and the temporal fluctuations between the two are also seen, suggesting that Stanion is part of a local pattern. At Wootton villa, for example, a similar range of taxa are seen and sheep dominate in one area of the site with cattle dominating the other, possibly a factor relating to site function (Deighton 2005a). At Oundle (Deighton 2005b) sheep dominate again and Croughton villa (Deighton 2002) has equal numbers of cattle and sheep. At the farmstead of Higham Ferrers (Deighton 2005c) cattle dominate the Roman phases and a similar range of taxa is seen. A tentative comparison to the larger assemblages at Latimer (Hamilton 1971) and Shakenoak (Cram 1973) villas to the south show a continual preference for cattle and pigs over sheep at these sites possibly indicating a high degree of "Romanisation" than is seen at the smaller Northamptonshire sites.

Conclusion

Some changes through time can be seen in the relative percentages of the major domesticates and in carcass utilisation (ie fluctuations between primary butchery and domestic waste). These probably reflect the changing demands and circumstances of the site inhabitants and changing functions of the site as evidenced by the archaeology. As with many local farmsteads /villa the animal economy seemed to rely largely on cattle and sheep/goat.

5.4 The charred plant remains by Karen Deighton and Val Fryer

A total of 50 samples were collected by hand from a range of contexts, including ditches, pits, buildings (roundhouse ring ditches and postholes) and drying ovens. This material was assessed to determine:

- the presence, preservation and nature of any ecofacts
- their potential to contribute to the understanding of the site

All samples were processed using a modified siraf tank fitted with a 250 micron mesh and flot sieve. The resulting flots and residues were dried. The flots were then sorted with the aid of a stereoscopic microscope (10x magnification) and residues were scanned. Identifications for plant macro-fossils were made with the aid of the author's reference collection, Jacomet (2006) and the Scottish Crop Research Institute (SCRI), arable seed identification system website (www.scri.ac.uk). Identifications for molluscs were made with the aid of Cameron and Kerney (1994).

Quantification of the products of the flotation are tabulated by sample and phase in Tables 25-30.

Preservation of plant remains was largely by charring, with the exception of that from the pond, sample 27, which had been waterlogged. Fragmentation and abrasion were at a low level. The remains from the waterlogged sample had become distorted rendering identifications unreliable.

The results suggest that a range of cereal crops were processed and utilised at the site. The cereal taxa present included spelt wheat, hulled and naked barley; all are common crops for the late Iron Age and Roman periods (Monkton 2006), and were found in the previous excavation at Stanion (Carruthers 2008, 126). The increase in disposal of spelt wheat chaff and the use of drying ovens, both found at Stanion, are interpreted as indicators of changes in methods and scale of production.

The origin of charred plant material is varied, for example the low numbers of charred grains and charcoal noted in sample 40 suggest their presence to be “background” (ie material washed or blown into samples from activities taking place elsewhere). Samples with high cereal to chaff and weed ratios (eg samples 5 and 37) may be the result from the accidental burning of storage crops or mishaps during food preparation. Whether these concentrations of burned grain result from single events or are cumulative is problematic.

The wild taxa included sheep sorrel (*Rumex acetocella*), chickweed (*Stella medaria*), fat hen (*Chenopodium album*), nipplewort (*Lapsanasp*) and speedwell (*Veronica sp.*). All are common crop weeds, and with the exception of sheep sorrel, annuals.

Molluscs included *Cochliopa lubrica*, *Vallonia excentrica*, *Discus rotundatus*, *Cachychium* sp., *Vertigo pygmaea* and *Clausiliabidentata*.

Table 25: Charred plant remains from the late Iron Age and early Roman settlement

Cut/fill	Sample	Volume (litres)	Charcoal	Cereal	Chaff	Wild/weed	molluscs
153 / roundhouse 2, ring ditch	9	10	-	183	300	17	93
167, layer	10	10	-	-	-	-	20
423 / hearth	29	10	-	-	-	-	-
469 beam slot	31	10	-	-	-	-	-
492/ ditch	33	20	500	-	-	-	1,000
642 / roundhouse 1, ring ditch	40	40	10	1	-	-	1,000+
645 / pit	41	40	500	5	-	1	1,000+
680 / ditch	46	30	300	-	-	-	1,000+
518 / ditch	47	40	300	-	-	-	1,000+
518 / ditch	43	40	sterile	-	-	-	-
630 / Roundhouse 1	51	20	200	-	-	-	-
695 / oven	52	10	1,000	-	-	-	-
702 / oven	53	10	1,000	20	-	3	-
Totals	13	290					

Table 26: Charred plant remains from the construction of the villa (2nd century)

Fill / cut	Sample	Volume (litres)	Charcoal	Cereal	Chaff	Wild/ weed	molluscs
92 / posthole 94	2	30	1,000	16	-	-	21
95 / posthole 97	3	10	1,000	147	-	2	34
201 / oven 191	14	20	1,000	400	200	-	-
204 / oven 191	18	20	1,000	600	600	1	-
212 / fire pit	21	20	1,000	-	-	-	-
358 / layer in Building 2	25	10	1,000	400	1000	12	107
523 / well 529	34	20	40	-	-	-	250
12 / posthole 14	35	10	1,000	600	-	-	-
396 / spring 398	42	40	30	2	-	-	-
Totals	9	180					

Table 27: Charred plant remains from the aisled barn and related activities (late 2nd-3rd centuries)

Fill / cut	Sample	Volume (litres)	Charcoal	Cereal	Chaff	Wild/ weed	molluscs
85 / oven 25	1	10	1,000	200	12	-	18
85 / oven 25	4	10	1,000	59	5	-	16
85 / oven 25	5	10	1,000	500	20	3	17
141 / oven 25	8	10	10	2	-	-	-
197 / pit 200	12	10	1,000	52	-	-	-
199 / pit 200	13	10	1,000+	137	-	2	-
205 / ditch 206	15	10	10	-	-	-	-
209 / pit 210	16	10	10	-	-	-	30
218 / cistern 222	17	20	-	3	-	-	50
239 / pit 240	19	20	300	24	39	-	54
Totals	10	120					

Table 28: Charred plant remains from the abandonment and reuse (late 3rd-4th centuries)

Fill / cut	Sample	Volume (litres)	Charcoal	Cereal	Chaff	Wild/ weed	molluscs
215 / flue 284	22	20	1,000	121	57	6	-
214 / oven 188	23	20	1,000	-	-	1	23
249 / fire pit 250	24	20	1,000	46	12	1	-
397 / pool 398	27	10	10	-	-	-	-
409 / pond 411	28	20	1,000	76	-	20	-
592 / oven 25	37	20	1,000	271	49	1	56
102 / oven 25	38	10	200	68	60	1	-
204 / oven 192	44	40	1,000	199	371	4	-
Totals	8	160					

Table 29: charred plant remains from the burials

Fill / cut	Sample	Volume (litres)	Charcoal	Cereal	Chaff	Wild/ weed	molluscs
126 / adult burial	6 & 7	20	500	-	-	-	1,000
184 / infant burial 2	11	30	-	-	-	-	-
502 / infant burial 3	32	10	1,000	18	3	16	1,000
552 / infant burial 4	36	10	500	6	-	-	500
Totals	5	70					

Table 30: Charred plant remains from unphased features

Deposit	Sample	Volume (litres)	Charcoal	Cereal	Chaff	Wild/ weed	molluscs
30, layer	20	10	1,000	-	-	-	10
438, alluvium	30	20	sterile	-	-	-	-
602, layer	39	20	10	13	3	6	500
671, mortar layer	45	30	200	43	-	-	71
stone roundhouse							
693, levelling layer	50	40	1,000	73	1	45	-
Totals	5	120					

Of the initial fifty flots, the following nine were selected for analysis:

Sample 2	Phase 2 posthole	(Feature 11)
Samples 1, 5 and 37	Phase 3 oven	(Feature 25)
Sample 9	Phase 3 ditch	(Feature 153)
Sample 22	Phase 3 oven	(Feature 284, fill 215)
Samples 14, 18 and 44	Phase 4 oven	(Feature 192)

It was hoped that analysis of these assemblages would:

- Provide data about the use and function of the ancillary structures and highlight any evidence for the zoning of activities;
- Pinpoint evidence for local agricultural practises;
- Provide data regarding the status of the villa within the local economy.

Table 31: Charred plant remains (selected samples)

Sample No.	35	1	5	37	9	22	14	18	44
Context No.	12	85	85	592	151	215	201	204	204
Feature No.	11	25	25	25	153	188	192	192	192
Feature type	ph	Oven	Oven	Oven	Ditch	Oven	Oven	Oven	Oven
Phase	2	3	3	3	3	3	4	4	4
Cereals									
<i>Avena</i> sp. (grains)	x	x	-	-	x	x	-	xcf	x
(awn frags.)		x	x	-	x	-	-	-	-
<i>Hordeum</i> sp. (grains)	xx	x	xx	-	-	-	-	x	xcf
<i>Triticum</i> sp. (grains)	xx	xxxx	xxx	xx	xx	x	x	xxxx	xxx
(germinated grains)	-	-	-	-	-	-	x	x	x
(glume bases)	-	x	-	x	xxx	-	xx	-	xxxx
(spikelet bases)	-	x	x	x	xx	x	x	-	xx
(rachis internodes)	-	x	x		x	x	x	xxx	x
<i>T. aestivum/compactum</i> type (rachis node)	-	-	-	-	-	-	-	-	x
<i>T. spelta</i> L.									
(glume bases)	-	xx	xx	xx	xxxx	xxx	xxx	xxxx	xxxx
(spikelet forks)	-	-	-	-	-	-	-	xxx	x
(spikelets)	-	-	-	-	-	-	x	x	-
							xxx		
Cereal indet. (grains)	xx	xxx	xxxx	xxx	xx	xxxx	xxfg	xxxx	xxxx
(sprout frags.)	-	x	-	-	xx	-	x	xx	xx
(detached embryos)	-	-	-	-	-	-	-	x	x
(awn frags.)	-	-	-	-	-	-	-	-	x
(basal rachis nodes)	-	-	-	-	-	-	-	x	-

