



**Archaeological Excavation  
on land at Polwell Lane, Barton Seagrave  
Northamptonshire  
August to December 2012:  
Assessment Report and Updated Project Design**

Report 14/113

Authors: Carol Simmonds and Charlotte Walker

Illustrators: Carol Simmonds, Amir Bassir and Charlotte Walker



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Authors: Carol Simmonds and Charlotte Walker

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| Querns and millstones  | Andy Chapman  |
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| Ceramic building material                                    | Pat Chapman BA CMS AlfA   |
| Human remains  | Chris Chinnock  |
| Animal bone  | Phillip Armitage PhD  |
| Charred Plant remains  | Val Fryer BA MifA   |
| Specialist photography                                       | West Yorkshire Archaeology Services (WYAS)  |

**OASIS REPORT FORM**

|  |  |   |  |
|--|--|---|--|
| <b>PROJECT DETAILS</b>   |  | <b>OASIS number: molanort1-180474</b>   |  |
| Project title  | Archaeological excavation on land at Polwell Lane, Barton Seagrave Northamptonshire August to December 2012: Assessment report and updated project design  |   |  |
| <p>Archaeological excavation was undertaken by MOLA (formerly operating as Northamptonshire Archaeology) on land at Polwell Lane, Barton Seagrave, Northamptonshire, between August 2012 and December 2012. The works were undertaken on behalf of Phoenix Consulting for Redrow Homes. Archaeology dating from the middle Iron Age to the present day, with earlier less tangible elements including Neolithic flint and a Middle Bronze Age pit, were recorded. The middle Iron Age settlement, comprising thirteen ring ditches and other features, was initially unenclosed; later a large ditched enclosure defined its extent. The settlement was self contained with a number of ancillary enclosures positioned around its core. Unusually for Northamptonshire, the settlement also contained over 300 pits, some of which were likely to have been used for storage. The sheep-based agricultural economy of the middle Iron Age was replaced in the late Iron Age by a cattle dominated one. By the early 1st century AD settlement had shifted away, probably to the south where rescue excavations in the 1960s recorded Iron Age and Roman pits. The area was given over to a network of outfield paddocks and enclosures with associated quarry pits, wells and a kiln. Later occupation of the site occurred during the early Anglo-Saxon period (5th to 6th century AD) with four sunken-featured buildings. The Late Saxon to medieval settlement core is thought to have been centred to the north-east of the site, at the manor and St Botolph's Church. From this period the site was farmland, ridge and furrow was recorded in the geophysical survey and traces of furrows were also found during excavation.</p> |  |   |  |
| Project type   | Excavation   |   |  |
| Previous work  | Desk-based heritage assets (Phoenix 2007), geophysical survey (Bartlett 2009), trial trenching (Coates 2009)   |   |  |
| Future work  | Unknown  |   |  |
| Monument type and period   | Iron Age, Roman and Anglo-Saxon settlement   |   |  |
| Significant finds  | Iron Age and Anglo-Saxon pottery, Iron Age and Anglo-Saxon worked bone   |   |  |
| <b>PROJECT LOCATION</b>  |  |   |  |
| County   | Northamptonshire   |   |  |
| Site address   | Land off Polwell Lane, Barton Seagrave, Northamptonshire   |   |  |
| Easting & northing   | SP 886 766   |   |  |
| Area   | 3ha excavation   |   |  |
| Height OD  | 75m-68m  |   |  |
| <b>PROJECT CREATORS</b>  |  |   |  |
| Organisation   | Northamptonshire Archaeology/ MOLA (Northampton)   |   |  |
| Project brief originator   | Lesley-Ann Mather, Northamptonshire County Council (Mather 2009)   |   |  |
| Project Design originator  | Northamptonshire Archaeology (NA 2011)   |   |  |
| Director/ Supervisor   | Adrian Chadwick and Carol Simmonds (NA)  |   |  |
| Project Manager  | Adam Yates, Anthony Maul (NA); Andy Richmond (Phoenix Consulting)  |   |  |
| Sponsor or funding body  | Phoenix Archaeology on behalf of Redrow Homes  |   |  |
| <b>PROJECT DATE</b>  |  |   |  |
| Start date   | July 2012  |   |  |
| End date   | December 2012  |   |  |
| <b>ARCHIVES</b>  | Location   | Content   |  |
| Physical   | MOLA Northampton BPL12   | Iron Age and Roman pottery, animal bone, human bone, cremations, flint, small finds, plant fossils                    |  |
| Paper  |  | Proforma sheets, plans, sections, black and white contact sheets, colour slides and digital photograph contact sheets |  |
| Digital  |  | Report, map and site data, digital images   |  |
| <b>BIBLIOGRAPHY</b>  |  |   |  |
| Title  | Archaeological excavation on land at Polwell Lane, Barton Seagrave, Northamptonshire August to December 2012: Assessment report and updated project design |   |  |
| Serial title   | 14/113   |   |  |
| Author(s)  | Carol Simmonds and Charlotte Walker  |   |  |
| Page numbers   | 127 pages of text, appendices and illustrations  |   |  |
| Date   | June 2014  |   |  |

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*Abstract*

*Archaeological excavation was undertaken by MOLA (formerly operating as Northamptonshire Archaeology) on land at Polwell Lane, Barton Seagrave, Northamptonshire, between August 2012 and December 2012. The works were undertaken on behalf of Phoenix Consulting for Redrow Homes.*

*Archaeology dating from the middle Iron Age to the present day, with earlier less tangible elements including Neolithic flint and a Middle Bronze Age pit, were recorded. The middle Iron Age settlement, comprising thirteen ring ditches and other features, was initially unenclosed; later a large ditched enclosure defined its extent. The settlement was self contained with a number of ancillary enclosures positioned around its core. Unusually for Northamptonshire, the settlement also contained over 300 pits, some of which were likely to have been used for storage. The sheep-based agricultural economy of the middle Iron Age was replaced in the late Iron Age by a cattle dominated one. The large pottery assemblage indicates that use of the settlement spanned the 2nd-1st centuries BC, with a probable continuation into the early 1st century AD.*

*By the early 1st century AD settlement had shifted away, probably to the south where rescue excavations in the 1960s recorded Iron Age and Roman pits. The area was given over to a network of outfield paddocks and enclosures with associated quarry pits, wells and a kiln.*

*Later occupation of the site occurred during the early Anglo-Saxon period (5th to 6th century AD) with four sunken-featured buildings. The Late Saxon to medieval settlement core is thought to have been centred to the north-east of the site, at the manor and St Botolph's Church. From this period the site was farmland, ridge and furrow was recorded in the geophysical survey and traces of furrows were also found during excavation.*

## **1 INTRODUCTION**

### **1.1 Background**

The development area, totalling 21.4ha, is located on land to the west of Polwell Lane, Barton Seagrave, Northamptonshire (NGR SP 886 766; Fig 1). The excavation of 3ha of the total development area was undertaken by MOLA, formerly Northamptonshire Archaeology, on behalf of Phoenix Consulting Ltd acting on behalf of their clients Redrow Homes. They have been granted planning permission by Kettering District Council to construct up to 450 dwellings with associated landscaping, green space and infrastructure together with potential mixed use land.

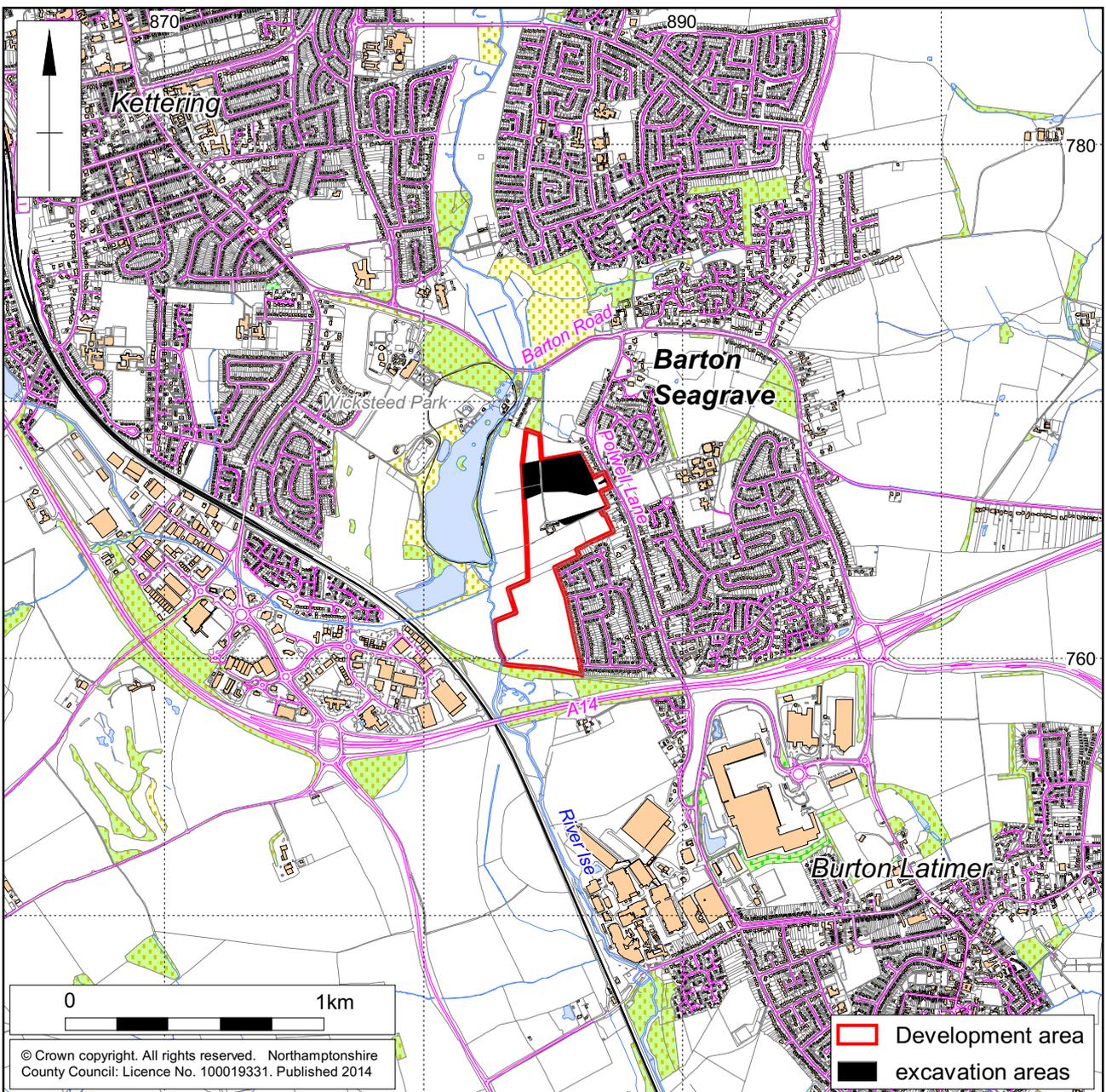
The excavation followed on from a geophysical survey (Bartlett 2009) and subsequent trial trench evaluation (Coates 2009) which had identified two main 'core' areas of settlement together with associated features, designated Site 1 and Site 2. A Written Scheme of Investigation (WSI) was produced by Northamptonshire Archaeology (NA 2011). Monitoring was undertaken by Lesley-Ann Mather of Northamptonshire County Council (NCC) on behalf of Kettering District Council (KDC) by Andy Richmond of Phoenix Consulting Ltd.

### **1.2 Location and topography**

The site is located to the west of Polwell Lane, extending to a total of 21.4 gross hectares (52.8 acres), between the existing built-up area of Barton Seagrave and the River Ise corridor. The topography of the site is generally flat at around 75m aOD, falling away gradually to the west to the floodplain of the River Ise at 55m aOD (Fig 2).

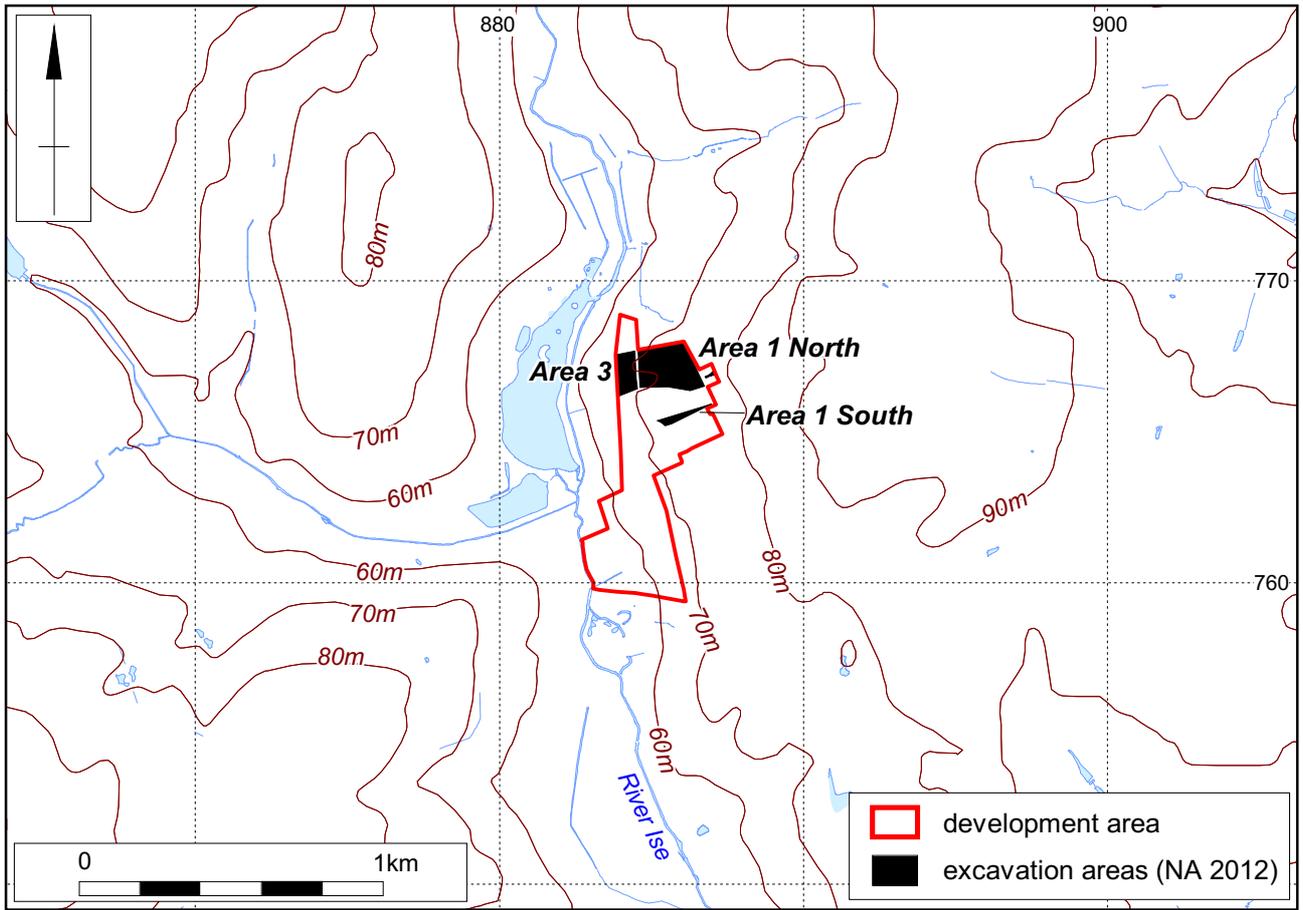
The site boundary to the east is formed by the road frontage to Polwell Lane and existing residential development. The other site boundaries are formed by the allotments and a woodland copse to the north, the River Ise corridor to the west and a disused railway line to the south. At the extreme south-western corner of the site is the Site of Special Scientific Interest. To the immediate north of the site are earthworks associated with the moated site of Barton Seagrave Manor, a Scheduled Ancient Monument. Before the excavation works the primary land use was agricultural with a mix of arable and pasture fields. Within the wider development area was the now demolished 18th/19th-century farm buildings of Dale's Lodge.

The areas of investigation occupied the northern part of the overall development area encompassing a total of 3ha. Areas 1 North and 1 South were separated by a natural shallow valley (slade) which drained away to the west into the Ise valley. The slade was also present to the west, in the southern part of Area 3.



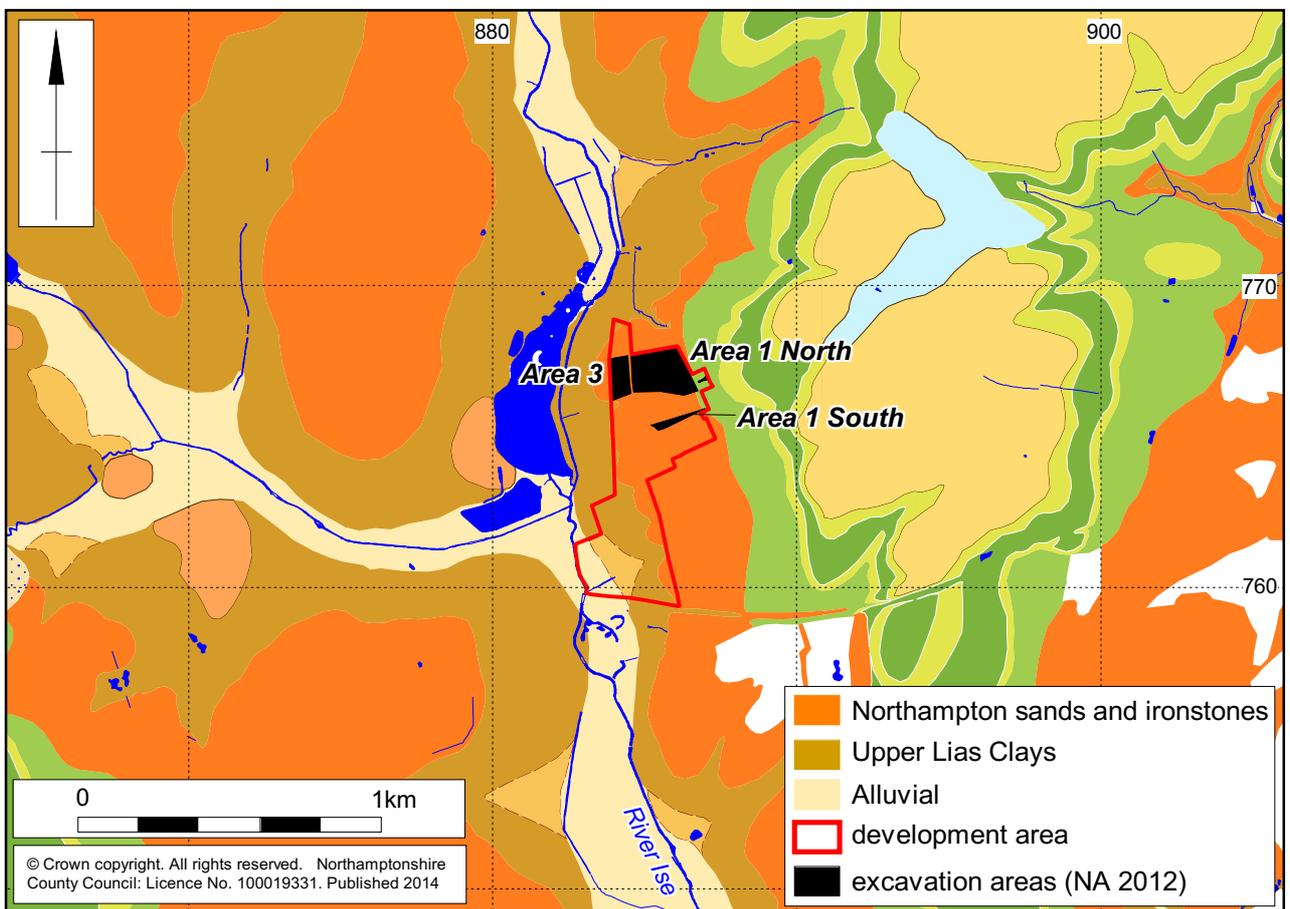
Scale 1:25,000

Site location Fig 1



Scale 1:25,000 (A4)

Topography Fig 2



Scale 1:25,000 (A4)

Principal bedrock and superficial deposits Fig 3

### 1.3 Geology by Steve Critchley

The excavation area is underlain by rocks belonging to the Middle Jurassic Inferior Oolite and Great Oolite Groups. They consist of marine ironstones and limestones of the Northampton Sand Ironstone Formation (Fig 3) unconformably overlain in the uppermost part of the excavation by pale sandy silts and sands of the non-marine Rutland Formation Stamford Member. Down slope of the excavation the Northampton Sand Formation in turn unconformably overlies mudstones of the Lower Jurassic Lias Group Whitby Mudstones Formation.

The Northampton Sand Ironstone Formation has been divided into five lithological units, the lower two of which are present in the Kettering area, namely the Lower Sideritic Mudstone –Limestone Group and the Main Oolitic Ironstone Group and both of these were observed in the excavation area. The Sideritic mudstones with subordinate limestones of Group 1 were exposed in the lower part of the palaeochannel incised into the valley slope running north from the excavation whilst rocks of Group 2 were extensively exposed over the bulk of the remainder of the site. The latter consisted predominantly of thick generally flat bedded orange to red-brown shelly sideritic berthieroid ooid- ironstones with occasional interbedded thin sandy pale brown to yellow-brown oolitic limestones. The effects of periglacial weathering during the Pleistocene had selectively decalcified some of the exposures producing zones and layers of fine orange-brown sands whilst ground ice activity has introduced widespread thermal fracturing and ice wedging features.

The valley of the river Ise is well known for the development of cambering, a phenomena whereby the flexing and extension of competent caprocks, in this instance the ironstones in the upper valley slopes, overlying softer rocks such as the Whitby Mudstones, lowers them down slope as these soft rock deform under their weight. The accompanying brittle deformation of the caprocks induces the development of fissures, minor faults and fractures running parallel to the valley contours. Cambering features are widely considered to have formed during the amelioration of permafrost conditions towards the end of the Pleistocene aided in part by the erosive over deepening of the river valleys under Artic to Subarctic nival glaciofluvial conditions. Individual caprock blocks frequently develop a gradual tilt towards the valley axis and these opening fissures became convenient runoff sinks for surface runoff/melt waters. Their accompanying sediment load would be deposited within the fissures as the water dissipated into the developing groundwater systems. These fissures would be quickly completely infilled with sediment as their propagation was progressively stabilised as equilibrium was established between the deformation of the underlying soft rocks and the weight of the overlying caprocks.

Several such filled partly discontinuous fissures, up to a metre or two wide, were observed within the lower to mid-point of the excavation running parallel with the valley slope. These were completely filled with light grey to light brown silty clays and fine sands derived from the fluvial run off sediment load accompanied by additional aeolian material.

The hydrogeology of the site is relatively uncomplicated with the ironstones and limestones acting as minor aquifer rocks hence the presence of a number of wells within the excavation. Rainfall infiltration would be rapid accompanied by a high hydraulic conductivity down slope or down dip aided by abundant internal fissures and fractures and a high primary porosity. The formation of springs, discharging calcareous groundwater near to the junction of the underlying impervious Whitby Mudstones, would allow the localised development of calcareous tufa deposits. Tufa material was noted in the fill of some archaeological features and may well be of local derivation.

FIG 4



## 1.4 Historical and archaeological background

The development area and its environs have been subject to previous archaeological investigation comprising a detailed geophysical magnetometer survey (Bartlett 2009). A subsequent trial trench evaluation of the site identified two discrete areas of archaeological activity of Iron Age and Roman date (Coates 2009). The following archaeological background is taken from both bodies of work augmented by data from Northamptonshire's Historic Environment Record (HER) and a historic background chapter submitted as part of the Environmental Impact Assessment (Hankinson Duckett 2007).

### *Prehistoric*

Approximately 1.2km to the south of the site lies extensive prehistoric remains dating from the Neolithic to the Iron Age. Cropmark evidence and geophysical survey has also identified a number of undated features in the landscape which will be referred to as appropriate.

Neolithic artefacts (**HER9783**) were recovered from land 1.5km to the south of the site. Other Neolithic artefacts (**HER 6669**) were recovered to the south of the A14 at Burton Latimer. Later prehistoric features including Iron Age ditches (**HER 7157, 8077**), a ring ditch (**HER 3773/0/5**), pit alignment (**HER 3772/0/6**) and other features (**HER 3772/0/5**) were also in the vicinity. There were also a number of undated enclosures (**HER 3772/0/3, 7208/0/1**) and ditches (**HER 3772/0/3**) in this area. To the east of this site were the fragmentary remains of Iron Age features (**HER 1953**), together with a number of undated but possibly related ditches (**HER 8456/2/3**) and enclosures (**HER 1955/0/1 – 2**).

To the south-west of the site was a Bronze Age barrow cemetery (**HER 3794/1**). To the west of the barrow cemetery was a large enclosed prehistoric settlement (**HER 3795, 5893 and 1504/0/1**) with ring ditches, trackways and pits.

Other prehistoric and undated features are recorded to the east of the site and comprise enclosures, ditches and pits.

### *Late Iron Age/Roman period*

At the northern end of Kettering is the site of an unenclosed small Roman town (Fig 4 inset; Taylor 2002). Much of it had been quarried away in the 19th and 20th centuries and the remainder lies beneath modern housing. Piecemeal evidence had identified the remains of buildings and a possible cemetery flanking the conjectured line of a Roman road (**HER3141/1**) linking the Welland and Nene valleys. This road lies 500m to the east of the site.

Much of the available evidence indicates that there was habitation in close proximity to the road, perhaps forming a hinterland. Part of a large site (**HER 3774, 3774/0/2**) was recorded 120m to the south when the area was developed for housing. There is little information regarding the site, but it appears that a number of Iron Age pits were found in 1965 (Brown 1969). Roman material was also found.

Some 1.2km to the north of the site, the remains of a further substantial settlement were recorded in part during development in the 1960-70s (**HER 3780**). Late Belgic pottery was recovered from ditches, gullies and pits (Corn-drying and pottery kilns indicate industrial activity). A number of box flue tiles and roof tiles were recovered suggesting the presence of a reasonably high status building in the vicinity. Late Roman pottery was found, including Nene Valley Colour Coat ware.

### **Anglo-Saxon**

It is conjectured from place name evidence that the post-Roman period marked a continuation of habitation of the site of the small Roman town and other sites in the area (Foard and Ballinger 2000). The extent of occupation and land use of the early to middle Saxon periods remains unclear, although there are indications of early Saxon settlement at Sharlecotes (**HER7424**), to the west of the site and also to the south-east (**HER3903**). Otherwise the clearest evidence for occupation is represented by two cemetery sites excavated in late 19th/early 20th centuries. A large cemetery site comprising at least 150 urns and associated artefacts was excavated near Southfields Farm (**HER 3771**), *circa* 900m to the south-east of the site. A second cemetery site was located at Stamford Road in Kettering town centre. Here, the assemblage comprised between 80-90 burial urns. Elsewhere two isolated inhumations have been recorded.

From the 9th century the development of the Kettering area become more documented, a property charter granted in 956 by King Eadwig defined the *Cytringan* township boundary (Foard and Ballinger 2000; **HER7427**). The principal centre of power within the area was situated at the royal estate at Rothwell. Prior to the Norman Conquest, Barton Seagrave existed as a manor held by Burred and was granted by him to the Abbey of Peterborough (Foard and Ballinger 2002). By the time of Domesday, the manor was held by the Bishop of Coutances (Page 1930). Aside from the documents and the excavation of the cemetery sites there is little physical evidence of later Saxon activity in Barton Seagrave. The locations of the manorial centres and other habitation are not known.

### **Medieval and later**

By the 13th century Kettering was a prosperous village but it began to expand following the grant of its Friday Market charter in 1227. In the 12th century the manor of Barton was divided into the manors of Barton Hanred and Barton Seagrave. The centre of the village may have been centred on the church dedicated to St Botolph (**HER3777/1/1**). The earliest upstanding part of the church dates from the early 12th century (Page 1930). Evidence of occupation survives as clearly defined earthworks to the north and north-west of the church and comprises house platforms and plot boundaries (**HER3777/2**). By the 14th century, the manor of Barton Hanred boasted a crenelated manor house which was built on the orders of Nicholas Segrave. It is last mentioned in 1433 by which time it is thought to have been a ruin. From the 15th century the manor house is likely to have been on the site of Barton Seagrave Hall (**HER3777/7**).

During the medieval period the development area is likely to have been farmland, although the records of the open field system are fragmentary. There are isolated records to the west of the site (**HER9816/0/2**), north (**HER7027/0/10**), east (**HER9821**) and south-east (**HER9821/0/1**, **9815/0/1- 6**) of the development area. However, recent extensive geophysical survey of the landscape around Kettering has revealed the form and pattern of the medieval open fields. In particular survey on land proposed for the eastern expansion of Kettering identified the layout of open field cultivation (Butler 2010). Within the development area a geophysical survey and subsequent trial excavation identified medieval open field cultivation in the fields to the west and south-west of the 2012 excavation area. The survey also recorded faint positive magnetic signals which may have indicated the presence of ridge and furrow across the northern excavation area. No remnants of furrows were identified in this area during the evaluation and this may have been due to modern deep ploughing.

It is thought that the parish of Barton Seagrave may have been enclosed during the 17th century (Phoenix Consulting 2007, Appendix 7.4). By 1842, when the Tithe

Award for Barton Seagrave was produced, the village had shrunk from its medieval form to an area centred on the Hall, the Rectory with its formal gardens and a few houses around the Church. The development area was divided into small, rectangular shaped fields. A field boundary is shown dividing 'Area 1 North' into two parts, although by the time of the production of the 1958 Ordnance Survey map this had been removed. From the 1960s Barton Seagrave rapidly expanded to its current extent.

## 1.5 Scope of mitigation works

The purpose of the archaeological works was to mitigate against the impact of the development on the archaeological deposits through preservation by record. Four areas targeting known zones of archaeological activity were identified for investigation (Fig 5).

The four areas comprised:-

Area 1 North- 2.3ha, Iron Age settlement and Roman paddocks

Area 1 South- 0.2ha, the north-western corner of a Roman enclosure

Area 3- 0.5ha, Roman paddock boundaries

'The Bellmouth'- archaeological watching brief of the show home area

Area 2 to the south of 'Area 1 South' was an area of projected dense Roman features and was not investigated during the current works.

## 1.6 Methodology

The archaeological mitigation works for the proposed development were designed and overseen by Andy Richmond for Phoenix Consulting Ltd on behalf of Redrow Homes. Management for MOLA was undertaken by Anthony Maull and Adam Yates. The fieldwork for MOLA was led by Adrian Chadwick and Carol Simmonds. Monitoring of the programme of fieldwork was carried out by Lesley-Ann Mather, the County Archaeological Advisor for Northamptonshire County Council. All works were conducted in accordance with the Institute for Archaeologists (IfA) *Standard and guidance for archaeological excavation* (2008) and the *Code of Conduct* of the Institute for Archaeologists (2010). All works were carried out in accordance with a Brief (Mather 2012) and a Written Scheme of Investigation (NA 2011).

The excavation took place between July and December 2012, with preliminary groundworks based around the strip for the 'Bellmouth' followed by the strip of the three principal areas. The overburden of topsoil and subsoil was machine excavated using 360 degree mechanical excavators under constant archaeological supervision. All features were hand-excavated and recorded following standard MOLA procedures (MOLA 2014). Machine slots across selected features were undertaken after discussions on site, and include profiles of enclosure ditches and sections to ascertain the full depth of the three wells found on the site.

## 2 RESEARCH OBJECTIVES

### 2.1 General objectives

The objectives for the excavation were identified in the brief provided by the County Archaeological Advisor for NCC (Mather 2009). The broad archaeological objectives for the archaeological works are as follows:

- To investigate the origin and development of domestic occupation by:  
analysing the distribution of material culture;  
investigating the form and function of structural features;  
comparing the assemblages of rubbish disposal deposits by period.
- To investigate paleo-economy and industry through time by:  
examination and comparison of faunal remains;  
analysis and comparison of soil samples from industrial contexts.  
to identify possible crop regimes and staple food stuffs from environmental sampling.
- To investigate the origin and development of the agricultural landscape by:  
determining the phasing of extant field systems by excavation;  
investigate the changes in landscape flora by environmental sampling;  
consideration of the wider geological/hydrological landscape as a mechanism for catalyzing settlement.

### 2.2 Research agenda

General research objectives derived from the regional research agendas (Cooper 2006) in place at the time of the production of the WSI (NA 2011) included broad themes from the Iron Age (Willis 2006) and Roman (Taylor 2006) sections. They were thought to be appropriate given the results of the evaluation (Bartlett 2009, Coates 2009), and were as follows:-

#### ***Iron Age*** (Willis 2006)

- Settlement archaeology
- Settlement and landscape
- Linear monuments and other land divisions
- Ritual, structured deposition and religion
- Agricultural economy
- Finds: Craft industry and exchange
- Social relations and society in the first millennium BC
- Economic and social change during the Late Iron Age / Roman transition

**Roman** (Taylor 2006)

- Chronology
- The late Iron Age landscape and the strategy and consequences of conquest
- Rural settlement, landscape and society
- Artefact production, exchange and consumption
- Ritual, religion and identity

**2.3 Specific research objectives**

In addition the programme of works provided the opportunity to examine the relationship between Iron Age and Roman settlement patterns, given the close proximity and apparently well defined chronology, as highlighted in the WSI (NA 2011). Specific questions might include:

- The differences in the form of settlement between the Iron Age and later Roman period; are they typical of regional and national trends?
- Is there evidence for settlement shift in the different periods? Why and when did it occur?
- How does the material culture of the settlements change between the Iron Age and Roman periods? Is there evidence of different attitudes to artefacts and can the presence of structured deposits be detected (e.g. deliberate artefact deposition in Iron Age pits)?
- Can evidence of changing economic and social opportunity be detected between the Iron Age and later Roman period?
- Is there evidence of different architectural traditions between the Iron Age and Roman periods? Can different uses of space be detected between the sites?
- Is there any evidence of craft activity or industry, does this change through time?
- Is there any evidence for the Iron Age and Roman settlements position within the local and regional social structure, relating them to larger settlements, villas or towns?

It is part of the purpose of the post-excavation assessment and updated research design to review these research aims and amend and add to them as appropriate (Knight, Vyner and Allen 2012). The updated research aims are in Section 8.3 below.

### 3 SUMMARY OF EXCAVATION RESULTS

#### 3.1 Site chronology

Archaeological features were encountered across all excavated areas, with concentrations in the northern and southern parts of the investigation area (Fig 5). The archaeological remains primarily consist of enclosure ditches, 13 ring ditches, ditches defining paddocks, in excess of 300 individual pits, postholes and other feature types including three wells and three quarry pits.

The following statement, Table 1 and Figure 6 summarises the general chronological development of the site. For the prehistoric period most of the activity takes place in the mid to late Iron Age (2nd to early 1st century BC) with some earlier elements present. For the Roman period the ceramic assemblage suggests that there were major landscape changes including a shift in settlement and a reorganisation of the farming landscape in the 1st to 2nd centuries AD. The next significant identified land use was the development of occupation in the 5th to 6th centuries AD. Following the mid Anglo-Saxon period there was no evidence for use till the adoption of the ridge and furrow cultivation system in the medieval period (Period 3).

There are a small number of features, comprising mainly pits in Area 1 South that have not yet been assigned a date. Across Area 3 and in the north-western part of Area 1 North were 20 tree pits, from some of which a quantity of worked flint was recovered indicating their exploitation during clearance.

