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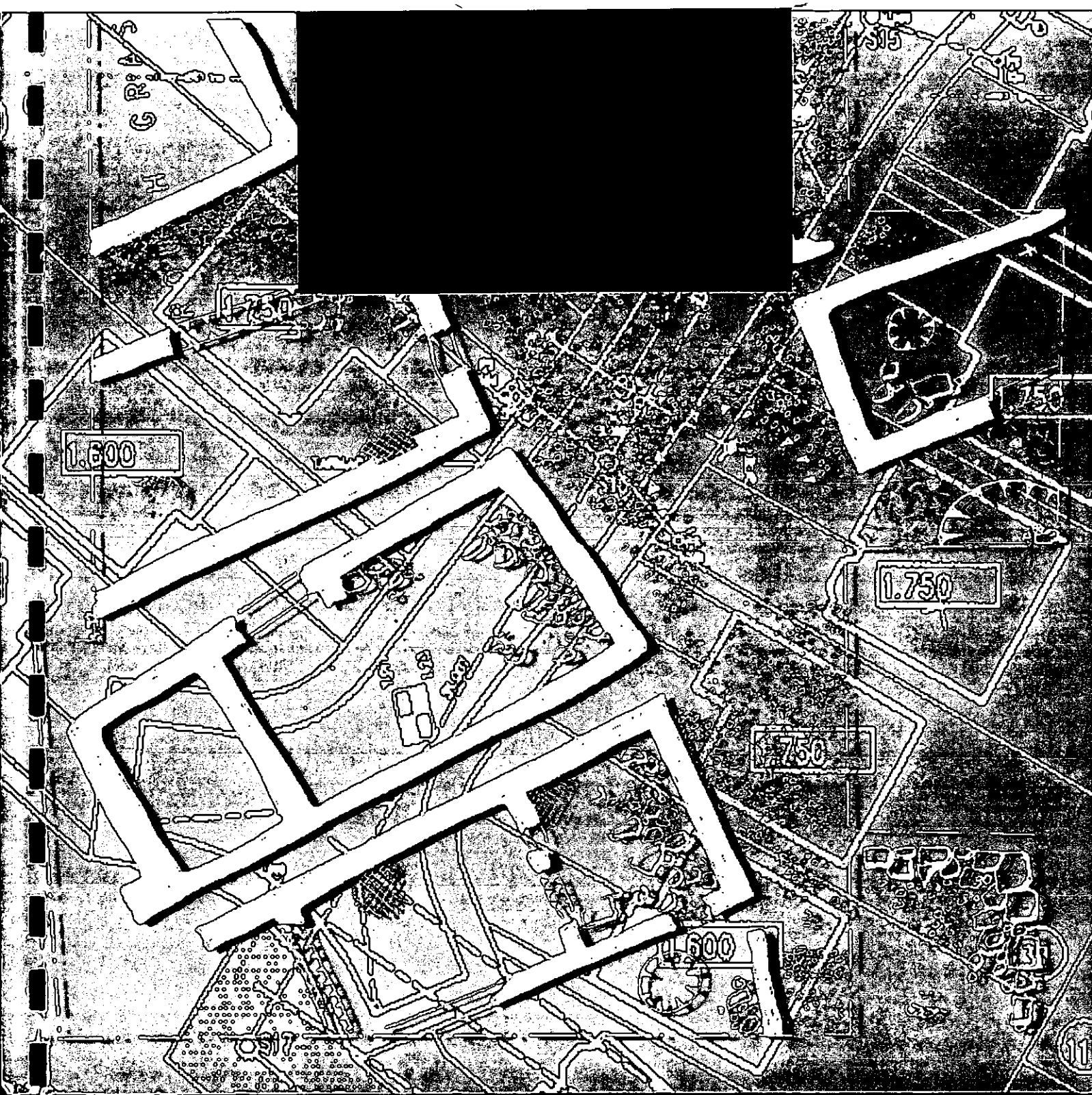

ARCHAEOLOGICAL EXCAVATION REPORT:
PHASE 5, THE BRIDLES, ST BARNABAS ROAD,
BARNETBY LE WOLD, NORTH LINCOLNSHIRE

Site Code:	BBAD
NGR:	TA 0572 0999
Planning Ref.	1999/0644

Report prepared for Keigar Homes Ltd.
by
Mark Allen and Jim Rylatt
Illustrations by Simon Savage (site drawings) and Dave Hopkins (artefacts)

Contributions from:

Dr Carol Allen
Margaret J Darling
Jenny Mann
James Rackham & Andrea Snelling
Mouli Start

Pre-Construct Archaeology (Lincoln)
61 High Street
Newton on Trent
Lincoln
LN1 2JP
Tel. & Fax. 01777 228155

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Illustrations (Part 2)

All illustrations are contained within a separately bound document, Part 2: Illustrations

Appendices

Summary

- *An archaeological excavation for Keigar Homes Ltd. took place on former agricultural land at Barnetby le Wold in North Lincolnshire. This investigation was part of a long-term scheme in advance of a staged residential development that has included a fluxgate gradiometer survey, trial excavations and a previous small-scale excavation that produced evidence of settlement in the late Iron Age, with continuity extending into the Romano-British period.*

- *The current excavation exposed a complex series of field systems, enclosures, roundhouses, stone-built corn-driers and burials, and these features were situated on the eastern side of a former water channel. They have been dated to the later pre-Roman Iron Age and Romano-British period. The site was abandoned by the end of the 3rd or beginning of the 4th century AD.*

- *Earlier activity is indicated by the presence of a single sherd of Late Neolithic pottery, and a small assemblage of worked flints, including a barbed and tanged arrowhead and several scrapers.*