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Sample No.	35	1	5	37	9	22	14	18	44
Context No.	12	85	85	592	151	215	201	204	204
Feature No.	11	25	25	25	153	188	192	192	192
Feature type	ph	Oven	Oven	Oven	Ditch	Oven	Oven	Oven	Oven
Phase	2	3	3	3	3	3	4	4	4
Herbs									
<i>Anthemis cotula</i> L.	-	X	-	-	-	-	-	-	-
Apiaceae indet.	-	-	-	-	-	-	-	-	X
<i>Bromus</i> sp.	X	xxx	xxx	X	X	X	-	-	X
Fabaceae indet.	-	-	-	-	-	X	-	-	-
<i>Galium aparine</i> L.	-	-	-	-	-	-	-	X	-
<i>Malva</i> sp.	-	-	-	-	-	-	-	X	-
<i>Plantago lanceolata</i> L.	-	-	-	-	-	-	X	-	-
Small Poaceae indet.	-	X	X	-	-	-	X	-	X
Large Poaceae indet.	-	X	XX	-	-	XX	-	X	X
<i>Rumex</i> sp.	-	X	XX	X	X	XX	X	X	X
<i>Stellaria media</i> (L.)Vill	X	-	-	-	-	-	-	-	-
<i>Tripleurospermum inodorum</i> (L.)Schultz-Bip	-	X	-	-	X	-	-	-	-
Wetland plants									
<i>Eleocharis</i> sp.	-	-	-	-	-	-	X	-	-
Tree/shrub macrofossils									
<i>Corylus avellana</i> L.	-	-	-	-	xcf	-	-	-	-
<i>Malus/Pyrus</i> sp.	-	-	-	-	-	-	-	-	X
<i>Sambucus nigra</i> L.	-	-	-	-	-	-	-	-	X
Other plant macrofossils									
Charcoal <2mm	xxxx	xxx	xxxx	xxxx	X	XX	xxxx	xxxx	xxxx
Charcoal >2mm	xxxx	xx	xxx	xx	-	xxx	xxx	xx	xxxx
Charcoal >5mm	X	-	-	-	-	-	-	-	xxx
Charcoal >10mm	X	-	-	-	-	-	-	-	-
Charred root/stem	-	X	X	X	-	-	X	X	xx
Indet.buds	X	-	X	-	-	-	-	-	X
Indet.inflorescence frags.	-	-	-	-	X	-	-	xxxx	xxx
Indet.seeds	-	X	X	X	-	X	X	X	X
Mollusc shells									
Woodland/shade loving species									
<i>Aegopinella</i> sp.	X	X	X	-	X	X	-	-	-
<i>Carychium</i> sp.	X	-	-	-	X	X	X	-	xx
<i>Clausilia</i> sp.	X	-	-	-	X	-	-	-	-
<i>Discus rotundatus</i>	-	X	-	X	X	-	-	-	-
<i>Punctum pygmaeum</i>	-	X	-	-	-	-	-	-	X
<i>Vertigo pusilla</i>	-	-	-	-	-	-	-	-	xcf
<i>Vitrea</i> sp.	-	X	-	X	-	X	-	-	X
Open country species									
<i>Helicella itala</i>	-	-	X	-	-	-	-	-	X
Helicidae indet.	X	X	-	-	-	-	-	-	-
<i>Pupilla muscorum</i>	-	-	X	-	X	X	-	-	-
<i>Vallonia</i> sp.	-	-	-	X	X	-	-	X	X
<i>V. costata</i>	X	X	X	X	X	X	X	-	x xb
<i>Vertigo pygmaea</i>	-	X	X	-	-	X	X	-	x xb
Catholic species									

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Sample No.	35	1	5	37	9	22	14	18	44
Context No.	12	85	85	592	151	215	201	204	204
Feature No.	11	25	25	25	153	188	192	192	192
Feature type	<i>ph</i>	<i>Oven</i>	<i>Oven</i>	<i>Oven</i>	<i>Ditch</i>	<i>Oven</i>	<i>Oven</i>	<i>Oven</i>	<i>Oven</i>
Phase	2	3	3	3	3	3	4	4	4
<i>Cochlicopa</i> sp.	x	-	-	x	x	x	x	-	x
<i>Nesovitreia hammonis</i>	-	-	-	-	-	-	-	-	x
<i>Trichia hispida</i> group	-	-	-	x	xx	x	x	-	x
Marsh/freshwater slum species									
<i>Lymnaea</i> sp.	-	-	-	-	x	-	-	-	x
<i>Succinea</i> sp.	-	-	-	-	-	-	-	x	x
<i>Vertigo angustior</i>	-	-	-	-	-	-	-	-	x
Freshwater obligate species									
<i>Lymnaea peregra</i>	-	-	-	-	-	-	-	-	xcf
Other									
Limacid plate	-	-	-	-	-	-	x	-	-
Other remains									
Black porous 'cokey' material	x	xxx	xxxx	xx	x	x	xxx	xx	x
Black tarry material	x	x	x	xx	-	-	x	-	-
Bone	-	x	x	x	-	-	x	-	-
Burnt/fired clay	x	x	-	x	-	-	x	-	-
Charred arthropod remains	-	-	-	-	-	-	-	x	-
Eggshell	-	-	-	xb	-	-	-	-	-
Mortar/plaster	-	xcf	-	-	-	-	-	-	-
Small coal frags.	-	x	-	x	-	x	x	-	x
Small mammal/amphibian bones	-	x	-	xpmc	-	-	-	-	-
Vitreous material	-	x	x	-	-	-	-	-	-
Sample volume (litres)									
Sample volume (litres)	10	10	10	20	10	20	20	20	40
Volume of flot (litres)	0.2	<0.1	0.2	0.1	<0.1	<0.1	0.2	0.5	0.6
% flot sorted	50%	100%	50%	100%	100%	100%	50%	12.50%	12.50%

The flots were sorted under a binocular microscope at magnifications up to x 16 and the plant macrofossils and other remains noted are listed in Table 31. Nomenclature within the table follows Stace (1997) and identifications were made by comparison with modern reference specimens. All plant remains were charred. The density of material within each assemblage is expressed in the table as follows: x = 1 – 10 specimens, xx = 11 – 50 specimens, xxx = 51 – 100 specimens and xxxx = 100+ specimens. Other abbreviations used in the table are explained at the end of the text section.

Sample composition

Cereal grains, chaff and seeds of common weeds were present at varying densities within all nine assemblages. Preservation was very variable. Some grains and chaff elements were extremely well preserved, but other grains were severely puffed and distorted (probably as a result of combustion at high temperatures, possibly on repeated occasions), whilst the chaff was very fragmented.

Oat (*Avena* sp.), barley (*Hordeum* sp.) and wheat (*Triticum* sp.) grains were recorded, with wheat being predominant within most assemblages. The wheat grains were mostly of an elongated 'drop' form typical of either emmer (*T. dicoccum*) or spelt type (*T. spelta*) type, although occasional more rounded grains of probable bread wheat (*T. compactum/laestivum*) type were also recovered, most notably within the assemblages

from oven 192 (samples 14, 18 and 44). Sample 44 also contained the only recorded specimen of a bread wheat type rachis node, with typical crescentic glume inserts. Double keeled spelt glume bases were present within all but sample 35 (posthole 11). These included a number of very narrow bases, all of which displayed characteristics typical of spelt (for example prominent nerves on the outer glume face) and were, therefore, probably from immature spikelets. The assemblages from oven 192 also included a small number of whole spelt spikelets, with the grains still tightly enclosed within the glumes, along with germinated wheat grains with the sprouts still attached.

Although oat grains were recorded, floret bases were absent and it was, therefore, not possible to determine whether cultivated or wild species were represented. Of the barley grains, most were poorly preserved, and although occasional asymmetrical grains of possible six-row (*H. vulgare*) type were noted, their shape could be related to distortion during combustion.

Although seeds of common segetal weeds and grassland herbs were recorded, the range of species was very limited. Grass (Poaceae) fruits (including specimens of brome (*Bromus* sp.) and dock (*Rumex* sp.) nutlets occurred most frequently, but other taxa included stinking mayweed (*Anthemis cotula*), small legumes (Fabaceae), goosegrass (*Galium aparine*), mallow (*Malva* sp.), ribwort plantain (*Plantago lanceolata*), chickweed (*Stellaria media*) and scentless mayweed (*Tripleurospermum inodorum*). A single spike-rush (*Eleocharis* sp.) nutlet from sample 14 was the only wetland plant macrofossil recorded. Tree/shrub macrofossils were equally scarce, with a possible fragment of hazel (*Corylus avellana*) nutshell present within sample 9 (gully 153), whilst the assemblage from sample 44 included a single apple or pear (*Malus/Pyrus* sp.) 'pip' and an elderberry (*Sambucus nigra*) seed.

Charcoal/charred wood fragments were present throughout, but other plant macrofossils, including pieces of charred root or stem and indeterminate buds, were comparatively scarce. High densities of indeterminate inflorescence fragments were recorded within the assemblages from samples 18 and 44, but most were thought to be derived from highly comminuted cereal chaff.

Mollusc shells were present within all nine of the assemblages studied, although generally at a very low density. Some specimens were extremely well preserved, and it was assumed that these were probably intrusive within the feature fills. However, most specimens were abraded and fragmentary, and it appeared most likely that these were contemporary with the features from which the samples were taken. All four of Evans (1972) ecological groups of terrestrial taxa were represented, with shells of woodland/shade loving species and open country species occurring most frequently.

The fragments of black porous and cokey material were all probable residues of the combustion of organic remains (including cereal grains) at very high temperatures. Other remains occurred infrequently, but did include small fragments of bone, small pieces of burnt or fired clay, charred arthropod remains, fragments of burnt eggshell and small pieces of coal. It was not known whether the latter were contemporary with the contexts from which the samples were taken, or later contaminants.

Discussion

For the purposes of this discussion, the samples are divided by Phase and feature type.

Phase 2 - posthole 11

The assemblage from feature 11 (sample 35), a posthole forming part of a 2nd-century internal partition within the villa building (Building 1), is possibly of note, as it is the only one studied which contains no cereal chaff and only a very small number of weed seeds. Although this may be purely a matter of chance, it is, perhaps, reasonable to assume that any grain stored or used within the villa building would be in a fully

processed state, free from chaff and most other obvious contaminants. That oat and barley grains are present within what was almost certainly a batch of wheat is not surprising, as neither would affect the palatability or storage potential of the grain.