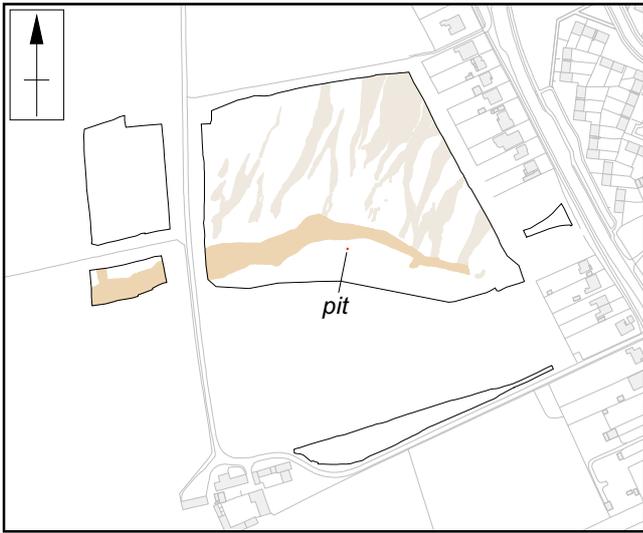
*Table 1: Site chronology*

| <b>Period/Phase</b>   | <b>Description</b>  |
|---|---|
| Early prehistoric   | Worked flint  |
| Middle Iron Age<br>(2nd century BC)                         | Middle Bronze Age pit (Deveral-Rimbury jar)<br>Paddocks and Enclosure 1<br>Settlement comprising 13 ring ditches and a four-post structure. This was initially unenclosed but was later bounded by large rectangular Enclosure 2. |
| Late Iron Age<br>(1st century BC –<br>early 1st century AD) | Pits<br>Pottery production<br>Redefinition of Enclosure 1<br>Continuation of settlement and Enclosure 2 with ancillary enclosures around it   |
| Roman<br>(mid 1st century AD-<br>2nd century AD)            | Pits<br>Settlement shift away from the site, presumably to the south (Enclosures 9 and 10)<br>Outfield paddocks including enclosure 8 and working areas   |
| Early Anglo-Saxon<br>(5th to 6th century AD)                | Cultivation ditches<br>Four Sunken Featured Buildings (SFBs)<br>Rectilinear post-built structure/ fence line  |
| Medieval and post medieval                                  | Pits<br>Ridge and furrow<br>Post-enclosure field boundary   |

Scale 1:2,000 (A4)



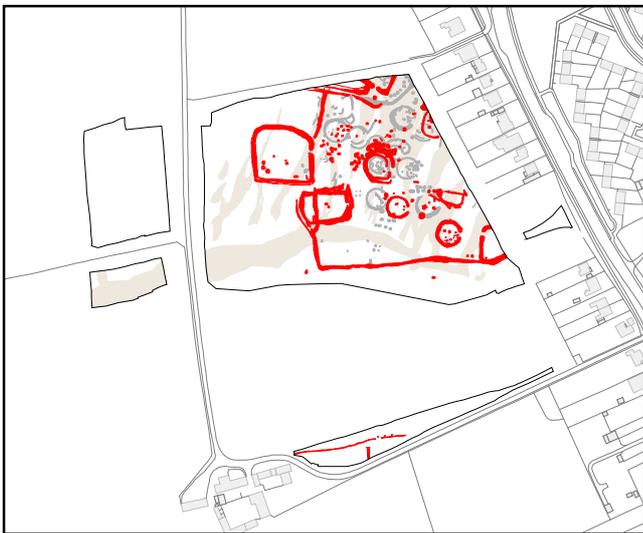
General site plan Fig 5



Bronze Age



Middle Iron Age (2nd century BC)



Late Iron Age (1st century BC)



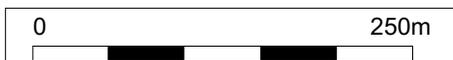
Roman (1st to mid 2nd century AD)



Anglo-Saxon (5th to 6th century AD)



medieval and post-medieval



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### 3.2 Early prehistoric

Early prehistoric features comprised one Middle Bronze Age pit [2244] (Fig 7). However 874 pieces of residual worked flint tools and debitage fragments were recovered from later features. The flint assemblage has been dated from the Late Mesolithic to early Bronze Age (section 4.1). It is probable that the raw source material was obtained locally from flint and gravel deposits.

#### ***Bronze Age pit [2244]***

A single oval pit [2244] (Fig 7) was situated on the east to west slope, to the south of the alluvial slade (2239). The pit was 1m long (north to south), 0.45m wide and 0.17m deep. From the upper fill (2242) 1.3kg of Deveral-Rimbury ware pottery (section 4.2), dated to the Middle Bronze Age, was recovered.

### 3.3 Middle Iron Age (2nd century BC)

#### ***Overview***

A rural settlement developed in the Middle Iron Age, probably the 2nd century BC, with its focus on the upper side of the south-west facing slope. The structures were positioned on the sandy geology above the slade (2239) (Fig 8).

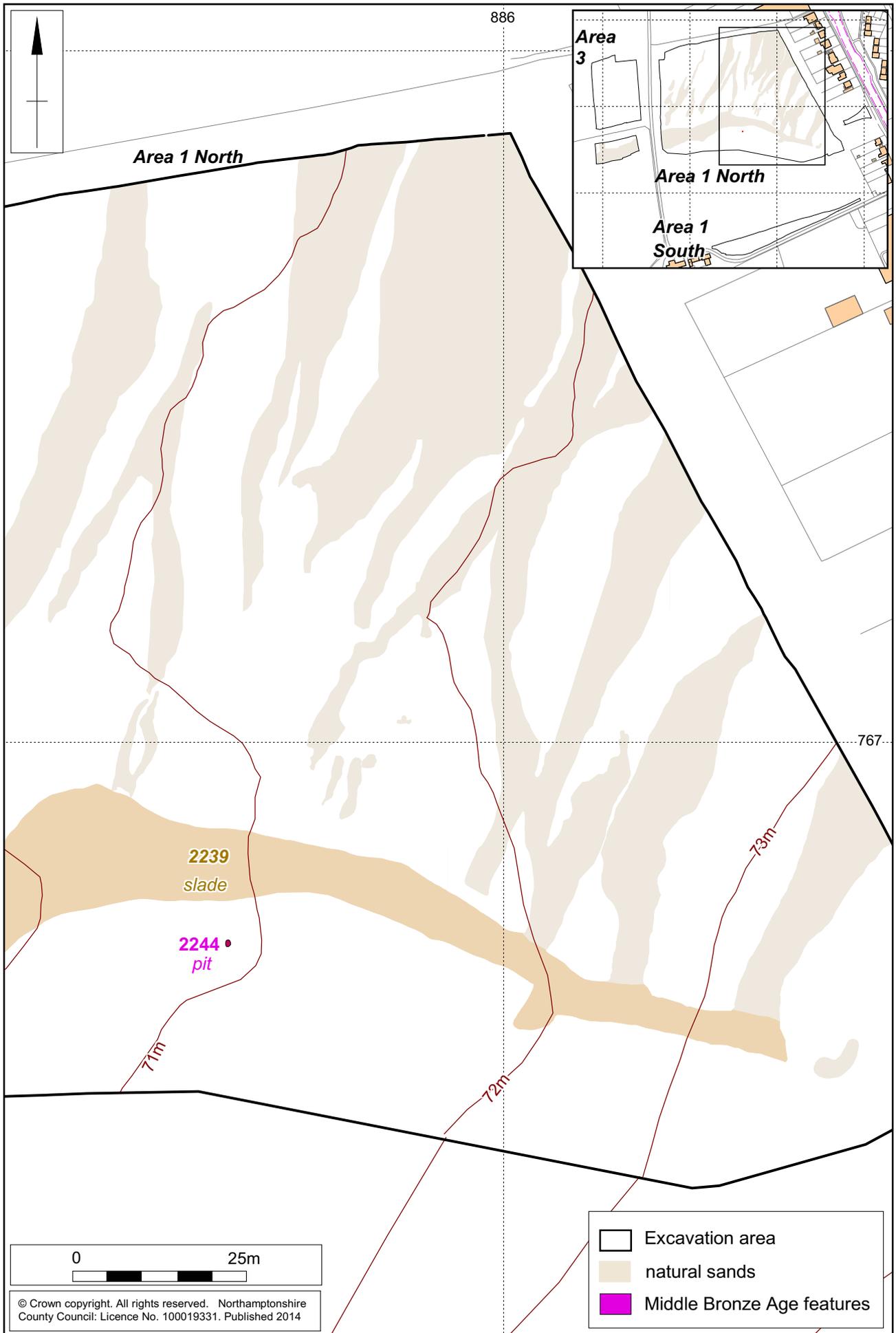
The settlement comprised a series of circular structures defined by ring ditches and a number of small paddocks set within a sub rectangular enclosure that exploited the natural contours and geological features. A minimum of 13 ring ditches were identified that appear to have enclosed domestic dwellings, as well as livestock enclosures and ancillary structures.

The environmental and artefactual evidence indicates that the settlement was associated with mixed agriculture. Sheep are likely to have been farmed in association with a variety of arable crops. These crops were processed and stored within the settlement.

Outside the enclosure to the west was an area of small-scale pottery production, comprising a pit with fired clay and a pit containing waster vessels.

The Middle Iron Age occupation comprised the following elements:-

- Early paddocks and pits
- Roundhouses and associated features
- Outer enclosure
- Pottery manufacture



Scale 1:750 (A4)

Middle Bronze Age pit Fig 7



### ***Early paddocks and pits***

The Middle Iron Age settlement comprised a sub-rectangular enclosure E1 that would have extended beyond the northern limit of excavation. The terminal ends of three shallow ditches protruding within the enclosure may have been subdivision ditches associated with stock management.

Two pits groups were recorded within the enclosure and are believed to be contemporary with its use: Pit Group [3845] were arranged in a linear pattern close to the southern limit of the enclosure; four shallow pits were clustered just to the north.



Enclosure E1 and Pit Group [3845], looking south-west Fig 9

To the south of the main enclosure E1 were a series of further, less well defined paddocks that probably formed part of the livestock management process.

### ***Roundhouses and associated features***

Thirteen penannular ring ditches were sited to the south of enclosure E1. Seven were arranged in a linear band running down the slope from the south-east to the north-west (RD1, RD2, RD3, RD4, RD5, RD6 and RD7). A further six were located to the north and south of this band (RD8, RD9, RD10, RD11, RD12 and RD13).

Some had evidence for redefinition and maintenance, and they were not all in contemporary usage. The majority are likely to have been ring ditches associated with domestic roundhouses and ancillary buildings with south-east or east facing entrances. However, two (RD2 and RD13) had opposing entrance ways and are likely to have been non domestic in nature, possibly associated with some form of processing that required partial shelter and a through draught. Ring ditch (RD9) was redefined on several occasions and may have been the main roundhouse in the settlement.

Internal structures within the ring ditches were not clearly defined, although a posthole circuit within elaborated ring ditch (RD9) may have been the remains of a

building. Paired door posts were identified in three of the ring ditches RD7, RD5 and RD9.

Approximately 30 of the 300 identified pits have been assigned to this period and are likely to have been associated with the use of the ring ditches. These include a group of seven to the south of ring ditch RD11 and seven to the north of ring ditch RD6. More dispersed groups were outside ring ditches RD1 and RD12.

A single four-post structure was situated 4m to the west of roundhouse RD10 (Figs 8 & 10). The structure measured 3.0m (east to west) by 3.3m (north to south). All the postholes had remnants of post pipes. The four-post structure appears to have been maintained as the south-western posthole appears to have been recut.



The four-post structure [3564], looking south Fig 10

A single sherd of pottery was recovered from the north-western posthole. The environmental samples had low quantities of cereals, chaff and seeds along with high quantities of burnt, vitreous material. These structures have usually been identified as granaries.

There are contemporary local examples of four and six post structures at Stanwick and at Loves Farm, St Neots and the majority of these examples had high quantities of cereals or pulses. By contrast the four-post structure at Barton Seagrave had low quantities of material, perhaps indicating that it was not used for a long period of time. Fryer (section 6.2) suggests that the structure may have burnt down as high quantities of vitreous material were recovered from the palaeo-environmental samples of two of the postholes.

### ***Outer enclosure***

The settlement may have originally been unenclosed; however, a sub-rectangular enclosure E2 was constructed around the settlement. A deliberate kink in the line of the new segment of the ditch respected the presence of ring ditch RD8 indicating that the outer enclosure was a later addition. The entrance way into the enclosure was positioned close to the south-west corner on the downslope.

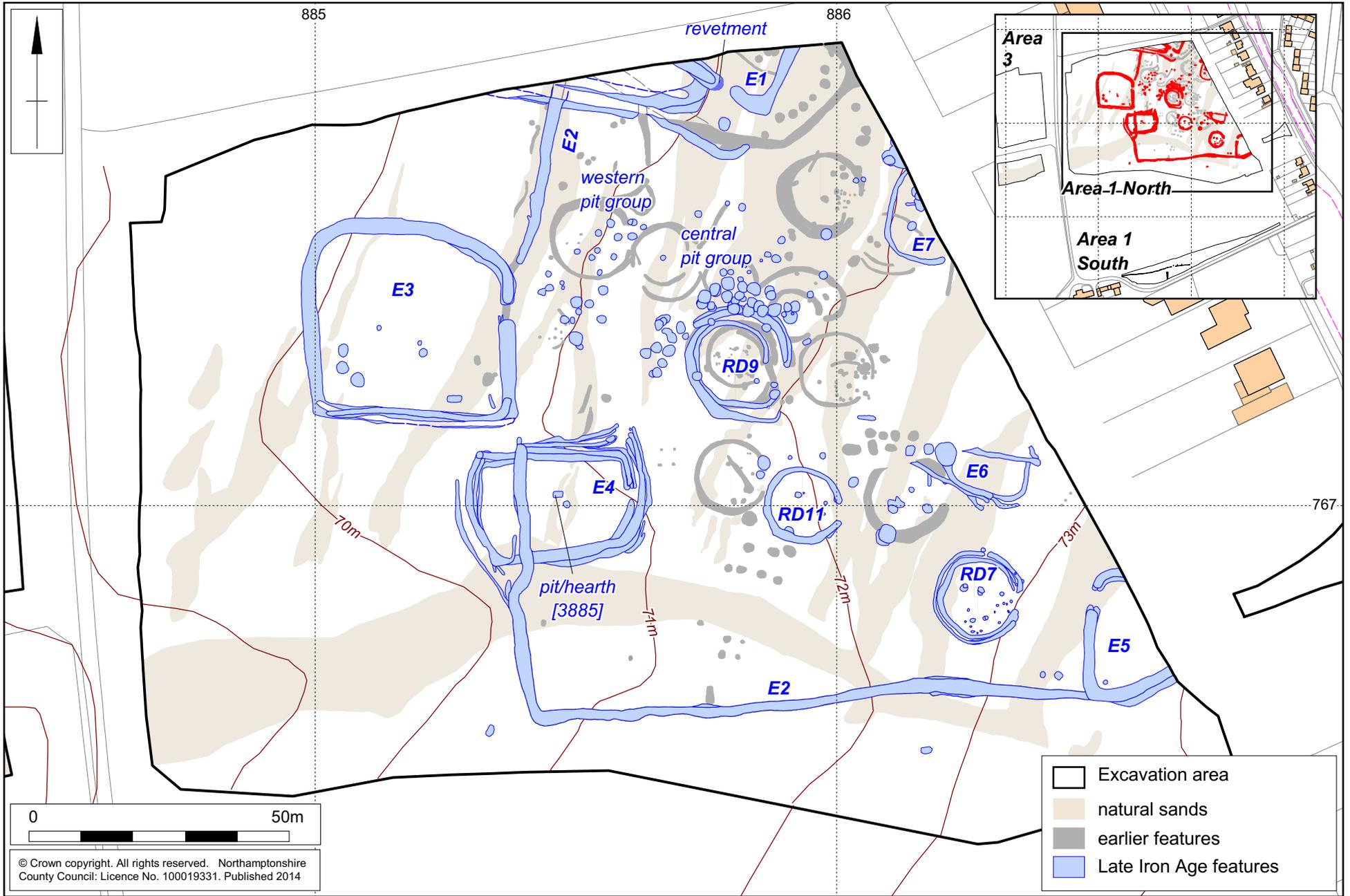
**Pottery manufacture**

A shallow oval pit [3604] just outside the outer enclosure is likely to have been used during pottery production. There was some scorching of the pit sides and base but it appears not to have been repeatedly fired. Large lumps of under fired clay fragments (Section 4.6 and Fig 11) had collapsed into the pit from the super structure.



Pit [3604] containing pottery manufacturing debris, looking west Fig 11

The presence of a small pit [3778] just to the north containing pottery waster vessels (see Section 4.3) supports the interpretation that there was pottery manufacture in the area during the Middle Iron Age.



### 3.4 Late Iron Age (1st century BC- early 1st century AD)

#### **Overview**

The settlement continued in use into the late Iron Age. The enclosure was modified and retained and a number of smaller ancillary enclosures were constructed. A number of the ring ditch structures were retained and domestic, farming and industrial activity continued.

The evidence suggests that cattle replaced sheep as the primary livestock, perhaps necessitating the construction of a number of substantial ditched enclosures. The mixed agricultural regime continued with grain being processed and stored on site, predominantly in storage pits (Figs 12 and 15).

The late Iron Age occupation of the site comprised the following elements:-

- The outer enclosure
- The ancillary enclosures
- Structures and pits
- Southern paddocks/ field system

#### ***The outer enclosure E2***

The outer enclosure, E2 was remodelled on a number of occasions in the late Iron Age, reflecting changes to ancillary enclosures. The construction of the sub-rectangular Enclosure, E3, on the western side of the main enclosure partially sealed the western entrance way.

#### ***Ancillary enclosures***

Six ancillary enclosures were in use, five (E1, E4, E5, E6 and E7) within the main enclosure and the sixth (E3) just on its western edge as described above.

#### ***Enclosure 1***

Enclosure 1 was remodelled and its position shifted slightly to the west. It had an entrance into the main enclosure E2 in the south-eastern corner. Its boundaries were redefined at least three times during this period. The western terminal of the entrance in the latest version had been revetted with stone (Fig 13), presumably to prevent erosion of the entrance causeway.



The revetted ditch terminal for Enclosure 1, looking south-east Fig 13

### *Enclosure 3*

This external enclosure was D-shaped in plan and offset from the western, side of the main enclosure. It was ancillary to, and accessed from within, Enclosure 2. The ditch was redug on at least one occasion.

### *Enclosure 4*

This enclosure (Fig 14) was similar in plan to E3, but smaller. It was positioned just within the western boundary of E2, and was remodelled on numerous occasions, changing the position of the entry from the east to the north-east corner. Despite the extensive remodelling this enclosure passed out of use before E3, and the main E2 ditch was realigned over it stopping just before the south-east corner of E3, narrowing the entrance to the main entrance.



General view of Enclosure 4, looking east Fig 14

#### *Enclosure 5*

This enclosure was offset from the southern side of the main enclosure, the eastern side was beyond the limit of excavation. It had been remodelled at least twice, and in its final phase truncated the main E2 ditch. The entrance way was located at its north-west corner providing access to the main E2.

#### *Enclosure 6*

Enclosure 6 was 20m to the north-west of E5 within the main enclosure (E2). It was D-shaped in plan, similar to both enclosures E3 and E4, but significantly smaller in size.

#### *Enclosure 7*

Enclosure 7 was 30m to the north of E6 and was partially obscured by the limit of excavation. It appears to have been sub rectangular in plan with an entrance at the south-eastern corner within the main enclosure.

### **Structures and pits**

#### *Structures*

At least three of the ring ditches (RD7, RD9 and RD11) within E2 probably continued in use into the late Iron Age. The remaining ring ditches were either truncated by late Iron Age pits or their entrances were obscured by later features and therefore could not have continued in use.

#### *Pits*

Approximately 120 pits have been assigned to the late Iron Age, the majority were within the main and ancillary enclosures with rare examples outside these boundaries.

#### *Central pit group*

Within the main E2 there were two principal clusters of pits. The central pit group was on the north side of RD9, pits had been clustered in this area from the middle Iron Age onwards. It comprised approximately 30 pits, some of which truncated the latest elements of RDs 3, 4 and 9. The pits did not encroach on to the centre of RD9 suggesting that a central structure, if any, may still have been present.

Although the pits were of varying sizes and depths, in general they had steep, almost vertical, sides with flattish bases indicative of storage pits.

*Western pit group*

The western pit group comprised a loosely linear scatter of approximately 20 pits. Unlike the central group these were mostly shallow and unlikely to be storage pits.

*Other pits*

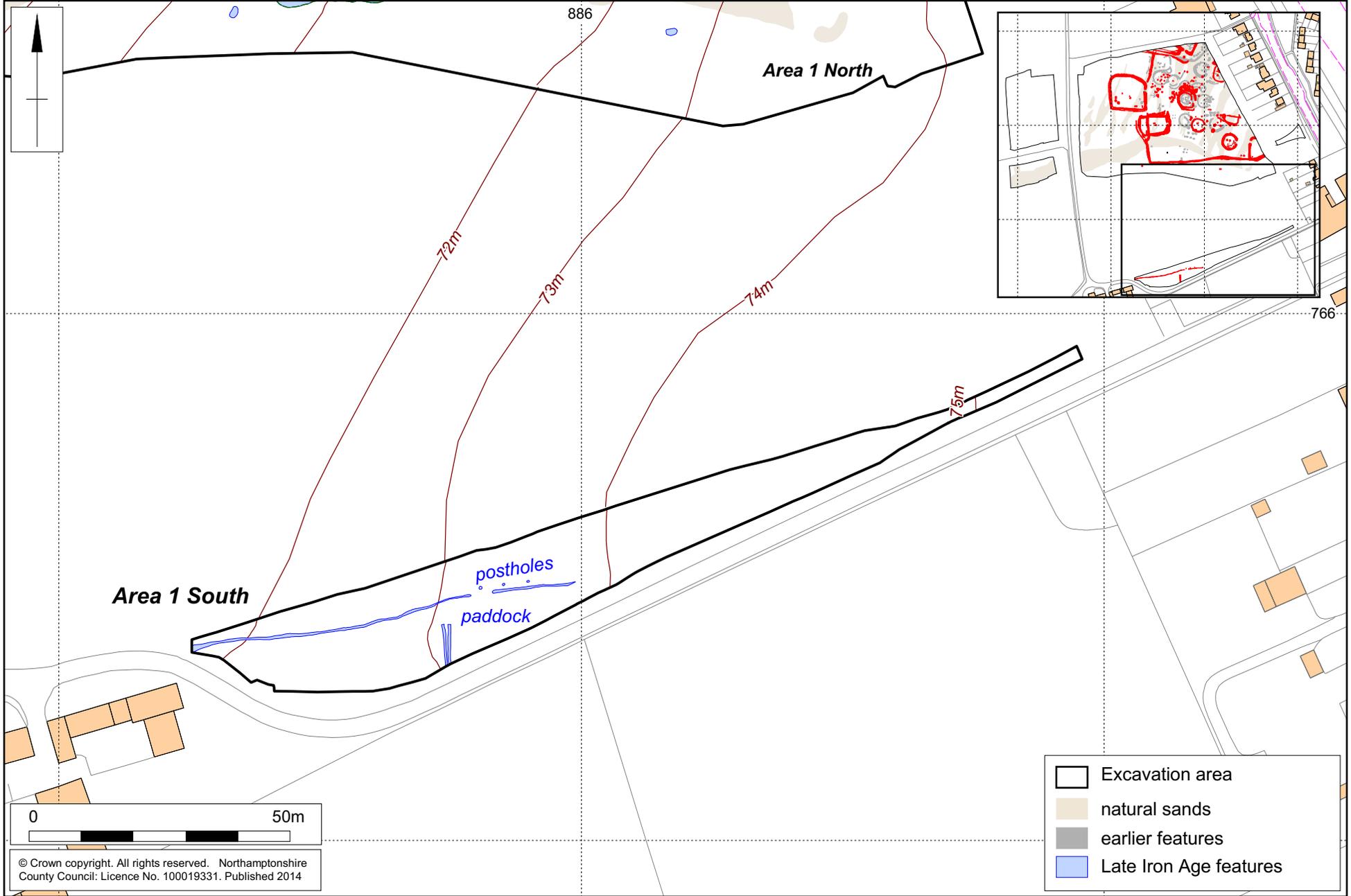
There were a further 25 pits within the main enclosure varying in size and depth. A small number of pits were sited within ancillary enclosures E3, E4, E5 and E7. Within Enclosure 4 were two centrally positioned pits, one of which, [3855], had been reused as a hearth perhaps suggesting that there had been a structure here with little or no sub-ground impact.

***Southern paddocks/ field system***

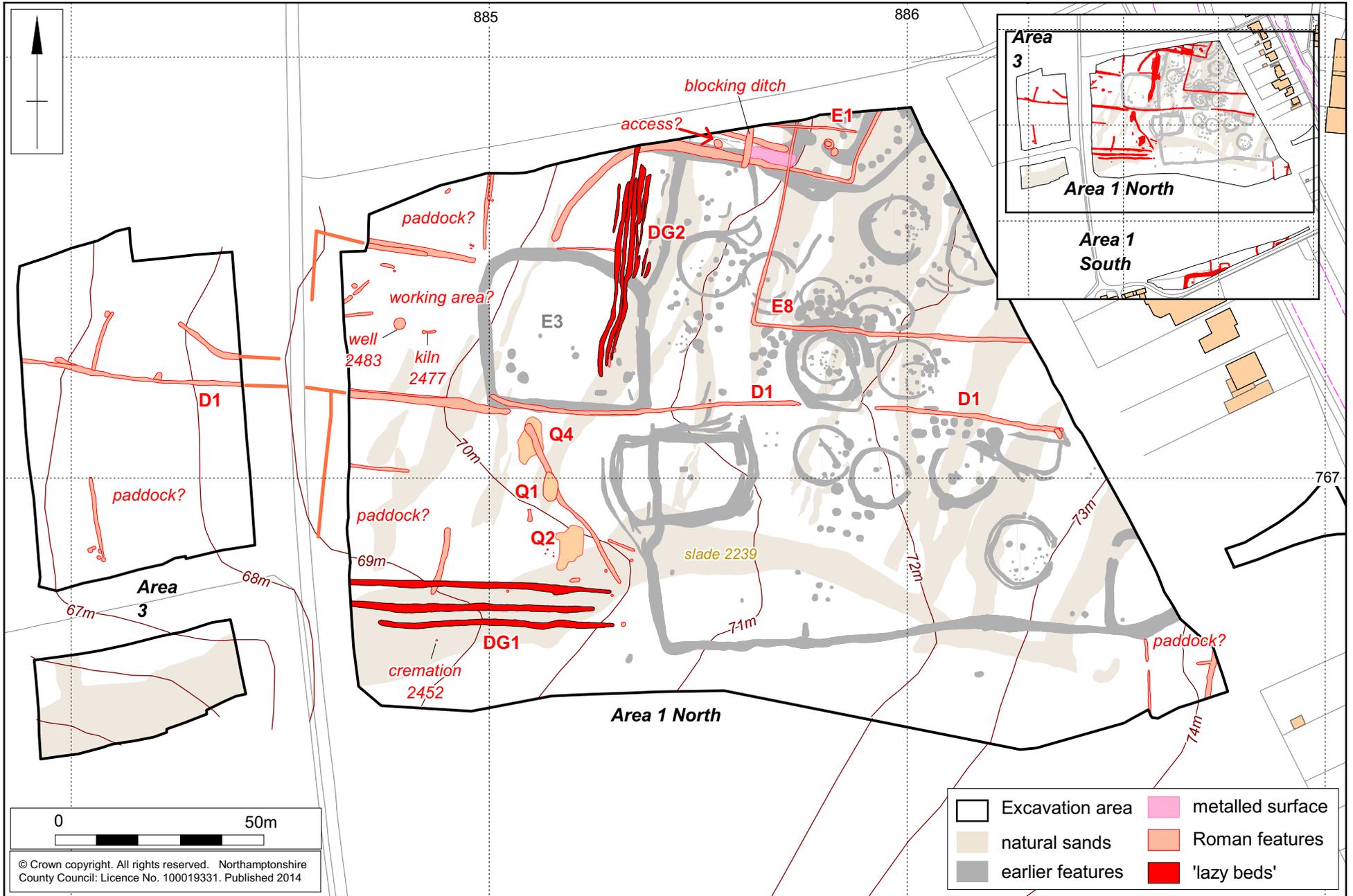
In the late Iron Age there was an expansion of activity into the area south of the slade (2239), (Fig 15). It comprised an east to west segmented, narrow, shallow ditch, associated with three post holes on the northern side and a ditch and its replacement running perpendicular to it on the southern side. The arrangement of features suggests paddocks or fields with off-set entrances, and a possible fence line to create a more robust boundary.

Scale 1:1,000 (A4)

The Late Iron Age features in Area 1 (south) Fig 15

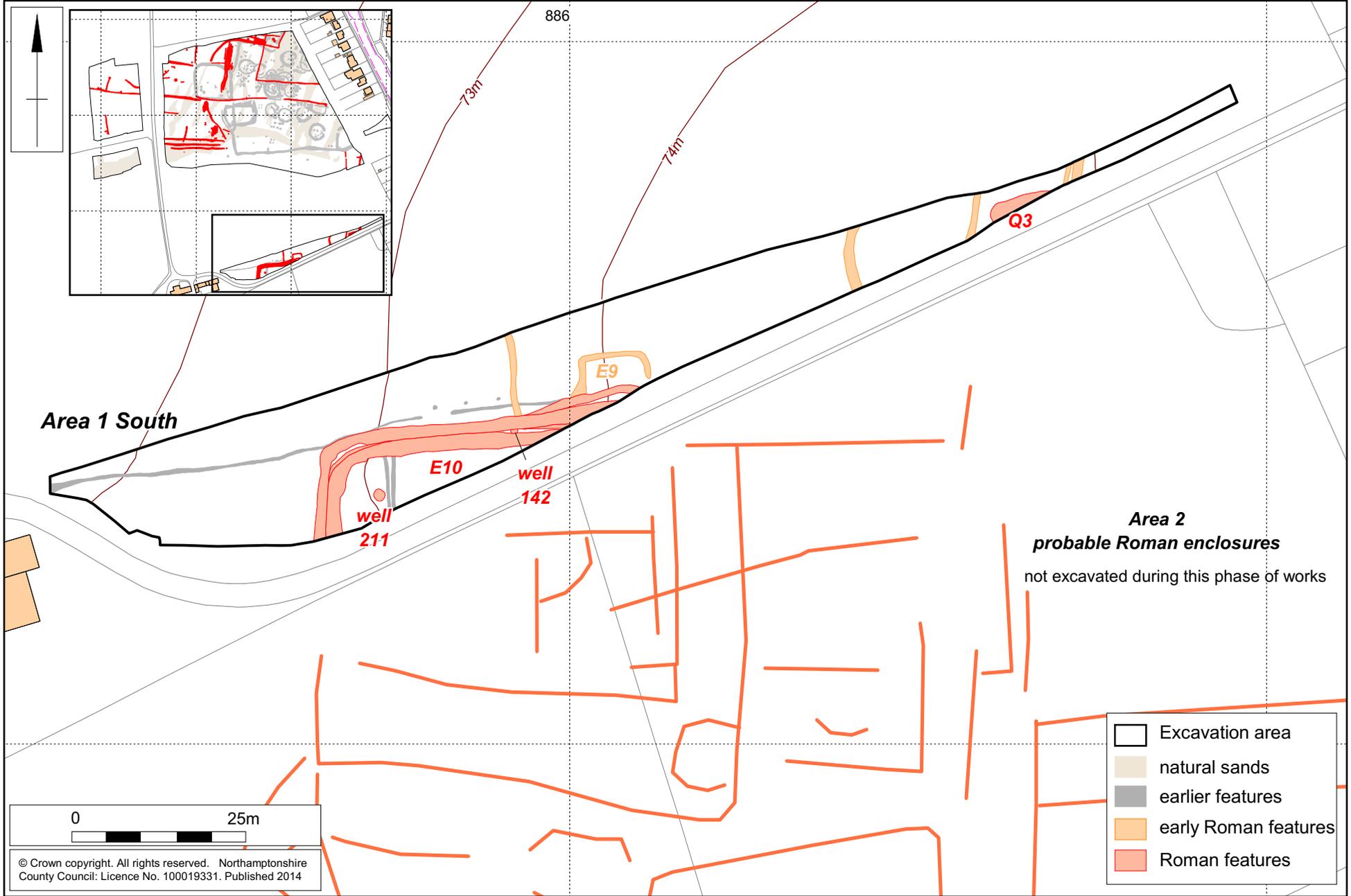


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Scale 1:750 (A4)

Roman Enclosures 9 and 10 Fig 17



### 3.5 The Roman period (mid 1st century AD – 2nd century AD)

Between the 1st century AD and middle part of the 2nd century AD the main focus of occupation shifted to the south, just outside the area of the current works (Figs 16 and 17). The late Iron Age settlement and enclosures ceased to function and were replaced by an extensive farming landscape defined by paddocks. There was evidence for cereal processing and low level industry comprising the manufacture of ceramics and also sand or ironstone extraction.

The Roman occupation comprised the following elements:-

- Enclosures
- Paddocks
- Industrial activity
- Cultivation ditches
- Cremation burial

#### ***Enclosures***

In the northern part of the site, two enclosures (E1 and E8) formed part of an extensive farming landscape which replaced the Iron Age settlement (Fig 16). The focus of settlement may have been located to the south in the vicinity of a rectangular enclosure (E9 and E10).

#### ***Enclosure 1***

Enclosure 1 was again remodelled, however, access was from the west, beyond the northern limit of excavation. The access route was emphasized by the remains of a metalled surface flanked by ditches. The surface, comprising a mix of clays and stone, overlay the poorly consolidated soils which comprised the backfill of the middle and late Iron Age ditches.

Enclosure 1 and the metalled surface were formally blocked or closed from further use by the excavation of a short length of ditch. It was from the base of this ditch that a complete beehive quern upper stone, of Iron Age date (section 4.7) was recovered (Fig 18).



Blocking ditch with the complete Iron Age beehive quern (SF137) in section, looking north-east  
Fig 18

#### *Enclosure 8*

Enclosure 8, defined by a narrow, shallow ditch, was rectangular in plan and replaced Enclosure 1. The eastern and northern sides of the enclosure were beyond the limits of excavation. Its construction may have been contemporary with the insertion of the short blocking ditch.

#### *Enclosure 9*

This small enclosure, located in Area 1 South, was probably rectangular in plan and had an east facing entrance (fig 17). It appears to be contemporary with five ditches, aligned north to south, which may have formed part of a network of paddocks.

#### *Enclosure 10*

In the southern part of the site, Enclosure 9 and the paddocks were replaced by a large rectangular enclosure (E10). The full extent of this enclosure was identified during geophysical survey and the excavation recorded its north-western corner. The enclosure had been remodelled at least twice.



The northern boundary of enclosure 10, looking east Fig 19

Two wells ([142] and [211]) were within Enclosure 10. Plant macrofossils recovered from well [211] suggest that cereal processing was carried out nearby.

### ***Paddocks***

Rectangular paddocks and working areas maintained the alignment of the Iron Age enclosures. The paddocks were arranged to the north and south of Ditch 1 which was on the same line as the southern boundary of Enclosure 3. This ditch may be the Roman formalisation of a route or boundary into the earlier main enclosure.

To the north of Ditch 1 the principal access continued to be from the east into a central working area. This formed the control or access point into the northern paddocks, defined by deep ditches. To the south of Ditch 1 the remnants of the paddocks were more fragmentary.

### ***Domestic industries and quarry pits***

Small scale industrial activity continued into the Roman period. The working area to the north of Ditch 1 contained a dumb bell shaped kiln [2477]. To the west of this was a well [2483] from which a fired-clay cylindrical loomweight (section 4.8) was recovered as well as three fragments of Roman millstones (section 4.7). To the west of the well was evidence for sub division of the area formed by a number of short lengths of ditch and pits.

To the south of Ditch 1 were three sub-rectangular pits (Q1, Q2 and Q4) which were probably used to extract sands or ironstone. Immediately to the west of Q2 were four shallow postholes which may have been an associated post-built structure.

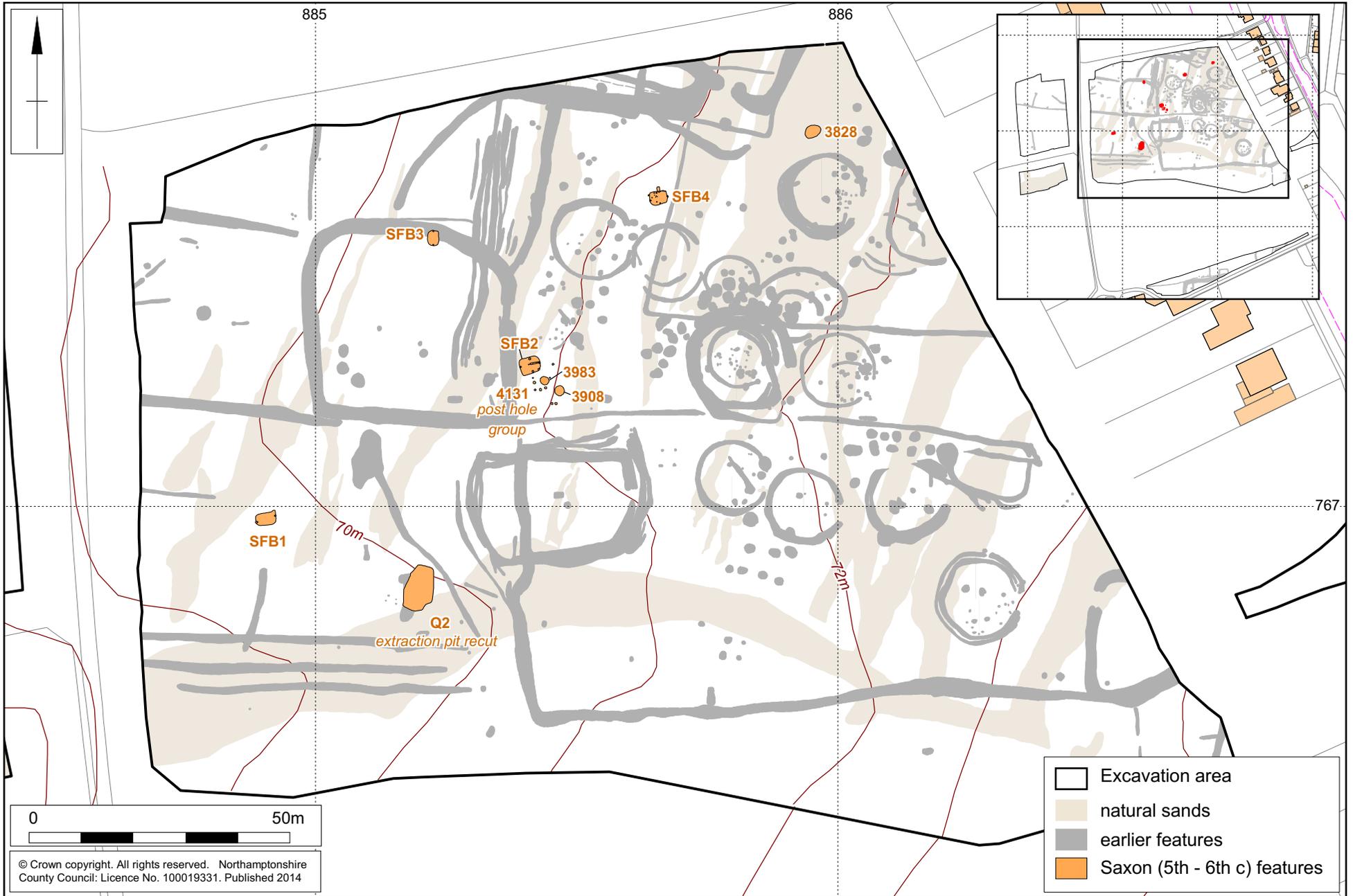
A further extraction pit (Q3) was recorded within Area 1 South, dating from this same period.