- *The results of this investigation are important in that they provide a relatively rare glimpse into the cultural evolution of a rural settlement, where the inhabitants of this settlement evolved from an Iron Age to a Romanised-British population. All of the archaeological evidence relating to this suggests that a key factor was continuity, not change: there is little evidence that the introduction of Roman control in the mid-1st century AD had any profound effects on the social geography of the settlement at Barnetby, which appears to have remained stable until at least the later 2nd century AD. Even then, traditional dwelling forms were maintained into the later phases of Romano-British occupation, possibly indicating a rejection of Roman architectural styles; a situation possibly also reflected in the ceramic assemblage that is associated with the various phases of occupation. These factors can be taken as indicators of possible passive resistance to Roman cultural imperialism.*

1.0 Introduction

Keigar homes Ltd. commissioned Pre-Construct Archaeology (Lincoln) to undertake a programme of archaeological excavation, analysis and reporting on land situated to the immediate west of 'The Bridles' Phase 4, St. Barnabas Road, Barnetby le Wold, North Lincolnshire (see fig. 1). These works were undertaken to fulfil the objectives of an agreed mitigation strategy that was developed following an evaluation of the land in 2000 and a small excavation and watching brief in 2001.

This report documents the results of the excavation, and it incorporates a series of specialist reports that have been prepared in support of the primary text (Appendices 2 – 7). The text adheres to current national guidelines produced by the Institute of Field Archaeologists (IFA, 1994).

2.0 Site location, topography and geology

Barnetby le Wold lies approximately 5 kilometres north-east of Brigg and c. 15 kilometres east of Scunthorpe, within the administrative district of North Lincolnshire. The village is situated towards the rear of a small valley (part of the Kirmington Gap), branching off the Ancholme valley. The site is on the north side of the village, and it constitutes phase 5 of 'The Bridles' residential development (see fig. 2). Prior to excavation, it was a sub-rectangular unit of agricultural land, approximately 0.65 hectares in extent. The field, of which phase 5 is a component, is bounded by a commercial yard and railway line to the west and north, and a hedge to the south. The eastern boundary is defined by Phase 4 of 'The Bridles'.

The excavation area occupies relatively flat, low-lying land at c. 18m OD. There is a single, roughly linear, north – south topographical feature (a small ridge) that is visible where the ground slopes downwards towards the west edge of the site. The dip corresponds with a former post-glacial channel that was evidenced by a spread of river gravels at the west end of the site.

Drift deposits consist of Quaternary deposits of Vale of York Lake sand and gravels. These mantle Upper Jurassic deposits of the Ancholme Clay Group (BGS 1979).

The Central National Grid Reference is TA 0572 0999.

3.0 Planning background

North Lincolnshire Council granted full planning consent for the erection of 16 dwellings and related infrastructure (Phase 5). This permission was granted subject to the implementation of an archaeological scheme of investigation resulting in the excavation of the entire footprint area (Ref. 1999/0644).

4.0 Archaeological and historical background

The Kirmington Gap forms a natural routeway across the Lincolnshire Wolds that appears to have been utilised throughout the prehistoric period, possibly as far back as the Palaeolithic (May 1976). It is surprising, therefore, that there have hitherto been surprisingly few early finds or records relating to the Barnetby area.

Approximately 400m south-east of the site, a Neolithic polished stone axe was found in 1977, close to Low Farm. These axes are often found in isolated contexts and need not provide evidence for settlement. Rather, it is possible that such axes were deposited in the Neolithic period as votive objects (*q.v.* Bradley 1990), and not casually discarded or lost (the popular explanation of earlier times (e.g. May 1976).

In relatively recent times, a metalworking mould of Bronze Age date was found close to the north-east corner of the site. This is unlikely to reflect casual loss or discard, and is more likely to indicate a metalworking site close by, possibly in the valley base itself. At Kirmington, further to the north-east, a possible early Bronze Age round barrow has been tentatively identified from aerial photographs on the site of a known late Iron Age and Romano-British settlement (Jones and Whitwell 1991). Such monuments are rarely found in isolation, usually forming components within 'barrow cemeteries'. At Kirmington airfield, a Late Neolithic/Early Bronze Age quartzite pebble hammer was found within a pit. This was an archetypal piece with an hourglass perforation, and exhibited signs of use on both ends (Rylatt 2002).

The closest known large Late Iron Age settlement is at Dragonby, approximately 16.3km west-north-west of Barnetby (see fig. 3). Excavations in the 1970's revealed ditched enclosures, an irregular system of roads, and circular structures of timber construction. The settlement may have been an important sub-tribal or clan centre (May 1996).

Later prehistoric and Romano-British sites within the parish are known from cropmark evidence. Approximately 1.5km to the north of the site, for example, on the top of the valley side (fig. 1), are two sub-rectangular enclosures (Samuels 1979).

Of greater regional significance are the cropmarks at Kirmington, approximately 4km to the north-east. Here, a programme of aerial rectification, coupled with fieldwalking (incomplete) has defined an extensive settlement on the valley floor that probably began as a series of sub-circular enclosures in the Late Iron Age, (Jones and Whitwell 1991). Although sherd counts of Iron Age pottery at Kirmington have been relatively low, more than 20 coins (coupled with quantities of bronze objects) indicate that the site was of some importance during the latest phases of the Iron Age. Amongst the bronze objects are an ox-head bowl spout and simpler ox-head terminal, possibly from the handle of a bucket: the presence of a group of bronze votive miniatures suggests the presence of a Late Iron Age and possibly an early Roman shrine (Leahy 1980).

Yarborough Camp on the north Wolds overlooks Kirmington. This small enclosure, defined by extant banks and ditches, may be of Iron Age date (Whitwell 1992).

During the Roman conquest of lowland Britain a fort was built over the site of one of the earlier enclosures at Kirmington. This was eventually superseded by a major settlement, comprising rectilinear enclosures and droveways. Although unexcavated, Romano-British pottery and building debris has been reported from the site, along with numerous metal objects, including brooches, strap ends, bracelets, spoons, and a coin hoard totalling some 10,000 3rd Century AD types (*ibid*).