Phase 3 - oven 25

Oven 25 was a large, rectangular structure situated within the enclosed 'agricultural' area at the southern edge of the excavation. The three assemblages (samples 1, 5 and 37) are relatively small, possibly indicating that they are derived from the final use of a structure, which was otherwise kept scrupulously clean, probably as a means of preventing catastrophic fires within the agricultural focus of the villa complex. Although cereal chaff is present, all three assemblages are grain dominant, almost certainly indicating that they are derived from the drying of the cereal prior to storage. This hypothesis appears to be corroborated by the high density of brome seeds within two of the three assemblages. Brome was a common crop contaminant throughout the Iron Age and Roman periods, and may even have been grown as a fodder crop in its own right. Because it is of a similar size to the cereal grains, it was not easily removed during processing and frequently persisted within the dried and stored crop along with other larger contaminants (cf. the oats and barley within Phase 2 posthole 11 – see above). The few chaff elements and other weed seeds which are present within these three assemblages may either be detritus from an earlier firing of the oven or relicts of grasses and grassland herbs used as kindling or fuel. The presence of bone fragments and a piece of eggshell may suggest that the oven was utilised for culinary purposes as well as for corn drying.

Phase 3 – oven 188

The single, small assemblage from oven 215 contains a very high density of extremely poorly preserved cereal grains along with chaff and seeds of grasses and grassland herbs. Although essentially similar to the material from oven 25 (see above), the very poor condition of the grains may indicate that these remains are derived from a catastrophic fire, which possibly occurred during drying. Because of the high temperatures involved and the innate flammability of the grain, accidental fires were not uncommon, with catastrophic fires being recorded at a number of contemporary sites (see, for example, Beck Row, Suffolk, Fryer 2004).

Phase 3 – gully 2

This gully formed the run-off from the cistern, which was situated alongside the aisled barn within the working enclosure. Although very small, the assemblage from sample 9 contains a very high density of cereal chaff, possibly suggesting that it is derived from spent fuel, possibly from oven 25, which is situated close by to the south. Cereal processing waste was often used during the Roman period as fuel for a range of domestic and light industrial purposes, and was probably traded as such (see Van der Veen 1999), although in this instance it is assumed that the waste may have been generated by on-site processing activities. Such waste would be raked out after burning and was frequently deposited in any nearby and convenient open feature.

Phase 4 – oven 192

Oven 192 was cut through the demolition layers within Building 3, an ancillary structure which lay to the east of the main villa. Although the recovered assemblages are broadly similar to those from the earlier ovens (see above), there are subtle differences, which appear to suggest that different activities are represented. Firstly, samples 14 and 18 include a small number of whole spelt spikelets and samples 18 and 44 contain spelt spikelet forks (ie the glume and rachis internode structure without the grains). Although the density of material is relatively low, it is possible that these remains are indicative of the storage and processing of some grain in the spikelet. During the Iron Age and earlier parts of the Roman period, spelt was often stored as semi-cleaned spikelets, as this prevented the grain from rotting (cf. deposits at

Prickwillow Road, Ely, Carruthers 2002). Although the practise diminished during the Roman period, probably because it proved a very bulky and inefficient way to both store and transport grain, occasional evidence does exist (for example from the second century deposits at Verulamium, Fryer 2006), and it is probably reasonable to assume that if it suited local needs, the practise was maintained. The possibility of spikelet storage was also recorded during an earlier phase of work at Stanion (Carruthers, 2005).

All three samples from oven 192 also include germinated wheat grains with attached sprouts and a number of detached sprout fragments. Such material is typically seen where either the grain has been spoiled because of poor storage conditions, or where germination has occurred deliberately as part of the malting process (cf. the Roman maltings at Beck Row, Fryer *ibid.*). It is unclear which process is represented here, as spoiled grain may have been part of the waste material used to fuel the oven, but it is entirely possible that small batches of malt were prepared on a regular basis to meet the everyday requirements of the villas residents.

Conclusions

In summary, the following statements may be made:

- Wheat, and most particularly spelt, is the primary crop represented within the assemblages. This is largely typical within deposits of Roman date, as although other cereals were grown and utilised, most were considered inferior to wheat. Oats and barley are both recorded within the current assemblages, but it would appear most likely that they are present as contaminants of the main wheat crop.
- As the weed seed assemblage is so limited, it is difficult to discern whether the cereal requirements of the occupants were being largely met by imported batches of semi-cleaned prime grain, or whether processing was occurring within areas of the site for which there is little or no plant macrofossil record (for example within the 'working area' associated with the aisled barn). Cereal chaff was almost certainly being used as kindling or fuel within the ovens, but as this was a tradable commodity, it too may have been introduced to the site from elsewhere. The limited weed assemblage also makes it difficult to deduce where any grain utilised on the site may have been grown, but it is tentatively suggested that most production was occurring on lighter soils. The near consistent presence of grass fruits and seeds of grassland herbs may indicate that areas which were formerly grassed were coming into cultivation for the first time during Roman period, an innovation made possible by the introduction of a heavier, more efficient plough.
- Corn drying prior to storage and possibly the malting of grain prior to brewing both appear to be represented within the few assemblages studied. Both practises were inherently dangerous, as ovens left unattended could easily ignite causing catastrophic fires, an event which is possibly recorded within the assemblage from oven 215. However, as is the case at Stanion, ovens were most often placed well away from any domiciliary or storage facilities to minimise the risk.

5.5 The waterlogged wood by Ian Meadows

Four stakes of roundwood, (662-665) had been driven into the base of the spring/pool [398]. They had been positioned in a line and may have originally been part of a structure such as a small platform (Fig 20). Each was given a separate context number. All the pieces were missing their bark.

Table 32: Quantification of waterlogged wood

Stake/feature	Length	Diameter
662, pool 398	0.22m	40mm
663, pool 398	0.23m	42mm
664, pool 398	0.35m	43mm
665, pool 398	0.27m	40mm

Stake (662) did not preserve a point, it was broken at both ends but at one end part of an oblique cut scar was evident. In cross section about 12 growth rings could be counted by eye, suggesting this piece could be the product of coppiced woodland. It is possible the missing point was represented by the additional pieces present with (664) although no direct join could be achieved

Stake (663) preserved a wedge-shaped point produced by three distinct converging cuts. The tip of the point was missing and the upper end of the stake was broken. One part of this wedge-shaped point was the original curved form of the roundwood. Again about 12-13 growth rings could be counted by eye.

Stake (664) had a tapering wedge-shaped point produced by three cuts leaving part of the original curved outer face of the wood. It appeared that there might have been slightly more growth rings in this piece, maybe as many as 16. In addition to the stake a further two fragments of originally joining roundwood were also present. They formed a 130mm length of the point of a stake produced by three oblique cuts.

Stake (665) had a tapering point produced by probably three oblique cuts. Unfortunately, the point was less well preserved than the other examples and the stake was broken at the upper end. About 12 growth rings could be seen by eye.

These four stakes are all of similar-sized roundwood with similar numbers of observed growth rings and perhaps denotes the product of coppicing. The simple three cuts to produce the point indicate this is produced probably with a billhook or similar heavy sharp edged tool.

In addition to the stakes two further pieces of waterlogged wood were recovered from (397), fill of pool [398]. One piece was 170mm long and part of a natural growth and the other a sliver of roundwood 120m long. Neither piece showed any sign of having been worked and was probably natural organic detritus.

6 DISCUSSION

The excavation undertaken in 2010 took in the eastwards extension of a villa first recognised in 2002, when it was subject to rescue excavation after its unexpected discovery during a watching brief (Tingle 2008). This second and more extensive investigation has extended knowledge of both the physical form and the chronology of the villa. Frustratingly though, the excavation has perhaps posed more questions than it has answered regarding the development and extent of the villa complex as it has now made it clear just how extensive the remains are, with significant parts of the complex preserved *in situ* to the north and east.