***Cultivation ditches***

Cultivation trenches (DG1 and DG2) were present on the softer soils in Area 1 North. The southern set comprised three ditches, aligned east to west, which cut across the slade 2239. The northern set (DG2) comprised at least seven sinuous, shallow ditches aligned roughly north to south. They are thought to be the remains of 'lazy bed' cultivation trenches.

***Cremation burial***

A cremation burial (2452) to the south of DG1 and within slade 2239, was recorded (Section 5.2). The burial was unurned but Roman pottery was found in the immediate vicinity.



### 3.6 The early Anglo-Saxon settlement

#### **Overview**

An unenclosed Anglo-Saxon settlement was established in the 5th or 6th century AD (Fig 20). It comprised four Sunken-Featured Buildings (SFBs), a possible post built structure and a small number of pits. The evidence suggests that, as in the late Iron Age period, cattle were predominantly exploited; pig and sheep were also kept.

The 5th to 6<sup>th</sup>-century settlements comprised:-

- Sunken-Featured Buildings (SFBs)
- Other features

#### **Sunken-Featured Buildings (SFBs)**

Four SFBs were located to the north of the slade on the west facing slope.

SFB 1 was the furthest west on the lower slope above the slade. It was sub-rectangular in plan, aligned east to west, with a centrally positioned posthole in the short ends at the east and west. It measured 3.7m long by 2.8m wide and was shallow at 0.09m deep (Fig 21). A worked bone handle and bone needle were recovered as well as 774g of pottery of 5th to 6th century date.



General view of SFB1 after excavation, looking south Fig 21

SFB2 was 50m to the north-east of SFB1, with a similar alignment. It measured 3.3m long, 3.0m wide and 0.25m deep (Fig 22). Unlike SFB1 it had two pairs of opposing postholes centrally positioned on all sides. A fifth posthole was positioned in the south-east corner. Two short, opposing beam slots were positioned on the central long axis with a central shallow posthole, associated with two stakeholes.



General view of SFB2, looking north-east Fig 22

The 5kg of pottery SFB 2 include decorated sherds and fragments of a large globular jar (Section 4.5, BS10), the profile of which can be reconstructed. The pottery from both fills, of 5th to 6th century date, is thought to be secondary deposition, probably as a result of the site of the SFB being used later as a midden.

Other artefacts from the SFB included a whetstone, loomweights and several pieces of worked bone, including part of a comb handle decorated with incised circle and dot pattern (Section 4.9).

SFB3 was located 25m to the northwest of SFB2, it measured 2.9m long by 2.6m wide by 0.17m deep. Unlike SFBs 1 and 2 its long axis was aligned north to south, and centrally positioned postholes were at the short axes at the north and south. It produced 16 times less pottery by volume than SFB2.

SFB4, 40m east of SFB3, was 3.62m long by 2.68m wide by 0.42m deep. Its long axis was aligned east to west like SFBs 1 and 2. As with SFB2 it had two pairs of opposing postholes on the centre of each side. Five additional postholes were set along the northern edge at irregular intervals. Evidence for further internal subdivision comprised two further postholes and three stakeholes. It contained approximately half of the volume of pottery contained within SFB2, as well as two spindle whorls and two bone needles.

#### ***Other features***

SFBs 2 and 4 were associated with external features. A posthole and sub-rectangular pit were recorded on the north side of SFB4 and may have been contemporary features.

Immediately to the south of SFB2 was the remains of a rectilinear post-built structure/fence line, surviving as five postholes forming the south-west corner of a possible ancillary structure or lean-to. Four further pits were recorded nearby. Two pits were recorded in the same area, one of which had been lined with fragments of

ironstone and tufa (Fig 23), three cattle skulls had been placed on the stony fill within the pit.



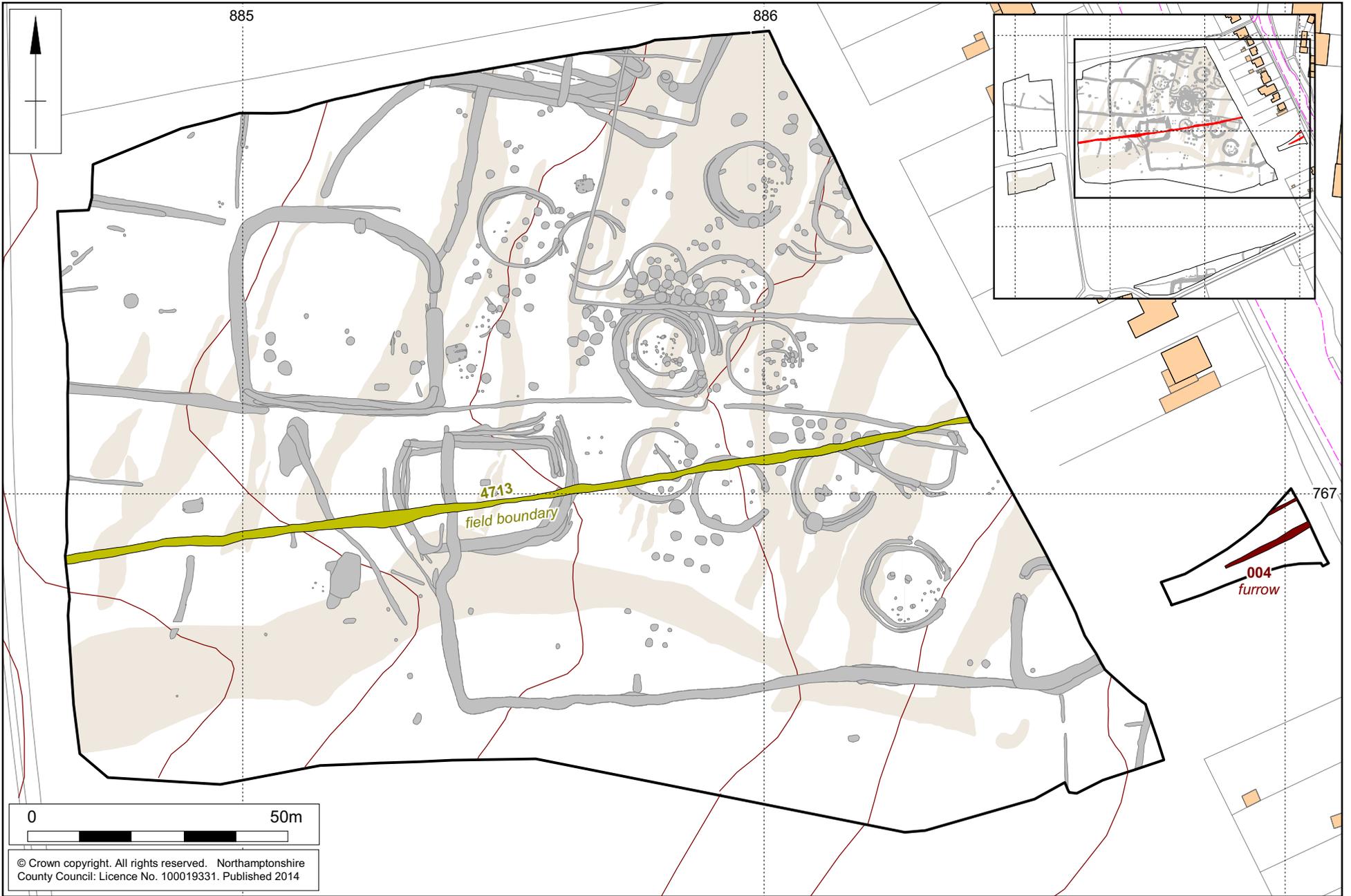
Pit 3908 during excavation, cattle skulls are *in situ* Fig 23

An oval pit [3828], lying 30m to the east of SFB4 contained four sherds of pottery dated to the 5th century as well as a loomweight. A large Roman extraction pit (Q2), 30m to the south-east of SFB1, had not completely filled in and the upper fills accumulated during the 6th century.

Scale 1:1,000 (A4)

Medieval and post-medieval landscape features

Fig 24



### 3.7 Medieval and later

After the middle Anglo-Saxon period the focus of activity probably shifted to a more nucleated settlement around St Botolph's church and the manor. The development area may have been given over to farmland (Fig 24).

#### *Open field system*

In the Bellmouth excavation area there were the fragmentary remnants of ridge and furrow cultivation. The bases of two furrows on a south-west to north-east alignment were recorded. They were spaced 4.5m apart and were at least 17m long, 1.10m wide by 0.08m deep, filled with sterile orangey-brown sandy clays (Figs 24 and 25). The furrows became shallower towards the south-western boundary where the natural soils changed from sandy clays to ironstone. A single sherd of late 15<sup>th</sup>-century pottery was recovered from one of the furrows. No further evidence of the medieval open field system was identified in the excavation areas to the west.



General view of furrow [4], looking south-west Fig 25

#### *Post medieval field boundary*

Ditch [4713], aligned south-west to north-east, bisected the northern area of excavation. It was 175m long, 1.13m - 1.40m wide, and up to 0.54m deep, generally filled with a brown sandy loam which had been disturbed in places by root action. Sherds of 17<sup>th</sup>-century pottery were recovered from the fill. The ditch probably represents the field boundary illustrated on the 1842 Tithe Award and the first edition Ordnance Survey map.

**4 THE FINDS**

**4.1 The flint** by Yvonne Wolframm-Murray

In total 874 pieces of worked flint were recovered. They were residual finds from undated or unstratified as well as from Middle Iron Age and later contexts. The assemblage comprises 512 flakes, 238 blades, 40 shattered pieces, 64 cores and 18 retouched tool forms comprising nine scrapers, five microlith, one notched blade, one awl and two undefined tool forms. A summary of the assemblage is provided in Table 2.

*Table 2: Summary of worked flint*

| Group           | Category      | Number     | %          | Sub-category | Number | %           |
|-----------------|---------------|------------|------------|--------------|--------|-------------|
| Debitage        | Flakes        | 512        | 64.8       | Utilised     | 1      |             |
|                 |               |            |            | Whole        | 335    |             |
|                 |               |            |            | Broken       | 173    |             |
|                 |               |            |            | Misc. Ret.   | 2      |             |
|                 | Blades        | 238        | 30.2       | Utilised     | 2      |             |
|                 |               |            |            | Whole        | 167    |             |
|                 |               |            |            | Broken       | 67     |             |
|                 |               |            |            | Misc. Ret.   | 2      |             |
|                 | Shatter       | 40         | 5.0        |              |        |             |
| <b>Subtotal</b> |               | <b>789</b> | <b>100</b> |              |        | <b>90.7</b> |
| Cores           |               | 64         |            | Whole        | 52     | 7.2         |
|                 |               |            | fragment   | 11           |        |             |
| Tools           | Microlith     | 5          |            |              | -      |             |
|                 | Notched blade | 1          |            |              | -      |             |
|                 | Scraper       | 9          |            | End          | 5      |             |
|                 |               |            |            | End/Side     | 3      |             |
|                 |               |            |            | Discoidal    | 1      |             |
|                 | Awl           | 1          |            |              | -      |             |
|                 | Undefined     | 2          |            |              | -      |             |
| <b>Subtotal</b> |               | <b>18</b>  |            |              | -      | <b>2.1</b>  |
| <b>Total</b>    |               | <b>874</b> |            |              |        | <b>100</b>  |

***Raw material and condition***

The majority of the raw material comprises a vitreous flint ranging from light to dark grey and brown colours. There is also a smaller proportion of a granular flint, usually a grey colour. The quality of the raw material is moderate. Flaws and inclusions in the raw material affected the quality of the flint, thermal flaws are not uncommon. The flint has a thin, weathered or abraded cortex, usually a light to mid brown colour with the occasional dark brown colour. The bulk of the material has cortex present on the dorsal surfaces. The raw material is most likely to be derived from local river gravels.

The condition of the worked flint is good with artefacts showing post-depositional edge damage consisting of occasional to moderate amounts of nicks to the edges. Very occasional crushing of the edges could be observed. Patination of the flint occurred occasionally, ranging from a light greyish-blue discolouration to white discolouration of the surface of the flint. Heat alteration of the worked flints was noted intermittently, these consisted of heavily burnt worked flint due to accidental heating

and on one occasion a reddish discolouration of the flint indicated deliberate and careful heat treatment.

### ***Assemblage composition***

#### *Cores*

In total 64 (7.24%) cores were recovered. Of these eleven are core fragments, usually fragmented due to a flaw in the raw material. The majority are flake cores, five cores possibly produced both flake and blades, there is only one blade core. The cores are relatively small in size, which is not unusual given the use of local gravel flint. The majority were haphazardly worked, multiple platform cores resulting in irregular spherical shapes. Generally there was little evidence of platform maintenance with the exception of a core rejuvenation flake.

#### *Debitage*

The assemblage is dominated by un-retouched waste flakes, blades and shatter/fragments, making up 90.69% (789) of the assemblage. This comprises 511 flakes, of which 173 are broken and 238 blades, of which 67 are broken. There are also soft hammer struck blades, often patinated, present. A portion of the worked flint was fragmented post-depositional, also there are pieces that shattered possibly during manufacture. It was possible to detect utilisation on two blades and one flake, but post-depositional edge damage obscured further possible detection of utilisation.

#### *Tools*

A small number of retouched tool forms are present, in total 18 (2.07%) comprising nine scrapers, five microlith, one notched blade, one awl and two undefined tool forms.

The nine scrapers, comprise five end scrapers, three end/sided scrapers and one discoidal scraper. All scrapers were manufactured on flakes with the retouch consisting of semi-abrupt to abrupt retouch on the distal ends and/or lateral edges.

The five microlith comprise four obliquely blunted forms and one rod form. There was one notched bladelet with retouch near the bulb of percussion, suggesting this was possibly intended for microlith production.

The awl was fashioned on a flake through a notch and a removal; there were also removals at the tip of the piercer consistent with utilisation. Additionally there are two bi-facially, invasively worked implements. Both were unfinished and it was not possible to discern with certainty their intended function. The other miscellaneous retouched implements had varying amounts of retouch on the edges.

### ***Discussion***

The technological characteristics of the assemblage indicate principally a Neolithic date with a Late Mesolithic/Early Neolithic and Late Neolithic/Early Bronze Age components. The microlith and bladelets are Late Mesolithic. The soft hammer struck blades are Late Mesolithic/Early Neolithic. Some of the cores and the scrapers are not directly diagnostic but the forms are typically associated with the Neolithic to Late Neolithic/Early Bronze Age. The more irregular, multi-platform cores and the discoidal scraper are Late Neolithic/Early Bronze Age in date. The presence of squat, hard hammer struck flakes with broad and/or cortical striking platforms supports the presence of a late Neolithic/Early Bronze Age component date.

The high incidence of cores todebitage is a result of the raw material quality. In Northamptonshire the local gravel deposits are small in size and of poor quality. This results in quick exhaustion of the cores, it is not unusual to have few removals and cortex remaining. Fragmentation due to breaking at flaw is also not unusual. This was

found to be the case at Briar Hill (Bamford 1985). Later assemblages tend to have fewer removals (Humble 2006)

Previous work on the site consisted of trial trenching, in total 52 pieces of worked flint were recovered. The assemblage was identified as Late Neolithic/Early Bronze Age with a small Late Mesolithic/Early Neolithic component (Coates 2009).

#### 4.2 The Bronze Age pottery by Andy Chapman

The fill (2242) of pit [2244] contained 1.3kg of pottery from a single large and thick-walled probably barrel-shaped jar, with a flat rim and a body decorated with thick applied strips running both horizontally and vertically. The distinctive decoration identifies this vessel as a Deverul-Rimbury jar of the Middle Bronze Age. The fabric contains large voids, probably from leached shell inclusions, and it has a grey-brown core and inner surface and a light orange-brown outer surface.

#### 4.3 The Iron Age pottery by Andy Chapman

This is an unusually large assemblage of middle and late Iron Age pottery, with a total weight of 113.84kg. While many context groups are quite small, there is no shortage of large primary deposits, containing large sherds from relatively small numbers of vessels, including two small jars from a pit that were recovered whole (Fig 26). Of particular interest is the presence of a pit containing a deposit of wasters from large storage jars, indicating that pottery was manufactured on the site, and these make up nearly a third of the total assemblage, 37.46Kg (33%).

For assessment, all contexts have been weighed and also scanned, to provide a broad quantification and a qualitative assessment of the nature and chronology of the assemblage. As part of the scanning, spot dates have been applied to larger groups containing obvious diagnostic sherds to assist in determining the overall site chronology.



Two complete small Iron Age jars recovered from pit [2818] (Scale 50mm) Fig 26

#### *Fabrics*

The fabrics have not been quantified, but the initial scan indicates that vessels containing shell are in an overwhelming majority. As is typical of middle to late Iron Age sites in Northamptonshire, the larger, thick-walled storage jars usually contain dense large shell inclusions, medium-sized jars and bowls contain less dense and smaller shell, and the thin-walled and often burnished bowls contain sparse finely-crushed shell.

The overall visual impression of the assemblage is that dark surface colours, grey-brown and grey to grey-black are dominant. Vessels with oxidised outer surfaces, red-brown to orange in colour are present, and these tend to be large and thick-walled storage jars, including a proportion that date to the late Iron Age, the 1st centuries BC and AD. Predominantly dark surfaces are a characteristic of assemblages dating to the later part of the middle Iron Age.

### ***Forms and decoration***

The assemblage contains a range of vessels from small bowl and jar forms to larger, typically thicker-walled storage jars, and a range of coarse to well-finished, sometimes highly burnished surfaces. There is the usual range of simple rounded, flattened and expanded rims, with some of the finer late burnished bowls tending towards bead rims. The rims are typically plain, with only a very small number showing fingernail decoration. The typical flat bases of these hand-built vessels also survive in some numbers.

A majority of the vessels are plain, but there are examples of storage jars and some smaller vessels with irregular scoring, in the fashion that is typical of Northamptonshire and adjacent parts of the surrounding counties, with an apparent focus on the Welland and Nene valleys. There are other storage jars with more regular scoring evidently executed using a coarse, usually four-toothed, comb. A small number of vessels may have been wheel-finished and some have finely-combed surface decoration, see chronology, below.

### ***Pottery manufacturing***

An important aspect of the assemblage is that it contains evidence for manufacturing on site in the form of a pit [3778] containing wasters, probably from a single at least partially failed firing. Four complete large, thick-walled storage jars had been quite carefully lain out on the base of the pit, along with smaller proportions of a further three vessels (Fig 27). For each of the larger vessels, the majority was well fired but there was one side that was not fully fired, indicating that these vessels had been standing upright at the outer edge during firing where the temperature had not stayed high enough for long enough to fully fire the ceramic. It will be possible to reconstruct the profiles of these four vessels.

An adjacent pit [3604] contained large thick lumps of shelly clay with one surface smoothed and fired, which appear to come from a clay lining of a shallow pit. The recovered fragments have no wattle impressions, indicating that the superstructure was perhaps not clay lined. Pit [3604] was clearly associated with pottery manufacturing, but its exact use is unclear.



The pit containing the placed wasters of four storage jars from a failed firing Fig 27

### ***Chronology***

The minimal presence of decorated rims, the absence of shouldered or carinated vessels with long necks, and the predominance of darker surface colours indicates that the assemblage contains little if any material dating to the early/middle Iron Age. It is suggested that the assemblage may date no earlier than the 2nd century BC.

#### *Middle Iron Age (2nd century BC)*

There are some primary groups that contain no evident later elements. These groups contain scored ware and plain vessels, with a high proportion of storage jars. These characteristics, along with the absence of longer necked and shouldered jars, the lack of rim decoration and the predominance of darker surface colours all suggest an origin no earlier than the 2nd century BC

#### *Late Iron Age (1st century BC)*

There are a greater number of primary groups that contain distinctly late elements, dating to the 1st century BC. There are black, globular burnished bowls, including two examples of Hunsbury bowls with curvilinear decoration (Fig 28). There are also storage jars with more regular scoring executed with toothed combs.



A Hunsbury bowl with curvilinear decoration, from Enclosure 3, (Scale 20mm) Fig 28

*Late Pre-Roman Iron Age (early 1st century AD)*

In addition, there are elements that denote a continuation into the 1st century AD, such as exceptionally large, thick-walled and heavy rimmed storage jars and some vessels with fine combed decoration, and some probable wheel-finished vessels. Some contemporary wheel-made vessels may be within the Roman assemblage, which is being studied separately.

**Summary**

The broad character of the pottery assemblage indicates the Iron Age settlement probably ran from the 2nd century BC through to the early 1st century AD, and it may be that occupation was continuous into the early Roman period, although with new enclosure systems slightly relocated.

It is suggested that the major roundhouses probably came into use in the 2nd century BC but that at least some of them appear to have continued in use into the 1st century AD, where they gave way to extensive pit groups and the growth of a system of ditched enclosures. These enclosures continued in use into the 1st century AD, to be replaced in the early Roman period by a further system of ditched enclosures. While this broad picture of the ceramic chronology is likely to hold through further analysis, the detailed phasing of individual features can only be achieved once the assemblage has been fully quantified and the results integrated with the excavated evidence.

#### 4.4 Roman Pottery by Rob Perrin

##### **Introduction**

A pottery assemblage (Table 3) of nearly 1700 sherds, weighing just over 26.5kg and with an estimated vessel equivalent (rim EVE, R%) of nearly 25 was recovered. The average sherd weight (ASW) was almost 16, higher in some fabrics. No attempt was made to identify joins, other than where certain features of fabric, colour, decoration etc made this obvious.

##### **Fabrics**

The pottery fabrics were recorded using simple classifications, based on principal inclusion or firing technique, together with known regional or imported wares. Quantification comprising numbers of sherds, weight and rim and base percentage by fabric group was carried out.

The main fabrics are grog, grog with shell, shell-gritted, various greys and oxidised. The grog-tempered pottery varies in colour with cream, pink, buffs, reddish-yellows, browns, reddish-browns, dark browns and grey all occurring. The hardness of the grog-tempered pottery also varies from quite soft to very hard. The shell in the mixed grog and shell fabric is mainly very small (1-2mm) in size, while the size of the shell in the shell-gritted ware varies from quite large (3-4mm) to small (2mm). The shell gritted ware also occurs in a range of colours from dark brown, to brown, reddish-brown, reddish-yellow and buff. The reduced and oxidised wares comprise a range of quartz-gritted fabrics with varying colours, surface treatment and texture. The colours in which the reduced wares occur are various shades of grey, dark grey and grey-brown and some have different coloured cores; one variant has a 'speckled' surface rather than a uniform colour. The oxidised fabrics are buff, pink or reddish-yellow in colour, some with darker coloured cores. The regional and imported wares are Lower Nene Valley colour coated ware (LNVCC), South and Central Gaulish samian ware (SGS, CGS) and Lower Rhineland colour coated (LRCC) ware.

Table 3 shows the proportions of pottery per fabric. The grog-tempered and reduced wares together account for around 80% of the total with the shell-gritted and the mixed grog and shell fabric over another 10%.

*Table 3: Number of sherds of Roman pottery per fabric*

| <b>Fabric</b>   | <b>sherds</b> | <b>%</b> | <b>Wgt (g)</b> | <b>%</b> | <b>R%</b>   | <b>%</b> | <b>ASW</b>  |
|-----------------|---------------|----------|----------------|----------|-------------|----------|-------------|
| Grogs           | 738           | 43.8     | 14667          | 55.2     | 785         | 31.7     | 19.9        |
| Grog + shell    | 36            | 2.1      | 580            | 2.2      | 39          | 1.6      | 16          |
| Shell           | 182           | 10.8     | 3170           | 8.7      | 159         | 6.4      | 17.4        |
| Greys           | 449           | 26.6     | 4544           | 17.1     | 829         | 33.5     | 10          |
| Dark greys      | 137           | 8.1      | 2098           | 7.9      | 474         | 19.2     | 15.3        |
| Buff            | 39            | 2.3      | 363            | 1.4      | 40          | 1.6      | 9.3         |
| Cream           | 41            | 2.4      | 400            | 1.5      | -           | -        | 9.8         |
| SGS             | 22            | 1.3      | 120            | -        | 64          | 2.6      | 5.5         |
| CGS             | 11            | -        | 142            | -        | 31          | 1.2      | 12.9        |
| LNVCC           | 3             | -        | 188            | -        | -           | -        | 62.7        |
| LRCC            | 8             | -        | 24             | -        | 24          | 1        | 3           |
| Saxon           | 16            | 1        | 234            | 0.9      | 16          | -        | 14.6        |
| Reddish- yellow | 2             | -        | 18             | -        | -           | -        | 9           |
| Dark brown      | 1             | -        | 12             | -        | 13          | -        | 12          |
| <b>Total</b>    | <b>1685</b>   |          | <b>26560</b>   |          | <b>2474</b> |          | <b>15.8</b> |

##### **Forms**

Vessel forms were recorded using simple form letter codes. Those represented in the assemblage comprise various types of jars, bowls and dishes, together with a few

flagons, beakers and cups, as well as a lid and a pottery disc. The recording of vessel forms, based on rims or other sherds where form identification was certain, identified some 159 different vessels (Table 4).

Table 4: Quantification of Roman vessel forms

| Fab/<br>Form                   | J          | J/       | B        | B/       | D         | BK       | BK/      | F        | F/J      | F/       | C        | L        | O        | Total      |
|--------------------------------|------------|----------|----------|----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|
|                                |            |          |          |          |           |          | J        |          |          | BKR      |          |          |          |            |
| Grogs                          | 50         | 1        | 1        | 1        | -         | -        | -        | -        | -        | -        | -        | -        | -        | 53         |
| Grog/<br>s<br>h<br>e<br>l<br>l | 4          |          |          |          |           |          |          |          |          |          |          |          |          | 4          |
| Shell                          | 13         | -        | -        | -        | -         | -        | -        | -        | -        | -        | -        | -        | 1        | 14         |
| Greys                          | 28         | -        | 2        | 1        | 3         | -        | 4        | 1        | -        | -        | -        | -        | -        | 39         |
| Dark<br>g<br>r<br>e<br>y<br>s  | 14         |          | 1        | 1        | 6         |          | 1        | -        |          |          |          | 1        | -        | 24         |
| Buff                           | 2          | -        | 2        | -        | -         | -        | -        | 1        | -        | -        | -        | -        | -        | 5          |
| Cream                          | -          | -        | -        | -        | -         | -        | -        | 3        | -        | -        | -        | -        | -        | 3          |
| SGS                            | -          | -        | -        | -        | 7         | -        | -        | -        | -        | -        | 2        | -        | -        | 9          |
| CGS                            | -          | -        | -        | -        | 2         | -        | -        | -        | -        | -        | -        | -        | -        | 2          |
| LVCC                           | -          | -        | -        | 1        | -         | -        | -        | -        | 1        | 1        | -        | -        | -        | 3          |
| LRCC                           | -          | -        | -        | -        | -         | 1        | -        | -        | -        | -        | -        | -        | -        | 1          |
| Saxon                          | -          | 1        | -        | -        | -         | -        | -        | -        | -        | -        | -        | -        | -        | 1          |
| Misc                           | 1          |          | -        | -        | -         | -        | -        | -        | -        | -        | -        | -        | -        | 1          |
| <b>Total</b>                   | <b>112</b> | <b>2</b> | <b>6</b> | <b>4</b> | <b>18</b> | <b>1</b> | <b>5</b> | <b>5</b> | <b>1</b> | <b>1</b> | <b>2</b> | <b>1</b> | <b>1</b> | <b>159</b> |

J- Jar; J/B- jar/bowl; B- bowl; d- dish; BK- beaker; F- Flagon; C- cup; L- lid

Jars comprise almost three-quarters of the vessels. The jar range includes a number of large storage-type jars in grog and shell gritted wares, while the rim forms of the more standard jars are lid-seated, curved, everted, plain, squared or beaded. Many of the jars are globular in shape. Lid-seated jars comprise over a third of those vessels with extant rims and occur in grogged and shell gritted fabrics. Jars with simple curved rims account for another quarter and occur in reduced and grog wares, with one in shell gritted ware. Narrow-mouthed jars, which comprise over another 10%, are all in reduced wares, barring one in grogged ware. The other rim forms occur on jars in both reduced or grogged ware, apart from a lid seated jar and an everted rim jar in a buff ware. Three of the beaker/jar vessels have the rim form and decoration of the type known as 'poppy-head' beakers or jars. The decoration on these comprises either panels or 'lozenges' of barbotone dots.

Many of the jars have neck cordons and shoulder and/or girth grooves. Some of the reduced ware jars are decorated with zones or panels of diagonal lines, lattice or rouletting. Decoration found on some of the grog ware jars comprises vertical, horizontal or diagonal combing, often combined with shoulder or girth grooves. Close horizontal rilling occurs on one of the grog tempered jars and some of the shell gritted jars. One cream ware sherd has a red painted band and circles, while a buff ware

vessel has red painted bands and vertical lines; another buff ware sherd has traces of a red wash.

There are few bowls in the assemblage. One is wide-mouthed with external grooves near the rim, in a hard cream fabric and another is a carinated bowl with a grooved rim in a coarse buff fabric. The others, three in reduced wares and one in buff ware, all appear to be imitations of samian ware form Dr 30; the reduced vessels could be considered as 'London' ware type. There are more obvious dishes in the assemblage and half are in samian ware, comprising forms Dr 18, 18 or 18/31 and 35/36. The others are all in reduced wares and have bead, triangular or flat rims. The cups are both in samian ware in forms Dr 27 and 33. The one definite beaker is part of a small Lower Rhineland (Cologne) colour coated 'hunt cup' with barbotine decoration comprising a dog running from left to right. All but one of the flagons are in cream or buff wares; the exception is a grey ware vessel with an elongated neck and the stubs of what was probably a vertical circular-shaped handle. The lid is in a dark grey ware and the other vessel is a pottery disc in shell gritted ware.

### **Sources**

Much of the pottery, other than the regional and continental imports, is likely to have been locally produced. A number of Roman pottery kilns are known near to Barton Seagrave at Kettering, Rushton and Weekley (Swan 1984, Map 14 and 145-6). A lot more kilns are known less than 20 kilometres to the south and west of the site (op. cit. Map 14) and the River Ise, which flows from the north-west past Kettering before turning south past Barton Seagrave to join the River Nene just south of Wellingborough, could have been a means of distribution, in addition to roads and tracks. It is also likely that pottery would have been obtained at local markets in larger centres such as Irchester, a little over 10 kilometres to the south. The buff ware sherds with painted decoration are probably products of the kilns at Rushden (Woods and Hastings 1984), some 15 kilometres to the south-east.

The pottery disc could be evidence of a kiln on the site. It is 20-30mm thick, is around 160mm in diameter, and is in a hard reddish yellow shell gritted ware with quite dense large shell. It has smooth but uneven brown surfaces. Similar 'furniture' is associated with kilns of the 1st to 2nd centuries AD (Shaw 1979). None of the pottery from the site, however, has the appearance of kiln wasters, although some of the shell gritted ware is light in weight and perhaps underfired.

### **Chronology**

Both grog and shell gritted wares were made in the Iron Age, with production continuing into the Roman period. A general, but not universal, rule is that the improved kiln technology of the Roman period led to lighter colours and harder fabrics. On this basis, the variety in the grog and shell gritted wares in the assemblage indicates late Iron Age and Roman activity; there were one or two definite Late Iron Age vessel forms in both grog and shell gritted ware. The mixed grog and shell fabric is probably mainly late Iron Age in date, but will also have continued into the Roman period.

Most of the samian ware is of South Gaulish origin and dates to the second half of the 1st century; the Central Gaulish samian is probably dated to within the first half of the 2nd century. Reduced wares were made locally from the later 1st century throughout the Roman period, but few of the vessel forms in the assemblage need date after the mid 2nd century. The small Lower Rhineland 'hunt cup' was probably made in the second quarter of the 2nd century. The only Roman pottery in the assemblage which dates later than the 2nd century are the vessels in LNVCC. These comprise a base from a bowl or dish, a flagon or beaker base and a jar base which are all 4th century in date. The latter two are associated with one of the SFBs. Apart from these late vessels, there are some 20 sherds in a fairly coarse dark grey to

black fabric from six contexts which are thought to be Saxon in date (see Section 4.5). Medieval and post-medieval pottery was recovered from four contexts, two in each area, though most of the sherds were from one feature, Pit 125 in the south area.

There are no obvious later 2nd or 3rd century fabrics or vessels and the pottery therefore suggests that the activity on the site was mainly of late Iron Age to mid 2nd century date.

### Assemblage and site characteristics

The preponderance of jars, together with the lack of fine wares and imported non local and continental material could indicate a fairly utilitarian range of activities and a fairly low status. The limited range of samian ware vessel forms, with no decorated types, coupled with the absence of mortaria and amphora, lend support to this view.

The two sherds of LNVCC found in SFB1 ([2545]) are of interest. They are both bases, one from a flagon or beaker and the other from a jar or flagon. The latter base has been trimmed and smoothed. These sherds may represent another example of the deliberate collection of specific types of Roman pottery by Saxon inhabitants (eg Wickenden 1982).

### Selected features

Eight assemblages have been selected for more detailed analysis – five ditches:- 202 (E10), 2478 and 2902 (D1), and from the ditch terminals 2489, 2491 and 2565 (paddocks), a well:- 211, and a quarry hole:- 2976 (Q1). Table 5 gives the total sherd count, weight, rim EVE and number of vessels in each of these features.

Table 5 Total sherd count

| Group/ cut               | No          | % site | Wgt (g)      | % site | EVE         | % site | Vessels    | % site |
|--------------------------|-------------|--------|--------------|--------|-------------|--------|------------|--------|
| E10 / 202                | 123         | 7.3    | 2084         | 7.8    | 115         | 4.6    | 9          | 5.7    |
| Well / 211               | 32          | 2.0    | 1488         | 5.6    | 101         | 4.0    | 7          | 4.4    |
| D1 / 2478                | 136         | 8.0    | 1768         | 6.7    | 185         | 7.5    | 13         | 8.2    |
| Paddock/2489 (terminal)  | 61          | 3.6    | 1222         | 4.6    | 53          | 2.0    | 4          | 2.5    |
| Paddock/2565 (terminal)  | 306         | 18.0   | 3664         | 13.8   | 741         | 30.0   | 15         | 9.4    |
| D1/2902                  | 72          | 4.3    | 1542         | 6      | 122         | 4.9    | 9          | 5.7    |
| Paddock/ 2491 (terminal) | 16          | 1.0    | 818          | 3      | 22          | 0.9    | 4          | 2.5    |
| Q1 / 2976                | 103         | 6.0    | 1036         | 3.9    | 98          | 4.0    | 7          | 4.4    |
| <b>Totals</b>            | <b>1685</b> |        | <b>26560</b> |        | <b>2474</b> |        | <b>159</b> |        |

Table 6: Enclosure 10 (Ditch 202, fill 146)

| Fabric       | Rim       | No.        | Wgt (g)     | R%         |
|--------------|-----------|------------|-------------|------------|
| Grog         | -         | 52         | 1382        |            |
| Shell        | 5         | 27         | 314         | 49         |
| Reduced      | 5         | 39         | 318         | 52         |
| Oxidised     | 1         | 5          | 70          | 14         |
| <b>Total</b> | <b>11</b> | <b>123</b> | <b>2084</b> | <b>115</b> |

All of the recognisable vessels are jars, including a large storage type, apart from a sherd in a dark grey grog ware from a dish or bowl reminiscent in form of Gallo-Belgic vessels. Probably mid to late 1st century.

*Table 7: Well 211 (fill 176)*

| <b>Fabric</b> | <b>Rim</b> | <b>No</b> | <b>Wgt (g)</b> | <b>R%</b>  |
|---------------|------------|-----------|----------------|------------|
| Grog          | 1          | 12        | 538            | 23         |
| Grog + shell  |            | 8         | 316            |            |
| Shell         | 3          | 25        | 420            | 8          |
| Reduced       | 5          | 6         | 210            | 65         |
| SGS           | 1          | 1         | 4              | 5          |
| <b>Total</b>  | <b>10</b>  | <b>32</b> | <b>1488</b>    | <b>101</b> |

The deposit contains three jars, including lid-seated and storage types, a samian ware dish of form Dr 18, another possible dish, a lid and the shell gritted ware disc. Probably later 1st to early 2nd century.