In 1979, two Romano-British pottery kilns were investigated on Elsham Top prior to construction of the M180 motorway (NGR TA 050 110). The kilns were producing grey ware vessels in the late 3rd to mid-4th centuries AD (Samuels 1979).

Roman activity in the vicinity of Barnetby itself was previously suggested by quantities of surface and other artefacts found at various locations. Coins were found in a garden to the south of the current site, and pottery of 2nd and 3rd century date was recovered in 1913 during the construction of a tunnel beneath the railway. North-east of the development site, a scatter of Roman pottery was found on Knabs Hill, c. 750m away, and an unquantified number of Romano-British finds have been recovered close to the current site by metal detectorists.

The site that is the subject of this report was evaluated for its archaeological potential in 2000; extending to development phases 4 – 6 (see fig. 2). A fluxgate gradiometer survey identified significant levels of magnetic variability across the site, although relatively little of this was archaeologically diagnostic (Rylatt and Bunn 2000). This was compounded by the results of a second, much smaller survey, where traverse intervals were decreased from 1.0 to 0.5m (Bunn & Palmer-Brown 2001). Some magnetic anomalies did appear to be of potential archaeological significance, but these were relatively low in number.

An intrusive evaluation in October 2000 exposed remains dating mainly to the late Iron Age and early Roman period (Allen and Palmer-Brown, 2000). The majority of these features appeared to concentrate towards the western part of the site, and they included a suspected Iron Age roundhouse, and ditches and gullies of both Iron Age and Romano-British date. Medieval boundary features were exposed towards the eastern part of the site.

A small excavation within the Phase 4 area identified activity primarily centred upon the 2nd century AD, with lesser quantities of material reflecting limited activity in the preceding Iron Age and continuity into the 4th century AD (Allen 2001). The apparent thrust of activity in the 2nd century centred on four inter-cutting cigar-shaped corn-driers. These appeared to reflect seasonal activities: temporary structures that were built prior to harvesting. Variations in orientation may have reflected prevailing wind directions at the time of construction. Associated with the driers was a stone surface, possibly a threshing floor or workshop surface.

5.0 Objectives and methodology

It was a conclusion of a preceding excavation report (Allen 2001) that the wider site had significant archaeological potential, and that further development would impact upon the Late Iron Age and Romano-British remains (preservation *in situ* was not a

viable option, given the relatively shallow depth of the archaeological remains from existing ground level).

To mitigate against the effects of development, the North Lincolnshire SMR Office recommended that the archaeology should be excavated under controlled conditions, and that the results of the investigation should be presented in a detailed report, or series of reports.

An archaeological project design for phase 5 (to include some further evaluation of phase 6) was prepared by Pre-Construct Archaeology (Lincoln), and this document underlined a series of priorities:

- to recover as much of the plan of the remains as possible and to sample or fully excavate features and deposits.
- to provide a context for the artefacts that have been recovered from this area by detectorists.
- to recover domestic pottery and other finds that would allow dating of the site, and an assessment to be made regarding the functional use of the settlement.
- to study the site within its landscape context.
- to recover data that would provide information relating to the social character of the settlement, if possible, its status, function and economy.

The area investigated was approximately 135m north – south, by 55m east – west (see fig. 2).

At the start of works, a 360^0 excavator fitted with a 1.6m toothless blade was used to remove all topsoil and subsoil, in spits not exceeding 0.2m in depth. The removal of these deposits was monitored to ensure that archaeological features were not needlessly truncated or destroyed. All further excavation was undertaken by hand.

A rigid grid was established with reference to the national grid, and a pre-excavation plan of all earth-cut remains was prepared to a scale of 1:50. Thereafter, a defined programme of selective intrusive investigation took place in accordance with the project design.

Archaeological features and deposits were sample, or fully, excavated to determine their nature, date and significance (excavated sections indicated on fig. 4), resulting in the production of written descriptions on standard context record sheets, and complementary scale drawings in both plan and section formats. A photographic record (colour sides and, black and white prints) was maintained throughout the investigation, and selective prints have been reproduced at the end of this report, including 2 aerial views (Appendix 1, plates 1 and 2).

Artefactual remains (eg pottery, animal bones, metallic finds) were recovered from stratified and unstratified contexts and, following completion of the excavation, were

washed and processed at the offices of PCA, prior to submission to researchers specialising in the examination of archaeological materials.

An environmental archaeological consultant (DJ Rackham) was appointed in advance of the investigation to devise and advise a programme of palaeo-environmental sampling.

A series of specialist accounts have been included as independent appendices to this report, and the general conclusions of such analyses have been integrated within the main text.

An experienced archaeological team of fourteen individuals undertook the excavation over a period of twenty-five days, between the 17th September and 19th October 2001. A three-day extension (22nd – 24th October) was conducted using a reduced team of three.

Presented below is a straightforward account of the major archaeological phases, and this is followed by a discussion of the evidence, drawing from a variety of sources. Illustrations that accompany these sections are separately bound for convenient reference, and the location of each of the illustrated section drawings can be seen on the individual phase plans (fig.'s 5, 13, 28, 38, 50, 63, 78, 111, 117).

6.0 Excavation results

Across the whole site the uppermost deposit was a dark grey clay-silt ploughsoil (001), 0.3 – 0.4m thick. Beneath this was a well defined subsoil (002), 0.25 – 0.4m thick, comprising mid brown sandy silt. This colluvium, or hillwash, was derived from the valley slope to the east of the site. Although previous investigations had suggested a Romano-British date for this material, the recovery of later objects within the deposit by metal detector suggests that the hillwash was still accumulating in the medieval period. The finds include a medieval ampoule, silver cross penny and medieval buckle (See Appendix 4).