Settlement origins

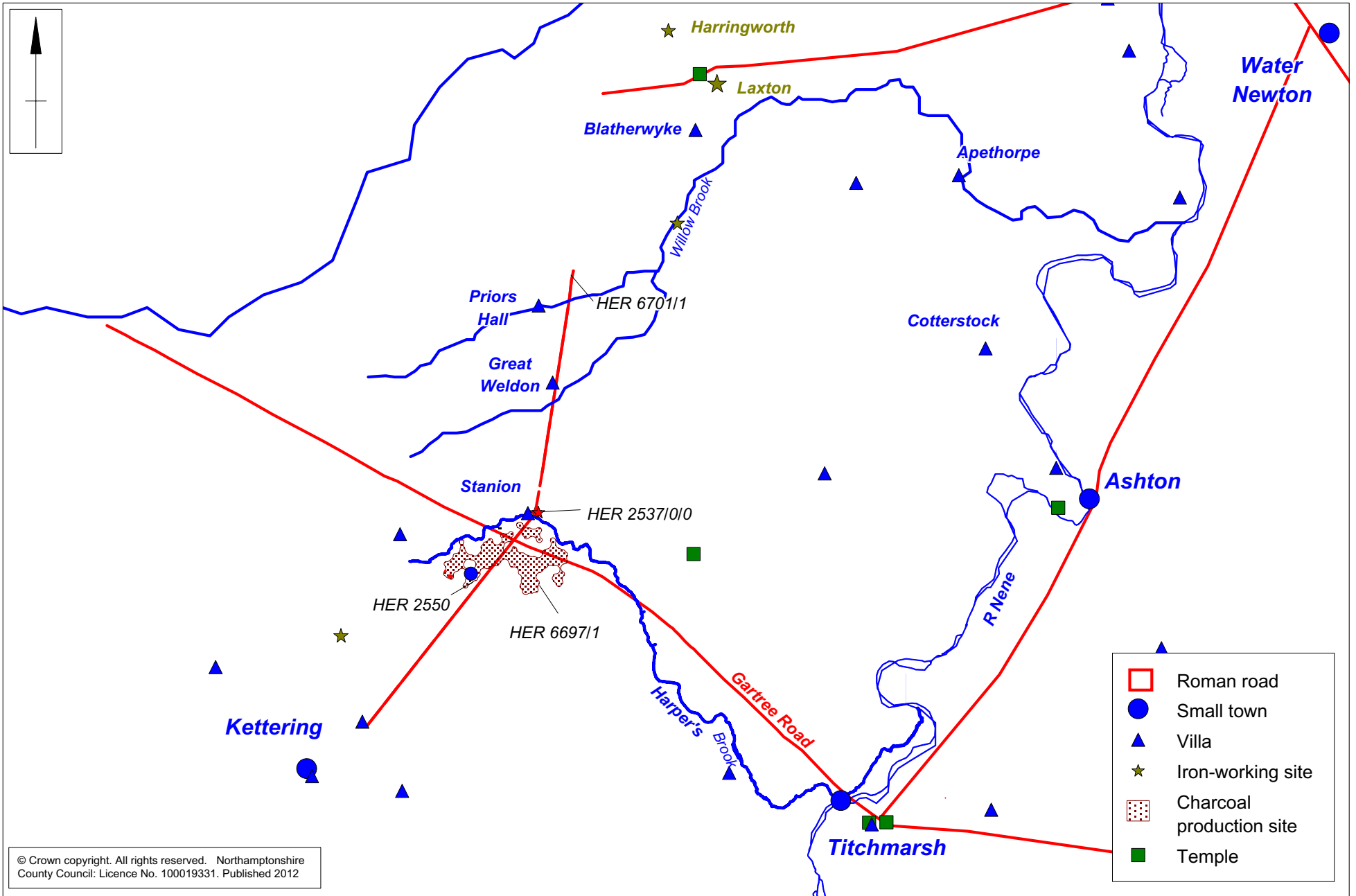
A possible middle Iron Age ditch was investigated just to the north of the site (Jackson 1985). The excavated Iron Age ditches, which possibly formed part of a large ditched enclosure, contained some pottery datable to the late Pre-Roman Iron Age, the early decades of the 1st century AD, but much of the small assemblage is only broadly middle to late Iron Age in date, so an earlier origin for the enclosure is possible. Two timber roundhouses probably came into use in the early 1st century AD, but they may have been retained into the later 1st century AD. The remains of the roundhouses were fragmentary, particularly Roundhouse 2, where only a small part of the ring gully had survived. Although Roundhouse 1 was better preserved, internal postholes only survived on the eastern and southern sides.

Through this period the major activity undertaken was iron smelting. The area of smelting extended north-eastwards towards the current Brigstock Road where a number of large quarry pits and ditches were excavated in 1984 (Tingle 2008), and the focus of the metalworking probably lies between these two areas. There was no evidence that secondary smithing was being undertaken, perhaps suggesting that the iron was being transported elsewhere for use.

The quarry pits to the north-east were in use from the second half of the 1st century and much of the iron smelting evidence from features within the site also falls into this period. The largest assemblage of material came from the primary fill of the eastern enclosure ditch and was suggestive of a furnace being dismantled nearby. The watching brief undertaken by Dennis Jackson in 1984 found evidence of three small hearths or furnaces just to the north-east of the ditch. Other similar features were also observed before being destroyed. Further evidence of possible Roman iron smelting in the vicinity includes a site 350m to the east.

This first phase of settlement remains at Stanion reflects the more general continuity of native traditions of construction in the north-eastern part of the county until the 2nd century, when roundhouses were gradually replaced by aisled buildings and villas (Flitcroft and Taylor 2004). At Great Oakley, c 2.5km to the west, the remains of several timber structures, including postholes of a roundhouse, were replaced by an aisled building sometime in the 2nd century (Meadows 1992). A similar re-arrangement of settlement also occurred at Stanwick, where the villa buildings developed from roundhouses. Neal (1989) argues that while this may have been due to the Nene opening up to navigation once the fens had been drained in the 2nd century, it may also have been due to a change from tribal to Roman control. The development of the estate may have been an attempt to raise the productivity of the settlement by someone familiar with more intensive land-management practises.

Not to scale



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Stanion villa in context Fig 54

Construction of the villa

The settlement was Romanised in the late 1st century AD. A possible stone roundhouse, replaced by a possible rectangular building, were the first stone phases, immediately pre-dating the construction of the villa building.

The villa at Stanion bears some similarity to the first phase of building at Weldon, just over 3km to the north, although Stanion was slightly larger overall. The first phase villa at Weldon was constructed in the mid to later 1st century, with a portico or corridor added at a later date, possibly in the mid-2nd century. Although Stanion villa was initially considered to be of a standard corridor type, this phase of excavation has indicated that the building was more probably of aisled construction, conforming more to a hall-type house under the typology devised by Smith (1998, 26). Similar buildings have been found at West Blatchington and Stroud near Petersfield, Hampshire (Smith 1963). Two models have been proposed attempting to clarify the evidence for aisled houses. One, proposed by Richmond, was that they represent the home of estate workers associated with a wealthier house occupied by the estate owner. Smith suggested that they were the homes of extended families, some of which may have owned estates themselves (Hingley 1989). Smith's model appears more likely in the context of Stanion, because a more complex house has not been found in the vicinity. Stanion falls into the group known as developed aisled houses, which had a distinct suite of rooms at one end, usually with a hypocaust and/or mosaic. They have been compared to medieval hall houses, which had an 'upper' and 'lower' end. The upper end of the building could have been a private suite of rooms and the lower end was a communal space where the family, guests and servants lived.

The eastern walls of the villa building were the most substantial, constructed from mortared limestone rubble, while the walls of the western part of the building were constructed of pitched stone, perhaps suggesting that the western rooms were a later addition. The substantial nature of the eastern walls may suggest the aisled hall had a clerestorey. There has, however, been much discussion regarding the presence or absence of such features within Roman buildings (eg Smith 1963). It does suggest that this building was probably constructed of stone throughout, rather than having a timber superstructure. The presence of the column may give some credence to the idea that the house had a portico, probably located on the northern side of the building. The main entrance was probably also located here, although the almost complete destruction of the south wall of the building has precluded analysis.

The enclosure ditch created in the first phase of settlement seems to have been maintained into the 2nd century, probably as an enclosure or precinct around the villa, similar to Gorhambury, near St Albans. Certainly no evidence of a precinct wall has been identified.

Development of the villa complex

The nature of the organisation of the site subsequent to the demolition of the villa in the 2nd century is difficult to assess. There is some evidence that when the first villa building was demolished it was replaced by a larger complex of buildings, perhaps in a similar manner to Great Weldon (Smith *et al* 1988-9). At Weldon the first house was destroyed by fire at the beginning of the 3rd century and a larger, grander replacement was built over the remains on the same orientation. The destruction of the house at Stanion appears to have been planned rather than catastrophic. The buildings to the east were clearly not meant to be a replacement and it is tempting to suggest that a more elaborate building was constructed somewhere to the north. Certainly, the later agricultural and industrial features on site suggest a thriving estate and some of the finds evidence, especially the Venus statue, indicate a high status presence during the 3rd and 4th centuries. A similar group of buildings to that at Stanion was excavated at Burcote Wood Farm, Towcester (Turland 1977). Buildings included a possible mill, a

stone building with two phases of internal ovens and a building of two/three bays, similar in size to Building 3.

There have been reports of *in situ tesserae* being observed in ditches to the north of Brigstock Road (Mr Lawrie Baker pers comm). This may indicate that Buildings 2 and 3 represent service ranges or outbuildings associated with a larger complex to the north. The watching brief evidence from 1984 also illustrates that the Roman activity is not only concentrated within the areas already excavated but extends to the north and at least 350m to the west. The extensive nature of the remains mirrors the large-scale excavations at Stanwick, which have illustrated just how extensive a villa estate could be with its myriad of estate buildings and tenants (Neal 1989).

However, it is also possible that subsequent to the demolition of the early villa, Stanion was no longer occupied by a person of high status and was instead managed by a tenant or bailiff. Buildings 2 and 3 perhaps operated as the main domestic range for such a person, in a manner similar to Orton Hall Farm (Mackreth 1996), where a large working farm seemed not to have a person of high social status living there permanently. It has been suggested that estate patterns may be characterised by a central large villa with smaller villas and settlements situated peripherally, although there is evidence that more complex forms of territorial organisation may have occurred (Hingley 1989). These smaller villas may have housed tenants of the landowner and it may be that Stanion falls into this category. Mackreth suggests that sites such as this may have functioned rather like a monastic grange, that is, as a collection point for produce coming from many smaller landholdings.

In the later 2nd/early 3rd centuries, at some time soon after the construction of Buildings 2 and 3, areas to the south and east, largely devoid of activity during the early development of the complex, were developed.

To the east a circular stone roundhouse was constructed. On other sites such stone-built circular buildings appear to have been used for a wide variety of different purposes. At Bancroft a circular building was interpreted as a shrine (Williams and Zeepvat 1994) and at Passenham Quarry a small circular structure contained a central urned cremation and appears to have been a mausoleum (Walker 2010). Roman stone-built roundhouses associated with agricultural or industrial purposes are particularly common in the Nene valley area, but are rarely found elsewhere. At Great Weldon a circular building containing three hearths lay just to the south of the main house and was built in the 2nd century, or later (Smith *et al* 1988-9). Droplets of copper alloy on the floor surface suggested an industrial use, although all of the hearths had only slight evidence of heat. There was little evidence to suggest that any metalworking or agricultural processing was being undertaken at Stanion with only small quantities of cereal and no slag being recovered. However, the presence of the central hearth could suggest that it was used for domestic purposes or that some sort of light industrial process was being carried out.

The area immediately to the south of the villa buildings was turned into a large working yard largely concerned with crop processing and related activities. The aisled barn, which at one end held an oven, was otherwise empty with no evidence of internal division. It is possible that the remaining large space was used as storage for processed or semi-processed grain.

Aisled buildings with a purely agricultural use, often containing structures such as malting ovens, are a recognised group on Romano-British sites (Morris 1979). Simpler aisled buildings, though used as domestic buildings in the 2nd century were by the 3rd and 4th centuries used as subsidiary buildings with an agricultural or industrial function. The use of aisled buildings within an agricultural context has been observed at a number of sites in the region, perhaps most notably at Orton Hall Farm, where a number of such structures contained within them an assortment of malting ovens/corn-driers and hearths.