*Table 8: D1 (Ditch 2478, fill 2479)*

| <b>Fabric</b> | <b>Rim</b> | <b>No.</b> | <b>Wgt (g)</b> | <b>R%</b>  |
|---------------|------------|------------|----------------|------------|
| Grog          | 8          | 61         | 1146           | 108        |
| Grog + shell  | 2          | 10         | 102            | 28         |
| Shell         |            | 20         | 182            |            |
| Reduced       | 5          | 34         | 246            | 49         |
| Oxidised      |            | 11         | 48             |            |
| SGS           |            | 4          | 18             |            |
| Saxon?        |            | 1          | 16             |            |
| <b>Total</b>  |            | <b>136</b> | <b>1768</b>    | <b>185</b> |

Nine of the 13 vessels are jars. There is one narrow-mouthed jar and one storage jar, together with four seated, two curved rimmed and one bead rimmed. There is also a samian ware dish of form Dr 18/31 or 31, a dark grey ware dish or bowl and a dark grey ware bowl, possibly an imitation of a samian ware form Dr 30. Probably late 1st to early 2nd century (with later intrusive material).

*Table 9: Paddock (Ditch 2489)*

| <b>Fabric</b> | <b>Rim</b> | <b>No.</b> | <b>Wgt (g)</b> | <b>R%</b> |
|---------------|------------|------------|----------------|-----------|
| Grog          | 3          | 53         | 1176           | 45        |
| Reduced       |            | 6          | 32             |           |
| Oxidised      |            | 1          | 8              |           |
| SGS           | 1          | 1          | 6              | 8         |
| <b>Total</b>  |            | <b>61</b>  | <b>1222</b>    | <b>53</b> |

Three of the four vessels are grogged ware jars, including lid-seated and narrow-mouthed types and the deposit also contains a samian ware dish or form Dr 18.

*Table 10 Paddock (Ditch 2565, fill 2564)*

| <b>Fabric</b> | <b>Rim</b> | <b>No.</b> | <b>Wgt (g)</b> | <b>R%</b>  |
|---------------|------------|------------|----------------|------------|
| Grog          | 22         | 123        | 1822           | 254        |
| Reduced       | 29         | 167        | 1688           | 435        |
| LRCC          | 1          | 8          | 24             | 24         |
| CGS           | 4          | 8          | 130            | 28         |
| <b>Total</b>  |            | <b>306</b> | <b>3664</b>    | <b>741</b> |

This feature contains the largest amount of pottery, including nine easily distinguished vessels, and 15 recognisable vessels in all. 10 of these are jars, four lid-seated in grog ware, and three narrow-mouthed and three with everted rims in reduced ware. There is also a grey ware 'poppy-head' type beaker or jar, two curved-sided bead rim dishes, a samian ware dish of form Dr 18/31 and the LRCC 'hunt cup' beaker. Probably early to mid 2nd century.

*Table 11: D1 (Ditch 2901, fill 2901)*

| <b>Fabric</b> | <b>Rim</b> | <b>No.</b> | <b>Wgt (g)</b> | <b>R%</b>  |
|---------------|------------|------------|----------------|------------|
| Grog          | 3          | 14         | 418            | 30         |
| Shell         | 1          | 11         | 264            | 5          |
| Reduced       | 4          | 43         | 718            | 87         |
| Oxidised      |            | 4          | 142            |            |
| <b>Total</b>  |            | <b>72</b>  | <b>1542</b>    | <b>122</b> |

Six of the nine vessels are jars, three lid-seated and three curved rimmed. The most complete vessel is a deep dish with a flat rim and there is also a dark grey carinated jar or beaker with a deep panel between cordons decorated with rouletting. The deposit contains a buff ware sherd with a red wash, possibly a product of the Rushden kilns. Probably late 1st to early 2nd century.

*Table 12: Paddock (Ditch 2491)*

| <b>Fabric</b> | <b>Rim</b> | <b>No.</b> | <b>Wgt (g)</b> | <b>R%</b> |
|---------------|------------|------------|----------------|-----------|
| Grog          | 3          | 15         | 718            | 22        |
| Reduced       |            | 1          | 100            |           |
| <b>Total</b>  |            | <b>16</b>  | <b>818</b>     | <b>22</b> |

This deposit contains grog ware lid-seated, square-rimmed and storage-type jars and a grey ware jar with a rouletted panel between neck and shoulder grooves. Probably late 1st to early 2nd century.

*Table 13: Q1 (Quarry 2976)*

| <b>Fabric</b> | <b>Rim</b> | <b>No.</b> | <b>Wgt (g)</b> | <b>R%</b> |
|---------------|------------|------------|----------------|-----------|
| Grog          | 3          | 26         | 308            | 33        |
| Shell         | 1          | 3          | 48             | 10        |
| Reduced       | 5          | 66         | 620            | 55        |
| Oxidised      |            | 7          | 58             |           |
| CGS           |            | 1          | 2              |           |
| <b>Total</b>  |            | <b>103</b> | <b>1036</b>    | <b>98</b> |

All of the seven vessels from this deposit are jars. Two are lid-seated jars in grog and shell gritted wares, a curved-rim jar in grogged ware, two other curved-rim jars in reduced ware and two bead-rimmed jars in dark grey ware. Probably late 1st to mid 2nd century.

#### 4.5 The early Anglo-Saxon pottery by Paul Blinkhorn

##### **Analytical methodology**

The pottery was initially bulk-sorted and recorded on a computer using DBase IV software. The material from each context was recorded by number and weight of sherds per fabric type, with featureless body sherds of the same fabric counted, weighed and recorded as one database entry. Feature sherds such as rims, bases and lugs were individually recorded, with individual codes used for the various types. Decorated sherds were similarly treated. In the case of the rimsherds, the form, diameter in mm and the percentage remaining of the original complete circumference was all recorded. This figure was summed for each fabric type to obtain the estimated vessel equivalent (EVE).

The terminology used is that defined by the Medieval Pottery Research Group's Guide to the Classification of Medieval Ceramic Forms (MPRG 1998) and to the minimum standards laid out in the Minimum Standards for the Processing, Recording, Analysis and Publication of post-Roman Ceramics (MPRG 2001). All the statistical analyses were carried out using a DBase package written by the author, which interrogated the original or subsidiary databases, with some of the final calculations made with an electronic calculator. Any statistical analyses were carried out to the minimum standards suggested by Orton (1998-9, 135-7).

##### **Fabrics**

The early Anglo-Saxon pottery assemblage comprised 227 sherds with a total weight of 7,884g. The estimated vessel equivalent (EVE), by summation of surviving rimsherd circumference was 5.00. The following fabrics were noted:

- F1: Fine Quartz. Sparse to moderate sub-angular quartz up to 0.5mm, most less than 0.2mm. Scattered very fine silver mica, rare calcareous fragments up to 1mm. 79 sherds, 3,965g, EVE = 2.20.
- F2: Chaff and Ironstone. Sparse to moderate to dense chaff voids up to 5mm, sparse to moderate sub-angular or sub-rounded ironstone up to 0.5mm, rare calcareous fragments up to 1mm. 42 sherds, 1,193g, EVE = 1.71.
- F3: Coarse Quartz. Moderate to dense sub-rounded quartz up to 1mm, rare to sparse red ironstone up to 1mm. 88 sherds, 2115g, EVE = 0.77.
- F4: Granite. Sparse to moderate sub-rounded granite up to 1mm, moderate to dense free gold mica platelets up to 1mm. 17 sherds, 550g, EVE = 0.24.
- F5: Quartz and Oolitic Limestone. Moderate oolitic limestone up to 2mm, sparse sub-rounded quartz up to 1mm. 1 sherd, 68g, EVE = 0.08.

The medieval and later assemblage consisted of 30 sherds with a total weight of 341g (EVE = 0). It was quantified using the chronology and coding system of the Northamptonshire County Ceramic Type-Series (CTS), as follows:

- F319: Lyveden/Stanion 'A' ware (AD1150-1400), 3 sherds, 17g, EVE= 0
- F320: Lyveden/Stanion 'B' ware (AD1225-1400), 16 sherds, 84g, EVE=0
- F330: Shelly Coarseware (AD1200-1400), 1 sherd, 75g, EVE=0
- F404: Cistercian Ware (AD1470 – 1600), 1 sherd, 6g, EVE = 0
- F409: Staffordshire Slip-trailed Ware (mid 17th-mid 18th centuries), 1 sherd, 84g
- F415: Creamware (c AD1740 – 1820), 4 sherds, 13g

F426: Iron-Glazed Coarsewares (c late 17th – 18th centuries), 2 sherds, 31g

F1000: Miscellaneous 19th and 20th-century wares, 2 sherds, 31g

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Appendix 1. Each date should be regarded as a *terminus post quem*. The range of Early Anglo-Saxon fabric types generally reflects the geology of northern Northamptonshire, and suggests that most of the pottery was made utilizing the local clays. A similar range of early-middle Saxon fabrics occurred at Raunds, some 10km to the south-east of this site (eg. Pearson 2009, 152), although it should be noted that chaff-tempered fabrics are better-represented here than at any of the Raunds sites. The granitic sherds may have their origins in the Charnwood Forest region of Leicestershire (Vince and Williams 1997), although granitic pottery was also being made in the St Neots region of Cambridgeshire (Blinkhorn in print).

### **Chronology**

The dating of Early Anglo-Saxon hand-built pottery is almost entirely reliant on the presence of decorated sherds. It seems that the Anglo-Saxons generally stopped decorating hand-built pottery in the 7th century (Myres 1977, 1). Usually, decorated hand-built pottery only comprises around 3 – 4% of 5th to 6<sup>th</sup>-century domestic assemblages, as was the case at sites such as West Stow, Suffolk (West 1985) and Mucking, Essex (Hamerow 1993). All the main assemblages from this site produced decorated pottery, including sherds of mid-5th century date, and two of the earliest pieces of Anglo-Saxon pottery known from Northamptonshire. One sherd, from a small carinated jar or bowl with incised lines above the waist and facets cut into it, is a typical example of a Schalurne, which Myres (1977, 18) saw as being amongst the earliest Anglo-Saxon pottery in England, and an incised sherd is almost certainly of a similar date. The rest of the decorated material comprises fragments of 'long boss' urns, probably of late 5th – early 6th century date (ibid. 43), and stamped sherds of the early – mid 6th century (ibid. 52). One of the bossed sherds may be fragment of a fifth-century Buckelurne, but is too small for this to be stated with certainty.

### **The Anglo-Saxon pottery**

#### **SFB1**

The assemblage from SFB1 comprised 53 sherds with a total weight of 774g. The estimated vessel equivalent (EVE), by summation of surviving rimsherd circumference was 0.53. The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 14. Most of the pottery occurred in contexts 2504 and 2544, the fills of the SFB hollow, with just a single sherd (12g) coming from the fill of a post-hole.

The assemblage appears to be very much the product of secondary deposition, and is likely to represent a dump of rubbish from a midden or similar which was used to back-fill the SFB hollow after the building has ceased to be used. Most of the sherds are from different vessel, with few re-fits, although refitting sherds were noted between (2504) and (2544), from the rim of a bowl. All the other rim-sherds are from jars. Four decorated sherds were present. One is from a vessel with multiple 'ring-and-dot' stamps, which appear likely to have been grouped in a pendant triangle, another has part of a 'long boss' with incised lines flanking the boss, with the last two having a fragments of incised decoration. The stamped sherd is most likely to be of sixth-century date (Myres 1977, 56). The bossed sherd could be slightly earlier, late

5th – early 6th century (ibid. 39), although the small size of the sherd means that the original overall scheme cannot be ascertained. Similar comments apply to the incised sherd, which can only be given a broad date of the 5th – 6th centuries.

*Table 14: Anglo-Saxon pottery occurrence by number and weight (in g) of sherds per context by fabric type, SFB1*

| Fill         | F1        |            | F2       |            | F3        |            | F4       |           | Date |
|--------------|-----------|------------|----------|------------|-----------|------------|----------|-----------|------|
|              | No        | Wt (g)     | No       | Wt (g)     | No        | Wt (g)     | No       | Wt (g)    |      |
| 2504         | 2         | 12         | 2        | 25         | 7         | 115        | 1        | 5         | ESAX |
| 2528         | -         | -          | 1        | 12         | -         | -          | -        | -         | E/MS |
| 2544         | 11        | 130        | 5        | 217        | 21        | 252        | 3        | 6         | 6thC |
| <b>Total</b> | <b>13</b> | <b>142</b> | <b>8</b> | <b>254</b> | <b>28</b> | <b>367</b> | <b>4</b> | <b>11</b> |      |

### SFB2

The assemblage from SFB2 comprised 82 sherds with a total weight of 5,087g. The estimated vessel equivalent (EVE), by summation of surviving rimsherd circumference was 1.83. The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 15. The pottery occurred in two contexts, a primary fill, 4083, and a final fill, 3868.

Primary Fill 4083. 11 sherds, 849g, EVE = 0.45.

The pottery from the primary fill, 4083, appears to be the product of secondary deposition, with all the sherds from different vessels, but they are generally all fairly large and in good condition, and include a single fragment of an extremely large jar. The sherd is from the shoulder, and is c 20mm thick, with the curvature suggesting that it had a diameter greater than 500mm at the widest point of the body. This is exceptionally large for a vessel of the period. A rimsherd of a vessel with a longitudinal shoulder lug was also noted, and this and a sherd from another vessels cross-fitted with sherds from context 3868.

Two decorated sherds occurred. The first has a relatively sharply carinated shoulder, with combed chevrons underneath a combed cordon. Such decoration has many parallels, and was particularly common on urns from the cremation cemetery at Sancton in Yorkshire (Myres 1977, Fig 263). The sherd is very likely to be of 5th century date, although a few 6th-century examples are known (ibid 46-7). The second decorated sherd has curved incised lines and a profile that suggests that it has the beginning of a boss on one edge. This can, tentatively, also be dated to the 5th century (ibid. 28). It may be a fragment of a 5<sup>th</sup> century Buckelurne, but is too small for this to be stated with certainty.

Upper fill 3868. 71 sherds, 4238g, EVE = 1.38.

This deposit produced a large assemblage of pottery, with many well-represented vessels, although none were complete, and it appears to also be a secondary backfill deposit from a midden or similar. His group also produced a lugged vessel in the form of an unusual, small, lugged cup with a foot-ring base. Two similar vessels, both antiquarian finds, are known from Northampton and Holdenby (Myres 1977, Fig. 76), but otherwise such vessels are very rare in the county.

Five decorated sherds were noted. All had linear decoration, with one having part of a boss and another a row of simple ring-stamps between incised cordons. The sherd with the diagonal slashed collar is from a very large vessel. The few vessels in the Myres corpus with such decoration are thought to be of 5th-century date (ibid. 1977, 45), although the overall scheme is unknown. The bossed sherd and the stamped fragment could be late 5th – early 6th century, although, again, as the overall scheme is unknown, this cannot be said with certainty. The two incised sherds could date to any time within the 5th – 6th century.

Overall, the decorated pottery from this deposit appears slightly later than that of the primary fill, although they could be contemporary, and represent dumps of material from different middens. The two cross-fits appear best explained as a result of bioturbation rather than evidence of contemporaneity and a common source for the two groups of dumped material.

*Table 15: Anglo-Saxon pottery occurrence by number and weight (in g) of sherds per context by fabric type, SFB2*

| Fill         | F1        |             | F2        |            | F3        |             | F4        |            | Date |
|--------------|-----------|-------------|-----------|------------|-----------|-------------|-----------|------------|------|
|              | No        | Wt (g)      | No        | Wt (g)     | No        | Wt (g)      | No        | Wt (g)     |      |
| 3868         | 31        | 2717        | 13        | 469        | 16        | 533         | 11        | 519        | 6thC |
| 4083         | 3         | 162         | 2         | 82         | 6         | 605         | -         | -          | 5thC |
| <b>Total</b> | <b>34</b> | <b>2879</b> | <b>15</b> | <b>551</b> | <b>22</b> | <b>1138</b> | <b>11</b> | <b>519</b> |      |

### SFB3

The assemblage from SFB3 comprised 17 sherds with a total weight of 301g. The estimated vessel equivalent (EVE), by summation of surviving rimsherd circumference was 0.12. The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 16.

A number of the sherds were from the same vessel, a small jar, but it was far from complete, and the entire assemblage again appears to be the product of secondary deposition. A single stamped sherd was noted, suggesting a sixth-century date for the assemblage

*Table 16: Anglo-Saxon pottery occurrence by number and weight (in g) of sherds per context by fabric type, SFB3*

| Fill | F1 |        | F3 |        | Date |
|------|----|--------|----|--------|------|
|      | No | Wt (g) | No | Wt (g) |      |
| 3782 | 12 | 140    | 5  | 161    | 6thC |

### SFB 4

The assemblage from SFB4 comprised 65 sherds with a total weight of 1,526g. The estimated vessel equivalent (EVE), by summation of surviving rimsherd circumference was 2.07. The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 17.

The pottery from this SFB also appears to be largely residual, and is again probably part of a domestic midden which was used to back-fill the hollow. A single jar is well-

represented and reconstructable to a full profile, but is not complete, and the same comments apply to the small lugged cup which is missing its base and a single lug. The rest of the assemblage comprises one or two sherds from a number of different vessels. These include a rim-sherd with a row of 'S' stamps between two incised cordons. This sherd is in the oolitic limestone fabric F5, the only one from the site. All the limestone in the inner surface has leached away, suggesting that the vessel was used as a container for an acidic liquid such as ale or sour milk (Perry 2011). Two other stamped sherds were noted along with another with a fragment of incised lines, indicating that the assemblage is largely of sixth-century date.

*Table 17: Anglo-Saxon pottery occurrence by number and weight (in g) of sherds per context by fabric type, SFB4*

| Fabric<br>s | F1 |           | F2 |           | F3 |           | F4 |           | F5 |           | Date              |
|-------------|----|-----------|----|-----------|----|-----------|----|-----------|----|-----------|-------------------|
|             | No | Wt<br>(g) |                   |
| 3835        | 14 | 654       | 18 | 383       | 31 | 418       | 1  | 10        | 1  | 61        | 6 <sup>th</sup> C |

*Pit 3828*

The assemblage from pit 3828 comprised four sherds with a total weight of 46g. The estimated vessel equivalent (EVE), by summation of surviving rimsherd circumference was 0.16. The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 18.

This assemblage includes a rim-sherd from a carinated bowl with incised decoration and facets cut into the carination. It is one of the earliest pieces of Anglo-Saxon pottery ever found in Northamptonshire, and only the second fragment of a faceted carinated bowl from the county. Its presence suggests very strongly that there was activity at this site from around the middle of the fifth century.

*Table 18: Anglo-Saxon pottery occurrence by number and weight (in g) of sherds per context by fabric type, Pit 3828*

| Fabric | F1 |           | F2 |           | F3 |           | F4 |           | F5 |           | Date  |
|--------|----|-----------|----|-----------|----|-----------|----|-----------|----|-----------|-------|
|        | No | Wt<br>(g) |       |
| 3829   | 3  | 30        | -  | -         | 1  | 16        | -  | -         | -  | -         | M5thC |

*Fill 4055 of Q2*

The fill of Q2 only produced a single sherd of Anglo-Saxon pottery, but it was a fragment of a vessel with incised decoration and stamping, and probably of 6th century date.

*Pit 2449*

The fill 2450 produced just two sherds, but both are fairly large rim-sherds. One is from a jar with a fairly long neck, the other has a band of deeply-incised and very precise combing just below the rim, and there is a fragment of a single small grid-stamp. It is most likely of 6<sup>th</sup> century date.

### **Overview and Discussion**

All the Anglo-Saxon pottery from this site appears to be the product of secondary deposition. Most likely, it was initially disposed of in domestic middens, then used to back-fill the hollows of the SFBs after they were abandoned and demolished. This would explain why there appears to be a relatively wide spread of dateable material in some of the features.

As noted, the assemblage includes two of the earliest sherds of Anglo-Saxon pottery from the county, in the form of the faceted carinated bowl from Pit 3829 and the incised sherd from SFB2. The former is a vessel type ('Schalenerne') which was considered by Myres to be amongst the earliest Anglo-Saxon pots in England, and is very rare in Northamptonshire. A single, small and probably residual sherd from such a vessel was noted at St John's Square Daventry (Blinkhorn 1997, fig 20.19), although that example lacked incised lines and facets. The only other known sherd of this type with similar decoration also comes from northern Northamptonshire, from a sunken-featured building from Stoke Doyle Road, Oundle (Pearson 1994, fig 4 no.10). The second decorated sherd from Pit 3828 at this site may be a fragment of a Buckelurne, another 5th-century pottery type (Myres 1977, 230), but insufficient of the vessel is represented for this to be certain.

The Schalenerne fragment occurred in a pit located in the north-east corner of the site, but the nearest excavated SFB4, is of 6<sup>th</sup> century date, suggesting that the two features are not related, and that the source of the early pottery could lie outside the excavated area, although the pottery from the primary fill of SFB2 in the central area of the site appears to be of a similarly early date, and could be the source.

The early incised sherd from that feature is another type which is rare in Northamptonshire. A vessel with similar decoration, although with a dot in each of the triangles formed by the chevrons is known from Kettering, and was thought by Myres to be very early (ibid 1977, 49). No comparable sherds were noted at any of the Raunds Area sites, St Johns Square Daventry or at Chalk Lane, Northampton (Gryspeerd 1981), all of which produced decorated pottery which, in the main, was stamped and of 6th century date.

The bossed sherds are perhaps less common than might be expected in Northamptonshire, but such pottery occurs in small quantities at other sites in the county, such as Chalk Lane (ibid fig 14 nos 2 and 3), and the 6th-century stamped wares are relatively common finds. The pottery indicates that there was more or less unbroken activity at this site from around the middle of the 5th century to the end of the 6th.

#### **4.6 Fired clay** by Pat Chapman

This assemblage comprises 253 pieces of varying sizes and types, together weighing 3032kg, coming from 37 contexts. Three contexts contained 23.9kg, about three-quarters by weight, of the material.

*Table 19: Quantification of fired clay*

| <b>Group/feature</b> | <b>Fill / cut</b> | <b>No</b> | <b>Wt (g)</b> | <b>Comment</b> |
|----------------------|-------------------|-----------|---------------|----------------|
| Well                 | 176 / 211         | 4         | 902           | -              |
| E10                  | 189/ 190          | 2         | 24            | -              |
| RD7                  | 2034 / 2033       | 1         | 21            | -              |
| RD7                  | 2050 / 2038       | 1         | 12            | -              |
| E5                   | 2052 / 2026       | 1         | 32            | -              |
| E6                   | 2099 / 2240       | 1         | 15            | -              |

| Group/feature       | Fill / cut  | No         | Wt (g)       | Comment  |
|---------------------|-------------|------------|--------------|--|
| Ditch               | 2108 / 2109 | 1          | 6            | -  |
| RD7                 | 2139 / 2141 | 2          | 15           | -  |
| RD11                | 2284 / 2285 | 21         | 200          | -  |
| RD10                | 2324 / 2325 | 1          | 8            | -  |
| Posthole            | 2369 / 2368 | 2          | 484          | Daub   |
| Posthole            | 2375 / 2376 | 1          | 145          | Daub   |
| Q2                  | 2450 / 2449 | 2          | 13           | -  |
| Oven/ hearth        | 2476 / 2477 | 1          | 6            | -  |
| Q2                  | 2563 / 2565 | 1          | 16           | -  |
| RD9                 | 2631 / 2632 | 4          | 189          | -  |
| RD6                 | 2717 / 2718 | 20         | 1876         | Pit lining, 35mm thick, finger impressions                                     |
| Pit/ gully?         | 2726 / 2727 | 2          | 25           | -  |
|                     | 2806 / 2807 | 1          | 6            | -  |
| E6                  | 3580 / 2581 | 1          | 46           | -  |
| Pit                 | 3603 / 3604 | 12         | 14305        | Pit lining, 1 piece 100mm thick, internal diameter c 700mm, finger impressions |
| Pit                 | 3618 / 3619 | 30         | 2953         | Pit lining, 40-65mm thick  |
| RD4                 | 3626 / 3627 | 4          | 326          | SF56 possible oven plates  |
| Four-post structure | 3638 / 3639 | 1          | 11           | -  |
|                     | 3652 / 3653 | 3          | 104          | -  |
| Pit                 | 3790 / 3791 | 9          | 657          | -  |
| RD12                | 4011 / 4012 | 7          | 175          | -  |
| Pit                 | 4052 / 4051 | 2          | 24           | -  |
| Pit                 | 4056 / 4057 | 74         | 6590         | Daub; 1 barely fired lump 180x120x80mm   |
| Hearth              | 4168 / 4191 | 23         | 655          | Daub   |
| RD4                 | 4252 / 4253 | 8          | 62           | -  |
| Pit                 | 4401 / 4402 | 1          | 12           | -  |
| Pit                 | 4456 / 4459 | 2          | 15           | -  |
| Pit                 | 4484 / 4485 | 1          | 20           | -  |
| Pit                 | 4488 / 4490 | 1          | 13           | -  |
| Ditch               | 4517 / 4518 | 2          | 39           | -  |
| Ditch               | 4625 / 4652 | 3          | 27           | -  |
| <b>Totals</b>       |             | <b>253</b> | <b>30029</b> |  |

### ***Pit lining material***

From fill (3603) of pit [3604] there is one large piece weighing 14.3kg, broken in two. It is 100mm thick, curved with an internal diameter of c 700mm, lining a pit c 900mm in diameter (Fig 29). The surface is a thin crust, 10-15mm thick, and finger-impressed where the clay lining was pressed against the side of the pit (Fig 30). It is made with reddish-brown to dark reddish-brown clay with frequent to dense shell. Below the surface the clay is friable and has not been heated to high temperature or used for prolonged firing.



Fired clay lining, from pit [3604] Fig 29



Close-up of finger impressions Fig 30

Twenty fragments of this same fabric, weighing 1.9kg, came from RD6 (fill (2717) feature [2718]). They were up to 35mm thick, the surface of hard fired clay 10mm thick with finger impressions, and one edge slightly curved. One piece, 40-65mm thick and weighing 1.7kg, together with surface and body sherds, came from fill (3618) pit [3619]. Four small fragments (SF56), weighing 325g, from RD4 (fill (3626) feature [3627]) resembled oven plates, 35-42mm thick, with curved edges. There was part of a perforation 25mm in diameter with 80mm between the perforation and the edge of the possible plate.

Small fragments in this same reddish-brown friable dense shelly clay were scattered through many contexts.

### **Daub**

Material from wattle and daub structures was recovered from two contexts: 23 fragments, weighing 655g, from fill (4168), hearth [4191] and 68 fragments, weighing 3.1kg, from (4056) feature [4057]. These are made from hard fine, silty orange-pink to black or white clay. The fragments are angular, the largest is 160mm long by 70mm wide and thick and could be from a corner. The three wattle impressions are

10-15mm in diameter. Two other pieces came from contexts (2369) feature [2368] and (2375) feature [2376]. Several small fragments were scattered through other contexts.

#### ***Other material***

Some fired clay comprise very sandy sub-rounded orange and black small fragments. A gradually disintegrating lump of dark brown barely fired clay c 180mm long x 120mm x 80mm and weighing 3.5kg was recovered from context (4056) pit [4057]. It has a very thin orange-brown surface and two edges joining at a right-angle imply that the natural clay had been deliberately employed for some purpose which did not require high temperatures close by.

#### ***Discussion***

This assemblage of fired clay demonstrates that some industrial-type work was being undertaken, but whether successfully is not clear. The clay lining is underfired, of similar material to the underfired pottery from pit [3778], fill (3777), and would seem to be the dump of a failed process. Some material is clearly from wattle and daub structures, either dwellings or oven structures.

#### **4.7 Querns, millstones and grinding/rubbing stones** by Andy Chapman (with geological identifications by Steve Critchley MSc)

There are parts of some 23 stones used for milling or grinding. For the purposes of assessment these have been examined, and a basic classification by form and period provided (Tables 20- 22). Each stone has a basic description and an assessment of the need for further reporting.

#### ***Iron Age rotary querns***

There are five stones that are certainly from upper stones of rotary querns of the beehive form characteristic of the middle to late Iron Age (Table 20). They include a complete upper stone as well as more damaged examples, and show a diversity of geological types. There is also a single lower stone formed from a large water worn cobble. They range from 270-400mm in diameter. A further fragmentary stone, the only example in Millstone Grit is of uncertain form, and there is a flake of Spilsby Sandstone probably from a quern.

An upper stone in Spilsby Sandstone is of particular interest as it has been split vertically through the hopper and much of the grinding surface has been cut away, suggesting a ritual killing of the stone before deposition.

Table 20: Quantification of Iron Age rotary querns

| Context/<br>feature/<br>SF No.               | Geology                                  | Description   | Assessment   |
|--|--|---|--|
| 2320<br>[2321] pit<br>SF 38                  | Millstone Grit                           | Possibly from beehive type<br>Fragment of circumference<br>110mm thick  | Fragment only, no<br>further work required                         |
| <b>RD9</b><br>(2725)<br>[2724] pit<br>SF 51  | Spilsby<br>Sandstone                     | <b>beehive upper stone</b><br>230mm high, 270mm diam<br>40% survives  | Describe,<br>photograph and<br>draw                                |
| (3907)<br>[3908] pit<br>SF 64                | Fine sandstone<br>(to be<br>provenanced) | <b>beehive upper stone</b><br>(top removed) 400mm diam<br>Single handle socket<br>45% survives  | Describe<br>Damage to irregular<br>to permit drawn<br>illustration |
| (4484)<br>[4485] pit<br>SF 100               | Fine sandstone<br>(to be<br>provenanced) | <b>beehive upper stone (collar)</b><br>120mm high, 400mm diam<br>30% survives   | Fragment only, no<br>further work required                         |
| (4561)<br>[4562] ditch<br>SF 137             | Spilsby<br>Sandstone                     | <b>beehive upper stone (complete)</b><br>180mm high, 300mm diam   | Describe,<br>photograph and<br>draw                                |
| <b>E2</b><br>(4392)<br>[4394]                | Spilsby<br>Sandstone                     | <b>beehive upper stone (fragment)</b><br>135mm high, 300mm diam<br>25% survives   | Fragment only, no<br>further work required                         |
| (4085)<br>[3855] pit<br>SF 66                | Water worn<br>cobble (shaped)            | <b>Rotary quern lower stone</b><br>90mm thick, 360mm diam<br>35% survives (with central pivot)  | Describe,<br>photograph and<br>draw                                |
| <b>E1</b><br>(4443)<br>[4446] ditch          | Spilsby<br>Sandstone                     | Flake of stone, 70x45x17mm, with<br>smoothed surface, probably from<br>a rotary quern   | No further work<br>required  |
| <b>E1</b><br>(4443)<br>[4446] ditch<br>SF 90 | Limestone/tufa                           | <b>Rotary grinder? (upper stone)</b><br>360mm diam, 100mm thick.(45%)<br>Convex grinding surface, hopper<br>90mm diam, Eye 35mm diam. | Describe,<br>photograph and<br>draw                                |

Another upper stone of interest, is a low domed-stone in limestone/tufa that has a strongly convex, rather than a concave surface, which has been worn smooth through use. The use of limestone and the convex surface indicate that this stone was not used for milling grain, for which it would have been of little use, and was presumably used on softer materials. There is a reference to a fragment from a possible tufa quern at Bell Slack, East Yorkshire, excavated in 1978 by Ian Stead ([www.britishmuseum.org/research/search\\_the\\_collection\\_database](http://www.britishmuseum.org/research/search_the_collection_database), accessed 11/02/2013).

### **Roman rotary querns and millstones**

There are upper and lower stones, probably the two halves of a single flat rotary quern, in Old Red Sandstone, and a near complete lower stone in Hertfordshire puddingstone (Table 21).

There are eight fragments from Roman millstones, all in Millstone Grit, used in a powered mill assembly (Table 21). There are two instances of joining fragments, and

the pieces come from only three contexts, indicating that they may be from only three stones, two upper stones and a lower stone. Few diagnostic features have survived, although two of the stones were c800mm in diameter, and an upper stone was 90-96mm thick, while the possible lower stone was 120mm thick. Where both surfaces survived, both possessed dimpled tool marks.

*Table 21: Quantification of Roman querns and millstones*

| <b>Context/<br/>feature/<br/>SF No.</b>              | <b>Geology</b>                | <b>Description</b>   | <b>Assessment</b>  |
|--|-------------------------------|--|--|
| <b><i>Roman flat rotary querns</i></b>               |                               |  |  |
| 237<br>[142] well                                    | Old Red<br>Sandstone          | <b>Rotary quern (upper)</b><br>380mm diam., 40mm thick (20%),<br>with recessed collar<br><br>This and stone below probably<br>same set   | Photograph and<br>draw                                       |
| 237<br>[142] well                                    | Old Red<br>Sandstone          | <b>Rotary quern (lower)</b><br>400mm diameter, 70mm thick<br>(40%)   | Photograph and<br>draw                                       |
| 2001<br>Subsoil<br>SF                                | Hertfordshire<br>puddingstone | <b>Rotary quern (lower)</b><br>300mm diam., 90mm thick<br><br>Central pivot socket, entire<br>circumference damaged  | Describe,<br>Photo and draw                                  |
| <b><i>Roman millstones</i></b>                       |                               |  |  |
| 237<br>[142] well                                    | Millstone Grit                | Two joining fragments, surface<br>dimpled, 260x150mm, and 40mm<br>thick, but probably from thicker<br>stone, split surface burnt   | Fragment of<br>millstone, no further<br>work required        |
| 237<br>[142] well                                    | Millstone Grit                | <b>Lower stone</b><br>800mm diameter (8%), 120mm<br>thick, both surfaces near flat and<br>dimpled  | Fragment of<br>millstone, no further<br>work required        |
| 2461<br>[2462] quarry<br>SF 46                       | Millstone Grit                | <b>Upper stone</b> (reshaped)<br>Rectangular 280x200mm, 55mm<br>thick, eye 60mm diam. Dimpled<br>grinding surface, >500mm diam   | Reused fragment of<br>millstone. No further<br>work required |
| 2482<br>[2483] well<br>SF 41, 42/43<br>(joining), 49 | Millstone Grit                | <b>Upper stone</b> (fragments)<br>All have two dimpled surfaces<br>SF 41, 400x250x90mm, part of<br>irregular eye survives.<br>SF 42/43, 350x330x90mm, with<br>damaged circumference<br>SF 49, 200x200x95mm, part of<br>circumference, 800mm diam | Describe, but too<br>incomplete to draw.                     |

### ***Grinding and rubbing stones***

There are two small rectangular slabs, one of sandstone and one of limestone/tufa, which have worn surfaces that are flat across the width of the stone but concave along the longitudinal axis (Table 22). These both appear to be too small to have functioned as saddle querns for grain, especially as one is in limestone/tufa, and it is suggested that they were grinding/sharpening stones. A further block of sandstone

has a worn but undulating upper surface, perhaps also used for grinding or sharpening.

There are four fragments of water worn cobbles that have a worn surface, including flat, concave and convex surfaces, which may have been used for grinding or sharpening.

*Table 22: Quantification of rubbing and grinding stones*

| <b>Context/<br/>feature/<br/>SF No.</b> | <b>Geology</b>                      | <b>Description</b>   | <b>Assessment</b>                                   |
|---|-------------------------------------|--|---|
| <b>Iron Age and Roman</b>               |                                     |  |   |
| (2318)<br>[2319] pit<br>SF 39           | Sandstone<br>(to be<br>provenanced) | Rectangular slab (complete)<br>260x215x55mm<br>Worn surface, flat, rising at end | Describe,<br>photograph and<br>draw                 |
| (2636)<br>[2637]<br>RD9<br>SF55         | Sandstone<br>coarse                 | Fragment (straight edge)<br>200x160x115mm<br>Undulating grinding surface         | Describe  |
| 4072<br>[4074] pit                      | Limestone/tuf<br>a                  | Rectangular slab,<br>230x180x55mm<br>Worn concave surface                        | Describe and<br>illustrate                          |
| 2280<br>[2283]<br>RD11                  | Water worn<br>cobble                | Small fragment<br>100x95x55mm<br>Worn surface, concave                           | No further work<br>required                         |
| (3716)<br>[3717] pit                    | Water worn<br>cobble                | Fragment 170x100x55mm<br>Worn surface, convex                                    | No further work<br>required                         |
| (4440)<br>[4446] ditch<br>SF 91         | Water worn<br>cobble                | Fragment, 110x70x70mm<br>Worn surface, flat                                      | No further work<br>required                         |
| (2216)<br>[2224]/[2226]<br>pit          | Water worn<br>cobble                | Fragment, 200x170x100<br>Worn, convex surface                                    | No further work<br>Required                         |
| <b>Saxon</b>                            |                                     |  |   |
| (3868)<br>[3869] SFB2<br>SF 62          | Limestone                           | rubbing stone<br>110x70x70mm<br>With highly polished flat surface                | Saxon<br>Describe and<br>illustrate<br>(photograph) |

From Anglo-Saxon SFB2 there is a small block of limestone with a highly polished flat surface.

#### **4.8 A Roman loomweight** by Andy Chapman

The fill (2482) of a Roman well [2483], produced large and small fragments from a single heated clay cylindrical loomweight (Fig 31), with the recovered fragments weighing 950g. The loomweight has been manufactured in clay containing dense coarse shell inclusions, 5-15mm in diameter. The outer surface has been well smoothed and is light brown in colour with some grey patches, probably a result of

heating. Inside, the clay is light brown to pale reddish brown in colour. The weight has been no more than lightly fired, which has left it friable and fragmenting.