Beneath the colluvium, geological deposits comprised glacial sands and gravels (003). At the west end of the site a spread of chalk river gravels appeared to define a post-glacial stream or palaeochannel (Rackham *pers. comm.*). These were overlain by localised alluvial deposits, representing fills that accumulated within this channel, which was nearing the close of its life during the Late Iron Age (see below).

The relative chronology for the site (i.e. structural phasing) is based predominantly on stratigraphic evidence; coupled with pottery dating and spatial distribution. Some features remain completely undated, whilst others have been dated to a general cultural period only. Nevertheless, at least eight structural phases have been identified during the post-excavation process:

Phase I:	Later pre-Roman Iron Age	(c. C3rd BC – Mid-C1st AD)
Phase II:	Late pre-Roman Iron Age	(c. C3rd BC – Mid-C1st AD)
Phase III:	Late pre-Roman Iron Age	(c. C3rd BC – Mid-C1st AD)
Phase IV:	Latest pre-Roman Iron Age	(c. C3rd BC – Mid-C1st AD)
Phase V:	Early Romano-British	(?C1st – C2nd AD)
Phase VI:	Romano-British	(C2nd – C3rd AD)
Phase VII:	Romano-British	(mid C3rd AD)
Phase VIII:	Romano-British	(late C3rd – C4th AD)

A small assemblage of worked flint and a single sherd of earlier prehistoric pottery show some pre-Phase I activity, and this is summarily considered below.

6.1 Pre-Phase I: Late Neolithic/Early Bronze Age (c. 3500 – 2500BC)

A small assemblage of worked flint and a single sherd from a Mortlake pottery vessel (Peterborough Ware) may be taken as evidence of temporary occupation at or close to the site.

Although identifiable pre-Iron Age features were not exposed within the excavated area, the occurrence of worked flint and a single sherd of Neolithic pottery is evidence of some form of earlier prehistoric activity within this area of the Kirmington Gap.

The worked flints comprise a small group of tools and waste; including a barbed and tanged arrowhead and a scraper. The majority of artefacts were finished tools, with few fragments representing debitage from knapping (Appendix 6). The knapping process probably took place at distance from the site, with this small group probably indicating some form of occupation either on the site itself or in its immediate environs. The low number of artefacts may be more indicative of one or more temporary camps, rather than any kind of permanent settlement.

The Neolithic rim sherd was recovered towards the south-west corner of the site, within a former water course (see below, Section 6.2 below): it comprised a moderately abraded rim with corded decoration, identified as part of a Mortlake style Peterborough Ware vessel (Appendix 2). Vessel fragments such as this are often selectively deposited within structured contexts (Allen & Hopkins 2000). Its stratigraphic position within the alluvial fill of the channel suggests that it is in a secondary context. It is conceivable that the stream channel towards the west of the site had eroded an earlier prehistoric feature; removing the sherd from its primary context and depositing it as part of an alluvial build-up (004) that formed in the Romano-British period (Phase V). The general absence of coarse inclusions within this alluvium, however, suggests that this was a slow-moving stream that was unlikely to have transported heavy objects any great distance. It is therefore possible that the

sherd was redeposited in spoil generated by the creation of features near the channel during the Roman period.

Taken in isolation, the evidence could suggest that a cultural hiatus of perhaps 2300 years occurred between the Neolithic period and the apparent resurrection of human activity in the later Iron Age. This would probably be a naive interpretation, however, as the valley would almost always have been a rich and productive area for the exploitation of natural resources throughout this lengthy period of time.

The relative absence of Bronze Age and Early/Middle Iron Age material at the site indicates only that occupation within the immediate site environs did not take place, or that it has not resulted in the deposition of material remains. In fact, at least one Bronze Age object has been recovered in the past (see Section 4.0 above), and Early/Middle Iron Age settlement sites are notoriously difficult to detect by standard archaeological methods.

Only one earth cut feature, a pit, context [387], may have pre-dated the earliest phases of Late Iron Age occupation. This feature was close to the former stream channel at the western end of site (see fig. 9). Its fill, (388), contained one Late Neolithic to Early Bronze Age worked flint, although the possibility that this was residual must be entertained.

6.2 Phase I: Later pre-Roman Iron Age (c. C3rd BC – Mid-C1st AD): see fig. 5

Late Iron Age activity at the site commenced with the construction of an irregular enclosure ditch, an L-shaped corner of which was exposed within the area of investigation. During the life of this ditch, the stratigraphic evidence suggested that a shallow grave was cut into its base and the body of a mature woman was deposited face down with her wrists and ankles tied in the small of her back. Her head was probably removed at the time of burial, and this was deposited several metres away in a shallow pit. Although the stratigraphic evidence places this burial in the Iron Age, decapitation burials are virtually unknown from this period, and it is hoped that a forthcoming radiocarbon date will provide confirmation. It is likely that the enclosure ditch itself defined a farmstead; situated largely to the south of the excavated area. Several gullies to the north may be the remnants of a contemporary field system. A stream channel extended NNW-SSE to the west of these features.

Enclosure 1

Ditch [098]/[046] was quite wide (1.45 – 2m) and shallow (fig's. 6 & 7). In plan, the exposed component was broadly L-shaped, extending northwards from the south section face, and then sharply veering to the east, disappearing beyond the south-east corner of the trench. Nine sherds of Iron Age pottery were recovered from the excavated sections, with eight of these coming from the northern arm. Generally, this finds assemblage is of a typically domestic character, suggesting that the ditch could well have enclosed a series of internal structures, situated somewhere to the south of the excavation.

Inhumation [088]
The stratigraphy suggested that, during the early life of the ditch, a shallow grave was cut into its base, close to the south section of the excavation. A mature woman (27 – 49 years) had been placed on her front with her wrists and ankles tied together in the small of her back, (090), see plate 4. Her right foot was articulated, but not in its normal position, and may have been removed at the time of, or soon after, death. The woman's head had also been removed; this may have been at the time, or soon after, the point of death.