To the south of the aisled barn the large malting oven may have formed a fairly substantial stone structure. Similar rectangular ovens have been found at Longthorpe and Orton Hall Farm (Morris 1979). A similar feature found at Foxholes Farm, Hertford was reconstructed to test the validity of the common interpretation as corn-driers (Reynolds and Langley 1979). The experiment proved how inefficient the oven was at drying grain, but how good it was as a malting floor.

The completed experimental structure comprised a sturdy square building over the flue system, with floorboards and a thatched roof. However, this interpretation of how such features were constructed is now thought to be incorrect (Ian Meadows pers comm). Current thinking suggests that most of these ovens lay within a larger building such as at Orton Hall Farm. It is possible that the large rectangular oven lay within a building, evidence for which has largely been lost.

The evidence for how the ovens were utilised at Stanion is equivocal. There were large amounts of charred grain, but none of it germinated, which would have indicated that the ovens were being used for malting. To the east there was evidence of other ovens.

The excavations at Stanion have now found the fragments of four millstones and, as has been pointed out elsewhere, though a mill was not necessary for the production of grain on a purely domestic scale, it would have been required for the production of flour in large quantities (Mackreth 1996). The presence of Harper's Brook to the south makes it likely that it was utilised for a water-driven mill.

There were two stone-lined wells; one to the south of Building 2 was probably used for domestic purposes, while the other, close to Roundhouse 4, may have been required for whatever industrial/craft activities were being carried out. To the south of Building 3 was a spring or pool. Similar structures to the pool are often interpreted as having ritual connotations, perhaps functioning as a small shrine. An example at the Roman villa at Rapsley consisted of a solid masonry semicircular wall surrounding a large basin rendered in *opus signinum*; other such structures have been found at Chedworth and Darenth. However, the Stanion example seems crude in comparison and there were no associated finds to give credence to such a theory. It seems more likely that the feature constituted another water-source for the inhabitants and livestock of the villa complex.

The demise of Stanion

Many of the buildings and activity areas had gone out use by the late 3rd century and during the 4th century only sporadic activity was taking place, suggesting perhaps that the focus of settlement may have shifted.

There is no definitive evidence of Saxon activity on the site; the small amount of 10th-12th century pottery probably derived from manuring of fields or limited robbing of the remains of the villa buildings. During the medieval period, the area was part of the open field system of Stanion and the remains of ridge and furrow cultivation were evident across the site. More recently, a tree plantation was created at some time between 2002 and 2010

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APPENDIX 1: Detailed description of the features from the 1984/1985 watching brief

The following description of features is taken from a report compiled by Dennis Jackson in 1985.

Area 1

F1: The removal of top[soil] exposed an irregular area of limestone slabs and rubble in association with dark soil. It did not extend to the side of the stripped area, however, and no roadside ditches were found. The feature did not appear to be a road, judged either from its surface appearance or as seen in section (Trench 1, Fig 3). It was not excavated but may represent the make-up for floors or other surfaces. There was no definite evidence of stone walls (but see F4 below).

F2: Iron Age pit or ditch. A few pieces of scored ware from its filling suggest a middle Iron Age date. No other Iron Age features or pottery was found in the stripped area.

F3: Pit cut through the Roman layers and filled with sandstone rubble. (The bedrock was limestone or silt in this area). No dating evidence was recovered.

F4: Robber trench of wall or drain. Outer facing of limestone slabs but filled internally with dark loam. Width 0.50m.

F5: Ditch, some 0.63m deep, below the stripped surface and filled mainly with grey clay or silt. A "furnace bottom", from an iron smelting furnace, was found in its filling as well as pottery dating to the 2nd century.

The finds from Area 1

The only finds from this area, apart from the pottery, were fragments of blue slate from the Smithland quarries in Leicestershire. The stratified pottery dates to the 1st/2nd centuries but unstratified material attests continuing activity in the later Roman period.

Area 2

The ground surface in Area 1 sloped from west to east, and in Area 3 from east to west. The area between (Area 2) therefore lay in a small valley and a deeper soil cover. Most of this extra soil was not removed during the top soil stripping, and archaeological features in this area are unlikely to have been exposed. The machine cut trench on the south (Trench 1) was taken down to bedrock, however, and no roadway, or any other features were revealed in the trench. The bedrock in this area was a soft, sandy silt and in 1985 was wet and "spongy". Any roadway crossing this area, without metalling, is likely to have rutted the underlying silt, but no evidence of this was found.

Area 3

On the west side of this area any features could have been sealed beneath uncleared soil, whereas to the east the mechanical excavator that stripped the soil had deeply rutted the clay beneath

F6 & 7: A thin layer, or layers, of limestone rubble was exposed in Trench 1 but, it was not possible to prove it was a Roman road (Fig 3).

The metalling was over 10m wide on the north side of the trench, but only 5m wide to the south. If a road, its orientation is therefore uncertain. There was a shallow ditch, running roughly north-south, on the west side of the stone layer (F6), but no corresponding ditch could be found to the east.

Adjacent to Trench 1 the layer of stone was partially covered with uncleared soil, but in trial trenches dug 5 to 10 to the north no stones were located. In addition, a

mechanically dug trench extending along the north side of the road corridor did not reveal any metalling or roadside ditches.

F8: A number of hearths or small pits, as well as patches of burnt subsoil, were revealed in this area. Most, however, were either mutilated or scraped away during soil clearance.

F9: The base of a small key-hole shaped kiln, furnace, or oven survived after the soil stripping. The clay lined chamber is likely to have been between 0.50 and 0.80m in diameter.

F10 & 11: Probably similar to *F9* but little surviving. Extensive burning around the features.

Area 4

Over most of the area, the bedrock was not cleaned sufficiently for the detection of archaeological features. Nevertheless, two Roman ditches were exposed in roadside drainage trenches.

F12: This ditch crossed the road corridor almost at right angles. The bottom of the ditch was not exposed but the ditch itself was in excess of 1.5m deep and fairly wide. Unstratified pottery from the ditch dates from the 2nd century onwards.

F13: This ran parallel, and some 5-6m to the east of Ditch *F12*. It could not be recorded in detail but was of smaller dimensions than Ditch *F12*.

Area 5

F14: Boundary ditch? (Approximately 120m east of ditch *F12*). The ditch was probably around 1.20m deep and a small amount of 2nd century pottery came from the filling.

F15-20: The quarry pit or pits were cut into the Northamptonshire Sands Ironstone, and had been excavated to the bottom of a workable seam of ironstone. There is therefore little doubt that they were dug for iron ore, and the slag found in their fillings suggests this was probably smelted nearby. An analysis of an ironstone sample by Mr J Rogerson, a retired BSc chemist, confirmed that the iron content of the ore was high (Fe 41.8).

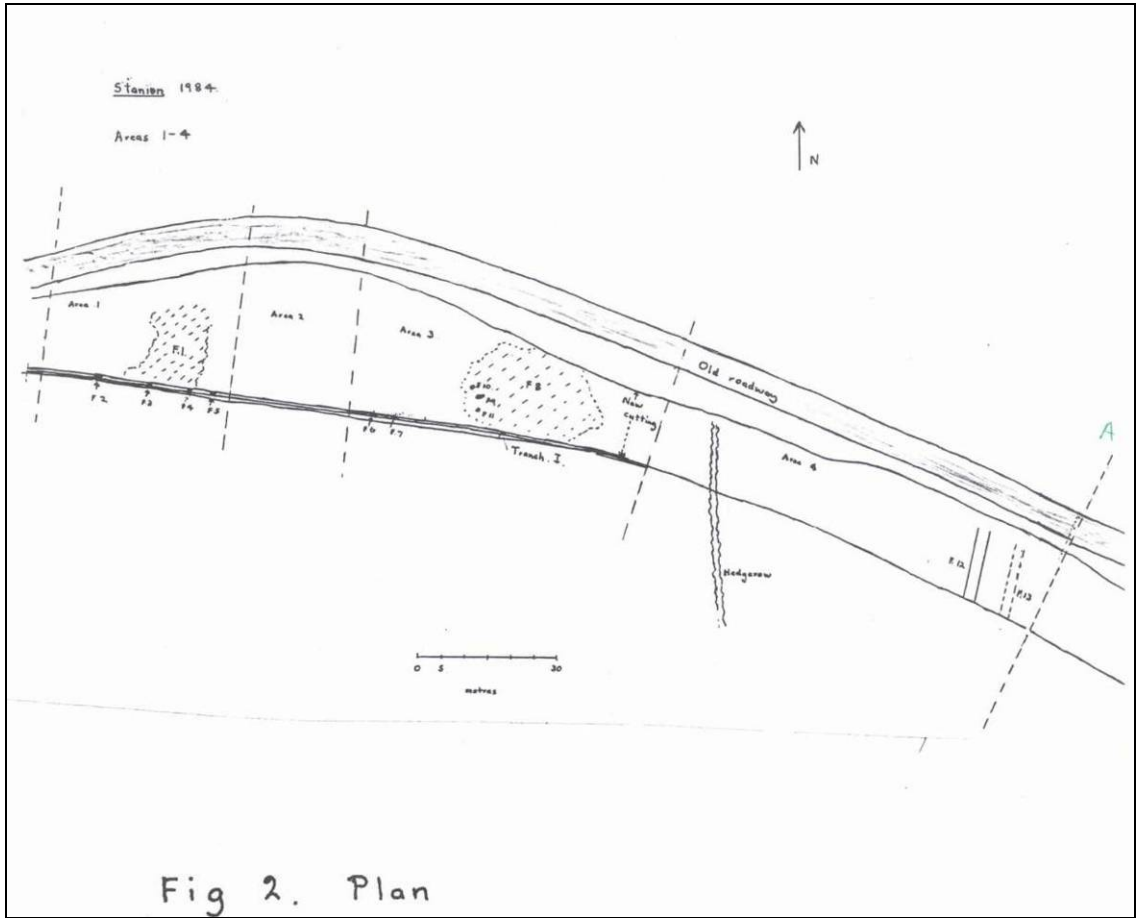
It is clear from the sections (Fig 3) that the quarry was open over a period of time, and that the pits were cut into the ironstone seam when further ore was required. In the process the unwanted sandstone rubble was discarded into disused pits, and the convenient holes were at the same time used for the disposal of domestic refuse.