The surviving portion stands 130mm high, and the complete weight would have stood at least c150mm high. It has a circular section and broadens towards the base, but the top, above the transverse perforation, has been lost. At the perforation, which is 16mm in diameter, the weight is 80mm in diameter and near cylindrical. The diameter flares outward towards the bottom 55mm and at the lowest point, which may be close to the original base; it is 100mm in diameter. When complete, it would have weighed a little over 1.0kg.



Roman loomweight (Scale 50mm) Fig 31

#### 4.9 Other finds assessment by Tora Hylton and Ian Meadows

Stratified finds were recovered from Iron Age and Saxon features, while finds of Roman, medieval and post-medieval date were recovered from topsoil deposits and therefore unstratified. The majority of the Iron Age and Saxon finds were recovered from the series of domestic structures and the range represented attests to the manufacture of textiles. In addition there are tools and personal items. Roman, medieval and post-medieval activity is represented by small portable items which may have been casually lost.

##### ***Quantity of material***

There are 72 individually recorded small finds, not including the querns and grinding stone (Chapman, Section 4.7). Of that number, c34 were recovered during a metal detecting survey undertaken by Steve Critchley. The finds were recovered from topsoil deposits in Area 1 south (10) and Area 1 north (10) or are unstratified (14). The remaining 38 objects were recovered from stratified deposits in Area 1 south (2) and north (36).

*Table 23: Quantification of finds by material*

| <b>Material/ Period</b>  | <b>Iron Age</b> | <b>Roman</b> | <b>Saxon</b> | <b>Medieval</b> | <b>Post-medieval</b> | <b>Unknown</b> | <b>Total</b> |
|--------------------------|-----------------|--------------|--------------|-----------------|----------------------|----------------|--------------|
| Copper alloy             | -               | 11           | -            | 5               | 12                   | 2              | 30           |
| Iron objects             | 3               | -            | -            | -               | 2                    | 4              | 9            |
| Lead                     | -               | 1            | -            | -               | 3                    | -              | 4            |
| Stone (excluding querns) | -               | -            | -            | -               | -                    | 1              | 1            |
| Bone/antler              | 6               | -            | 12           | -               | -                    | 1              | 19           |
| Glass                    | -               | -            | -            | -               | 1                    | -              | 1            |
| Ceramic                  | 4               | -            | 4            | -               | -                    | -              | 8            |
| <b>Total</b>             | <b>13</b>       | <b>12</b>    | <b>16</b>    | <b>5</b>        | <b>18</b>            | <b>8</b>       | <b>72</b>    |

**Data collection**

All the finds were manually recorded on site following standard guidelines. While a small number were recovered by metal detector, the majority were recovered by hand during the excavation of archaeological features. The position of all excavated finds was recorded by three-dimensional co-ordinates. The small finds have been recorded on to a computerised database (ACCESS), and a basic catalogue has been compiled, comprising, material type, object identification, together with stratigraphic information.

**Condition**

The copper alloy is in a stable condition. The ironwork is in a reasonable state of preservation, although some objects are covered in corrosion products. Nine objects have been x-rayed by Beth Werret, Conservator with Wiltshire Conservation Service. The results aid identification, highlighted technical details and provide a permanent record. The worked bone objects are in a good and stable condition, no conservation work will be required.

**Summary of material recovered**

The assemblage is represented by a range of objects dating from the Late Iron Age through to the post-medieval period. The majority of the Iron Age and Saxon finds were recovered from stratified deposits, while the Roman, Medieval and post-medieval finds were recovered from topsoil deposits overlying Area 1 north/south. The table (24) below provides an indication of the types of artefacts recovered.

Table 24: Quantification of Iron Age to post-medieval finds

| Functional category                   | Iron Age | Roman | Saxon | Medieval | Post-med |
|---------------------------------------|----------|-------|-------|----------|----------|
| <b>Personal Possessions</b>           |          |       |       |          |          |
| Costume and jewellery                 | -        | 6     | 1     | 5        | 1        |
| Toiletry items                        | -        | -     | 2     | -        | -        |
| <b>Equipment and furnishings</b>      |          |       |       |          |          |
| Nails                                 | 1        | -     | -     | -        | -        |
| Locks and keys                        | -        | -     | ?1    | -        | -        |
| Weapons                               | -        | -     | -     | 1        | 2        |
| <b>Tools</b>                          |          |       |       |          |          |
| Knives                                | 1        | -     | -     | -        | -        |
| Textile working                       | 6        | -     | 9     | -        | 1        |
| <b>Coins/Jettons</b>                  |          |       |       |          |          |
|                                       | -        | 5     | -     | -        | 8        |
| <b>Trade token</b>                    |          |       |       |          |          |
|                                       | -        | -     | -     | -        | 1        |
| <b>Miscellaneous and unidentified</b> |          |       |       |          |          |
| Copper alloy                          | -        | -     | -     | -        | 1        |
| Iron                                  | 1        | -     | -     | -        | 1        |
| Lead                                  | -        | 1     | -     | -        | 1        |
| Bone                                  | 3        | -     | 2     | -        | -        |

### **Iron Age finds**

#### *Iron*

Three iron objects were recovered from Iron Age deposits. They include a whittle tang knife, a possible tang, and a nail. The knife is a known Iron Age form, it has a concave upper edge and a convex lower cutting edge and typologically it equates to Danbury Type 2c. It was recovered, together with the tang fragment from a hearth within RD12.

#### *Bone/antler*

There are five objects manufactured from animal bone. All were recovered from the fills of pits or roundhouse gullies. This small group comprises three needles, including one double-pointed needle made from a sliver of bone and one shank fragment (broken at the eye).

Of interest is the presence of two almost identical cut sections of rib bone (70 x 40 x 7mm). The terminals have been cut transversely and the protruding edges display signs of wear. Each rib section has been perforated twice along the medial line through the anterior and posterior surfaces; the perforations have been positioned c21mm apart and measure c5mm in diameter, they have been drilled from both sides. Wear through use is evident on the cut terminals, but there is very little evidence of wear on the sides of the perforations. There is an identical object from Hunsbury hill fort (A Chapman pers comm) Further research is required.

Two joining fragments of antler waste were also recovered.

#### *Ceramic clay weights*

Three complete clay weights were recovered from a hearth within a roundhouse. The weights are large, weighing up to c1.34kg, they have rounded corners which have each been pierced by a circular/ovoid suspension hole from side to side. The sides of the weights measure up to c148mm and in general each of the weights has one side which is shorter than the other two. The weights have been crudely fashioned

from a clay with few discernible inclusions, the fabric is hard, but smooth to touch. The weights may have been made from un-tempered Boulder Clay. The cores are partially unfired and the external surfaces are fired to red (oxidised) colour and at least one surface on each of the weights has been fired to a black (oxidised) colour.

### ***Roman finds***

In total ten Roman objects were recovered, six coins (reported on by Ian Meadows), four brooches, one strap-end and a lead repair patch. All the objects were recovered from topsoil or are unstratified.

*Table 25: Roman coins*

| <b>SF Number</b> | <b>Identification</b>   | <b>Context</b> |
|------------------|---|----------------|
| 16               | A worn CONSTANTINOPOLIS issue, 15mm diameter. Unfortunately all lettering was too ill defined to read the mintmark.   | Unstratified   |
| 32               | An issue of Constans (obv CONSTAN SPFAVG). The reverse has two victories each holding a wreath (rev VICTORIAEDDAVGGQNN). Unfortunately the mintmark would have missed the flan but this issue dates to 341-46AD.  | Unstratified   |
| 33               | A partial flan 15mm diameter. The obverse face is illegible but the reverse has two victories facing each other holding wreaths. Part of the legend VICTORIAEDDAVGGQNN could be read suggesting a date of 341-46 AD.  | Unstratified   |
| 34               | An irregular fragment 10mm across, possibly of a fourth century coin. No detail or lettering could be observed on either face.  | Unstratified   |
| 35               | An illegible 17mm diameter flan of possible 4 <sup>th</sup> century date which has been perforated perhaps for suspension. The flan is incomplete with little of its original edge surviving and none of the original faces clear enough for a type to be determined. | Unstratified   |

### ***Discussion***

The coins were in a poor condition suggesting they were recovered from an environment where they were actively corroding. The single perforated issue is likely to have been perforated in the post Roman period. Perforated Roman coins are not uncommon finds from Anglo-Saxon contexts where the coin has perhaps been worn as a piece of jewellery or as a talisman.

### ***Brooches***

There are four Roman brooches dating from the early 1st to 4th centuries AD. All were recovered from topsoil deposits and presumably may be regarded as casual losses. None of the examples are complete, of the four brooches, parts of two upper bows (no pins) and two lower bows were recovered.

The typologically earliest form represented, is a Proto Langton Down – Nauheim Strand, which dates to the early 1st century AD. It comprises the lower section of the bow and catch plate only. The bow is flat with straight sides; these converge slightly

towards the upper bow. The surface is ornamented with a longitudinal decoration, comprising a plain central panel with a border of scorper-graver ornament.

There are two Hod Hill brooches. One comprises a vestige of the upper bowdecorated with vertical ridges and separated from the lower bow by a single transverse moulding. The lower bow is plain, flat and broad at the top and it tapers to simple foot, it dates to the early/mid 1st century. The other example is represented by the upper part of the bow. The axis bar now missing would have been housed in the forward, rolled-over head. The upper bow has a wide but shallow ridge in the middle with narrow ridges down each side. It has a curved profile and there are short (broken) dendritic protrusions, emerging from the sides, suggesting that the brooch is probably a Hod Hill with voids incorporated into the design (cf Mackreth Type 8, plate 96). It dates of the mid 1st century AD.

There is part of a knee brooch (hinge and upper section of bow only). The bow is wide and flat with an S-shaped profile, it is plain and there is a moulding at the junction of the bow and hinge. The hinge comprises a cylinder which is open at the back with an iron axis bar inside (ferrous corrosion deposits evident). Brooches of this type are generally recovered from civilian and military sites and they date to the c4th century (cf Mackreth Type 2a, plate 132).

#### *Strap-end*

There is one cast amphora-shaped military strap-end with the attachment end missing (L: 34mm, W: 12mm, Th:1.5mm). The strap-end is flat, lanceolate in form and tapers to the base where there is a small projecting knop. There is a small centrally placed circular recess, possibly the remains of a ring and dot motif. Strap-ends of this type dominate belt furniture in the 4th century and they are generally associated with the Roman military.

#### *Lead*

Repair patch for base of ceramic vessel, vestige of red fabric retained in recess (possibly Samian). Dimension: 42 x 35mm H: 11mm Wgt: 83.9g

### ***Anglo-Saxon finds***

The Anglo-Saxon finds comprise a small group of domestic items. These include objects for the manufacture of textiles (spinning and weaving) and personal items (combs, pins). Of particular interest is part of a possible antler key.

#### *Bone/antler*

Twelve objects are manufactured from bone/antler. Of particular interest is the presence of what may be an example of part of an antler key, but further research will be required to confirm this identification. Finds related to the manufacture of textiles include one spindle whorl manufactured from an antler burr and one double-pointed pin beater for use with a warp-weighted loom. Finds for personal use include two combs, including a triangular backed comb, three pig fibula pins and a tapered shank, possibly from a pin/needle. In addition there is one small fragment of antler waste.



Fragment of Anglo-Saxon bone comb (Scale 20mm) Fig 32

### *Ceramic*

There are four ceramic spindle whorls. Three were recovered from the fills of SFBs and one from a pit. One of the whorls has been made from the base of a Nene valley colour coat vessel and the other three appear to have been made from pottery fabrics – compare with pot.

### **Medieval finds**

There are six copper alloy small finds which stylistically date to the medieval period, all were recovered from topsoil deposits and are therefore unstratified. This small group is dominated by dress accessories and includes two buckles, a buckle plate and a mount. The buckles represent distinct types, one has four knobs, bowed sides and a narrowed offset bar and the other complete with a gilded buckle plate has a trapezoidal frame with lobed knobs on the corners; both forms date to c1250-1400AD. The mount would have been used for enhancing items of leather or textile. It is a 'floral' quatrefoil mount with plain lobes and bevelled edges. Other objects include a suspension loop from a purse bar decorated with a simple neillo motif which dates to the late 15th/16th century and a hexagonal hilt originating from a dagger which stylistically also dates to the c15th century.

### **Post-medieval finds**

A range of post-medieval finds were recovered from topsoil deposits over lying Area 1 north/south, Those worthy of note include eight coins and jettons (see table below), a cast copper alloy thimble with knurled indentations dating to the c17th century, a Georgian shoe buckle frame manufactured from iron, a iron spike and two pieces of lead shot. The latter range in size from 15-18mm in diameter. The smaller size may have been used with a pistol, while the larger shot may have been for use with a musket.



Table 26: Post-medieval finds

| SF Number      | Identification  | Context      |
|----------------|---|--------------|
| <b>Coins</b>   |   |              |
| 4              | Farthing? Illegible   | 2000         |
| 21             | George III half penny, bust facing right, date not legible on rev. Ref : Spink 2001, 3774 Dated 1775  | Unstratified |
| 23             | George III half penny, bust facing right, date not legible on rev. Ref : Spink 2001, 3774 Dated 1775?   | Unstratified |
| 24             | George III half penny, bust facing right, date not legible on rev. Ref : Spink 2001, 3774 Coin damaged, looks as if it has 9/10 sides.  | Unstratified |
| 27             | George III half penny, bust facing right, date not legible on rev. Ref : Spink 2001, 3774   | Unstratified |
| 29             | George III half penny, bust facing right, date not legible on rev. Ref : Spink 2001, 3774   | 1000         |
| 30             | Farthing? Obverse - illegible Rev: barely legible. Dia:22mm   | Unstratified |
| <b>Jettons</b> |   |              |
| 19             | German jetton, extremely worn and abraded. Almost illegible. Obv. Three open crowns and three lys arranged alternately round a rose, within an inner circle of rope pattern. Rev. The reichsapfel within a double tressure of three curves and three angles set alternately, all within an inner circle of rope pattern. Dia 22mm Date: 16/17th century | 1000         |

## 5 THE HUMAN REMAINS by Christopher Chinnock

### ***Introduction***

One cremation burial, one deposit of disarticulated remains and further isolated fragments of human bone were excavated. Little information could be gained from the material due to a degree of fragmentation and under representation of skeletal elements in the cremated and the disarticulated remains. The cremation was found with early Roman pottery and the disarticulated remains are thought to be broadly Iron Age in date.

### ***Aims and objectives***

Macroscopic assessment of the human bone material will provide information on preservation, completeness, number of individuals, age, sex, pathology, metric and non-metric traits. The remains and the contexts in which they were found will be compared with others typical for the period.

### ***Methods***

The disarticulated remains and the cremated remains were recorded and analysed in line with the guidance set out in the Institute for Archaeologists *Guidelines to the Standards for Recording Human Remains* (Brickley and McKinley 2004), the *Standards for Data Collection from Human Skeletal Remains* (Buikstra and Ubelaker 1994) and English Heritage's *Human Bones from Archaeological Sites: Guidelines for producing assessment documents and analytical reports* (Mays, Brickley and Dodwell 2004).

## 5.1 The disarticulated remains

Human bone was recovered from two contexts [pit [3821], fill (3900) and E1, ditch [4556], fill (4555)]. Disarticulated human remains from (3900) were found with disarticulated horse bones in a large re-cut pit [3821]. Two human skull fragments from (4555) were recovered from the backfill of a ditch section [4556]. Both contexts date from the Middle to Late Iron Age based on stratified pottery recovered from the relevant features.

### ***Results***

#### ***Preservation and Completeness***

A full inventory as laid out by Buikstra and Uberlaker (1994) was compiled. Surface preservation, concerning the condition of the cortical bone, was assessed using the seven category grading system defined by McKinley (2004), ranging from 0 (excellent) to 5+ (very poor). The material under analysis was in excellent condition (0-1). The majority of the long bones were fragmented into a few large pieces and the rest of the material showed minimal fragmentation. One femur was complete allowing for stature estimation. The two skull fragments recovered from ditch section [4556] can be pieced together and clearly indicate one severely underrepresented individual. The disarticulated bones from pit [3821] represent 25%-50% of one individual.

#### ***Minimum Number of Individuals (MNI)***

Though remains excavated from (3900) were disarticulated, the size, state of development and robusticity would suggest that they came from one individual. Additionally there are no duplicated skeletal elements. Similarly the skull fragments from (4555) represent one individual.

### *Age*

The fragment from (4555) would appear to be adult based on the fusion of the sagittal suture. Suture closure is not considered a reliable method of ageing and a more accurate estimation was not possible.

The disarticulated remains retrieved from (3900) can be described as adult based on the morphology and maturity of the long bones. Due to the lack of any skull, dentition or pelvis, other standard ageing methodologies could not be employed. Two sternal rib ends were recorded. Using the Işcan (1984) method, an estimate of 18-30 years of age was given based on pit depth, pit shape and rim/wall configuration. The Işcan method for sternal rib ageing is based on a study of the 4th rib, neither of the ribs from the Barton Seagrave material could be confidently assigned to a position and as such may be less accurate as a result.

### *Sex*

The skull fragments from (4555) cannot accurately be attributed to either male or female. Only a small portion of the right supraorbital ridge and the temporal line can be observed, neither of which can provide conclusive sex estimations independently.

The two regions which are most sexually dimorphic, the skull and the pelvis, were not available for the remains in context (3900). Post cranial measurements on the right and left femur were used as the only available method for an estimation of sex in this instance. The femoral head diameter (46.5mm) suggests a possible male and the femoral mid-shaft circumference (91mm) is comfortably within the male range (Bass 1995). Taken by themselves without comparison to skull and or pelvic morphological traits an estimation of sex remains inconclusive.

### *Stature*

One right femur, from the disarticulated material (3900), was sufficiently intact to provide a stature estimation using the equations outlined in Trotter (1970). As no confident sex estimation was available for these remains, calculations were made for both male and female. The male equation gives a result of 166.46cm +/- 3.27 compared to 166.24cm +/-3.72 for a female. Both results fall within the average stature for the period as recorded by Roberts (2009).

### *Pathological Observations*

The disarticulated remains from (3900) indicate some pathological changes. The thoracic vertebrae show slight porosity and osteophytic growth on the costal articulations. A congenital unilateral cranial shift of the thoracic-lumbar border has resulted in more severe pitting and bone formation on the twelfth thoracic vertebrae. Periosteal new bone formation is present on both tibiae on both the anterior and posterior aspects of the diaphyses. This is most commonly associated in the bioarchaeological literature with 'non-specific infections' (Weston 2012).

Congenital abnormalities are defined as those observable at birth, and developmental anomalies those which become apparent during skeletal maturation (Barnes 1994: 2). One developmental abnormality was noted amongst the disarticulated remains. A unilateral (left side) cranial shift of the thoracic-lumbar border can be seen very clearly (Fig 33) between the twelfth and eleventh thoracic vertebrae. Barnes (2007) notes that in such cases of cranial shifting, significant stunting or absence of the twelfth ribs may occur and hypoplasia will often be seen on the rib facets. In this unilateral case, the left costal facet of the twelfth thoracic vertebrae is indeed under-developed (hypoplastic) and the right costal facet shows severe osteophyte formation and porosity.



Congenital anomaly on 12th thoracic vertebrae Fig 33

### ***Discussion***

The fragments of skull retrieved from ditch section [4556] can be pieced together and as such represent a single adult individual. However it is almost certain that these fragments were merely deposited as waste with the rest of the backfill.

The disarticulated material from pit [3821] again is likely to represent a single adult individual. The absence of key elements of the skeleton such as the skull suggests that this also was not a primary deposit. Mild pathological changes including a developmental abnormality were noted in this individual. Meaningful diagnosis of the pathology was not possible as the full distribution of pathology could not be assessed due to the incomplete skeleton.

It is likely that both features which were found to contain human remains had received the material after primary burials had been disturbed elsewhere within the settlement or in the surrounding area.

## **5.2 The cremation burial**

The cremation burial (2452), based on associated pottery, dates from the Roman period. It was discovered toward the edge of an area of alluvial deposits described as a slade (2239). The cremation burial was unurned, however, pottery associated with the remains may represent an accessory vessel.

### ***Results***

#### ***Quantity and Fragmentation***

The material was received washed and dried. Extraneous material (pea grit etc.) was removed. The cremated remains were weighed to the nearest 0.1g. They were then passed through 10mm, 5mm, and 1mm sieves each of which was weighed separately and a percentage of the total given (Table 27). The material was organised, where possible, into elemental groups and macroscopically analysed for sexually dimorphic traits, indicators of age and pathology. The largest fragment present was 37mm long.

*Table 27: Cremation material; weights of sieved material and percentage of total weight*

| Sieve (mm) | Weight (g) | Percentage of total (%) |
|------------|------------|-------------------------|
| 10         | 101        | 66                      |
| 5          | 47         | 31                      |
| 1          | 5          | 3                       |
| Total      | 152        | 100                     |

A complete adult cremation weighs between 1.5 – 3kg (Mays 2010, McKinley 2000). The cremation burial from Barton Seagrave is significantly under this weight. The deposit was slightly disturbed during the mechanical stripping of the area and it is likely some of the cremation has been lost. Even accounting for this, it is still very light.

#### *Pyre Conditions*

The colour of cremated bone relates directly to the pyre conditions. White bone is produced by temperature in excess of 600 °C with sufficient oxygen (Mays 2010). Lower temperatures result in shades of brown, grey and blue depending on the exposure of that part of the body and oxygen supply. The cremated remains from Barton Seagrave vary in colour from brown to grey/blue and white. The skull appears uniformly white with slightly darker grey internal surfaces, perhaps reflecting the quicker exposure of these elements to the heat. Much of the cortical bone is white or grey/blue with the endosteal surfaces varying from brown to blue. This difference is much more noticeable in the thicker long bones of the lower limbs. This observation suggests some variation in body position and or time of exposure, resulting in different colouration on the bone. McKinley (2008) notes that other external factors such as weather may have had an impact, which would further affect the consistency in exposure and temperature.

#### *Number of Individuals*

There was no indication of multiple individuals within the cremation burial and the assumption remains that this deposit is that of a single person. None of the observed skeletal elements were duplicated.

#### *Ageing and sexing*

The destructive nature of the cremation process often means that indicators of sex and age are not available for analysis. Unfortunately this was the case for this cremation deposit. Maturity of the bone was assessed by observing the degree of epiphyseal fusion wherever possible. It could be said that the individual was adult although no further comment on age or sex was possible.

#### *Pathology*

Due to the highly fragmentary nature of the remains and under representation of the skeletal elements, no pathology could be observed.

#### **Discussion**

The cremation burial from Barton Seagrave is fairly typical of cremation burial for the period. The weight of the bone suggests the full individual is not represented. McKinley (1997) notes that it is very rare for the entire body to be collected from the pyre site, often the smaller deposits represent 'token' burials. Unfortunately ageing

and sexing beyond assigning 'adult' to the individual was not possible. No pathology was observed on any of the fragments.

### 5.3 Conclusion

There were a minimum of three individuals. Skull fragments from an Iron Age ditch [4556] represent one individual, disarticulated long bones and vertebrae from an Iron Age pit [3821] represent another and an isolated cremated deposit account for at least one more.

The cremated deposit was recovered from an alluvial deposit described as a slade and the associated pottery suggests an early Roman date. Isolated cremations in wet or boggy areas are not uncommon for the period.

The disarticulated material from (3900) and (4555) both represent secondary deposits dating broadly to the Iron Age. As such, the time of primary burial cannot be accurately dated. It is possible that the human remains were buried or excarnated with selected disarticulated skeletal elements then re-deposited at a secondary location. This has been seen at many sites of this period, most notably at the Iron Age hillfort at Danebury (Cunliffe and Poole 1991). However, the disarticulated material shows no signs of prolonged exposure and no 'gnaw marks' which could be attributed to scavengers, which would be expected with excarnated material. It is also possible that the disarticulated material represent disturbed burials elsewhere, with the disturbed skeletal material simply reburied or discarded in secondary locations

The small size of the assemblage does not reflect the complexity and size of the settlement and it is likely that primary funerary practice, burial or otherwise, was undertaken nearby but outside of the excavated area. It is interesting to note the possible shift in mortuary practice from inhumation (Iron Age) to cremation (Roman), though the small sample size precludes a conclusive interpretation.

## 6 THE FAUNAL AND ENVIRONMENTAL EVIDENCE

### 6.1 The animal bone by Philip L Armitage

For the purposes of carrying out a preliminary assessment of the recovered animal bone assemblages from the site, identification, recording and analysis was focused on bone from Area 1 (North) contexts associated with the Middle Iron Age roundhouses and Late Iron Age enclosures, plus one of the early Saxon SFB2. All bone had been hand collected and no sieved samples were included in this assessment. Accompanying tables (Tables 2.1 to 2.16) are in Appendix 2.

Although the initial assessment was intended to concentrate on a selected subsample (5 boxes) sent earlier in the year, the author decided a more accurate picture of the potential of the whole assemblage of recovered animal bone - that filled an additional 35 boxes (received later on) - would be achieved by also examining the context samples in ten of these later shipped boxes.

As discussed below, the assessment has indicated the potential and value of carrying out a more detailed study and analysis of the entire 35 boxes of recovered animal bone, the results of which would greatly contribute to an understanding of the pre-Roman local livestock economy, the diet of the inhabitants and the nature of the domestic stock, as well as providing insight into early Saxon animal husbandry and diet.

It is important to recognise that the data presented in this assessment report relating to the roundhouses and enclosures only cover a portion of the bone from these Iron Age features; the remaining 25 boxes to be looked at will include samples from further associated contexts. Bone from other early Saxon SFBs (in addition to those from SFB2) also remains to be analysed.

#### **Methodology**

Basic NISPs (number of identified specimens) data were collected for species/taxon and anatomical determinations, carried out using the author's modern comparative collections and with reference to standard published osteological/zooarchaeological works (including Schmid 1972, Lawrence & Brown 1973 and Getty 1975). Wherever possible, sheep and goat bones and teeth were differentiated following Boessneck *et al's* (1964) and Payne's (1985) criteria. Although no positive identifications of goat were made and all elements with diagnostic features proved to be sheep, it remained a possibility there may have been a few unrecognised goats among the broken elements. All ovicaprid material in this report is therefore referenced as sheep/goat, except where specific mention is made to positively identified sheep elements. Sex in cattle innominate bones was determined using the criteria of Grigson (1982) and in sheep innominate bones by applying the criteria of Armitage (1977). Pig lower canine teeth (tusks) were sexed using the methodology of Mayer and Brisbin (1988). Patterns of eruption and wear in mandibular cheekteeth were recorded in order to determine age at death; in cattle and pigs (classification of Bond and O'Connor 1999) and in sheep (system of Payne 1973). Crown heights in cheek teeth (method of Levine 1982) and incisor wear (criteria in Goody 2003) were used to determine ages in the horse remains. Measurements (in mm) were taken on selected elements using a Draper dial calliper (graduated 0.02 mm); following the system of von den Driesch (1976).

*Numbers of identified specimens present (NISP) and species represented (Table 2.1)*

Some 3,078 elements/fragments were examined. Of these, 2,160 (70.2%) have been identified to species and anatomy, with the majority from the Middle Iron Age roundhouse contexts: 1,641 specimens (76%/identified total).

Overall, eight mammalian species are represented in the examined material: comprising horse - *Equus caballus* (domestic); cattle - *Bos* (domestic); sheep - *Ovis* (domestic); domestic pig - *Sus* (domestic); dog - *Canis* (domestic); red deer - *Cervus elaphus*; brown hare - *Lepus cf. capensis*; and water vole - *Arvicola terrestris*. There are four bird taxa present: grey-lag/domestic goose - *Anser anser*/domestic; duck (? mallard *Anas platyrhynchos*), common buzzard - *Buteo buteo*; and thrush (species indet.) *Turdidae*. A single amphibian species, common frog *Rana temporaria*, is also represented.

No fish or reptiles are present in the examined material.

### **Preservation**

The general condition/state of preservation of the bones is assessed as fair to good but with a relatively high proportion of fragmented material (Table 2.2). Many of the bones appear to have been shattered whilst buried - owing to their brittle condition. Some breakages had also apparently occurred during excavation and/or during post-excavation handling – again owing to the brittle nature of the bones. For the purposes of quantification, where fragments/pieces of the same bone elements were able to be refitted together, these were counted as single NISPs.

In the material examined, the presence of measurable bones will allow reconstructions of stature (withers heights) in the cattle, sheep and horses represented. Butchery in the form of knife cut marks is also in evidence on horse, cattle and sheep bones providing information on butchery practices as well as evidence for hide and skin removal. An interesting feature – encountered also at other Iron Age sites – is the high frequencies of the cattle and sheep/goat long bones that had been smashed open in order to extract the marrow.

The incidence of burnt bone appears to be relatively low. Likewise, the frequency of dog gnawing appears to be low to moderate. However, the complete assemblages of bone recovered from the site will need to be examined in detail to determine exactly the incidences of these pre-deposition modifications

### **Results of the Assessment**

#### ***Body part distribution and Articulating/Associated Bone Groups (ABGs)***

Overall, for both the Iron Age and Early Saxon bone material examined, all body parts are well represented by the disarticulated anatomical distributions of the main domesticates (food animals) which is indicative of the disposal of waste from local slaughtering, butchering and consumption of the cattle, sheep and pigs. As commonly encountered on Iron Age sites there are several partial skeletons (ABGs)(Tables 2.8 to 2.11), including that of a female horse aged 12 to 13 years at time of death (from pit 3821) (Table 2.12). Another ABG that of an adult dog (Table 2.14) came from Area 1 (South) context 237, fill of well [142].

#### ***Livestock husbandry***

On the evidence documented so far, the frequencies of the major food species (Table 2.16) indicate sheep at the Barton Seagrave site were numerically predominant over cattle in the Middle Iron Age but by the Late Iron Age their position in the local farm economy was secondary to cattle. Throughout the Iron Age, pigs apparently were only a minor contributor to the overall meat source. However, pigs appear to have increased in importance by the early Saxon period, coupled with a slight reduction in sheep numbers, with cattle maintaining their overall predominance. Based on the age profiles in the cattle, which include young calves (Table 2.14) and high ratio of cows to oxen/bulls (based on sexed innominate bones), it may be suggested that the local livestock management focused on the slaughter of young animals for meat, with older female animals kept as breeding stock and perhaps also for their milk. A similar livestock husbandry regime may be indicated by the kill off

pattern in the sheep, with a high ratio of female innominate bones also represented. In the case of the sheep, wool production was probably also an important product of the flock. Pigs were killed at a primary age for meat production, with an emphasis on culling males - as indicated by the preponderance of their canine teeth relative to those of female pigs in the material examined from the roundhouse contexts.

Although there is a noticeable lack of evidence in the examined subsamples for the exploitation of wild animal resources for food or raw material (apart from a single piece of worked red deer antler from context ditch 2641, RD9) a preliminary look through other samples from contexts not yet fully recorded and analysed, did yield some evidence indicating hunting of roe deer in the early Saxon period (eg from a SFB1 deposit). Likewise, early Saxon samples indicate the keeping of domestic chickens at the site, evidence of this is absent from the Iron Age deposits.

## 6.2 Charred plant remains by Val Fryer

### ***Introduction and method statement***

Soil samples for the retrieval of the plant macrofossil assemblages were taken from across the excavated areas from features of Iron Age, Roman and Anglo-Saxon date, and a total of sixty-nine were submitted for assessment.

The samples were processed by manual water flotation/washover and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16 and the plant macrofossils and other remains noted are listed in Appendix 3 (Tables 3.1 –3.5). Nomenclature within the tables follows Stace (1997). All plant remains were charred. Modern roots, seeds and arthropod remains were also recorded.

The non-floating residues were collected in a 1mm mesh sieve and sorted when dry. All artefacts/ecofacts were retained for further specialist analysis.

### ***Results***

Cereal grains/chaff, seeds of common weeds and wetland plants, and tree/shrub macrofossils were present at varying densities within all sixty-nine assemblages. Preservation was very variable; whilst some specimens were extremely well preserved, other cereals and seeds were severely puffed and distorted, probably as a result of very high temperatures of combustion.

Oat (*Avena sp.*), barley (*Hordeum sp.*) and wheat (*Triticum sp.*) grains were recorded, with wheat occurring most frequently. A number of grains which were too poorly preserved for close identification were also present. Wheat chaff was common, with spelt (*T. spelta*) glume bases being noted within most assemblages. Barley was moderately common, with a particularly high density of grains occurring within the fill of Roman well [211] (sample 1). Asymmetrical lateral grains of six-row barley (*H. vulgare*) were noted within three samples. A single possible rye (*Secale cereale*) grain was noted within the assemblage from sample 39 (RD5). Other possible food plant remains were scarce, but cotyledon fragments of indeterminate large pulses (*Fabaceae*) were recorded within the assemblages from samples 68 (Middle Iron Age pit [3863]) and 102 (E1). The presence of silica skeletons of cereal awn within six assemblages (most particularly that from Roman kiln [2477] – sample 40) was probably of note, as these only occur within high temperature fires with a good air supply.

Seeds of common weeds were present throughout, although rarely at a high density. Segetal species were predominant, with taxa noted including orache (*Atriplex sp.*),

brome (*Bromus sp.*), fat hen (*Chenopodium album*), small legumes (*Fabaceae*), black bindweed (*Fallopia convolvulus*), goosegrass (*Galium aparine*), corn gromwell (*Lithospermum arvense*), medick/clover/trefoil (*Medicago/Trifolium/Lotus sp.*), grasses (*Poaceae*), knotgrass (*Polygonum aviculare*), dock (*Rumex sp.*), sheep's sorrel (*R. acetosella*) and field madder (*Sherardia arvensis*). Sample 80, from Middle Iron Age pit [4057], was of particular note as it contained a high density of cabbage/mustard (*Brassica/Sinapis* type) seeds. Seeds/nutlets of common wetland plants, namely sedge (*Carex sp.*), spike-rush (*Eleocharis sp.*) and blinks (*Montia fontana*), were noted within eleven assemblages. Hazel (*Corylus avellana*) nutshell fragments were present within a number of the Middle Iron Age features, but were scarce elsewhere, and occasional sloe (*Prunus spinosa*) fruit stones were also recorded. Charcoal/charred wood fragments were present throughout. Although most were comminuted, larger fragments >10mm in size were recorded within a number of contexts, most notably from the Middle Iron Age features and from the Anglo-Saxon sunken-featured buildings. Small pieces of charred root or stem were also present within most contexts, but other plant macrofossils, including indeterminate buds, culm nodes, thorns and inflorescence fragments, occurred less frequently.

The fragments of black porous and tarry material, which were noted within a number of assemblages, were mostly thought to be residues of the combustion of organic remains (including cereal grains) at very high temperatures. However, occasional fragments were hard and brittle and these were possibly industrial residues or bi-products of the combustion of coal, fragments of which were present throughout. Small fragments of abraded bone (some of which were burnt/calcined) and pellets of burnt or fired clay were especially common within the Middle Iron Age assemblages, but were also noted elsewhere. Vitreous globules, possibly derived from the high temperature combustion of straw/grass or silica rich ash, were present at a moderate to high density within the assemblages from Middle Iron Age groups RD10 (samples 23 and 31), four-post structure 3564 (samples 52, 53, 57 and 58) and RD12 (samples 80, 85 and 86). Other remains occurred infrequently, but did include small pieces of pottery, possible mineralised faecal concretions and small mammal or amphibian bones. Burnt shells of a small number of terrestrial and freshwater snails were noted within the assemblages from pit [4459] (sample 100) and Enclosure 1 (ditches [4652] - samples 101 and 102 and [4657] - sample 103), but at the time of writing the significance of these was not fully understood.

## **Discussion**

### *Middle Iron Age contexts* (Tables 3.1)

A total of thirty-one soil samples were taken from features of Middle Iron Age date. The majority were from a series of roundhouses situated at the centre of the main area of excavation, but isolated pits and ditches were also sampled, along with the postholes of a four-post structure (group 3564). The roundhouse assemblages appear to be largely derived from scattered domestic detritus with, in most instances, higher densities occurring within the ditch termini, with lower densities being recovered from the rear of the structures. This pattern has been noted at numerous contemporary sites, and almost certainly reflects the fact that detritus from the interior of the buildings was swept out through the door, where it frequently accumulated within the adjacent ditches. In the current instances, it would appear that some, if not all, of the cereals were possibly accidentally charred during culinary preparation, whilst cereal processing waste was probably being used as tinder or kindling. The bone fragments are also probably indicative of dietary refuse, whilst the pellets of burnt or fired clay are almost certainly derived from the hearths which are recorded within many of the structures. Why the fill of pit [4057] (RD12) contains such a high density of Brassica type seeds is currently unknown, although plants of this family

were used as fodder and as medicinal and culinary herbs. Similarly, it is not fully understood why some assemblages contain high densities of vitreous material, but it may simply be that some hearths were cleared infrequently, thereby creating a large volume of silica rich ash.