A human skull with articulated mandible, (116), was found in a shallow pit, [115], c.3.5m to the north of the body (see plate 5). It seems likely that this had originally belonged to the woman and had been separately buried (the two sets of skeletal remains appear to have been of a similar age at death, but it was not possible to establish a conclusive relationship).

Burials of Late Iron Age date are extremely rare throughout Lincolnshire and North Lincolnshire, and the context of [088] should be treated with caution. It relies solely upon stratigraphic information, and the possibility that soil leaching and other post-depositional processes have had a corrupting influence must be entertained. Furthermore, it should be noted that there are a series of east-west Romano-British burials towards the south of the excavation in Phase VII: the possibility that the decapitation burial is also Phase VII is real.

Gullies
Within the north half of the site, several irregular gullies were truncated by Phase II features. It is clearly possible therefore that these features represent elements of Phase I activity, although a 'pre-Phase I' origin cannot discounted.

Gullies [337]/[390], [476] and [763] were all shallow (c. 0.1m – 0.16m); see fig's 8 - 11. Their fills were relatively clean, and all of the excavated sections were devoid of artefacts. The poor survival of these features renders interpretation difficult. They may once have formed part of a system of very small fields and paddocks. The lack of artefactual evidence suggests perhaps that these features were at distance from areas of direct habitation, or that they were created and utilised at a time when ceramics were in relatively limited circulation (possibly even during an earlier phase of the Iron Age).

Watercourse (see fig. 12, plate 6)
A broadly linear band of alluvium, exclusive to the west side of the excavation, appears to have accumulated throughout the Later Iron Age and into the Roman period. These deposits had accumulated within a relatively low-energy stream channel, depositing medium-coarse sands and silts, (651). It was not possible within the time available to plot the exact course of the channel during each phase of its development, although it evidently meandered gently in a NNW – SSE direction.

6.3 Phase II: Later pre-Roman Iron Age (c. C3rd BC – Mid-C1st AD): see fig. 13

The enclosure of the preceding phase was superseded by an extensive curvilinear ditch, the western end of which terminated adjacent to the stream channel. A contemporary rectilinear field system appears to have developed to the north. A group of pits located towards the north-east corner of the site also appear to have been associated with this system, and possibly indicate contemporary settlement to the north/north-west of the area that was investigated.

Boundary ditches
The narrow curvilinear ditch at the south end of the excavation [007]/[086] extended from the south-east corner of the site westwards (fig. 14), terminating adjacent to the watercourse. It was approximately 0.4m wide and 0.3m deep, and its grey/brown primary fill, (042), contained three sherds of Iron Age pottery. Above this, its tertiary fill, (055), produced one sherd of the same date. Although this feature had truncated the corner of the Phase I enclosure ditch, it curved in such a way as to suggest that it was respecting and reiterating the pre-existing east-west landscape division.

The curvilinear symmetry of this ditch is mirrored by gully [110] (and its probable westerly continuation [246]) situated approximately 24m to the north. Gully [110] was c. 0.6 – 0.83m wide and 0.2m deep. Both features are likely to represent contemporary elements of a field system, which differs from the rectilinear elements immediately to the north. Gully [106] appeared to be a contemporary southerly offshoot of [110] (see fig's. 16 & 17).

Field system (see fig.'s 18 - 23)
A series of linear ditches/gullies situated in the northern half of the site were truncated by Phase III features and had themselves cut through the gullies that were tentatively grouped into Phase I. Gullies [322], [474]/[725] and [694] were orientated from north to south, and appeared to form the primary axis of a rectilinear system of fields, with gullies [722] and [555], probably sub-dividing the long strips into manageable small plots for cultivation. These features were all filled with sandy silt deposits of varying hues, with some chalk gravels. None contained any artefacts.

Pit group
A group of four shallow pits was exposed to the immediate north-east of the field system.

Pit [609]/[611], which was partially truncated by Phase III ditch [500], was sub-oval in plan with fairly steep sides and an irregular base (fig. 24, plate 7). A red deer antler pick (Registered Find No. 17) was recovered from its sandy silt backfill (610)/(612). This tool had been utilised, but was still functional and in relatively good order. Consequently, it is possible that this was a deliberate, structured votive deposit.

Pits [541] and [543] contained fragments of un-worked, burnt flint, with [541] also possibly having a clay lining to its sides and base. These pits were shallow, and both of a similar diameter (c. 0.75m) (fig.'s 25 & 26).

Attributing functional interpretations is problematic, as the lack of direct spatial associations or related artefacts, such as pottery, hampers interpretation. Pit [541] could have been used to contain and/or heat water, and the fire-shattered stones found within it would lend weight to this interpretation. Pit [543] also contained burnt stone, although there was no evidence that it had ever been lined. [539] was only 0.12m deep, with steep sides and a flat base. No heat-shattered stones were found within its fill, (538) (fig. 27).

As water and fire/heating appear to be the only determinable associations, it is possible that these features were used as trough hearths for boiling food. The absence of associated animal remains, the likely residues of this process, may merely reflect the acidity of the surrounding soils. If, however, these features were trough hearths, the context of their use has to be considered. They appear to be situated within a field system, either at the edge of, or at some distance from, contemporary settlement. This does not seem to indicate a function within a routine domestic environment. Rather, it seems to suggest either some form of agricultural/industrial processing carried out away from the dwellings, or more nebulous, possibly 'ritual' activities. The latter need not amount to large-scale events, but could merely reflect tasks such as food processing for particular forms of feasting. Furthermore, it should be noted that the question of whether these pits represent one event, or four smaller episodes played out at the same locale remains unresolved.

proximity to round house in rural track. ?

6.4 Phase III: Later pre-Roman Iron Age (c. C3rd BC – Mid-C1st AD): see fig. 28

The southern curvilinear ditch of the previous phase was re-aligned southwards, and its internal area was divided by a connecting gully. A roundhouse was constructed to the north of the principal ditch, and re-aligned field systems appear to have developed to the north of this building.