In addition to slag and ash, quantities of mortar and plaster were found in the pits, perhaps suggesting the existence of buildings or floors nearby. A brooch of Hod hill type, found in the pit, is unlikely to have been manufactured after 60-65 AD. (Information from B Dix), and a lot of the Samian pottery from the pits dates to the later 1st century. However, a few pieces of Samian ware suggest that some of the pits were probably still open after the middle of the 2nd century (information on the Samian pottery kindly provided by Hedley Pengelly).

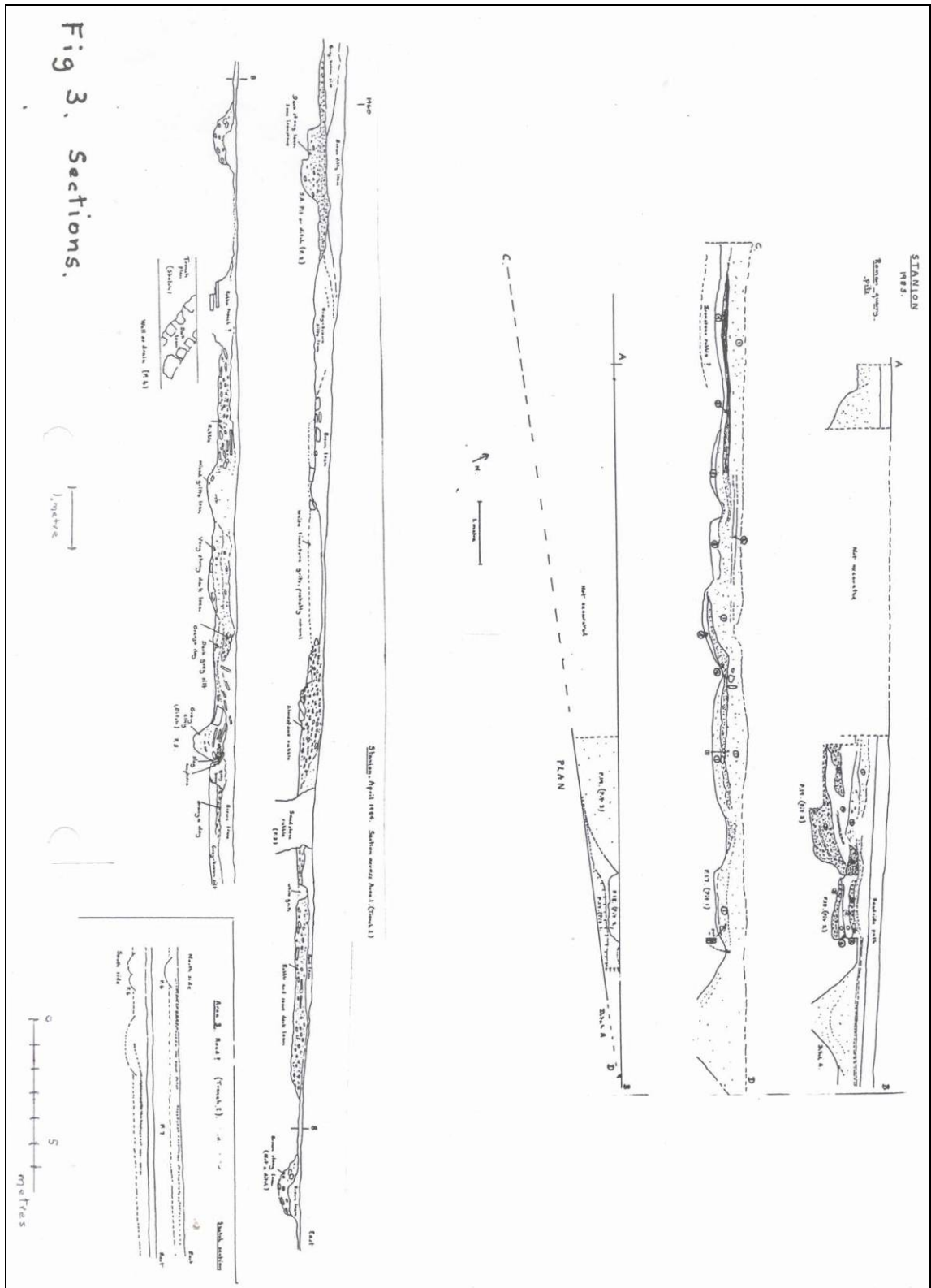
The excavation of the quarry pits was not an original objective of the watching brief and much of this work was carried out by Mr P J Foster of the Northants Field Group. An interesting late 1st or 2nd century ceramic assemblage was retrieved from the pits and will be subject to a report by Mr Foster.

F21: There were further Roman features in this area which could not be investigated. Unstratified pottery found nearby dates to the later Roman period (3rd/4th centuries).

F22: When the old road was removed it was found to overlay a layer of loam, 0.3-0.40m thick and this in turn sealed a thick layer of limestone rubble. This feature was exposed after the completion of the watching brief and there was no opportunity to plan its extent, or if a road, the alignment.



Plan of the western half of the watching brief area



Plan of quarry pits and sections through features

APPENDIX 2: COIN CATALOGUE

SF Context	Ruler <i>Denom</i>	Date Mint	Obverse type	Reverse type	Wear	Diam (mm)	Die axis
1/ 7 ditch 8		C4	Illeg	Illeg	C/C NSU	18	
3/7 ditch 8	Crispus*	323-4 London	CRISPVS- NOBIL C	BEAT TRA- NQLITAS Altar inscribed VOT/IS/XX Three stars above PLON	SW/SW	20	6
5/ 9 phole 11	Magnentius or decentius	350-3		Christogram	C/C	24	5
6/9 phole 11					C/C	18	5
10/ u/s		C4	C4 bust tye	2 victories holding up a shield VOT V MVL T	C/C	21	
11/ u/s	Valentinian II(?)	383-92 Cyzicus	Helmed bust	GLORIA ROMANORUM kneeling captive type SMK (A)	C/C	20	12
12 u/s	Marcus Aurelius * <i>Sestertius</i>	161-80	Bearded bust	Standing figure with	W/W	29	11
13 u/s		C4	C4 type bust		W/W C/C	15	
14 u/s		C4	Illeg	Illeg	C/C	21	
18 u/s		C1/2	Illeg	Illeg	C/C	26	
19/29 ayer		C3/4	Illeg	Illeg	C/C	15	
20 u/s	Allectus <i>Antoninianus</i>	293-96	IMP C ALLECTVS PF AVG	PAX AVG	C/C	22	6
21	Gratian	375-8	DN GRATIA – NVS PF AVG	GLORIA ROMANORUM C& K type 8 364-66	C/C	19	12
22/29 layer	As	Late C1- C2	Illeg	Illeg	C/C W/W	28	
23/109 layer		Mid-late C4	C4 bust	Standing victory	C/C		11
24 Furrow u/s		330-35	H of C bust	2 soldiers 2 standards GLORIA EXCECITVS	C/C	17	11
25/29 ayer	<i>Dupondius</i>	C2	Illeg	Illeg	C/C W/W	27	
26/29 layer	i) Crispus	324-6 Ticinum	Unseen as fused to coin below	Wreath VOT XX Legend DOMINOR NOSTROR CAES MM PT H&K 491	/UW	19	
26/29 layer	ii) Constans	330-5 Heraclea	CONSTANSIVN NOBC	Unseen but would have been Gloria Exercitvs type 2 soldier 2 standards	UW/	16	

STANION VILLA

SF Context	Ruler <i>Denom</i>	Date Mint	Obverse type	Reverse type	Wear	Diam (mm)	Die axis
27/30	As	C1/C2	Illeg	Illeg	W/W C/C	26	
28 u/s		C4	C4 bust – NIVSPFAVG	Illeg	W/W C/C	19	
33	? Victorinus	268-70	Radiate bust and legend ending in PF AVG	Illeg	W/W C/C	19	
34		C4	Illeg	Illeg poss standing victory type figure	C/C	17	
35	<i>Dupondius</i>	C2	Illeg	Illeg	C/C W/W	29	
37		C3	Barbarous Radiate		NSU	14	
38	As	C2	Illeg	Illeg	C/C W/W	25	
40		C3/4	Illeg	Illeg	W/W	16	
42	<i>Dupondius</i>	C2	Illeg	Illeg	C/C W/W	29	
44	Gallienus <i>Base silver Antoninianus</i>	253-68	Radiate bust GAL-	Lion advancing legend lost	NSU Edge missing	18	
45		C4	C4 type bust	Illeg	C/C	16	
46		C4	C4 bust	Illeg	C/C	19	
47	Trajan <i>Sestertius</i>	103-11	Laureate bust	Danube bridge	C/C SW/SW	32	
52		Post 270	Barbarous radiate based upon the DIVO CLAVDIO issue	Barbarous version of CONSECRATIO eagle type	NSU	17	
55	Constans	341-46	CONSTAN SPFAVG	VICTORIAEDDAV GGQNN 2 victories facing Mm TRS	NSU	15	6
57/482 ditch 481		C3	Radiate bust	Illeg	C/C	19	
58	Claudius II	268-70	IMP CLAUDIVS AVG	AEQUITAS AVG	NSU	20	11
59/157 layer	Claudius II	268-70	IMP C CLAV[	Standing figure holding caduceus ? Felicitas	NSU / C	17	5
60/157 layer			Illeg	Illeg	C/C	18	
62/157 layer	Claudius II	268-70	IMP C CLAVDIVS AVG	GENIVS EXCERCI	C/C	20	6
64/157 layer	Gallienus **	253-68 Rome	Illeg radiate head]ALLIENV[	APOLLINI CONS AVG centaur walking drawing bow	C/C	20	6
65/157 layer		C3	Illeg radiate head	Illeg	C/C	15	
66/157 layer		C3	Illeg radiate head	Illeg	C/C	18	
75/10 phole 11		C4	Illeg C4 bust	Illeg	C/C	18	