The assemblages from four-post structure [3564] are somewhat unusual as although small (<0.1 litres in volume), they all contain very high densities of vitreous material. During the Iron Age, four- and six-post structures often appear to have been used as granaries (cf St Osyth, Essex – Fryer 2007) or hay ricks (cf Loves Farm, St Neots – Fryer forthcoming), with the postholes frequently containing moderate to high densities of grain, weed seeds or chaff. Whilst cereals, chaff and seeds are present within the current samples, the density is low. Although this may indicate that this particular structure was not used for either grain or hay storage, the globules of vitreous material certainly appear to suggest that localised high temperature combustion did occur and it is, therefore, tentatively suggested that the structure may have been accidentally or deliberately destroyed by fire whilst it was empty.

Sample 65 from pit [3778] had a quantity of cereal chaff, probably indicating that they are derived from burnt cereal processing waste. It was from this pit that the waster pottery vessels (Section 4.3) were recovered and it was adjacent to the proto-kiln [3604]. It is possible the cereal waste was used as tinder, kindling or fuel is not known.

#### *Late Iron Age to Early Roman contexts (Table 3.2)*

Eight samples were taken from pit and ditch fills of Late Iron Age to Early Roman date. With the exception of samples 51 (E3) and 93 (E2), which both contain high densities of charcoal/charred wood, the assemblages are small (i.e. <0.1 litres in volume) and largely composed of chaff. This possibly indicates that the assemblages are primarily derived from scattered or wind dispersed cereal processing detritus, although it should be noted that domestic refuse including bone fragments and small pieces of pottery are also recorded.

Samples 46 (pit [2818]), and 100 (pit [4459]) had quantities of cereal waste and a high density of charcoal.

#### *Roman contexts (Table 3.3)*

Although cereals, chaff and seeds are present within all ten samples of Roman date, the assemblages from well [211] (samples 1, 27 and 28) and kilns [2477] (sample 40) and [3619] (sample 55) are of particular interest. The well assemblages are particularly rich, containing what appears to be a moderate to high density of cereal processing waste. Whether this material was deliberately dumped or whether it accidentally accumulated within the well is not known, but either way, it would appear likely that this feature may have been situated very close to a main focus of agricultural activity within the Roman settlement. The assemblages from the kilns are very similar in composition to those from well [211], and it would appear that again, they are largely composed of cereal processing waste. Such material was commonly used as tinder, kindling or fuel for a range of 'industrial' purposes during the Roman period, with parallels from, for example, the pottery kilns at Postwick, Norwich (Fryer 1997a) and Two Mile Bottom, Thetford (Fryer 1997b). It is currently unclear why the assemblage from enclosure ditch [242] (sample 3) contains such high densities of both black porous and tarry residues and small pieces of coal. Whilst such material could represent a small, discrete deposit of Roman industrial refuse, the remains could also be more modern in origin, derived from recent agricultural practises. This will require further clarification from the excavator.

Samples 15 and 16 from pit [2224]

Both assemblages contain very high densities of cereal chaff, probably indicating that they are derived from burnt cereal processing waste, possibly from an early stage of processing. Whether this waste was burnt immediately after it was generated, or whether it was subsequently used as tinder, kindling or fuel is not known, but either way, the burnt material was deliberately deposited within the fill of pit [2224].

Cereals and chaff are again present in samples 101, 102 and sample 103 from Enclosure 2 (ditches [4652] and [4657]), but in these instances, the assemblages also contain moderately high densities of weed seeds, possibly suggesting that they are derived from a different stage of processing, for example winnowing. Again, it would appear possible that these three assemblages represent material which was deliberately deposited within the ditch fills.

*Anglo-Saxon contexts* (Table 3.4)

Four samples were taken from deposits within three sunken-featured buildings of Anglo-Saxon date. Of these, three (samples 37 from SFB1 and 90 and 91 from SFB2) contain assemblages which are typical of such contexts, containing high densities of charcoal/charred wood, but very few other remains. It is generally assumed that such assemblages are derived from domestic detritus and/or hearth waste which fell through the floor of the structure into the cavity below. In contrast, the assemblage from SFB4 (sample 98) is atypical as it contains a higher density of material including glumed wheat chaff, an unusual occurrence for a context of this date. However, it is important to note that the pit for SFB4 was dug into ground adjacent to Middle Iron Age round houses RD1 and RD2 and it is, therefore, most likely that these remains are relicts from that earlier activity.

A sample (82) was taken from pit [3908] and contained an assemblage similar to that of pit [2224], although the density was lower.

Although all the remaining assemblages do contain plant macrofossils, the density of material is generally low, probably indicating that they are derived from scattered or wind-dispersed refuse, some or all of which was accidentally incorporated within the feature fills.

### **Conclusions**

In summary, although many of the assemblages are small (ie 0.1 litres in volume or less), all contain plant macrofossils which are likely to be indicative of specific on site activities. During the Middle Iron Age, it is apparent that the production, processing and consumption of cereals were of particular importance to the occupants of the site, with every structure containing both cereal grains and chaff. As there is little evidence for any large-scale, centralised processing activity, it is presumed that each household may have processed what they required on a day-to-day basis. Similar patterns have been noted at other contemporary sites (for example Loves Farm, St Neots – Fryer forthcoming), although in many of these instances, the occupants appear to have been a little tidier than they were at Barton Seagrave, as the assemblages are generally quite sparse.

The production and processing of cereals possibly continued through the Late Iron Age and Roman periods, although the evidence is more sporadic. Roman well [211] almost certainly contains cereal processing waste, which may have been generated locally, and chaff appears to have been used as tinder or kindling within the Roman kilns. However, it should be noted that such material was almost certainly traded as fuel at this time (Van der Veen 1999) and as a result it may not necessarily be a product of local agricultural activity. One point of possible note within the Roman assemblages is that they are essentially the same as those from the Iron Age

contexts, with little or no evidence for agricultural expansion or the cultivation of more marginal land. As such evidence is very often recorded elsewhere, this may suggest that the area became less agriculturally important, with cereal production possibly superseded by pastoralism or industry.

The Anglo-Saxon assemblages are very limited but do appear to indicate that all structures acted as domestic dwellings.

## **7 SUMMARY OF POTENTIAL AND RECOMMENDATIONS FOR FUTURE WORK**

### **7.1 Archaeological features**

The information from the site will add to the wider corpus of knowledge regarding the Iron Age/Roman periods within the area of Barton Seagrave and the wider region. The excavation unexpectedly identified early Anglo-Saxon features which would also raise questions about the early medieval development of Barton Seagrave.

Further analysis of the written record, stratigraphic relationships and finds evidence has the potential to refine the developmental sequence of activity within the site.

#### ***Iron Age***

The continuous improvement and maintenance of the ditch systems and enclosures has meant that stratigraphic relationships in parts of the site, particularly for Enclosures 1 and 4 have been difficult to interpret. It is considered that further in depth stratigraphic and finds analysis may be able to refine the phasing.

The origin and development of the ring ditches, in particular, ring ditch 9 clearly has a complex history of maintenance and improvement. Further analysis on the spatial position of the ring ditches and other ancillary structures such as the four-post granary may help interpret function and development.

The large quantity of pits of Iron Age date in such a localised area is considered to be unusual in Northamptonshire (Andy Chapman pers comm). The pits lie in close physical relationship to the ring ditches and this suggests that further work regarding their character, form and function is needed.

Rural agricultural sites dating to the Iron Age and Romano-British periods are relatively common in this area. Comparative analysis with similar sites both locally and regionally will be undertaken, especially with regard to spatial and structural development. Comparative sites include work at Twywell (Jackson 1975), Weekley Hall Wood and Rushton (Jackson 1976).

#### ***Roman***

The Roman period saw a different direction in how the landscape was organised. Although the general alignment reflected the Iron Age occupation, there were no obvious signs of occupation of the site. It is likely that the inhabitants of the site shifted to the south where Area 2 and the 1950s/1060s housing development lie. Further work will consider this change in landscape use and look at how it was maintained.

#### ***Early Anglo-Saxon***

The survival of Anglo-Saxon remains on the site was unexpected. Further work will be needed to analyse the form, function and spatial distribution of the features.

#### ***Medieval and later***

No further stratigraphic work on the medieval and later remains on the site are required but the final report will put the site into its wider context on the periphery of medieval settlement. Other recent work in the area (Butler 2010) identified ridge and furrow in the landscape.

### **7.2 The flint**

No further work is required on the assemblage. However it may be beneficial to photograph select microliths and other tools to illustrate form and characteristics.

### **7.3 Bronze Age pottery**

The vessel is too fragmentary to reconstruct the profile, but the larger decorated sherds should be photographed to illustrate the scheme of decoration.

### **7.4 Iron Age pottery**

Given the exceptional size of the assemblage, only context groups in excess of 100g will be fully quantified to fabric type. This will take in around 50% of the contexts but a much higher percentage of the assemblage by weight, and certainly sufficient to provide a representative breakdown of the fabrics present. The smaller context groups will be scanned to identify any diagnostic pieces by form, fabric or decoration.

The larger groups will be fully quantified by fabric, form (when identifiable), rim type etc, along with the calculation of EVEs.

There needs to be provision for the drawing of some 20-30 vessels with either partial or substantially complete profiles, supplemented by photographic records as necessary.

It would be desirable to confirm the date of origin for the settlement through the radiocarbon dating of at least two identified early contexts, and preferably contexts that have also produced substantial and distinctive pottery assemblages, in order to contribute towards refining the dating of Iron Age ceramics, which is a regional research objective (see Section 7.13).

### **7.5 Roman pottery**

Further work will be carried out on specific assemblages as identified in Section 4.4. Illustrations of 22 sherds/vessels will be drawn.

### **7.6 Fired clay**

No further analysis is required.

### **7.7 Querns, millstones and grinding/rubbing stones** by Andy Chapman

The parts of some 23 stones, largely Iron Age and Roman, with one of probable Anglo-Saxon date, is an unusually large group of querns, millstones and grinding/rubbing stones, but the majority are of forms and geologies seen on many contemporary sites.

For reporting the stones will need to be more fully described, along with a broader discussion of the assemblage. It is recommended that ten stones need to be photographed in plan to accompany drawn sections, to illustrate the range of forms present.

The context of all stones will need to be checked to ensure that they have been allocated to the correct period, particularly in respect to the various rubbing and grinding stone that are less diagnostic of period by form, and to examine the distribution of the Iron Age stones to see if there was a specialised area/building for milling.

The stones of unknown geological provenance will be examined by a geologist

### **7.8 Other Iron Age and Roman finds**

Specific Iron Age artefacts such as the cut rib sections, the ceramic weights (compare sizes, fabrics etc) will be studied further as will the Roman brooch. The full report will consider the functional category and spatial distribution and will compare assemblages from other local sites. The bone items and ceramic weights will be illustrated as appropriate.

### **7.9 Early Anglo-Saxon pottery**

No further work on the form of the pottery is required but C14 dates of some of the pottery may help refine the dating of certain features (Section 7.13). This will be discussed at a meeting following the approval of the UPD.

Twenty-six sherds/vessels will be illustrated.

### **7.10 Other Anglo-Saxon finds**

The Anglo-Saxon antler key, the triangular-backed comb will be studied further and provision will be made for their illustration. The full report will consider the functional category and spatial distribution and will compare assemblages from other local sites. Select items including the bone combs and the antler key will be illustrated.

### **7.11 The human remains**

No further analysis on either the cremated or disarticulated human bone is required.

### **7.12 Animal bone**

The total faunal remains assemblage comprising 35 archive boxes, this analysis has considered a sub-sample of five archive boxes. Not only will analysis of the remaining 30 boxes be required but the sub-sample will need to be considered within its context.

In summary, priority areas meriting further investigation are identified as follows:

- Documentation and interpretation of the changes in the livestock economy through the Iron Age and into the early Saxon period. Work on the remaining - as yet unstudied - samples will enable a more accurate reconstruction of the site's livestock economies during this timeframe.
- Metrical analysis to determine any improvement in size and build of the livestock from the Iron Age to early Saxon period.
- From the ageing data relating to the equid remains, determine if local horse breeding took place on site or whether these animals were imported from specialist communities located some distance away (as has been indicated from isotope signatures in horse teeth from other Iron Age sites studied by Bendry et al 2009).
- Examination of the bone material for evidence of the exploitation of wild game, wildfowl and fish as food sources.
- Examination of the horse, cattle, and sheep and pig bones for the presence of knife cut marks indicating skinning /removal of hides – distinguishing these cut marks from butchery/meat filleting. Also recording and reporting on antler- and bone- working evidence.

- Detection of any spatial patterning in bone waste deposition and preservation—ditches cf. pits.
- Reconstruction of the surrounding natural landscape based on habitat preferences of micro-faunal remains (e.g. water voles and frogs) and wild birds.

### 7.13 Charcoal and charred plant remains

As this site is important both locally and nationally for the archaeological evidence and for the plant macrofossil record, it is strongly recommended that full quantification and analysis of the following assemblages is undertaken:

|                               |                                  |
|-------------------------------|----------------------------------|
| Samples 11, 35 and 36         | Middle Iron Age structure [2153] |
| Samples 42, 47 and 48         | Middle Iron Age structure [2620] |
| Samples 78, 79, 80, 85 and 86 | Middle Iron Age structure [4021] |
| Samples 1, 27 and 28          | Roman well [211]                 |
| Sample 40                     | Roman kiln [2477]                |
| Sample 55                     | Roman kiln [3619]                |
| Samples 15 and 16             | Pit [2224] *                     |
| Sample 46                     | Pit [2818] *                     |
| Sample 65                     | Pit [3778] *                     |
| Sample 82                     | Pit [3908] *                     |
| Sample 100                    | Pit [4459] *                     |
| Samples 101 and 102           | Ditch [4652] *                   |
| Sample 103                    | Ditch [4657] *                   |

\*Analysis to be undertaken only if the contexts can be intrinsically or stratigraphically dated

It is hoped that analysis of the above samples will provide:

- Important data regarding the everyday functioning of the site during both the Middle Iron Age and Roman periods
- Information about the structure and development of the local economy
- New evidence to supplement the existing regional and national databases

Charcoal identification and analysis will take place by a specialist following the approval of the UPD and the sampling strategy.

### 7.14 Radiocarbon dating

The excavations produced a broad range of pottery dating from the Middle Iron Age (2nd century BC) to the early Roman period (end of the 2nd century AD). The regional research agendas suggest that if it is achievable that pottery be subject to radiocarbon dating to help refine the dating further. A total of four vessels, two of Iron Age date and two of Anglo-Saxon date be submitted for radiocarbon dating.

## 8 REVIEW OF RESEARCH OBJECTIVES

### 8.1 General objectives

The following general objectives were highlighted.

*To investigate the origin and development of domestic occupation*

*To investigate paleo-economy and industry through time*

*To investigate the origin and development of the agricultural landscape*

The archaeological works have succeeded in providing the baseline evidence to enable the fulfilment of the three general objectives. The programme of assessment works already undertaken and the proposed future work will fully realise the objectives.

### 8.2 Specific objectives

*The differences in the form of settlement between the Iron Age and later Roman period; are they typical of regional and national trends?*

Further work will need to be undertaken, but could only be discussed fully if the Area 2 is excavated. Work will also need to be undertaken to bring in the already recorded settlements on the site of the small Roman town at Kettering and the potentially limited evidence of Roman activity to the south (HER 3774) and to the north (HER3780).

*Is there evidence for settlement shift in the different periods? Why and when did it occur?*

There is evidence for the transition in occupation between Iron Age and Roman periods. The presence of early Anglo-Saxon features hint at the Saxon origins and development of medieval village of Barton Seagrave.

*How does the material culture of the settlements change between the Iron Age and Roman periods? Is there evidence of different attitudes to artefacts and can the presence of structured deposits be detected (e.g. deliberate artefact deposition in Iron Age pits)?*

There is evidence for structured deposits of Associated Bone Group (ABG), querns and pots across all periods. Such features include Iron Age pits and the terminals of ring ditches. The Roman pottery report has highlighted a number of features from which interesting assemblages were recovered; some of the features include the terminals of ditches. An Iron Age quern was also recovered from what is considered to be a Roman closing or blocking ditch.

There is the suggestion that there was pagan activity on the site. A stone-filled pit, to the south of SFB2, had three cattle skulls which would appear to have been deliberately placed. Further work with reference to Helena Hamerow's studies on structured Saxon deposits will be undertaken.

*Can evidence of changing economic and social opportunity be detected between the Iron Age and later Roman period?*

Further work will be needed to consider the changing economic and social opportunity between the Iron Age, Roman and Saxon periods. This will be achieved through looking at the context of the artefactual assemblages.

*Is there evidence of different architectural traditions between the Iron Age and Roman periods? Can different uses of space be detected between the sites?*

The Iron Age occupation initially comprising a unenclosed settlement of ring ditches is clearly defined. Unfortunately at this stage it is difficult to ascertain the scope of Roman occupation and architectural traditions. This is due to the possible shift in settlement.

*Is there any evidence of craft activity or industry, does this change through time?*

There is evidence indicating that there was a range of craft production and small scale industry on the site across all periods. This includes pottery production and cereal processing in the Iron Age and possibly in the Roman period. Domestic crafts are also represented in the artefactual record indicating that there was weaving and spinning.

*Is there any evidence for the Iron Age and Roman settlements position within the local and regional social structure, relating them to larger settlements, villas or towns?*

Further work will be needed to put the site into its local and regional context.

### **8.3 Updated research objectives**

A number of further research objectives have been identified following the assessment of the results of the excavation that could not have been anticipated prior to the start of the project. All have been related to the appropriate section of the regional research agenda for the East Midlands (Knight, Vyner and Allen 2012).

#### ***Late Bronze Age and Iron Age***

*Research Objective 4B- Refine first millennium BC ceramic chronology by additional radiocarbon dating and typological analyses*

It is proposed that radiocarbon dating of select assemblages will take place (Section 7.4) to help inform the origins of the settlement.

*Research Objective 4E- Assess the evidence for the evolution of settlement hierarchies*

See Section 8.2.

*Research Objective 4G- Study the production, distribution and use of artefacts*

The excavations produced evidence indicating that a range of artefacts including pottery, querns and grinding stones were produced on the site and also imported from elsewhere.

In particular pits [3604] and [3778] indicate that there was small scale pottery production on site in the Middle Iron Age. Thus the site has the potential to add to the understanding of local pottery production and trade for this period.

*Research Objective 4H- Characterise placed deposits and sites of shrines or temples*

See Section 8.2.

#### ***Roman***

*Research Objective 5H- Investigate the landscape context of rural settlements*

The enclosures and paddocks of the 1st to 2nd century AD clearly form part of a wider rural landscape. Although the evidence for habitation and land use beyond the site is patchy the site lies in an area of recorded Roman remains. To the west is the course of a Roman road and the site is likely to have formed part of the hinterland for the small Roman town to the north. To the south and east of Kettering, cropmark and geophysical surveys have recorded a landscape of enclosures and fields.

The site recorded a changing focus of animal husbandry from the Middle Iron Age to the Roman period with the landscape being altered to reflect the change. The full report of the animal bone will help to aid understanding of the development of the rural economy.

Analysis of the Roman remains from this site could be put into the wider landscape context.

### ***Early medieval***

#### *Research Objective 6C- Review the evidence for developing settlement hierarchies*

The excavations unexpectedly recovered evidence of early Anglo-Saxon occupation indicating that there was successive occupation in the area for a long period of time. However currently there is scant evidence as to what form and development of the Saxon settlement took.

#### *Research Objective 6J- Update and expand the East Midlands Anglo-Saxon Pottery Project*

The site recovered some of the earliest Saxon pottery found in Northamptonshire and the assemblage could provide the basis to aid the production of a standardised fabric series and typology. It is proposed that selected sherds could be subject to radiocarbon testing to help refine the dating of the pottery further.

### ***High medieval***

#### *Research Objective 7I- Investigate the development of the open-field system and medieval woodland management*

The parish of Barton Seagrave is thought to have been enclosed in the 17th century and little is known about the extent and character of the open field system. In recent years a considerable amount of work has been undertaken in advance of development that has recorded the form of the open field system. This includes the work on land east of Kettering (Butler 2010) and the geophysical survey undertaken on the site (Bartlett 2009). There is the potential to reconstruct in part the form of the open field system around the village of Barton Seagrave.

## 9 REPORTING, PUBLICATION AND ARCHIVE

### 9.1 Reporting and publication

A full site report will be prepared by MOLA Northampton. This will be submitted to the Historic Environment Record and deposited with the Archaeological Data Service (ADS). Provision will be made for publication as a monograph for wider dissemination either as part of the British Archaeological Reports (BAR) series or through MOLA. It is also proposed that an article will be submitted to the journal of the Northamptonshire Archaeological Society.

The proposed structure of the report is as follows:

- 1 INTRODUCTION**
- 2 BACKGROUND**
  - 2.1 Location and topography**
  - 2.2 Geology**
  - 2.3 Historical and archaeological background**
- 3 OBJECTIVES, METHODOLOGY AND SUMMARY OF SITE CHRONOLOGY**
  - 3.1 Objectives and methodology**
  - 3.2 Summary of site chronology**
- 4 EARLIER PREHISTORIC ACTIVITY**
  - 4.1 The worked flint** by Yvonne Wolfram-Murray
  - 4.2 Bronze Age pit**
  - 4.3 The Bronze Age pottery** by Andy Chapman
- 5 THE MIDDLE TO LATE IRON AGE SETTLEMENT**
  - 5.1 Early paddocks and pits**
  - 5.2 The Middle Iron Age settlement**
  - 5.3 Enclosure of the settlement**
  - 5.4 Pottery manufacture**
  - 5.5 Late Iron Age enclosure**
  - 5.6 Late Iron Age pits**
  - 5.7 The Iron Age pottery** by Andy Chapman
  - 5.8 The fired clay** by Pat Chapman
  - 5.9 Iron Age querns** by Andy Chapman
  - 5.10 Other Iron Age artefacts** by Tora Hylton
  - 5.11 The human remains** by Christopher Chinnock
  - 5.11 Animal bone** by Philip Armitage
  - 5.12 Charred plant remains** by Val Fryer
  - 5.13 Wood species** by tbc
- 7 THE ROMAN ENCLOSURES**
  - 7.1 Enclosures and paddocks**
  - 7.2 Domestic industries and quarry pits**
  - 7.3 Cultivation trenches**
  - 7.4 The cremation burial** Carol Simmonds and Christopher Chinnock
  - 7.5 Roman pottery** by Rob Perrin
  - 7.6 The fired clay** by Pat Chapman
  - 7.7 Roman querns, millstones and grinding stones** by Andy Chapman
  - 7.9 Roman loomweight** by Andy Chapman

- 7.10 **Other Roman finds** by Tora Hylton
- 7.11 **Animal bone** by Philip Armitage
- 7.12 **Charred plant remains** by Val Fryer
- 7.13 **Charcoal** tbc

## 8 THE ANGLO-SAXON SETTLEMENT AND LATER ACTIVITY

- 8.1 **The Sunken-Featured Buildings**
- 8.2 **Other features**
- 8.3 **The Anglo-Saxon pottery** by Paul Blinkhorn
- 8.4 **Anglo-Saxon artefacts** by Tora Hylton
- 8.5 **Animal bone** by Philip Armitage
- 8.6 **Charred plant remains** by Val Fryer
- 8.7 **Charcoal** tbc
- 8.8 **The medieval and later landscape**
- 8.9 **Medieval and later pottery** by Paul Blinkhorn
- 8.10 **Other artefacts** by Tora Hylton

## 9 DISCUSSION

### BIBLIOGRAPHY

Each section will be accompanied by appropriate illustrations. The introductory sections will include figures showing the location of the site and its topographic and geological context. Within the narrative text illustrations will include overall phase plans, detailed drawings of individual features or feature groups, photographs and finds illustrations. The discussion will include figures showing the archaeological context of the works in relation to other archaeological investigations discussed in the text and other figures as necessary.

### 9.2 Archive

A microfilm copy of the site archive and the site narrative will be made to RCHME standards and submitted to the National Archaeological Record. The archive will comprise all written, drawn and photographic records, and all material finds and processed sample residues recovered from the trial trench evaluation and excavation phases. All records and finds generated by the excavation will be compiled in a structured archive in accordance with the guidelines of Appendix 3 in the English Heritage procedural documents, *Management of Archaeological Projects* (EH 1991) and *MoRPHE* (EH 2006). Site details will be entered onto the OASIS online database.

### 9.3 Quantification of site records

*Table 28: Site records*

| Type                                 | Quantity -<br>evaluation | Quantity-<br>excavation |
|--------------------------------------|--------------------------|-------------------------|
| Plans and sections                   | 4 sheets                 | 166 sheets              |
| Registers                            | 20                       | 245 sheets              |
| Contexts (+ TT logs)                 | 159                      | 2490 sheets             |
| Colour Slides                        | -                        | 1600 in 92 holders      |
| Monochrome negatives                 | -                        | 46 holders/ sheets      |
| Digital photograph<br>contact sheets | -                        | 49 sheets               |

A Microsoft Access database has also been generated from the site data.

#### 9.4 Quantification of the finds and palaeoenvironmental evidence

*Table 29: Finds*

| <b>Material</b>         | <b>Quantity</b>               |
|-------------------------|-------------------------------|
| Iron Age pottery        | 18 boxes                      |
| Roman pottery           | 4 boxes                       |
| Saxon and later pottery | 2 boxes                       |
| Worked flint            | 1 box                         |
| Fired clay              | 3 boxes plus block            |
| Querns                  | 3 boxes plus 14 large unboxed |
| Coins, small finds      | 1 box                         |
| Human remains           | 1 box                         |
| Animal bone             | 35 boxes                      |
| Flots, charcoal         | 1 box                         |
| Miscellaneous           | 2 boxes                       |

## 10 RESOURCES AND PROGRAMMING

### 10.1 Work completed

All work on the consolidation of the site achieve, artefactual and ecofactual processing, basic site phasing, the assessment evaluation of finds and ecofacts, preparation of assessment reports and updated project design have been completed.

### 10.2 Future works

In order to fulfil the potential of the archaeological features and the artefactual and ecofactual assemblages set out in Chapter 7, a programme of future works will be undertaken. This will maximise the potential of the archaeological resource to fulfil the research objectives set out in Chapter 8, and will lead to the production of a final report that will form the basis of the publication.

*Table 30: Task list*

| <b>Tasks</b>                          | <b>Personnel</b>                 |
|---------------------------------------|----------------------------------|
| 1. Introduction and background        | Carol Simmonds                   |
| 2. Structural site narrative          | Carol Simmonds                   |
| 3. Prehistoric pottery                | Andy Chapman                     |
| 4. Roman pottery                      | Rob Perrin                       |
| 5. Anglo-Saxon and medieval pottery   | Paul Blinkhorn                   |
| 6. The querns and millstones          | Andy Chapman and Steve Critchley |
| 7. Other finds                        | Tora Hylton and Ian Meadows      |
| 8. Ecofactual evidence                | Val Fryer                        |
| 9. Charcoal                           | tbc                              |
| 10. C14 and other scientific testing  | tbc                              |
| 11. Animal bone                       | Phillip Armitage                 |
| 12. Illustrations                     | MOLA drawing office              |
| 13. Integration of specialist reports | Carol Simmonds                   |
| 14. Report digest and discussion      | Carol Simmonds                   |
| 15. Editing                           | Andy Chapman                     |
| 16. Publication                       | MOLA                             |
| 17. Preparation of research archive   | Theodora Anastasiadou-Leigh      |

**10.3 Programme**

The programme will commence once the Assessment Report and Updated Project Design has been approved by the County Archaeological Advisor to Northamptonshire County Council.

*Table 31: Post-excavation analysis programme*

| Task / month | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|--------------|---|---|---|---|---|---|---|---|---|----|----|----|
| 1            |   |   |   |   |   |   |   |   |   |    |    |    |
| 2            |   |   |   |   |   |   |   |   |   |    |    |    |
| 3            |   |   |   |   |   |   |   |   |   |    |    |    |
| 4            |   |   |   |   |   |   |   |   |   |    |    |    |
| 5            |   |   |   |   |   |   |   |   |   |    |    |    |
| 6            |   |   |   |   |   |   |   |   |   |    |    |    |
| 7            |   |   |   |   |   |   |   |   |   |    |    |    |
| 8            |   |   |   |   |   |   |   |   |   |    |    |    |
| 9            |   |   |   |   |   |   |   |   |   |    |    |    |
| 10           |   |   |   |   |   |   |   |   |   |    |    |    |
| 11           |   |   |   |   |   |   |   |   |   |    |    |    |
| 12           |   |   |   |   |   |   |   |   |   |    |    |    |
| 13           |   |   |   |   |   |   |   |   |   |    |    |    |
| 14           |   |   |   |   |   |   |   |   |   |    |    |    |
| 15           |   |   |   |   |   |   |   |   |   |    |    |    |
| 16           |   |   |   |   |   |   |   |   |   |    |    |    |
| 17           |   |   |   |   |   |   |   |   |   |    |    |    |

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## APPENDIX 1: QUANTIFICATION OF EARLY ANGLO-SAXON, MEDIEVAL AND POST-MEDIEVAL POTTERY

| Feature  | Cntxt | F1        |             | F2        |             | F3        |             | F4        |            | F5       |           | F319     |           | F320      |           | F330     |           | F404     |          | F409     |           | F415     |           | F426     |           | F1000    |           | Date   |
|----------|-------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|------------|----------|-----------|----------|-----------|-----------|-----------|----------|-----------|----------|----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|--------|
|          |       | No        | Wt          | No        | Wt          | No        | Wt          | No        | Wt         | No       | Wt        | No       | Wt        | No        | Wt        | No       | Wt        | No       | Wt       | No       | Wt        | No       | Wt        | No       | Wt        | No       | Wt        |        |
| Furrow   | 3     | -         | -           | -         | -           | -         | -           | -         | -          | -        | -         | -        | -         | -         | -         | -        | -         | 1        | 6        | -        | -         | -        | -         | -        | -         | -        | -         | L15thC |
| Well     | 124   | -         | -           | -         | -           | -         | -           | -         | -          | -        | -         | 3        | 17        | 16        | 84        | -        | -         | -        | -        | -        | -         | -        | -         | -        | -         | -        | -         | 13thC  |
| 4713     | 2158  | -         | -           | -         | -           | -         | -           | -         | -          | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | 1        | 84        | -        | -         | -        | -         | -        | -         | M17thC |
| Tree pit | 2303  | -         | -           | -         | -           | -         | -           | -         | -          | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | 2        | 5         | 1        | 11        | 2        | 31        | 19thC  |
| 4713     | 2339  | -         | -           | -         | -           | -         | -           | -         | -          | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | -        | -         | 1        | 20        | -        | -         | L17thC |
| LD       | 2403  | -         | -           | -         | -           | -         | -           | -         | -          | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | 1        | 2         | -        | -         | -        | -         | M18thC |
| Q2       | 2450  | 2         | 69          | -         | -           | -         | -           | -         | -          | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | -        | -         | -        | -         | -        | -         | 6thC   |
| 2487     | 2488  | -         | -           | -         | -           | -         | -           | -         | -          | -        | -         | -        | -         | -         | -         | -        | 1         | 73       | -        | -        | -         | -        | -         | -        | -         | -        | -         | 12thC  |
| 2478     | 2479  | -         | -           | -         | -           | 1         | 15          | -         | -          | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | -        | -         | -        | -         | -        | -         | E/MS   |
| SFB1     | 2504  | 2         | 12          | 2         | 25          | 7         | 115         | 1         | 5          | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | -        | -         | -        | -         | -        | -         | ESAX   |
| SFB1     | 2528  | -         | -           | 1         | 12          | -         | -           | -         | -          | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | -        | -         | -        | -         | -        | -         | E/MS   |
| SFB1     | 2544  | 11        | 130         | 5         | 217         | 21        | 252         | 3         | 6          | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | -        | -         | -        | -         | -        | -         | 6thC   |
| RD       | 2703  | -         | -           | -         | -           | -         | -           | -         | -          | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | 1        | 6         | -        | -         | -        | -         | M18thC |
| 3704     | 3703  | 1         | 51          | -         | -           | -         | -           | -         | -          | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | -        | -         | -        | -         | -        | -         | E/MS   |
| SFB3     | 3782  | 12        | 140         | -         | -           | 5         | 161         | -         | -          | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | -        | -         | -        | -         | -        | -         | 6thC   |
| 3830     | 3829  | 3         | 30          | -         | -           | 1         | 16          | -         | -          | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | -        | -         | -        | -         | -        | -         | M5thC  |
| SFB4     | 3835  | 14        | 654         | 18        | 383         | 31        | 418         | 1         | 10         | 1        | 61        | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | -        | -         | -        | -         | -        | -         | 6thC   |
| SFB2     | 3868  | 31        | 2717        | 13        | 469         | 16        | 533         | 11        | 519        | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | -        | -         | -        | -         | -        | -         | 6thC   |
| 3890     | 3889  | -         | -           | 1         | 5           | -         | -           | -         | -          | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | -        | -         | -        | -         | -        | -         | E/MS   |
| 3908     | 4055  | -         | -           | -         | -           | -         | -           | 1         | 10         | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | -        | -         | -        | -         | -        | -         | 6thC   |
| SFB4     | 4083  | 3         | 162         | 2         | 82          | 6         | 605         | -         | -          | -        | -         | -        | -         | -         | -         | -        | -         | -        | -        | -        | -         | -        | -         | -        | -         | -        | -         | L5thC  |
|          |       | <b>79</b> | <b>3965</b> | <b>42</b> | <b>1193</b> | <b>88</b> | <b>2115</b> | <b>17</b> | <b>550</b> | <b>1</b> | <b>61</b> | <b>3</b> | <b>17</b> | <b>16</b> | <b>84</b> | <b>1</b> | <b>73</b> | <b>1</b> | <b>6</b> | <b>1</b> | <b>84</b> | <b>4</b> | <b>13</b> | <b>2</b> | <b>31</b> | <b>2</b> | <b>31</b> |        |

**APPENDIX 2- THE FAUNAL REMAINS**

(Tables accompanying Section 6.1)

Table 2.1: Area 1 (North). Summary counts of the identified bone elements/fragments (NISP) by species and period.

| Species/Period            | MIA  | LIA | ES  | Totals |
|---------------------------|------|-----|-----|--------|
| <b>Mammals:</b>           |      |     |     |        |
| horse                     | 58   | 4   | 4   | 66     |
| cattle                    | 620  | 74  | 196 | 890    |
| sheep/goat                | 869  | 53  | 114 | 1036   |
| pig                       | 80   | 8   | 54  | 142    |
| dog                       | 9    | 2   | -   | 11     |
| red deer                  | 2    | -   | -   | 2      |
| hare                      | -    | 1   | -   | 1      |
| water vole                | 1    | -   | -   | 1      |
| <b>Birds:</b>             |      |     |     |        |
| goose                     | -    | -   | 4   | 4      |
| duck                      | -    | 1   | -   | 1      |
| common buzzard            | 1    | -   | -   | 1      |
| thrush (sp.indeterminate) | 1    | -   | -   | 1      |
| <b>Amphibian:</b>         |      |     |     |        |
| common frog               | -    | 4   | -   | 4      |
| Totals                    | 1641 | 147 | 372 | 2160   |

Key to Periods:

MIA = Middle Iron Age roundhouses

LIA = Late Iron Age enclosures

ES = early Saxon SFB2

Table 2.2: Area 1 (North). Summary counts of the unidentified mammalian bone fragments by period.

| Category/Period | MIA | LIA | ES  | Totals |
|-----------------|-----|-----|-----|--------|
| Category 1      | 236 | 23  | 59  | 318    |
| Category 2      | 22  | -   | 14  | 36     |
| Category 3      | 144 | 5   | -   | 149    |
| Category 4      | 294 | 19  | 102 | 415    |
| Totals          | 696 | 47  | 175 | 918    |

Key to unidentified mammal fragment categories:

cat. 1 = cattle/horse sized; cat. 2 = pig/sheep/goat sized; cat.3 = mammal bone frags. of indeterminate species/element; cat.4 = small highly fragmented ("scrappy") bone material.