Southern boundary ditch (?enclosure)

Ditch [051]/[123] superseded the Phase II curvilinear boundary, [086]/[007], running along the southern end of the site. This new ditch was comprised of two obliquely-angled straight sections, and appeared to respect a ring gully to its north (see below). It was shallow (0.25m deep) with gradually sloping sides and a flat base. Fill (052) comprised brown silty sand with occasional flecks of charcoal. A single sherd of Late Iron Age pottery was recovered from this context.

Extending southwards from the ditch was a contemporary internal gully, [058]. This was shallow, with steep sides and a flat base (fig. 30). Again, [051] and [058] appear to replicate and reinforce the original Phase I enclosure boundary, [046]. This level of repetition suggests a high level of continuity with respect to the division of the landscape and understandings of social space.

The fill of [058] was an orange/brown sandy silt that yielded three sherds of Iron Age pottery, and one sherd that could either be a fragment of Iron Age fabric or a piece from a 3rd century AD Dalesware jug. This sherd is more likely to be Iron Age than Romano-British, but either chronology is a possibility (MJ Darling, *pers. com.*)

Building 1 (Ring gully [022] – see fig.'s 31 & 32)
Later disturbance had resulted in the destruction of the south-western half of gully [022]. However, sufficient survived to demonstrate that the feature had had an internal diameter of c. 10m. The sides of the gully were quite steep, and it was filled with brown silty sand, (023)/(039)/(245). A secondary fill, (244), comprising brown/grey sandy silt was noted in one excavated section - above (245). Nineteen sherds of Late Iron Age – early Roman pottery were recovered from (039), at the south-east quadrant of this feature.

A shallow hollow [041], was tentatively attributed to this phase due to its location within the area enclosed by ring gully [022]. It was approximately 1.3m long, 0.9m wide and 0.1m deep (fig. 33). It was filled by a clay deposit that may have represented, or included the base of a lining. Excavation demonstrated that this fill incorporated two sherds of Late Iron Age pottery, along with flecks of charcoal and some animal bone. The location, shape and size of the feature, along with the potential clay lining, raises the possibility that [041] represents the remains of a truncated trough hearth situated within Building 1.

Rectilinear field system
The eastern part of the site, to the north of Building 1, had been enclosed to form one or two small fields or paddocks. The primary division was a north to south aligned ditch, [290], [359], and [704]/[705], which separated the field from the land flanking the stream (fig.'s 35 & 36). Another section of ditch, [736], appears to represent a northerly continuation of this boundary along the side of a second field. The southern edge of the first field was defined by another obliquely-angled ditch [728]/[730] and [108], running c. 12m to the north of Building 1 (see fig. 34). The eastern edge of the southern field was situated outside of the trench. The ditches defining this field varied from 0.42m to 0.74m wide, and were between 0.12m and 0.24m deep. Unfortunately no dateable artefacts were recovered from any of the sections that were excavated. However, some of these ditches, particularly [705]/[704] and [736], had been heavily truncated by the ditches of the succeeding Phase IV field system.

An east – west ditch, [500], situated towards the northern end of the excavation, appears to be associated with this phase of activity, forming the division between the northern and southern fields. The western end of this ditch cut the edge of the fills of Phase II pit [609]/[611]. However, the relationship between these two features suggests that the ditch respected the pits, raising the possibility that relatively little time had elapsed between the creation of these different elements. Excavation of [500] demonstrated that it was approximately 0.7m wide and 0.20m deep and contained grey sandy silt. The excavated sections yielded no finds, although this feature produced the largest molluscan assemblage. The species associated with this assemblage are predominantly associated with grassland/open countryside (see Appendix 5).

6.5 Phase IV: Latest pre-Roman Iron Age (c. C3rd BC – Mid-C1st AD): see fig. 38

A possible enclosure, which contained two large storage pits, was constructed at the south-east corner of the excavated area. The associated field system was redefined again, this time forming a more regular rectilinear system. The northernmost of the field ditches contained a moderately large assemblage of pottery, suggesting that some form of domestic settlement may have been situated immediately to the north of the excavated area.

Enclosure 2
An L-shaped ditch, [016]/[056], was exposed at the south-east corner of the excavation (fig.'s 46 & 47). This may have been a continuation of the field system to the north, or it could represent the north-west corner of a settlement enclosure. The latter explanation is favoured, as this L-shaped feature was offset from the alignment of the north-south field ditches, and the enclosed area contained at least two large pits (see below). The north-south component, [056], was widest and deepest and contained an homogenous yellow/brown silty sand. Six sherds of Iron Age pottery were recovered from two of the four excavated sections ((024) and (054)), and cattle vertebrae and a horn core were found in (024). One abraded sherd of Romano-British pottery from fill (155) is almost certainly out of context.

Two possible storage pits, [044] and [699] (fig.'s 48 & 49), were excavated within the enclosure area. Pit [044] had near-vertical sides and a rounded base, being 0.75m by 0.67m in plan, and 1.09m deep (plate 8). It was filled with three silt-sand deposits, (047), (048) and (043), which together contained four sherds of Late Iron Age pottery.

Pit [699] was 1.0m in diameter, and approximately 0.7m deep (plate 9). The feature had steep sides and a flat base. Nine sherds of Late Iron Age pottery were recovered (six from soil samples) from its brown sandy silt fill, (700).

Field system (fig.'s 42 - 45)
The Phase III field ditches were succeeded by a more regular and structured system. The north-south primary axis was defined by two parallel ditches [656] and, [343]/[460], [513] and [696]/[697]. The lateral divisions were created by [571], [619], [511] and [515]. The features were all filled with sandy silts of varying hues, which contained little datable artefactual material. However, the subsequent Phase V features had cut elements of this group.