STANION VILLA

SF Context	Ruler <i>Denom</i>	Date Mint	Obverse type	Reverse type	Wear	Diam (mm)	Die axis
76/10 phole 11	Crispus	324-390	FLIVLOCONST ANTIVSNOBC	Camp gate PROVIDEN TIAECAESS	UW/UW	18	7
83/44 subsoil		Siscia post- med?	Illeg	Illeg	Smooth	21	
88/29	<i>Sestertius</i>	C3	Illeg	Illeg	C/C	28	
94/49	Constans	341-46	CONSTAN SPFAVG	2 victories holding palms VICTORIAEDDAV GGQNN	C/C W/W	15	6
110 u/s	Valens	365-78	DNVALEN[		C/C	18	6
111/157		C3/4	Illeg	Illeg	C/C	18	
112 u/s		364-78	Bust but no surviving legend	SECURITAS REIPUBLICAE	C/C	16	6
115/30		C4	Illeg C4 bust	Illeg	C/C	14	
116/30		C3/4	Illeg	Illeg	C/C	19	
117/30		C4	Illeg	Illeg	C/C	20	
119/29/ 30	Hadrian <i>Sestertius</i>	117-38	Bust but legend illegible	Illeg	W/W	34	6
127/29	Gallienus	260-68	GALLIENVS AVG	LAETITIA AVG	SW/SW	20	6
128/09		341-6	Illeg	2 Victories holding palms VICTORIAEDDAV GGQNN	C/C	13	11
130/109		C4	Illeg	Illeg	C/C	14	
132/85		C4	Illeg	Illeg	NSU	9	
133/109	<i>Dupondius</i>	Late C1 early C2	Illeg bust Domitian??	Illeg	W/W	26	
150/30		C3/4	Illeg	Illeg	C/C	17	
154/109	Gallienus	260-68	]ALLIEN[radiate bust	Illeg	C/C	21	
155/109	Crispus	324-30 (Trier?)	]IVNCRISPVS NOB CAES	Camp gate PROVIDENTIAE CAESS Mint mark ST[	SW/SW	19	11
158/30			Illeg half coin	Illeg	C/C	10	
174/175		C3	Illeg radiate head	Illeg	C/C	18	
177/175		C3	Illeg radiate head	Illeg	C/C	16	
181/175			Illeg	Illeg	C/C	11	
192/204	Constantius	320-21 Ticinum	Illeg]NOB[Constantius ivn nob c	VOT X in wreath]OROR[dominor nostrorcaess	C/C	20	11
199 u/s	<i>Dupondius/A s</i>	C1/2	Illeg	Illeg	W/W C/C	27	
200 u/s	<i>Sestertius</i>	C1/2	Illeg	Illeg	W/W C/C	28	
201 u/s			Illeg	Illeg	C/C	23	
202 u/s		C4	Illeg	Illeg	C/C	11	
203 u/s		C4	Illeg	Illeg	C/C	10	
204 u/s		C4	Illeg	Illeg	C/C	21	

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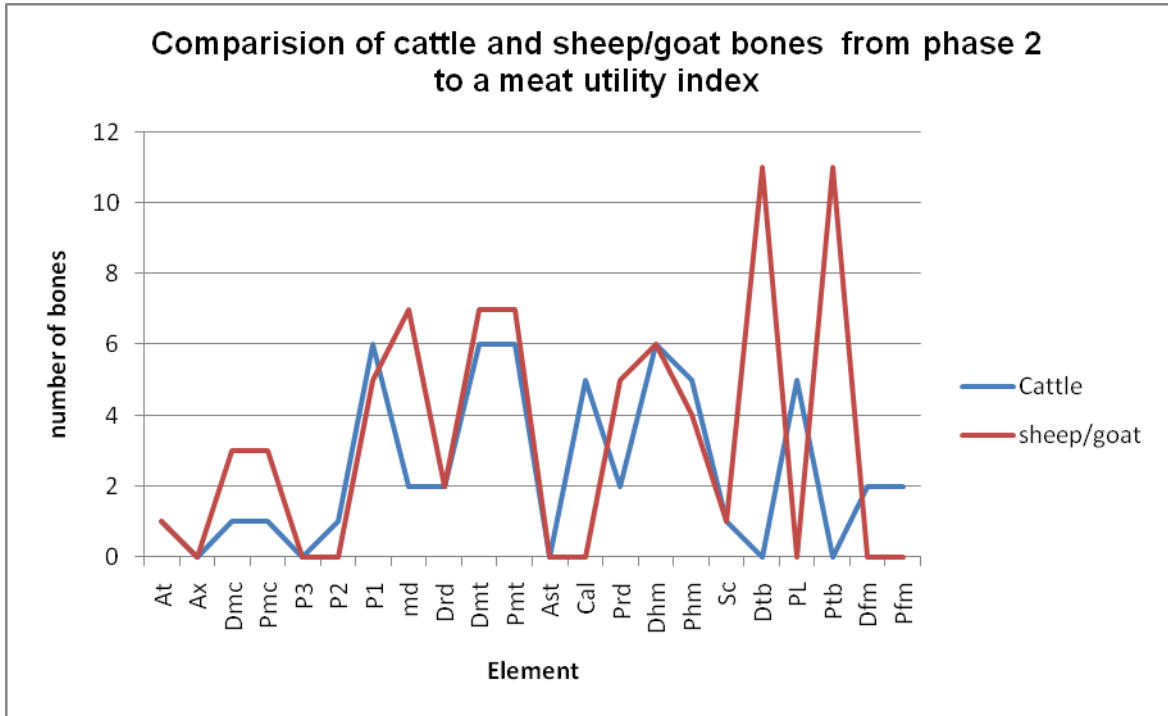
SF Context	Ruler <i>Denom</i>	Date Mint	Obverse type	Reverse type	Wear	Diam (mm)	Die axis
206/157		C3	Illeg radiate	Illeg	C/C	16	
208/175		C3/4	Illeg	Illeg	C/C	18	
211/30		C4	Illeg	Illeg	C/C	18	
212/175		C3	Radiate bust legend missing	Illeg	C/C	19	
244/413		C3/4	Illeg fragments	Illeg	C/C		
272/572			Illeg	Illeg	C/C	27	
279/10		C4	Illeg	Illeg	C/C	19	
287/591	Postumus	259-68	]VMVS[radiate head	Illeg	C/C	18	
337/693	Flavian (As)		Bust Hadrian?	Illeg smooth	W/VW	25	
340/693	Flavian? Domitian <i>Denarius</i>	81-96	Bust Domitian?	Illeg? seated figure	W/W C/C	17	7