Table 2.3: Area 1 (North). Middle Iron Age roundhouses. Summary counts of the identified bone elements/fragments (NISP) by species.

| Species/<br>Roundhouse     | RD7 | RD6 | RD7 | RD10 | RD5 | RD9 | Totals |
|----------------------------|-----|-----|-----|------|-----|-----|--------|
| <b>Mammals:</b>            |     |     |     |      |     |     |        |
| horse                      | 18  | 9   | 6   | 2    | 12  | 11  | 58     |
| cattle                     | 143 | 118 | 68  | 73   | 44  | 174 | 620    |
| sheep/goat                 | 56  | 189 | 104 | 103  | 125 | 292 | 869    |
| pig                        | 4   | 3   | 15  | 18   | 7   | 33  | 80     |
| dog                        | 6   | -   | -   | -    | 1   | 2   | 9      |
| red deer                   | -   | -   | -   | -    | -   | 2   | 2      |
| water vole                 | -   | -   | -   | -    | -   | 1   | 1      |
| <b>Birds:</b>              |     |     |     |      |     |     |        |
| common buzzard             | -   | -   | -   | -    | -   | 1   | 1      |
| thrush (sp. indeterminate) | -   | -   | -   | -    | -   | 1   | 1      |
| Totals                     | 227 | 319 | 193 | 196  | 189 | 517 | 1641   |

Table 2.4: Area 1 (North). Middle Iron Age roundhouses. Summary counts of the unidentified mammalian bone fragments.

| Category/<br>Roundhouse | RD5 | RD6 | RD7 | RD10 | RD5 | RD9 | Totals |
|-------------------------|-----|-----|-----|------|-----|-----|--------|
| Category 1              | 10  | 27  | 26  | 12   | 12  | 149 | 236    |
| Category 2              | 1   | 8   | -   | -    | 4   | 9   | 22     |
| Category 3              | 4   | 58  | -   | 26   | 53  | 3   | 144    |
| Category 4              | 149 | 9   | -   | -    | 3   | 133 | 294    |
| Totals                  | 164 | 102 | 26  | 38   | 72  | 294 | 696    |

Key to Periods: as in Table 1 Key to unidentified mammal fragment categories: cat. 1 = cattle/horse sized; cat. 2 = pig/sheep/goat sized; cat.3 = mammal bone frags. of indeterminate species/element; cat.4 = small highly fragmented ("scrappy") bone material. Note: Roundhouse scrappy frags. Include over 100 from the complete much broken up cattle skull (context 2631)

Table 2.5: Area 1 (North). Late Iron Age enclosures. Summary counts of the identified bone elements/fragments (NISP) by species.

| Species/Enclosures | E4        | E5       | E6        | E3        | Totals     |
|--------------------|-----------|----------|-----------|-----------|------------|
| <b>Mammals:</b>    |           |          |           |           |            |
| horse              | 4         | -        | -         | -         | 4          |
| cattle             | 31        | 2        | 11        | 30        | 74         |
| sheep/goat         | 21        |          | 14        | 18        | 53         |
| pig                | 6         | -        | -         | 2         | 8          |
| dog                | 2         | -        | -         | -         | 2          |
| hare               | -         | -        | -         | 1         | 1          |
| <b>Birds:</b>      |           |          |           |           |            |
| duck               | -         | -        | 1         | -         | 1          |
| <b>Amphibian:</b>  |           |          |           |           |            |
| common frog        | -         | -        | -         | 4         | 4          |
| <b>Totals</b>      | <b>64</b> | <b>2</b> | <b>26</b> | <b>55</b> | <b>147</b> |

Table 2.6: Area 1 (North). Late Iron Age enclosures. Summary counts of the unidentified mammalian bone fragments.

| Category/Enclosures | E4 | E5 | E6 | E3 | Totals |
|---------------------|----|----|----|----|--------|
| Category 1          | 7  | -  | 5  | 11 | 23     |
| Category 2          | -  | -  | -  | -  | 0      |
| Category 3          | 4  | -  | 1  | -  | 5      |
| Category 4          | 6  | -  | 10 | 3  | 19     |
| Totals              | 17 | 0  | 16 | 14 | 47     |

Key to Periods: as in Table 1

Key to unidentified mammal fragment categories: cat. 1 = cattle/horse sized; cat. 2 = pig/sheep/goat sized; cat.3 = mammal bone frags. of indeterminate species/element; cat.4 = small highly fragmented ("scrappy") bone material

Table 2.7: Area 1 (North).Early Saxon SFB2. Summary counts of the identified mammalian bone elements/fragments (NISP) by species.

| <b>Element/Species</b> | <b>Horse</b> | <b>Cattle</b> | <b>Sheep</b> | <b>Pig</b> |
|------------------------|--------------|---------------|--------------|------------|
| horn core              | -            | 1             | -            | -          |
| skull                  | -            | 5             | 1            | 1          |
| premaxilla             | -            | 2             | -            | -          |
| maxilla                | -            | 1             | -            | 2          |
| mandible               | -            | 12            | 8            | 7          |
| incisor                | -            | 1             | -            | 5          |
| canine                 | -            | -             | -            | 2          |
| upper cheekteeth       | -            | -             | 2            | -          |
| lower cheekteeth       | -            | 6             | 4            | -          |
| indet.tooth frag.      | -            | -             | 1            | -          |
| indet.vertebral frag.  | -            | 2             | -            | -          |
| atlas                  | -            | -             | -            | 1          |
| axis                   | -            | -             | 1            | -          |
| cervical               | -            | 1             | 3            | -          |
| thoracic               | -            | 3             | 1            | -          |
| lumbar                 | -            | 3             | 3            | -          |
| rib                    | -            | 77            | 38           | 8          |
| scapula                | -            | 7             | 1            | 3          |
| humerus                | -            | 1             | 1            | 2          |
| radius & ulna          | -            | 1             | 1            | -          |
| radius                 | -            | 2             | 2            | 4          |
| ulna                   | -            | 1             | -            | 3          |
| metacarpus             | 2            | 4             | 2            | 3          |
| innominate             | -            | 3             | 2            | 1          |
| femur                  | -            | -             | 2            | -          |
| tibia                  | -            | 3             | 2            | -          |
| fibula                 | -            | -             | -            | 1          |
| calcaneum              | -            | 3             | 1            | -          |
| astragalus             | -            | 1             | -            | -          |
| tarsal                 | -            | 2             | -            | 1          |
| metatarsus             | -            | 2             | -            | 1          |
| metapodial             | 1            | -             | -            | 6          |
| phalanx I              | -            | 5             | -            | 2          |
| phalanx II             | 1            | 3             | -            | 1          |
| long bone shaft frag.  | -            | 44            | 38           | -          |
| <b>TOTALS</b>          | <b>4</b>     | <b>196</b>    | <b>114</b>   | <b>54</b>  |

Table 2.8: Articulating/Associated Bone Groups (ABGs). Domesticated species.

| <i>Area</i> | <i>Period</i> | <i>Cut/<br/>Fill</i> | <i>Feature</i> | <i>Species</i> | <i>Age/sex</i>                           | <i>NISP</i> | <i>Anatomical<br/>(body) parts<br/>represented</i>                     | <i>Bone<br/>elements<br/>present</i>  |
|-------------|---------------|----------------------|----------------|----------------|--|-------------|--|---|
| 1<br>(S)    | RB            | 237/<br>142          | Well           | Dog            | adult/ sex<br>indeterminate              | 9           | Skull,<br>jawbones<br>and parts of<br>the post-<br>cranial<br>skeleton | see Table<br>13   |
| 1<br>(S)    | RB            | 237/<br>142          | Well           | Sheep          | less than 1<br>year/sex<br>indeterminate | 6           | Rib, parts<br>of left fore<br>and hind<br>legs                         | 1 rib, 1<br>humerus, 1<br>innominate,<br>1 femur, 1<br>tibia & 1<br>calcaneum |
| 1<br>(N)    | LIA           | 3900/<br>3821        | Pit            | Horse          | 12 to 13 yrs/<br>female                  | 31          | jawbones,<br>vertebral<br>column &<br>one hoof<br>core                 | see Table<br>12   |

Table 2.9: Articulating/Associated Bone Groups (ABGs). Small wild mammal species.

| <i>Area</i> | <i>Period</i> | <i>Cut/<br/>Fill</i> | <i>Feature</i> | <i>Species</i> | <i>Age/ sex</i>                | <i>NISP</i> | <i>Anatomic<br/>al (body)<br/>parts<br/>represented</i>                              | <i>Bone<br/>elements<br/>present</i>  |
|-------------|---------------|----------------------|----------------|----------------|--------------------------------|-------------|--|---|
| 1 (S)       | RB            | 237/<br>142          | Well           | Hare           | immature/ sex<br>indeterminate | 2           | part pelvis<br>& upper<br>hind leg   | 1<br>innominate<br>bone &<br>1 femur  |
| 1 (N)       | LIA           | 2433/<br>2402        | Pit            | house<br>mouse | adult/ sex<br>indeterminate    | 5           | jawbones<br>and parts<br>of the<br>post-<br>cranial<br>skeleton                      | R & L<br>jawbones<br>R & L<br>femur & 1<br>tibia prox.<br>fragment  |
| 1 (N)       | LIA           | 2433/<br>2402        | Pit            | house<br>mouse | immature/ sex<br>indeterminate | 10          | part of<br>skull,<br>jawbones<br>and parts<br>of the<br>post-<br>cranial<br>skeleton | 1 maxilla,<br>R & L<br>jawbones<br>1<br>scapula,<br>1<br>humerus,<br>R & L<br>radius, R<br>& L femur<br>& 1 tibia |

Table 2.10: Articulating/Associated Bone Groups (ABGs). Goose.

| <i>Area</i> | <i>Period</i>  | <i>Cut/<br/>Fill</i> | <i>Feature</i> | <i>Species</i> | <i>Age</i> | <i>NISP</i> | <i>Anatomical<br/>(body) parts<br/>represented</i> | <i>Bone elements<br/>present</i>                                     |
|-------------|----------------|----------------------|----------------|----------------|------------|-------------|--|--|
| 1<br>(N)    | Early<br>Saxon | 3868/<br>3869        | SFB2           | Goose          | Adult      | 4           | foot<br>extremity<br>bones                         | 4 phalanges;<br>either wild<br>greylag goose<br>or domestic<br>goose |

Table 2.11: Articulating/Associated Bone Groups (ABGs). Common frog.

| <i>Area</i> | <i>Period</i> | <i>Cut/<br/>Fill</i> | <i>Feature</i> | <i>Species</i>       | <i>Age</i>                 | <i>NISP</i> | <i>Anatomical<br/>(body) parts<br/>represented</i> | <i>Bone elements<br/>present</i>  |
|-------------|---------------|----------------------|----------------|----------------------|----------------------------|-------------|--|---|
| 1<br>(N)    | LIA           | 2433/<br>2402        | Pit            | frog<br>(MNI =<br>7) | adults &<br>immature       | 33          | fore & hind<br>legs                                | 3 urostyle, 2<br>humerus, 5<br>ilium, 7 femur,<br>8 tibio-fibula, 7<br>tarsal bones &<br>1 sacrum |
| 1<br>(N)    | LIA           | 2800/<br>2829        | E3             | frog<br>(MNI =<br>1) | Adult                      | 4           | long bones   | 1 humerus, 1<br>tibio-fibula & 2<br>indet.long bone<br>shafts                                     |
| 1<br>(N)    | LIA           | 4488/<br>4490        | Pit            | frog<br>(MNI =<br>2) | 1 adult &<br>1<br>immature | 9           | fore & hind<br>legs                                | 1 urostyle, 2<br>humerus, 1<br>ilium, 2 femur,<br>2 tibio-fibula &<br>1 angulare                  |

Table 2.12: Horse ABG from Area 1 (North) context 3900 fill of pit 3821. Anatomical representations.

| Element/ fusion | R | -  | L | - | Prox.epi. | -     | Dist.epi. |
|-----------------|---|----|---|---|-----------|-------|-----------|
| mandible        | 1 | -  | 1 | - | -         | -     | -         |
| incisor         | - | 8  | - | - | -         | -     | -         |
| cervical        | - | 4  | - | - | -         | F - F | -         |
| Thoracic        | - | 10 | - | - | -         | F - F | -         |
| lumbar          | - | 6  | - | - | -         | F - F | -         |
| metacarpus III  | - | -  | 1 | - | F         | -     | F         |
| TOTALS          | 1 | 28 | 2 | - | -         | -     | -         |

Note: female horse aged 12 to 13 yrs at time of death. F = epiphysis fused

Table 2.13: Dog ABG from Area 1 (South) context 237 fill of well 142. Anatomical representations.

|             | R | L  |            |
|-------------|---|----|------------|
| skull       | - | 1  | fragmented |
| mandible    | 1 | -  | 1          |
| atlas       | - | 1  | -          |
| axis        | - | 1  | -          |
| cervical    | - | 7  | -          |
| thoracic    | - | 13 | -          |
| lumbar      | - | 13 | -          |
| sacrum      | - | 1  | -          |
| rib         | - | 19 | -          |
| scapula     | 1 | -  | 1          |
| humerus     | - | -  | -          |
| radius      | 1 | -  | 1          |
| ulna        | 1 | -  | -          |
| innominate  | - | -  | 1          |
| femur       | 1 | -  | 1          |
| tibia       | 1 | -  | -          |
| calcaneum   | 1 | -  | -          |
| astragalus  | 1 | -  | -          |
| tarsal      | 1 | -  | -          |
| metapodials | - | 12 | -          |
| phalanges   | - | 9  | -          |
| TOTALS      | 9 | 77 | 5          |

Notes: All epiphyses fused = Adult animal Context 191 fill of well 142 included 1 dog tibia (shaft piece only/broken) = left tibia probably from same animal as above.

Table 2.14: Ageing of the mandibles in the main domesticates by species and period. All Area 1 (North).

CATTLE (age categories referenced in Bond &amp; O'Connor 1999:346)

|                             | N | J | I | SA1 | SA2 | A1 |
|-----------------------------|---|---|---|-----|-----|----|
| Middle Iron Age Roundhouses | 1 | 4 | 5 | 4   | -   | -  |
| Early Saxon SFB2            | - | 2 | - | -   | -   | 1  |

Key to categories: N = neonatal, J = juvenile, I = immature, SA = sub adult, A = adult, E = elderly

SHEEP (age categories after Payne 1973)

|                             | A | B | C | D | E |
|-----------------------------|---|---|---|---|---|
| Middle Iron Age Roundhouses | - | 2 | 6 | 6 | 5 |
| Early Saxon SFB2            | - | 1 | 1 | 3 | 1 |

Key to categories: A = 0 - 2 months, B = 2 - 6 months, C = 6 -12 months, D = 1 - 2 years, E = 2 - 3 years, F = 3 - 4 years, G = 4 - 6 years, H = 6 - 8 years, I = 8 - 10 years

PIG (age categories referenced in Bond &amp; O'Connor 1999:351)

|                             | N | J | I1 | I2 | SA1 | SA2 | A1 | A2 | A3 |
|-----------------------------|---|---|----|----|-----|-----|----|----|----|
| Middle Iron Age Roundhouses | - | - | 1  | 1  | 1   | 4   | 1  | 1  | -  |
| Early Saxon SFB2            | - | - | -  | -  | 1   | 2   | -  | -  | -  |

Key to categories: N = neonatal, J = juvenile, I = immature, SA = sub adult, A = adult

Table 2.15: Ageing of the horse dentition. All Area 1 (North).

## 1) Aged on cheek tooth crown heights - method of Levine (1982)

| Feature/context         | Age (years) | Sex                                    |
|-------------------------|-------------|--|
| RD7, ditch 2033         | 11 to 12    | indet.                                 |
| Context 2488 ditch 2489 | 8 to 10     | indet.                                 |
| Context 3900 pit 3821   | 12 to 13    | female (no canine present in mandible) |
| Context 4480 pit 4481   | 6 to 7      | indet.                                 |
| Gully terminal 2047     | 9 to 10     | indet.                                 |
| RD5, gully 2706         | 15 to 16    | indet.                                 |

## 2) Aged on incisor wear - criteria of American Association of Equine Practitioners (1966) and Goody (2003)

| Feature/context             | Age (years) | Sex                   |
|-----------------------------|-------------|-----------------------|
| Context 2401 pit 2402       | 10 to 11    | male (canine present) |
| E3, context 2901 ditch 2902 | 6 to 7      | indet.                |
| RD5, gully 2603             | 6 to 7      | indet.                |

## 3) Aged on eruption time/wear of the lower fourth deciduous premolar - criteria of Silver (1971) and Goody (2003)

| Feature/context | Age (years) | Sex    |
|-----------------|-------------|--------|
| RD6, ditch 2232 | under 3     | indet. |

Table 2.16: Frequencies of the major meat yielding species by period.

| Period          | Cattle | Sheep/ goat | Pig   | Total NISP |
|-----------------|--------|-------------|-------|------------|
| Middle Iron Age | 39.5%  | 55.4%       | 5.1%  | 1569       |
| Late Iron Age   | 54.8%  | 39.3%       | 5.9%  | 135        |
| Early Saxon     | 53.9%  | 31.3%       | 14.8% | 364        |

**APPENDIX 3: PALAEO-ENVIRONMENTAL EVIDENCE (TABLES ACCOMPANYING SECTION 6.2)**

## Key to Tables

x = 1 – 10 specimens xx = 11 – 50 specimens xxx = 51 – 100 specimens xxxx = 100+ specimens

cf = compare fg = fragment b = burnt coty = cotyledon

RHG = Round house gully RHG(B) = Round house gully (back) PP = post pipe

E.Ditch = Enclosure ditch

Table 3.1: Processed samples from middle Iron Age features

| Sample No.                        | 8    | 13     | 14      | 11   | 35      | 36   | 20   | 34   | 23   | 31   | 39     | 42     | 47   | 48   | 50   | 41    |
|-----------------------------------|------|--------|---------|------|---------|------|------|------|------|------|--------|--------|------|------|------|-------|
| Context No.                       | 2034 | 2147   | 2168    | 2101 | 2318    | 2447 | 2273 | 2411 | 2268 | 2369 | 2711   | 2673   | 2635 | 2625 | 3548 | 2737  |
| Feature No.                       | 2033 | 2148   | 2169    | 2142 | 2319    | 2448 | 2274 | 2412 | 2269 | 2368 | 2712   | 4035   | 2628 | 2626 | 3533 | 2738  |
| Feature type                      | RHG  | RHG(B) | Heart h | RHG  | Heart h | Pit  | RHG  | Pit  | RHG  | Pit  | RHG(B) | RHG(B) | RHG  | RHG  | RHG  | Ditch |
| Group No.                         | RD7  | RD7    | RD7     | RD6  | RD6     | RD6  | RD11 | RD11 | RD10 | RD10 | RD5    | RD9    | RD9  | RD9  | RD9  |       |
| <b>Cereals</b>                    |      |        |         |      |         |      |      |      |      |      |        |        |      |      |      |       |
| <i>Avena</i> sp. (grains)         |      |        |         |      |         |      | x    | x    |      |      |        | x      | x    |      |      | x     |
| (awn frags.)                      |      |        |         |      |         |      |      | x    |      | x    |        |        |      |      |      |       |
| <i>Hordeum</i> sp. (grains)       |      |        |         | x    | xcf     | x    | xcf  |      | xcf  | xcf  |        | x      | x    |      | x    | x     |
| (rachis node)                     |      |        |         |      |         |      |      |      |      |      |        |        | x    |      |      |       |
| <i>Secale cereale</i> L. (grain)  |      |        |         |      |         |      |      |      |      |      | xcf    |        |      |      |      |       |
| <i>Triticum</i> sp. (grains)      | x    | x      |         | x    |         | x    | x    | x    |      | xcf  |        |        | xx   | x    | x    | x     |
| (glume bases)                     | x    |        | x       | x    | x       |      | x    | x    |      |      | x      | x      | x    | x    |      | xx    |
| (spikelet bases)                  | x    |        | x       | x    | x       | x    |      |      |      |      |        |        | x    |      |      | x     |
| (rachis internodes)               |      |        | x       |      |         | x    |      |      | x    |      |        | x      | x    |      |      | x     |
| <i>T. spelta</i> L. (glume bases) | x    | x      | xx      | x    | x       | xx   | x    | x    | x    | xx   |        | x      | xxx  | xx   | xx   | xx    |
| Cereal indet. (grains)            | x    | x      | x       |      | x       | x    |      | x    | x    | x    | x      | xx     | xx   | xx   | x    | xx    |
| (detached sprouts)                |      |        |         |      |         |      |      |      |      | x    |        |        |      |      |      |       |
| (silica skeletons)                | x    |        |         |      |         |      |      |      |      |      |        |        |      |      |      |       |
| <b>Herbs</b>                      |      |        |         |      |         |      |      |      |      |      |        |        |      |      |      |       |
| <i>Arrhenatherum</i> sp. (tubers) |      | x      |         |      |         |      |      |      |      |      |        |        |      |      |      |       |

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| Sample No.                             | 8   | 13  | 14  | 11   | 35  | 36   | 20   | 34   | 23   | 31    | 39   | 42   | 47   | 48   | 50   | 41   |
|--|-----|-----|-----|------|-----|------|------|------|------|-------|------|------|------|------|------|------|
| <i>Brassica</i> sp.                    |     |     |     |      |     |      |      |      |      |       |      | x    |      |      |      |      |
| <i>Bromus</i> sp.                      | x   | xcf |     | x    |     | x    | x    | x    |      | x     |      |      | x    | x    | x    | x    |
| Chenopodiaceae indet.                  |     |     |     |      |     |      |      |      | x    |       |      |      |      |      | x    |      |
| Fabaceae indet.                        | x   |     | x   |      |     |      | x    |      |      | x     |      | x    | x    | x    | x    |      |
| <i>Fallopia convolvulus</i> (L.)A.Love |     |     |     | x    |     |      | x    | x    |      |       |      |      |      |      |      |      |
| <i>Galium aparine</i> L.               |     |     |     | x    |     |      |      |      | xfg  | x     |      |      | x    |      |      | x    |
| <i>Lithospermum arvense</i> L.         |     |     |     |      |     |      |      |      |      |       |      |      |      |      | x    |      |
| <i>Medicago/Trifolium/Lotus</i> sp.    |     |     |     |      |     | x    |      |      |      |       |      | xcf  |      |      |      |      |
| Small Poaceae indet.                   | x   |     | x   | x    |     |      |      | x    |      |       |      |      | x    | x    |      |      |
| Large Poaceae indet.                   | x   |     |     |      |     |      |      |      |      |       |      |      |      |      |      |      |
| <i>Polygonum aviculare</i> L.          |     |     |     |      |     | x    |      | x    |      |       |      | x    |      | x    |      |      |
| <i>Rumex</i> sp.                       |     |     |     | x    | x   | x    | x    | x    | x    |       |      | x    |      | x    | x    |      |
| <i>Sherardia arvensis</i> L.           |     |     |     |      |     |      | x    |      |      |       |      |      |      |      |      |      |
| <i>Stellaria</i> sp.                   |     |     |     |      |     |      | xcf  |      |      |       |      |      |      |      |      |      |
| <i>S. media</i> (L.)Vill               |     |     |     |      |     |      |      |      |      |       |      | x    |      |      |      |      |
| <b>Wetland plants</b>                  |     |     |     |      |     |      |      |      |      |       |      |      |      |      |      |      |
| <i>Carex</i> sp.                       |     |     |     |      |     |      |      |      |      | x     |      |      |      |      |      |      |
| <i>Eleocharis</i> sp.                  |     |     |     |      |     |      |      |      |      |       |      |      | x    |      |      |      |
| <b>Tree/shrub macrofossils</b>         |     |     |     |      |     |      |      |      |      |       |      |      |      |      |      |      |
| <i>Corylus avellana</i> L.             |     |     | x   | xcf  | xcf | x    | xcf  |      | xcf  |       | x    |      |      | x    |      | x    |
| <i>Prunus spinosa</i> L.               |     |     |     |      |     |      |      |      |      | xcffg |      |      |      |      |      |      |
| <b>Other plant macrofossils</b>        |     |     |     |      |     |      |      |      |      |       |      |      |      |      |      |      |
| Charcoal <2mm                          | xxx | xxx | xxx | xxxx | x   | xxxx | xxxx | xxxx | xxxx | xxx   | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx |
| Charcoal >2mm                          | xx  | xx  | xx  | xx   |     | xxxx | xxx  | xxxx | xx   | xxx   | xxx  | x    | xxx  | xxx  | xxx  | xxx  |
| Charcoal >5mm                          | x   | x   | x   | x    |     | xx   | xx   | xxx  | x    | x     | x    | x    | xx   | xx   | xx   | x    |
| Charcoal >10mm                         | x   | x   | x   | x    |     | x    |      | xx   |      | x     |      | x    | x    | x    | xx   |      |
| Charred root/stem                      | x   | x   | x   | x    | x   | x    | x    |      |      | x     |      | x    | x    | x    | x    | x    |

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| Sample No.                      | 8              | 13             | 14             | 11          | 35             | 36          | 20             | 34             | 23             | 31             | 39             | 42             | 47          | 48             | 50          | 41          |
|---------------------------------|----------------|----------------|----------------|-------------|----------------|-------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------|----------------|-------------|-------------|
| Indet.culm nodes                | x              |                |                | x           |                |             |                |                |                |                |                |                |             |                | x           | x           |
| Indet.inflorescence frags.      |                |                |                |             |                |             | x              |                |                |                |                |                |             |                |             |             |
| Indet.seeds                     |                |                | x              | x           |                | x           | x              | x              |                |                | x              |                | x           |                |             | x           |
| Indet.thorn                     |                |                |                |             |                |             | x              |                |                |                |                |                |             |                |             |             |
| <b>Other remains</b>            |                |                |                |             |                |             |                |                |                |                |                |                |             |                |             |             |
| Black porous 'cokey' material   | x              | x              | x              | xxx         | x              | x           | x              |                | x              |                | x              | xx             | x           |                | xx          | xxx         |
| Black tarry material            |                | x              | x              |             |                | x           |                | x              | x              |                | x              | x              |             | x              | x           | x           |
| Bone                            | xx             | x              | x xb           | x xb        | x              | x           | x              |                | x xb           | x xb           |                | xx<br>xb       | x           |                | x xb        | x xb        |
| Burnt/fired clay                | x              | x              | x              | x           | x              | x           | x              | x              | x              | x              |                | x              | x           |                |             | x           |
| Burnt stone                     |                |                |                |             |                |             |                |                |                |                |                |                |             | x              |             |             |
| Pottery                         | x              |                |                |             |                |             |                |                |                |                |                |                |             |                |             |             |
| Small coal frags.               | x              | x              | x              | x           | x              | x           | x              |                | x              | x              | x              | xxx            | x           | x              | xx          | x           |
| Small mammal/amphibian bones    | x              | xx             | x              | x           |                | xx          | x              | x              | x              | x              | x              | x              | x           | x              | x           |             |
| Vitreous material               |                |                |                |             |                | x           | x              | x              | xx             | xxx            | x              | xx             |             | x              | x           | x           |
| <b>Molluscs</b>                 |                |                |                |             |                |             |                |                |                |                |                |                |             |                |             |             |
| <i>Bithynia</i> sp. (operculum) |                |                |                | x           |                |             |                |                |                |                |                |                |             |                |             |             |
| <b>Sample volume (litres)</b>   | <b>40</b>      | <b>40</b>      | <b>40</b>      | <b>40</b>   | <b>10</b>      | <b>30</b>   | <b>40</b>      | <b>20</b>      | <b>30</b>      | <b>40</b>      | <b>40</b>      | <b>40</b>      | <b>40</b>   | <b>40</b>      | <b>40</b>   | <b>40</b>   |
| <b>Volume of flot (litres)</b>  | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>0.1</b>  | <b>&lt;0.1</b> | <b>0.1</b>  | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>0.1</b>  | <b>&lt;0.1</b> | <b>0.1</b>  | <b>0.1</b>  |
| <b>% flot sorted</b>            | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    | <b>100%</b> | <b>100%</b>    | <b>100%</b> | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    | <b>100%</b> | <b>100%</b>    | <b>100%</b> | <b>100%</b> |

BARTON SEAGRAVE, POLWELL LANE

| Sample No.   | 52   | 53   | 57   | 58   | 60   | 78     | 79   | 80   | 85      | 86      | 87   | 89   | 92   | 96   | 68            |
|--|------|------|------|------|------|--------|------|------|---------|---------|------|------|------|------|---------------|
| Context No.  | 3573 | 3575 | 3638 | 3640 | 3675 | 4003   | 4017 | 4056 | 4168    | 4190    | 4252 | 4345 | 4356 | 4451 | 3862          |
| Feature No.  | 3574 | 3576 | 3639 | 3641 | 3581 | 4004   | 4018 | 4057 | 4191    | 4191    | 4253 | 4346 | 4357 | 4450 | 3863          |
| Feature type                                       | PP   | PP   | PP   | PP   | RHG  | RHG(B) | RHG  | Pit  | Heart h | Heart h | RHG  | RHG  | RHG  | RHG  | Pit           |
| Group No.  | 3564 | 3564 | 3564 | 3564 | RD13 | RD12   | RD12 | RD12 | RD12    | RD12    | RD4  | RD8  | RD2  | RD2  | 3845          |
| <b>Cereals and other food plants</b>               |      |      |      |      |      |        |      |      |         |         |      |      |      |      |               |
| <i>Avena</i> sp. (grains)                          |      |      |      |      |      |        |      |      |         | x       |      |      |      |      |               |
| (awn frags.)                                       |      |      | x    |      |      |        |      |      |         |         |      |      |      |      |               |
| <i>Hordeum</i> sp. (grains)                        | x    |      | xcf  |      | x    |        | x    |      | x       |         | x    | x    | x    | x    | xcf           |
| (rachis node)                                      |      |      |      |      |      |        |      |      |         |         | x    |      |      | x    |               |
| <i>H. vulgare</i> L. (asymmetrical lateral grains) |      |      |      | x    |      |        |      |      | x       |         |      |      |      |      |               |
| <i>Triticum</i> sp. (grains)                       | x    | x    | xx   | xx   | x    | x      | x    | x    | x       | x       |      | x    | x    | x    | x             |
| (glume bases)                                      |      |      |      |      |      | x      | x    |      | x       |         |      |      |      | x    | x             |
| (spikelet bases)                                   |      |      | x    |      |      |        |      |      | x       |         |      |      |      | x    | x             |
| (rachis internodes)                                |      |      |      |      |      |        |      |      |         | x       |      |      | x    |      |               |
| <i>T. spelta</i> L. (glume bases)                  |      |      | x    | x    | x    | x      | x    |      | xx      | x       | x    |      | x    | xx   | x             |
| Cereal indet. (grains)                             | x    | xx   | x    | xx   | x    | x      | xx   |      | x       | x       | x    | x    | x    | x    | x             |
| Large Fabaceae indet.                              |      |      |      |      |      |        |      |      |         |         |      |      |      |      | xcfcot<br>yfg |
| <b>Herbs</b>                                       |      |      |      |      |      |        |      |      |         |         |      |      |      |      |               |
| <i>Atriplex</i> sp.                                |      |      |      |      |      |        |      |      |         |         |      |      |      | x    |               |
| <i>Brassica/Sinapis</i> sp.                        |      |      |      |      |      |        |      | xxx  |         |         |      |      |      |      |               |
| Brassicaceae indet.                                |      |      |      |      |      |        |      | xxx  |         |         |      |      |      |      |               |
| <i>Bromus</i> sp.                                  |      |      | x    | x    | x    | x      | x    |      | xcf     |         | x    |      | x    | x    | x             |
| <i>Chenopodium album</i> L.                        |      |      |      |      |      |        |      |      | x       |         | x    |      |      |      |               |
| Chenopodiaceae indet.                              |      |      |      |      |      |        |      |      |         | x       |      |      |      |      |               |
| Fabaceae indet.                                    | x    | x    | x    | x    |      | x      | x    | x    |         | x       | xcf  | x    | x    | x    |               |

BARTON SEAGRAVE, POLWELL LANE

| Sample No.  | 52  | 53 | 57  | 58 | 60   | 78  | 79 | 80   | 85   | 86  | 87   | 89  | 92  | 96  | 68  |
|---|-----|----|-----|----|------|-----|----|------|------|-----|------|-----|-----|-----|-----|
| <i>Fallopia convolvulus</i><br>(L.)A.Love           |     |    |     |    |      | xcf | x  | xcf  |      |     |      |     | x   |     |     |
| <i>Fumaria officinalis</i> L.                       |     |    |     |    |      |     |    |      |      |     |      | x   |     |     |     |
| <i>Galium aparine</i> L.                            |     |    | x   |    |      |     | x  |      | x    | x   |      |     |     | x   |     |
| <i>Lithospermum arvense</i> L.                      |     |    |     |    |      |     |    | x    |      |     |      |     |     |     | x   |
| <i>Medicago/Trifolium/Lotus</i> sp.                 |     |    |     |    |      |     |    |      | x    | x   |      |     |     |     |     |
| <i>Plantago lanceolata</i> L.                       |     |    | x   |    |      |     |    |      |      | x   |      |     |     |     |     |
| Small Poaceae indet.                                |     |    |     |    | x    |     | x  |      | x    | x   | x    |     | x   |     |     |
| Large Poaceae indet.                                |     |    | x   |    |      |     |    |      | x    |     |      |     |     |     |     |
| <i>Polygonum aviculare</i> L.                       |     |    |     |    |      |     |    | x    | x    | x   |      |     |     |     |     |
| Polygonaceae indet.                                 |     |    |     |    |      |     |    | x    |      | x   |      |     |     | x   |     |
| <i>Rumex</i> sp.                                    |     |    | x   |    |      | x   |    |      | x    |     | x    |     |     |     |     |
| <i>R. acetosella</i> L.                             |     |    |     |    |      |     |    | x    | x    | x   |      |     |     |     |     |
| <i>Sherardia arvensis</i> L.                        |     |    | x   |    |      |     |    |      |      | x   |      |     |     |     |     |
| <i>Sinapis</i> sp.                                  |     |    |     |    |      |     |    |      |      | xcf | xcf  |     |     |     |     |
| <i>S. media</i> (L.)Vill                            |     |    |     |    |      |     |    |      |      |     |      |     | x   |     |     |
| <i>Tripleurospermum inodorum</i><br>(L.)Schultz-Bip |     |    |     |    |      |     |    |      |      |     |      |     | x   |     |     |
| <i>Veronica</i> sp.                                 |     | x  |     |    |      |     |    |      |      |     |      |     |     |     |     |
| <i>V. hederifolia</i> L.                            |     |    |     |    |      |     |    | x    |      |     |      |     |     |     |     |
| <b>Wetland plants</b>                               |     |    |     |    |      |     |    |      |      |     |      |     |     |     |     |
| <i>Carex</i> sp.                                    |     |    |     |    |      |     |    |      |      |     | x    |     |     |     |     |
| <b>Tree/shrub macrofossils</b>                      |     |    |     |    |      |     |    |      |      |     |      |     |     |     |     |
| <i>Corylus avellana</i> L.                          |     |    |     |    | x    | x   |    |      |      |     |      | xcf |     | x   | xcf |
| <b>Other plant macrofossils</b>                     |     |    |     |    |      |     |    |      |      |     |      |     |     |     |     |
| Charcoal <2mm                                       | xxx | x  | xxx | xx | xxxx | xxx | xx | xxxx | xxxx | xxx | xxxx | xxx | xxx | xxx | xx  |
| Charcoal >2mm                                       | xx  | x  | xx  | xx | xx   | xx  | x  | xxx  | xxx  | xx  | xxxx | xxx | x   | xxx | xx  |
| Charcoal >5mm                                       | x   |    |     | x  | x    |     | x  | xx   | x    | x   | x    | x   | x   | x   | x   |
| Charcoal >10mm                                      | x   |    |     |    |      |     | x  |      |      |     |      |     |     |     | x   |