Together the ditches defined elements of five fields. Only one of these, which was situated toward the north-west corner of the system, had boundaries defining all four sides. It appears that there were entrances at the north-east and south-west corner of the field. The provision of corner entrances is a feature generally indicative of stock management (Pryor, 1998).

Ditch [515] was situated at the extreme north end of the site and is likely to have formed a component of the Phase IV field system. It had a shallow concave profile and rounded base, measuring 0.95m wide and 0.3 – 0.35m deep. It differed from other ditches of this phase in that its fills contained a comparatively large pottery assemblage. This ceramic material included roulette decorated sherds and other forms

that are comparable to the fine wares recovered in large quantities from the extensive Late Iron Age site at Dragonby.

6.6 Phase V: Early Romano-British (?1st – 2nd Century AD): see fig. 50

The earliest phase of distinct Romano-British activity saw the re-excavation and re-adjustment of the previous rectilinear field system. Another roundhouse was constructed within a ditched enclosure in the south-east corner of site. The watercourse appears to have migrated westwards and become shallower, although the surrounding area was probably still boggy.

Enclosure 3
The corner of a ditched enclosure, probably sub-rectangular in plan, was exposed in the south–east corner of the trench. It encircled the eaves drip gully of a circular building (Building 2, see below). The enclosure ditch, [273]/[349]/[789], was filled with brown silty sand, and the excavated sections were devoid of any finds. The ditch was 0.43m – 0.8m wide and 0.35m – 0.64m deep (fig's 51 & 52).

The western edge of the enclosure was abutted by a ditch, [790], that ran westward to terminate close to the edge of the stream. This is likely to have been a lateral boundary continuing the field system situated to the north of the enclosure (see below, and fig. 53)).

Building 2 (Ring gully [076])
Ring gully [076] was of penannular form, and was situated at the north-west corner of enclosure [273]. There was clear spatial relationship between the building and the enclosure ditch, the eastern end of the latter curving around the north-east quadrant of the structure, which provides convincing indications of contemporaneity. Gully [076] had an internal diameter of 9.5m, with an entrance c. 2.5m wide that opened to the west-south-west. It had steep sides, with a flat base, approximately 0.3m in depth (fig.'s 54 – 57, plate 10). Pottery was recovered from each of the excavated sections; predominantly small fragments of Late Iron Age and Romano-British forms.

Field system (fig.'s 58 – 62)
For the fourth successive time, the boundaries of the field system were redefined. While the ditches defining the main north-south axis, [553]/[605] and, [294]/[550]/[658]/[703], followed a very similar alignment to their predecessors, the lateral ditches, [289] and [506], occupied new locations, thus creating fields of different sizes and shapes. These ditches appeared to define two rectilinear enclosures that occupied the western part of the site. The relationship between lateral ditch [506] and the western boundary, [553]/[605], suggests that there was a corner entrance to the field, which would again allude to stock control. Two sherds of Late Iron Age/Early Roman pottery were recovered from [294], which was truncated by a Phase VI ditch, [321].

6.7 **Phase VI: Romano-British** (2nd - mid 3rd Century AD): see fig. 63
This period has been divided into two sub-phases.

Sub-phase VIa:
Initially, in the 2nd – 3rd century, the 'ladder system' of fields appears to have been either replaced or supplemented by several new ditches to create further enclosures. The roundhouse associated with the previous phase may have been redundant, but there is no evidence for a successor within the confines of the site. A possible storage or refuse pit is also attributed to this phase.

Boundary ditches
A north-south aligned linear ditch, [072], redefined the western edge of the curving settlement enclosure boundary of Phase V. It appears likely that this feature was associated with an east-west orientated ditch, [332] (fig.'s 64 & 65), aligned on its northern end. The two ditches did not converge, as there was a possible entrance gap, c. 13m wide, between them. Ditch [072] was 1.84m wide and 0.64m deep with fairly steep sides and a flat base; its fill, (074), contained mid 2nd – 3rd century pottery. Similarly, the fill of ditch [332], contained pottery of mid - late 2nd century date.

Although it is far from clear, it is possible that [072] and [332] formed the north-west corner of a larger, rectilinear settlement enclosure succeeding that from Phase V. It is therefore also possible that Building 2 was still standing, and occupied the corner of the enclosure. However, this proposition cannot be proven, and largely depends upon whether the ditches would have silted up faster than the timber structure degraded.

It is also possible that much or all of the field system to the north-west of the enclosure was still functional, particularly if the ditches were supplemental to hedges or fences. If this were the case, the existing divisions would form a series of small paddocks along the western edge of the field system, while a newly created ditch, [497] (fig. 67), would create two larger fields immediately to the north of the enclosure. Unfortunately, (498), the fill of ditch [497], produced no datable artefacts.

Other features
A large pit, [136] (fig. 68, plate 11), was investigated towards the southern end of the site. This elongated feature (3.75m long, 1.2m wide and 0.79m deep) appeared to have been purposefully backfilled with brown silty sand, (135), a deposit that incorporated nineteen sherds from an early – mid 2nd century rusticated jar.

Sub-phase VIb:
It appears that both the enclosure at the south-eastern corner of the site and the field system to the north go out of use, heralding a significant reorganisation of the landscape.

Post-Alignment 1: fig. 75, plate 12
A regular post alignment extended northwards from the south section for a distance of approximately 11m, [174] – [187]. Each of 16 postholes was approximately 0.4m in diameter, and each incorporated a c.0.2m diameter post-pipe. Posts were approximately 0.5m apart, a distance too close for a simple fence, and they are more

likely to represent part of a timber palisade with narrow gaps. Six sherds of Romano-British pottery in total were recovered from postholes [174], [178] and [182], four of which were clearly identified as mid 3rd century.