* RIC273-281

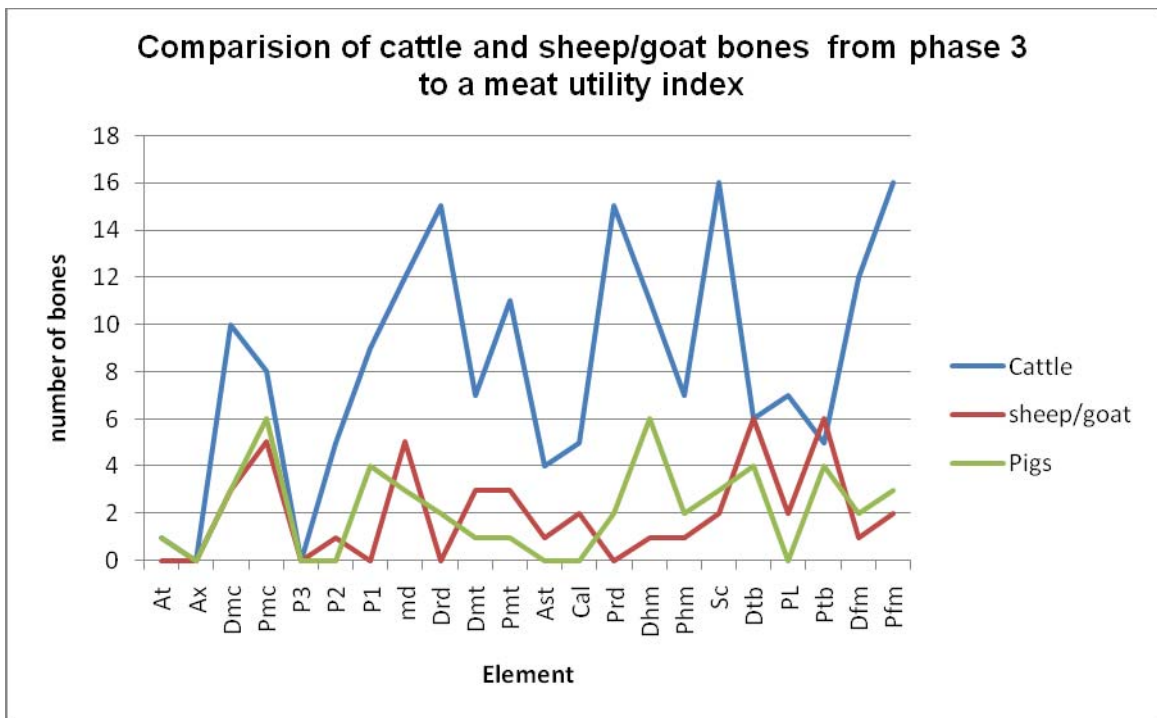
** RIC 163

APPENDIX 3- Comparative graphs for meat utility and preservation

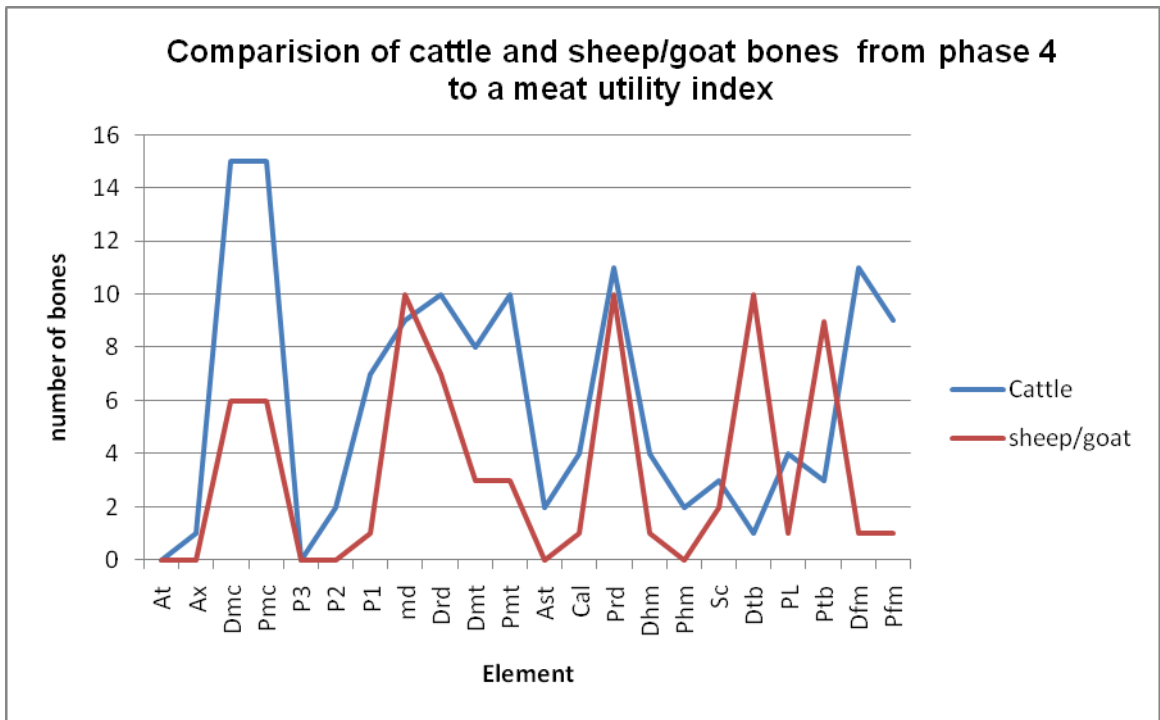
Graph 1



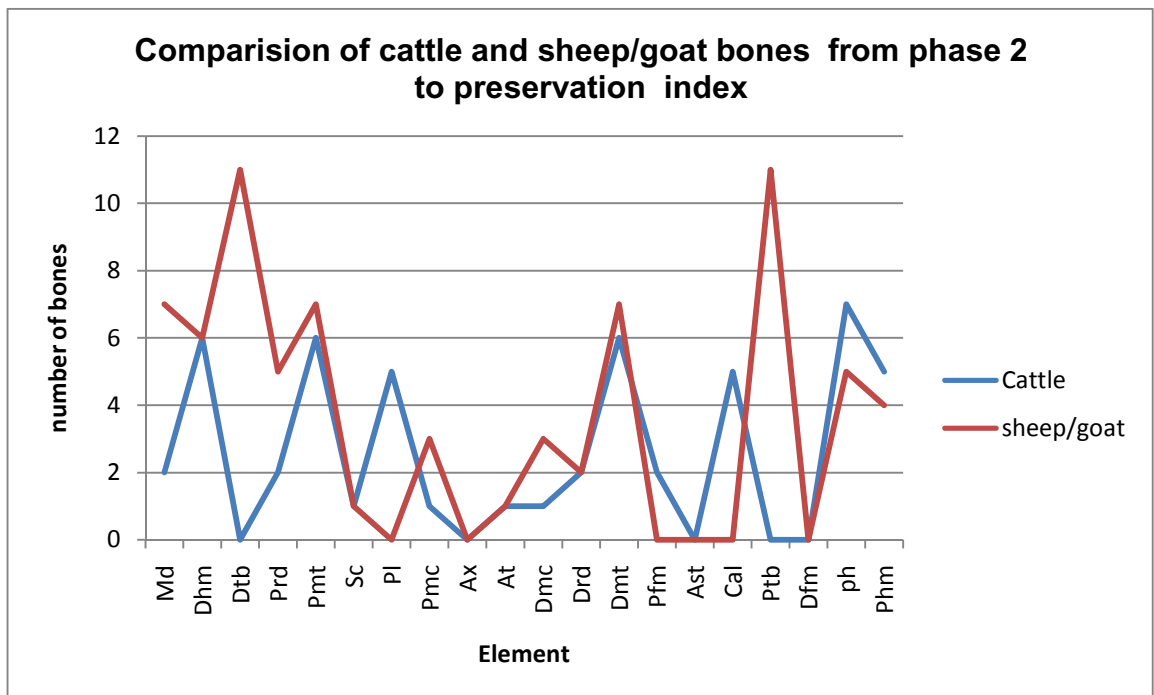
Graph 2



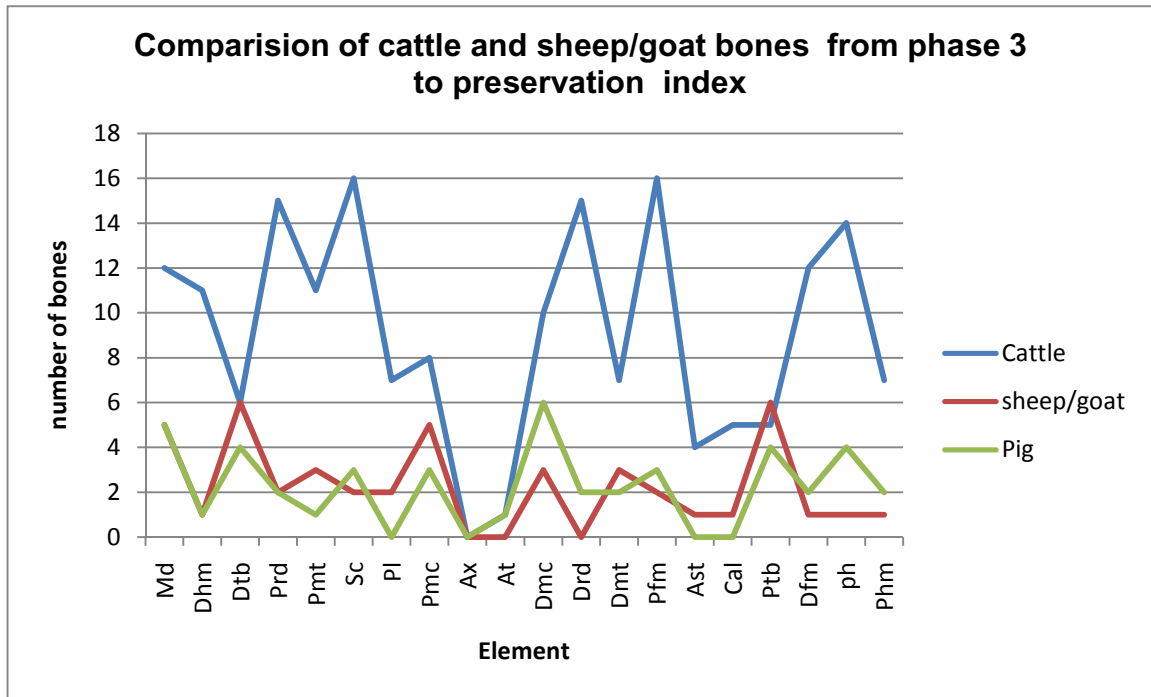
Graph 3



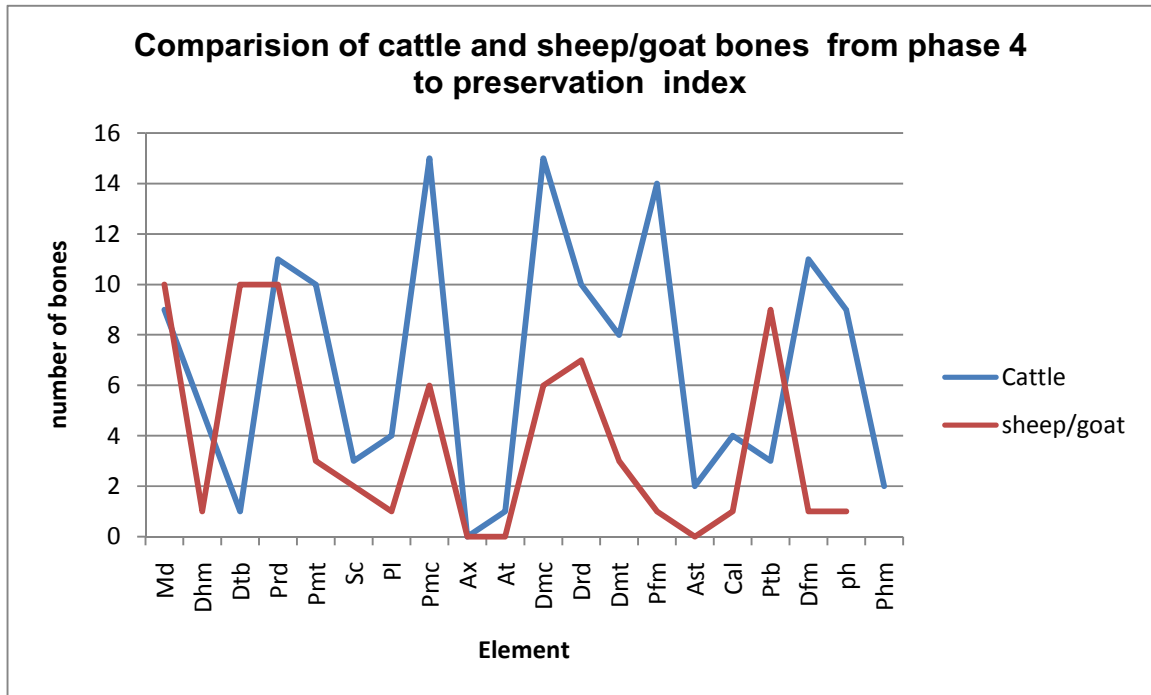
Graph 4



Graph 5

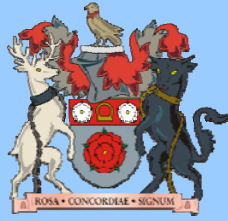


Graph 6



key

md-Mandible; DhM- Distal humerus; Dtb-Distal tibia; Prd-Proximal radius
 Pmt-Proximal metatarsal; Sc-scapula; PL-pelvis; Pmc-Proximal metacarpal
 Ax-Axis; At-Atlas; Dmc-distal metacarpal; Drd-distal radius; Dmt-distal metatarsal
 Pfm-proximal femur; ast-astragalus; Cal-calcaneum; Ptb-proximal tibia; Dfm-distal
 femur
 Ph-phalanges; Phm-proximal humerus



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