BARTON SEAGRAVE, POLWELL LANE

| Sample No.                            | 52             | 53             | 57             | 58             | 60             | 78             | 79             | 80         | 85             | 86          | 87         | 89          | 92             | 96             | 68          |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------|----------------|-------------|------------|-------------|----------------|----------------|-------------|
| Charred root/stem                     |                |                | x              | x              | x              | x              | x              |            | x              |             |            |             |                | x              | x           |
| Indet.seeds                           |                |                |                | x              |                |                | x              | x          | x              | x           |            | x           |                | x              |             |
| Indet.thorn ( <i>Prunus</i> sp. type) |                |                |                |                |                |                |                |            |                |             |            |             |                | x              |             |
| <b>Other remains</b>                  |                |                |                |                |                |                |                |            |                |             |            |             |                |                |             |
| Black porous 'cokey' material         | x              | x              | x              | xx             | x              | xx             | xx             | x          | x              | x           | x          | x           | xx             |                | xx          |
| Black tarry material                  |                |                |                |                | x              |                |                |            |                |             |            | xx          | x              | x              |             |
| Bone                                  | x              | x              |                | x              | x              | x xb           | x              |            | x              | xb          | x          | x xb        | x              | x              |             |
| Burnt/fired clay                      |                |                | x              | x              | x              | x              | xx             |            | x              |             |            |             |                |                |             |
| Ferrous globule                       |                |                |                |                |                | x              |                |            |                |             |            |             |                |                |             |
| Marine mollusc shell                  |                |                |                |                |                |                |                |            |                |             |            | x           |                |                |             |
| Pottery                               |                |                |                |                |                |                |                |            |                |             |            |             |                |                | x           |
| Small coal frags.                     |                | x              | xx             | xx             | x              | xx             | xx             |            | x              | x           |            | xx          | xx             | x              | x           |
| Small mammal/amphibian bones          |                |                |                |                |                | x              | x              | x          | x xb           | xx<br>xxb   |            | x           |                | x              | x           |
| Vitreous material                     | xxx            | xxxx           | xx             | xxxx           | x              | x              | x              | xx         | xxxx           | xxx         | x          | x           | xxx            | xx             | x           |
| <b>Sample volume (litres)</b>         | <b>10</b>      | <b>30</b>      | <b>10</b>      | <b>20</b>      | <b>40</b>      | <b>40</b>      | <b>40</b>      | <b>40</b>  | <b>40</b>      | <b>40</b>   | <b>40</b>  | <b>30</b>   | <b>40</b>      | <b>40</b>      | <b>40</b>   |
| <b>Volume of flot (litres)</b>        | <b>&lt;0.1</b> | <b>0.3</b> | <b>&lt;0.1</b> | <b>0.1</b>  | <b>0.4</b> | <b>0.1</b>  | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>0.1</b>  |
| <b>% flot sorted</b>                  | <b>100%</b>    | <b>50%</b> | <b>100%</b>    | <b>100%</b> | <b>25%</b> | <b>100%</b> | <b>100%</b>    | <b>100%</b>    | <b>100%</b> |

| Sample No.                              | 19   | 43    | 65   | 67   | 88   |
|---|------|-------|------|------|------|
| Context No.                             | 2181 | 2239  | 3790 | 3852 | 4283 |
| Feature No.                             | 2182 |       | 3778 | 3854 | 4285 |
| Feature type                            | Pit  | Layer | Pit  | Pit  | Pit  |
| Group No                                |      | Slade |      |      |      |
| <b>Cereals and other food plants</b>    |      |       |      |      |      |
| <i>Avena</i> sp. (grains)               | x    |       |      |      |      |
| (awn frags.)                            |      |       |      |      |      |
| <i>Hordeum</i> sp. (grains)             |      |       |      | xcf  | x    |
| (rachis nodes)                          |      |       | xfg  |      |      |
| <i>Triticum</i> sp. (grains)            | x    |       | x    |      | x    |
| (glume bases)                           | x    |       | x    |      | x    |
| (spikelet bases)                        | x    |       | x    |      | x    |
| (rachis internodes)                     | x    |       | x    |      |      |
| <i>T. spelta</i> L. (glume bases)       | x    |       | xx   |      | x    |
| Cereal indet. (grains)                  | x    | x     | x    | x    | x    |
| (detached sprouts)                      |      |       |      |      |      |
| (detached embryos)                      |      |       |      |      |      |
| (basal rachis nodes)                    |      |       |      |      |      |
| (silica skeletons)                      |      |       |      |      |      |
| Large Fabaceae indet.                   |      |       |      |      |      |
| <b>Herbs</b>                            |      |       |      |      |      |
| <i>Arrhenatherum</i> sp. (tuber)        |      |       | x    |      |      |
| <i>Atriplex</i> sp.                     |      |       |      |      |      |
| Brassicaceae indet.                     |      |       |      |      |      |
| <i>Bromus</i> sp.                       | x    |       | x    |      |      |
| <i>Chenopodium album</i> L.             |      |       |      |      |      |
| Chenopodiaceae indet.                   |      |       |      |      |      |
| Fabaceae indet.                         | x    |       | x    |      |      |
| <i>Fallopia convolvulus</i> (L.)A.Love  |      |       |      |      |      |
| <i>Galium aparine</i> L.                | x    |       |      |      | x    |
| <i>G. mollugo</i> type                  |      |       |      |      |      |
| <i>Hyoscyamus niger</i> L.              |      |       |      |      |      |
| <i>Lithospermum arvense</i> L.          |      |       |      |      |      |
| <i>Medicago/Trifolium/Lotus</i> sp.     |      |       |      |      |      |
| <i>Papaver</i> sp.                      |      |       |      |      |      |
| <i>Plantago lanceolata</i> L.           |      |       |      |      |      |
| Small Poaceae indet.                    |      |       |      |      |      |
| Large Poaceae indet.                    |      |       |      |      | x    |
| <i>Polygonum aviculare</i> L.           |      |       |      |      |      |
| <i>Ranunculus acris/repens/bulbosus</i> |      |       |      |      |      |
| <i>Rumex</i> sp.                        | x    |       |      |      | x    |
| <i>R. acetosella</i> L.                 |      |       |      |      |      |
| <i>Sherardia arvensis</i> L.            |      |       |      |      |      |

| Sample No.  | 19             | 43             | 65          | 67          | 88             |
|---|----------------|----------------|-------------|-------------|----------------|
| <i>Solanum</i> sp.                                  |                |                |             |             |                |
| <i>Stellaria media</i> (L.)Vill                     |                |                |             |             |                |
| <i>Tripleurospermum inodorum</i><br>(L.)Schultz-Bip |                |                |             |             |                |
| <i>Valerianella denata</i> (L.)Pollich              |                |                |             |             |                |
| <b>Wetland plants</b>                               |                |                |             |             |                |
| <i>Carex</i> sp.                                    |                |                |             |             |                |
| <i>Eleocharis</i> sp.                               |                |                |             |             |                |
| <i>Montia fontana</i> L.                            |                |                |             |             |                |
| <b>Tree/shrub macrofossils</b>                      |                |                |             |             |                |
| <i>Corylus avellana</i> L.                          | x              | xcf            |             |             | x              |
| <i>Prunus spinosa</i> L.                            |                |                |             |             |                |
| <b>Other plant macrofossils</b>                     |                |                |             |             |                |
| Charcoal <2mm                                       | xxxx           | xx             | xxxx        | xxxx        | xxxx           |
| Charcoal >2mm                                       | xxxx           | x              | xxxx        | xxx         | xxx            |
| Charcoal >5mm                                       | xxx            |                | xx          | x           | xx             |
| Charcoal >10mm                                      | xx             |                | xx          |             |                |
| Charred root/stem                                   | x              | x              | x           |             | x              |
| Indet.bud   |                |                |             |             |                |
| Indet.culm nodes                                    |                |                |             |             |                |
| Indet.inflorescence frags.                          |                |                |             |             |                |
| Indet.seeds   | x              |                | x           |             | x              |
| Indet.tubers  |                |                |             |             |                |
| <b>Other remains</b>                                |                |                |             |             |                |
| Black porous 'cokey' material                       | x              | x              | xx          | x           | x              |
| Black tarry material                                | xx             | x              | xx          |             | x              |
| Bone  | x xb           | x              | x xb        | x           | x              |
| Burnt/fired clay                                    |                |                | x           | x           |                |
| Burnt organic concretion                            |                |                |             |             |                |
| Pottery   | x              |                |             |             |                |
| Small coal frags.                                   | x              | xx             | x           | x           | x              |
| Small mammal/amphibian bones                        | x              |                | xxx         |             | x              |
| Vitreous material                                   | x              |                | x           | x           | x              |
| <b>Mollusc shells</b>                               |                |                |             |             |                |
| <i>Anisus leucostoma</i>                            |                |                |             |             |                |
| <i>Pupilla muscorum</i>                             |                |                |             |             |                |
| <i>Trichia hispida</i> group                        |                |                |             |             |                |
| <i>Vertigo pygmaea</i>                              |                |                |             |             |                |
| <b>Sample volume (litres)</b>                       | <b>40</b>      | <b>40</b>      | <b>40</b>   | <b>40</b>   | <b>40</b>      |
| <b>Volume of flot (litres)</b>                      | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>0.1</b>  | <b>0.1</b>  | <b>&lt;0.1</b> |
| <b>% flot sorted</b>                                | <b>100%</b>    | <b>100%</b>    | <b>100%</b> | <b>100%</b> | <b>100%</b>    |

Table 3.2: Processed samples from late Iron Age features

| Sample No.  | 4    | 9     | 10    | 18   | 46   | 51    | 54    | 83                | 93    | 100  | 101   | 102   | 103   | 105  |
|---|------|-------|-------|------|------|-------|-------|-------------------|-------|------|-------|-------|-------|------|
| Context No.                                       | 2054 | 2100  | 2099  | 2243 | 2817 | 2922  | 3593  | 4084              | 4441  | 4457 | 4627  | 4628  | 4653  | 4571 |
| Feature No.                                       | 2053 | 2241  | 2240  | 2244 | 2818 | 2923  | 3594  | 3855              | 4446  | 4459 | 4652  | 4652  | 4657  | 4572 |
| Feature type                                      | Pit  | Ditch | Ditch | Pit  | Pit  | Ditch | Ditch | Pit<br>heart<br>h | Ditch | Pit  | Ditch | Ditch | Ditch | Pit  |
| Group No.   |      | E6    | E6    | -    |      | E6    | -     |                   | E2    |      | E1    | E1    | E1    |      |
| <b>Cereals</b>                                    |      |       |       |      |      |       |       |                   |       |      |       |       |       |      |
| <i>Avena</i> sp. (grains)                         | -    | xcf   | -     | -    | -    | xcf   | -     | -                 | -     | -    | -     | -     | -     | -    |
| (awn frags.)                                      | -    | -     | -     | -    | -    | x     | -     | -                 | -     | x    | -     | -     | -     | -    |
| <i>Hordeum</i> sp. (grains)                       | -    | x     | x     | -    | X    | -     | xcf   | -                 | -     | xcf  | x     | x     | x     | -    |
| (rachis nodes)                                    |      |       |       |      |      |       |       |                   |       |      | -     | -     | x     |      |
| <i>H. vulgare</i> L. (asymmetrical lateral grain) | -    | -     | -     | -    | -    | -     | x     | -                 | -     | -    | -     | -     | -     | -    |
| <i>Triticum</i> sp. (grains)                      | -    | x     | x     | -    | X    | x     | x     | -                 | x     | xx   | xx    | x     | xx    | X    |
| (glume bases)                                     | -    | x     | x     | -    | Xx   | -     | x     | X                 | -     | xxx  | -     | x     | -     | X    |
| (spikelet bases)                                  | -    | x     | x     | -    | X    | -     | -     | -                 | -     | x    | X     | -     | -     | -    |
| (rachis internodes)                               | -    | -     | x     | -    | X    | x     | -     | -                 | -     | x    | -     | -     | x     | -    |
| <i>T. spelta</i> L. (glume bases)                 | -    | xx    | xx    | x    | Xx   | x     | x     | X                 | x     | xxx  | x     | xx    | xx    | X    |
| Cereal indet. (grains)                            | xfg  | x     | x     | -    | xx   | x     | x     | X                 | x     | xxx  | xxx   | xx    | xx    | -    |
| Large Fabaceae indet.                             |      |       |       |      |      |       |       |                   |       |      | -     | x     | -     |      |
| <b>Herbs</b>                                      |      |       |       |      |      |       |       |                   |       |      |       |       |       |      |
| <i>Atriplex</i> sp.                               |      |       |       |      |      |       |       |                   |       |      | x     | x     | x     |      |
| <i>Bromus</i> sp.                                 | -    | xcf   | x     | -    | x    | x     | x     | -                 | x     | x    | x     | x     | x     | X    |
| <i>Chenopodium album</i> L.                       | -    | -     | -     | -    | x    |       |       | -                 |       | x    | -     | -     | -     | -    |
| Chenopodiaceae indet.                             | -    | -     | -     | -    | -    | -     | -     | -                 | -     | -    | -     | -     | x     | -    |
| Fabaceae indet.                                   | -    | x     | -     | -    | -    | -     | -     | -                 | x     | x    | x     | x     | x     | -    |
| <i>Fallopia convolvulus</i> (L.) A.Love           |      |       |       |      | x    |       |       | -                 |       | -    | x     | -     | x     | -    |
| <i>Galium aparine</i> L.                          | -    | -     | x     | -    | x    | -     | -     | -                 | -     | x    | x     | -     | x     | X    |

BARTON SEAGRAVE, POLWELL LANE

| Sample No.  | 4    | 9   | 10 | 18  | 46   | 51   | 54 | 83   | 93  | 100  | 101  | 102  | 103  | 105  |
|---|------|-----|----|-----|------|------|----|------|-----|------|------|------|------|------|
| <i>G. mollugo</i> type                              |      |     |    |     |      |      |    |      |     |      | -    | x    | -    |      |
| <i>Hyoscyamus niger</i> L.                          | -    | xcf | -  | -   | -    | -    | x  | -    | -   | -    | -    | -    | -    | -    |
| <i>Lithospermum arvense</i> L.                      |      |     |    |     |      |      |    | -    |     | x    | x    | xx   | x    | -    |
| <i>Medicago/Trifolium/Lotus</i> sp.                 |      |     |    |     |      |      |    | -    |     |      | xx   | xx   | x    | xcf  |
| <i>Plantago lanceolata</i> L.                       |      |     |    |     |      |      |    |      |     |      | x    | x    | -    |      |
| Small Poaceae indet.                                | -    | -   | -  | -   | -    | -    | x  | -    | -   | x    | x    | xx   | x    | x    |
| Large Poaceae indet.                                | -    | -   | x  | -   | -    | -    | -  | -    | x   | x    | -    | -    | -    | -    |
| <i>Polygonum aviculare</i> L.                       |      |     |    |     |      |      |    | -    |     | x    | x    | x    | x    | X    |
| <i>Ranunculus acris/repens/bulbosus</i>             |      |     |    |     |      |      |    |      |     |      | x    | x    | -    |      |
| <i>Rumex</i> sp.                                    | -    | -   | x  | -   | x    | -    | -  | -    | x   | xx   | -    | x    | xx   | X    |
| <i>R. acetosella</i> L.                             |      |     |    |     |      |      |    | -    |     |      | x    | x    | x    | X    |
| <i>Sherardia arvensis</i> L.                        |      |     |    |     |      |      |    |      |     |      | -    | -    | x    |      |
| <i>Solanum</i> sp.                                  |      |     |    |     |      |      |    |      |     |      | x    | -    | -    |      |
| <i>Stellaria media</i> (L.)vill                     | -    | -   | -  | -   | -    | -    | -  | -    | x   | -    | -    | x    | -    | -    |
| <i>Tripleurospermum inodorum</i><br>(L.)Schultz-Bip |      |     |    |     |      |      |    |      |     |      | -    | x    | x    |      |
| <i>Valerianella denata</i> (L.)Pollich              |      |     |    |     |      |      |    |      |     |      | -    | -    | x    |      |
| <b>Wetland plants</b>                               |      |     |    |     |      |      |    |      |     |      |      |      |      |      |
| <i>Carex</i> sp.                                    |      |     |    |     |      |      |    |      |     |      | x    | x    | x    |      |
| <i>Eleocharis</i> sp.                               | -    | -   | -  | -   | -    | -    | -  | -    | -   | -    | -    | -    | x    | X    |
| <i>Montia fontana</i> L.                            | -    | -   | -  | -   | -    | -    | -  | -    | -   | -    | x    | x    | x    | x    |
| <b>Tree/shrub macrofossils</b>                      |      |     |    |     |      |      |    |      |     |      |      |      |      |      |
| <i>Prunus spinosa</i> L.                            |      |     |    |     |      |      |    |      |     |      | -    | x    | -    |      |
| <b>Other plant macrofossils</b>                     |      |     |    |     |      |      |    |      |     |      |      |      |      |      |
| Charcoal <2mm                                       | xxxx | xxx | xx | xxx | xxxx | xxxx | xx | xxxx | xxx | xxxx | xxxx | xxxx | xxxx | xxxx |
| Charcoal >2mm                                       | xxxx | xx  | x  | xx  | xxxx | xxxx | xx | xxx  | xxx | x    | xx   | xx   | xxx  | xx   |
| Charcoal >5mm                                       | xxxx | x   | x  | x   | X    | xxx  | x  | x    | x   | x    | xx   | x    | xx   | x    |
| Charcoal >10mm                                      | xxxx | -   | -  | x   | X    | -    | -  | x    | xx  | x    | x    | x    | -    | -    |
| Charred root/stem                                   | x    | x   | x  | x   | -    | xxx  | x  | x    | x   | x    | xx   | x    | xx   | x    |

BARTON SEAGRAVE, POLWELL LANE

| Sample No.                     | 4                 | 9              | 10             | 18             | 46             | 51         | 54          | 83             | 93         | 100         | 101        | 102        | 103        | 105         |
|--------------------------------|-------------------|----------------|----------------|----------------|----------------|------------|-------------|----------------|------------|-------------|------------|------------|------------|-------------|
| Indet.culm nodes               | -                 | -              | -              | -              | -              | x          | -           | -              | x          | -           | -          | -          | -          | -           |
| Indet.fruit/nutshell frag.     | -                 | -              | -              | x              | -              | -          | -           | -              | -          | -           | -          | x          | x          | -           |
| Indet.inflorescence frags.     | -                 | -              | -              | x              | -              | -          | -           | -              | x          | -           | -          | -          | -          | -           |
| Indet.seeds                    | -                 | -              | -              | -              | -              | -          | -           | -              | X          | X           | x          | xx         | xx         | x           |
| <b>Other remains</b>           |                   |                |                |                |                |            |             |                |            |             |            |            |            |             |
| Black porous 'cokey' material  | -                 | x              | x              | x              | Xx             | -          | x           | x              | -          | X           | xxx        | x          | -          | -           |
| Black tarry material           | -                 | x              | x              | -              | Xx             | -          | x           | x              | x          | X           | x          | -          | -          | -           |
| Bone                           | X                 | x xb           | x              | -              | X              | x          | x           | xxb            | -          | -           | x          | -          | -          | X           |
| Burnt/fired clay               | -                 | x              | x              | x              | x              | -          | -           | x              | x          | X           | -          | -          | -          | x           |
| Burnt organic concretion       |                   |                |                |                |                |            |             | -              |            | -           | -          | x          | -          | -           |
| Ferrous globules               | -                 | -              | -              | -              | -              | -          | -           | -              | x          | -           | -          | -          | -          | -           |
| Ostracods                      | -                 | -              | -              | -              | -              | -          | -           | -              | x          | -           | -          | -          | -          | -           |
| Pottery                        | -                 | -              | -              | xx             | -              | -          | -           | -              | -          | -           | -          | -          | -          | -           |
| Small coal frags.              | X                 | x              | x              | x              | Xx             | -          | x           | -              | -          | X           | -          | -          | -          | X           |
| Small mammal/amphibian bones   | -                 | x              | x              | -              | X              | x          | -           | x              | x          | X           | -          | x          | -          | X           |
| Vitreous material              | -                 | -              | -              | -              | X              | -          | x           | -              | x          | -           | x          | x          | x          | X           |
| <b>Mollusc shells</b>          |                   |                |                |                |                |            |             |                |            |             |            |            |            |             |
| <i>Anisus leucostoma</i>       | -                 | -              | -              | -              | -              | -          | -           | -              | -          | -           | xb         | -          | -          | -           |
| <i>Pupilla muscorum</i>        | -                 | -              | -              | -              | -              | -          | -           | -              | -          | -           | -          | xb         | -          | -           |
| <i>Trichia hispida</i> group   | -                 | -              | -              | -              | -              | -          | -           | -              | -          | -           | xb         | xb         | -          | -           |
| <i>Vertigo pygmaea</i>         | -                 | -              | -              | -              | -              | -          | -           | -              | -          | -           | xb         | xb         | xb         | -           |
| <b>Sample volume (litres)</b>  | <b>40</b>         | <b>40</b>      | <b>40</b>      | <b>20</b>      | <b>40</b>      | <b>40</b>  | <b>40</b>   | <b>10</b>      | <b>40</b>  | <b>40</b>   | <b>40</b>  | <b>40</b>  | <b>40</b>  | <b>20</b>   |
| <b>Volume of flot (litres)</b> | <b>0.9</b>        | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>0.3</b> | <b>0.1</b>  | <b>&lt;0.1</b> | <b>0.2</b> | <b>0.1</b>  | <b>0.2</b> | <b>0.2</b> | <b>0.2</b> | <b>0.1</b>  |
| <b>% flot sorted</b>           | <b>&lt;12.5 %</b> | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    | <b>50%</b> | <b>100%</b> | <b>100%</b>    | <b>50%</b> | <b>100%</b> | <b>50%</b> | <b>50%</b> | <b>50%</b> | <b>100%</b> |

Table 3.3: Processed samples from Roman features

| Sample No.                        | 1    | 15   | 16   | 27   | 28   | 29   | 38   | 2     | 3     | 40   | 55   | 44    | 71   | 99    |
|-----------------------------------|------|------|------|------|------|------|------|-------|-------|------|------|-------|------|-------|
| Context No.                       | 176  | 2218 | 2218 | 176  | 235  | 237  | 2482 | 218   | 214   | 2476 | 3618 | 2784  | 3938 | 4602  |
| Feature No.                       | 211  | 2224 | 2224 | 211  | 211  | 142  | 2483 | 219   | 242   | 2477 | 3619 | 2785  | 3821 | 4603  |
| Feature type                      | Well | Pit  | Pit  | Well | Well | Well | Well | Ditch | Ditch | Kiln | Kiln | Ditch | Pit  | Ditch |
| Group No.                         |      |      |      |      |      |      |      | E10   | E10   |      |      |       |      |       |
| <b>Cereals</b>                    |      |      |      |      |      |      |      |       |       |      |      |       |      |       |
| <i>Avena</i> sp. (grains)         | xx   | -    | x    | x    | x    | -    | -    | -     | -     | -    | x    | -     | -    |       |
| (awn frags.)                      | xx   | xxxx | xxx  | x    | x    | -    | -    | -     | -     | -    | x    | -     | -    | x     |
| <i>A. fatua</i> L. (floret base)  | x    | xcf  | x    | -    | -    | -    | -    | -     | -     | -    | -    | -     | -    |       |
| <i>Hordeum</i> sp. (grains)       | xxx  | x    | x    | xx   | x    | -    | -    | -     | x     | x    | xcf  | -     | x    |       |
| (rachis nodes)                    | x    | x    | xx   | -    | x    | X    | -    | -     | -     | -    | -    | -     | -    | x     |
| <i>Triticum</i> sp. (grains)      | xx   | xxxx | xxxx | xxx  | x    | X    | x    | -     | x     | xx   | x    | -     | x    | x     |
| (glume bases)                     | xx   | xxx  | xxx  | xx   | x    | X    | -    | -     | -     | xx   | x    | -     | x    | x     |
| (spikelet bases)                  | x    | xxx  | xxx  | -    | x    | -    | x    | x     | -     | xx   | x    | -     | x    |       |
| (rachis internodes)               | xx   | xxxx | xxxx | x    | x    | X    | -    | x     | -     | x    | x    | -     | -    |       |
| <i>T. spelta</i> L. (glume bases) | xxx  | x    | xx   | xx   | xxx  | X    | x    | x     | x     | xxx  | xx   | x     | x    | x     |
| Cereal indet. (grains)            | xxx  | -    | x    | xxxx | x    | X    | x    | xfg   | x     | xx   | xx   | -     | xx   | x     |
| (detached sprouts)                | xx   | X    | -    | x    | x    | -    | -    | -     | -     | x    | -    | -     | -    |       |
| (detached embryos)                | -    | -    | X    | -    | -    | -    | -    | -     | -     | -    | -    | -     | -    |       |
| (basal rachis nodes)              | -    | Xx   | -    | -    | -    | -    | -    | -     | -     | -    | -    | -     | -    |       |
| (silica skeletons)                | x    | -    | -    | x    | x    | -    | -    | -     | -     | xxxx | -    | -     | -    |       |
| Large Fabaceae indet.             | -    | -    | -    | -    | -    | -    | -    | -     | -     | -    | -    | -     | -    |       |
| <b>Herbs</b>                      |      |      |      |      |      |      |      |       |       |      |      |       |      |       |
| <i>Aethusa cynapium</i> L.        | -    | -    | -    | -    | -    | -    | -    | -     | -     | -    | x    | -     | -    |       |
| <i>Anthemis arvensis</i> L.       | -    | -    | -    | x    | -    | -    | -    | -     | -     | -    | -    | -     | -    |       |
| <i>Arctium</i> sp.                | -    | -    | -    | -    | xcfg | -    | -    | -     | -     | -    | -    | -     | -    |       |
| Asteraceae indet.                 | -    | -    | -    | -    | -    | -    | -    | -     | -     | x    | -    | -     | -    |       |
| <i>Atriplex</i> sp.               | -    | x    | X    | x    | xx   | -    | -    | -     | x     | x    | -    | -     | -    |       |

BARTON SEAGRAVE, POLWELL LANE

| Sample No.                                       | 1   | 15 | 16 | 27  | 28  | 29 | 38  | 2 | 3   | 40  | 55 | 44 | 71 | 99 |
|--|-----|----|----|-----|-----|----|-----|---|-----|-----|----|----|----|----|
| <i>Brassicaceae</i> indet.                       |     |    |    |     |     |    |     |   |     |     |    |    |    | xx |
| <i>Bromus</i> sp.                                | xx  | x  | x  | x   | -   | -  | -   | x | -   | -   | xx | -  | x  | x  |
| <i>Chenopodium album</i> L.                      | x   | x  | -  | -   | xx  | -  | -   | - | -   | x   | -  | -  | -  |    |
| Chenopodiaceae indet.                            | -   | -  | Xx | x   | xx  | -  | -   | - | x   | -   | -  | -  | -  |    |
| <i>Cirsium</i> sp.                               | x   | -  | -  | -   | -   | -  | -   | - | -   | -   | -  | -  | -  |    |
| Fabaceae indet.                                  | xx  | -  | x  | x   | x   | X  | x   | x | xcf | x   | x  | x  | x  | x  |
| <i>Fallopia convolvulus</i> (L.)A.Love           | x   | x  | x  | x   | x   | -  | -   | - | -   | -   | -  | -  | -  |    |
| <i>Galium aparine</i> L.                         | x   | -  | x  | x   | -   | -  | -   | x | -   | -   | -  | -  | x  | x  |
| <i>G. mollugo</i> type                           | -   | -  | -  | -   | -   | -  | -   | - | -   | x   | -  | -  | -  |    |
| <i>Lithospermum arvense</i> L.                   | xx  | -  | -  | xx  | -   | -  | -   | - | -   | -   | -  | -  | x  |    |
| <i>Medicago/Trifolium/Lotus</i> sp.              | xx  | -  | x  | x   | x   | -  | -   | - | -   | xcf | -  | -  | -  |    |
| <i>Papaver</i>                                   | -   | -  | -  | -   | -   | X  | -   | - | -   | -   | -  | -  | -  |    |
| <i>Plantago lanceolata</i> L.                    | x   | -  | -  | x   | -   | -  | -   | - | -   | -   | -  | -  | -  | x  |
| Small Poaceae indet.                             | xxx | x  | x  | xxx | xxx | X  | -   | - | x   | x   | -  | x  | -  |    |
| Large Poaceae indet.                             | xx  | x  | x  | x   | -   | -  | -   | - | -   | x   | x  | -  | -  |    |
| <i>Polygonum aviculare</i> L.                    | -   | -  | x  | x   | x   | X  | -   | - | -   | -   | x  | -  | x  |    |
| <i>Prunella vulgaris</i> L.                      | -   | -  | -  | x   | -   | -  | xcf | - | -   | -   | -  | -  | -  |    |
| <i>Ranunculus acris/repens/bulbosus</i>          | -   | -  | -  | x   | x   | -  | -   | - | -   | -   | -  | -  | -  |    |
| <i>Raphanus raphanistrum</i> L. (siliqua frags.) | x   | -  | -  | x   | -   | -  | -   | - | -   | -   | -  | -  | -  |    |
| <i>Rumex</i> sp.                                 | xx  | -  | x  | xx  | x   | X  | -   | - | -   | x   | x  | -  | x  |    |
| <i>R. acetosella</i> L.                          | x   | -  | -  | -   | -   | -  | -   | - | -   | x   | -  | -  | -  |    |
| <i>Sherardia arvensis</i> L.                     | x   | -  | -  | x   | -   | -  | -   | - | -   | x   | -  | -  | -  | x  |
| <i>Silene</i> sp.                                | x   | -  | -  | x   | x   | -  | -   | - | -   | -   | -  | -  | -  |    |
| <i>Stellaria</i> sp.                             | -   | -  | -  | x   | -   | -  | -   | - | -   | -   | -  | -  | -  |    |
| <i>S. media</i> (L.)Vill                         | x   | -  | -  | x   | x   | -  | -   | - | x   | -   | -  | -  | -  |    |
| <i>Thlaspi arvense</i> L.                        | x   | -  | -  | x   | x   | -  | -   | - | -   | -   | -  | -  | -  |    |
| <i>Tripleurospermum inodorum</i> (L.)Schultz-Bip | -   | x  | x  | -   | -   | -  | -   | - | -   | -   | -  | -  | -  |    |

BARTON SEAGRAVE, POLWELL LANE

| Sample No.                              | 1    | 15  | 16 | 27   | 28   | 29  | 38 | 2   | 3    | 40   | 55   | 44  | 71   | 99  |
|---|------|-----|----|------|------|-----|----|-----|------|------|------|-----|------|-----|
| <i>Valerianella dentata</i> (L.)Pollich | -    | -   | -  | X    | -    | -   | -  | -   | -    | -    | -    | -   | -    |     |
| <b>Wetland plants</b>                   |      |     |    |      |      |     |    |     |      |      |      |     |      |     |
| <i>Carex</i> sp.                        | x    | -   | -  | x    | -    | X   | -  | -   | -    | -    | -    | -   | -    | x   |
| <b>Tree/shrub macrofossils</b>          |      |     |    |      |      |     |    |     |      |      |      |     |      |     |
| <i>Corylus avellana</i> L.              | -    | -   | -  | x    | -    | -   | -  | xcf | -    | -    | -    | -   | -    |     |
| <i>Prunus spinosa</i> L.                | -    | -   | -  | -    | -    | -   | -  | -   | xcf  | -    | -    | -   | -    |     |
| <b>Other plant macrofossils</b>         |      |     |    |      |      |     |    |     |      |      |      |     |      |     |
| Charcoal <2mm                           | xxxx | xxx | x  | xxx  | xxxx | Xxx | xx | xx  | xxx  | xxx  | xxxx | xxx | xxxx | xxx |
| Charcoal >2mm                           | xxx  | x   | -  | xx   | xx   | Xx  | x  | x   | xx   | xx   | xxxx | xx  | xxx  | xx  |
| Charcoal >5mm                           | xx   | -   | -  | x    | xx   | X   | -  | -   | -    | x    | xxx  | x   | xx   |     |
| Charcoal >10mm                          | x    | -   | -  | x    | xx   | -   | -  | -   | -    | x    | x    | -   | x    |     |
| Charred root/stem                       | xx   | -   | x  | xx   | x    | -   | x  | x   | x    | x    | x    | x   | x    | x   |
| Indet.culm nodes                        | x    | -   | -  | x    | -    | -   | -  | -   | -    | -    | -    | -   | -    |     |
| Indet.inflorescence frags.              | -    | xxx | X  | x    | -    | -   | -  | -   | -    | -    | -    | -   | -    |     |
| Indet.seeds                             | x    | x   | X  | -    | -    | X   | x  | -   | x    | -    | -    | -   | x    | x   |
| Indet. tuburs                           |      | -   | X  | -    | -    | -   | -  | -   | -    | -    | -    | -   | -    |     |
| <b>Other remains</b>                    |      |     |    |      |      |     |    |     |      |      |      |     |      |     |
| Black porous 'cokey' material           | xxx  | x   | xx | xxxx | -    | -   | x  | x   | xxxx | -    | x    | x   | x    | xxx |
| Black tarry material                    | x    | x   | -  | -    | -    | -   | x  | -   | xxxx | x    | -    | -   | x    | xxx |
| Bone                                    | -    | -   | -  | xb   | -    | -   | x  | x   | xx   | x xb | x xb | -   | x xb |     |
| Burnt/fired clay                        | -    | -   | -  | -    | xx   | -   | x  | -   | x    | xx   | x    | -   | -    | x   |
| Marine mollusc shell                    | -    | -   | -  | -    | -    | -   | -  | -   | -    | -    | x    | -   | -    |     |
| Mineralised faecal concretions          | xcf  | -   | -  | xcf  | -    | -   | -  | -   | -    | -    | -    | -   | -    |     |
| Small coal frags.                       | x    | X   | -  | -    | -    | -   | -  | -   | xxxx | x    | x    | xx  | xx   | xx  |
| Small mammal/amphibian bones            | x    | -   | x  | -    | x    | x   | xx | x   | -    | xb   | x    | -   | x    |     |
| Vitreous material                       | -    | x   | x  | -    | -    | -   | -  | X   | X    | -    | X    | -   | -    | x   |

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|                                |            |            |                |            |             |                |                |                |                |                |             |                |                |                |
|--------------------------------|------------|------------|----------------|------------|-------------|----------------|----------------|----------------|----------------|----------------|-------------|----------------|----------------|----------------|
| <b>Sample No.</b>              | <b>1</b>   | <b>15</b>  | <b>16</b>      | <b>27</b>  | <b>28</b>   | <b>29</b>      | <b>38</b>      | <b>2</b>       | <b>3</b>       | <b>40</b>      | <b>55</b>   | <b>44</b>      | <b>71</b>      | <b>99</b>      |
| <b>Sample volume (litres)</b>  | <b>40</b>  | <b>10</b>  | <b>20</b>      | <b>20</b>  | <b>20</b>   | <b>20</b>      | <b>30</b>      | <b>40</b>      | <b>60</b>      | <b>40</b>      | <b>40</b>   | <b>40</b>      | <b>20</b>      | <b>40</b>      |
| <b>Volume of flot (litres)</b> | <b>0.2</b> | <b>0.3</b> | <b>&lt;0.1</b> | <b>0.2</b> | <b>0.1</b>  | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>0.1</b>  | <b>&lt;0.1</b> | <b>&lt;0.1</b> | <b>&lt;0.1</b> |
| <b>% flot sorted</b>           | <b>50%</b> | <b>25%</b> | <b>100%</b>    | <b>50%</b> | <b>100%</b> | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    | <b>100%</b> | <b>100%</b>    | <b>100%</b>    | <b>100%</b>    |

Table 3.4: Processed samples from Anglo-Saxon features

| Sample No.                             | 37   | 90   | 91   | 98   | 82   |
|--|------|------|------|------|------|
| Context No.                            | 2544 | 3868 | 4083 | 3835 | 4055 |
| Feature No.                            | 2545 | 3869 | 3869 | 3836 | 3908 |
| Group number                           | SFB1 | SF2  | SFB2 | SFB4 | Pit  |
| <b>Cereals</b>                         |      |      |      |      |      |
| <i>Avena</i> sp. (grains)              | xcf  | -    | -    | -    | -    |
| (rachis nodes)                         |      |      |      |      | X    |
| <i>Hordeum</i> sp. (grains)            | x    | xcf  | x    | x    | X    |
| <i>Triticum</i> sp. (grains)           | x    | x    | x    | x    | X    |
| (glume base)                           | -    | -    | -    | x    | Xx   |
| (spikelet base)                        | -    | -    | -    | x    | X    |
| (rachis internode)                     | -    | -    | -    | x    | X    |
| <i>T. spelta</i> L. (glume base)       | -    | -    | -    | x    | Xx   |
| Cereal indet. (grains)                 | x    | x    | x    | x    | X    |
| <b>Herbs</b>                           |      |      |      |      |      |
| Brassicaceae indet.                    | -    | -    | -    | -    | X    |
| <i>Bromus</i> sp.                      | -    | -    | x    | x    | X    |
| <i>Chenopodium album</i> L.            | -    | -    | -    | -    | X    |
| Chenopodiaceae indet.                  | -    | -    | -    | -    | X    |
| Fabaceae indet.                        | -    | -    | -    | x    | X    |
| <i>Galium aparine</i> L.               | x    | -    | -    | -    | -    |
| <i>Hyoscyamus niger</i> L.             | x    | -    | -    | -    | X    |
| <i>Medicago/Trifolium/Lotus</i> sp.    | -    | -    | -    | x    | x    |
| Small Poaceae indet.                   | -    | -    | -    | x    | -    |
| Rumex sp.                              | -    | -    | -    | -    | X    |
| <i>Sherardia arvensis</i> L.           | -    | -    | -    | -    | X    |
| <i>Polygonum aviculare</i> L.          | -    | -    | -    | -    | x    |
| <b>Tree/shrub macrofossils</b>         |      |      |      |      |      |
| <i>Corylus avellana</i> L.             | -    | -    | x    | x    | -    |
| <b>Other plant macrofossils</b>        |      |      |      |      |      |
| Charcoal <2mm                          | xx   | xxxx | xxx  | xxx  | Xxxx |
| Charcoal >2mm                          | xxxx | xxxx | xxx  | xxx  | Xxxx |
| Charcoal <5mm                          | xx   | xx   | x    | x    | Xx   |
| Charcoal >10mm                         | x    | -    | x    | x    | X    |
| Charred root/stem                      | x    | x    | x    | x    | x    |
| Indet. bud                             |      |      |      |      | x    |
| Indet. Culm nodes                      |      |      |      |      | X    |
| Indet.seeds                            | -    | -    | x    | -    | -    |
| Indet. thorn ( <i>Prunus</i> sp. type) | -    | -    | x    | -    | -    |
| <b>Other remains</b>                   |      |      |      |      |      |
| Black porous 'cokey' material          | x    | x    | x    | x    | Xx   |
| Black tarry material                   | x    | -    | x    | x    | X    |
| Bone                                   | x    | -    | -    | -    | -    |
| Burnt/fired clay                       | x    | -    | -    | x    | X    |

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|                                |            |            |             |             |                |
|--------------------------------|------------|------------|-------------|-------------|----------------|
| Charred arthropod remains      | -          | -          | -           | x           | -              |
| Fish bone                      | -          | x          | -           | -           | -              |
| Small coal frags.              | X          | x          | x           | xx          | -              |
| Small mammal/amphibian bone    | -          | x          | x           | x           | X              |
| Vitreous material              | -          | -          | x           | x           | -              |
| <b>Sample volume (litres)</b>  | <b>40</b>  | <b>40</b>  | <b>40</b>   | <b>40</b>   | <b>10</b>      |
| <b>Volume of flot (litres)</b> | <b>0.3</b> | <b>0.2</b> | <b>0.1</b>  | <b>0.1</b>  | <b>&lt;0.1</b> |
| <b>% flot sorted</b>           | <b>50%</b> | <b>50%</b> | <b>100%</b> | <b>100%</b> | <b>100%</b>    |



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