Post Alignment 2: fig.'s 76 & 77, plate 13
Towards the north-west corner of the site, a shallow north – south gully was exposed, [765]; more or less on the projected line of Post Alignment 1. Machine clearance had truncated much of this, but it was possible to establish that a linear arrangement of posts continued southwards from the south terminal ([739] – [761]). These postholes appeared to be contemporary with the gully, suggesting that it was in fact a palisade trench for the posts. The post pipes were all circular in plan, c. 0.24 – 0.35m diameter and c. 0.15 - 0.40m deep, with vertical sides and concave bases. They were filled with brown/grey silty sand, and three sherds of pottery of probable 3rd century were recovered from the surface of posthole [761].

Although it was not possible to clarify that alignments 1 and 2 were contemporary, their projections were similar, as are the pottery dates that have been derived from these features.

Other boundary features
A slightly curving, east-west aligned ditch, [104]/[731], was excavated across the northern end of the Phase VIa enclosure (fig.'s 96 & 70). It was approximately 0.25m deep, with relatively gently sloping sides, and its fills, (075)/(102)/(103), contained 3rd century artefactual material. Contemporary material was recovered from a shallow, L-shaped ditch, [321]/[312], which was created to the north of [104]/[731]; fig.'s 71 – 74). This 1.4m – 1.86m wide feature appeared to define two sides to a field. It is possible that the third, western, side of this field was defined by Post Alignment 2. Similarly, the comparable post row, Post Alignment 1, may perform the same function with respect to ditch [104]/[731]. It is therefore possible that the Phase VIb features represent two relatively large fields, or enclosures, that were separated by an east – west aligned droveway, c. 13m wide.

6.8 Phase VII: Romano-British (mid 3rd Century AD): see fig. 78

The field systems that were a persistent element of all the previous phases had disappeared by the mid 3rd century AD. The southern half of the site was divided into a series of sub-rectangular enclosures. Two of these contained stone-built corn-driers, with a roundhouse also having been constructed near the western edge of one. The southern enclosure contained a number of burials, further examples being dispersed across the northern part of the site. A group of pits was also created outside and to the immediate west of these enclosures.

Enclosure 4: fig.'s 79 - 81
A large, probably sub-rectangular, enclosure that was over 35m wide from east to west, was partially exposed at the southern end of the trench. The eastern ditch, [009], was notably deeper than the northern boundary, [064], which separated Enclosure 4 from Enclosure 5; fig. 80. A c. 2.5m wide entrance, situated slightly to the west of centre in the northern boundary, enabled direct movement between Enclosures 4 and 5. The ditches defining the north-west corner, [127]/[654], were relatively insubstantial.

Building 3: fig. 82
A curvilinear eaves drip gully that had once surrounded a roundhouse [216]/[652] was situated at the north-west corner of Enclosure 4. It encircled an area less than 8m in diameter, with an entrance probably facing toward the south or east. The gully varied in profile from V-shaped to U-shaped, measuring c.0.4m – 0.48m wide and c.0.25m – 0.3m deep. The excavated section of its grey sandy silt fill was devoid of artefacts.

Square Corn-drier: fig.'s 84 – 88, plates 14 & 15
Near the eastern edge of Enclosure 4 was a square corn-drier, approximately two thirds of which was exposed. This stone structure was 4.6m long and more than 4.4m wide. The base of its construction trench was c.0.37m below stripped ground level, and contained the surviving lower two courses of the walls. The eastern wall of this structure comprised roughly dressed chalk blocks bonded with orange/brown sandy clay, (153). The west wall was similar, but contained fewer chalk blocks. The ground plan comprised a central flue attached to a stoking area, with side chambers extending around two plinths. The north plinth consisted of a 'block' of orange/brown clay, faced with dressed chalk blocks (154). The clay (?local Jurassic clay) was similar to that used in the walls. The plinths had probably supported a wooden drying floor. All flues, and the stoking area, were fully excavated, and clear traces of burning were observed within the central flue chamber; lenses of charcoal and ash filled the bases of all flues: (268), (281), (302) and (428).

At the end of its life, this structure was deliberately demolished, being reduced to ground level, with recyclable stone being removed and probably reused elsewhere. The flue chambers were then backfilled with demolition debris. Pottery and fired clay from these deposits has been dated to the mid 3rd century AD.

One caution that is applicable to each of the driers discussed in this report is that there is some evidence that the identification of these structures solely as corndriers may be misleading (see Appendix 7), and there is some doubt as to whether or not they could economically be used for the effective drying of cereals. As an alternative, it has been suggested that these common structures were malting floors: some support for this hypothesis derives from the Barnetby samples, which contained a percentage of sprouted grain. None of the sprouted grain was barley which, in a modern context, would argue against the structures being used for malting purposes, although wheat could well have been used for brewing in antiquity.

Seven soil samples were taken from this structure, and an analysis of the processed flots indicates that these were made up of 65% cereal grain, with evidence for both wheat and barley. Wheat was dominant in five of the samples, barley in two.

Enclosure 5
This was a contemporary enclosure adjoining the northern side of Enclosure 4. It was smaller, and approximately square in plan, measuring 25m by 22.5m. The enclosure ditch was uneven in profile, varying in width from 1.15 – 1.43m (cut numbers: [122], [256], [276], [415] and [536]); fig. 89. Pottery from the excavated sections was produced during the mid – late 3rd century.

Ditch [330], which was attached to the north-eastern corner of Enclosure 5, may be evidence for a further enclosure situated to the east of the excavated area. Pottery from [330] included a sherd of mid 3rd century Dales Ware that joined with a sherd from pit [484] situated to the west.

T-Shaped Corn-drier: fig.'s 90 – 93, plates 16 - 18
There was a corn-drier within the south-west quadrant of Enclosure 5. This had also been constructed within a foundation pit that was sunk into natural gravels. It had a central, T-shaped flue, the walls consisting of four courses of stone, each being one block wide, which created vertical internal faces. These dressed chalk blocks were stacked rather than interlocked, and were of a high quality, possibly suggesting re-use from an earlier structure.

The primary fill of the main chamber comprised dark grey/black clayey silt mixed with abundant charcoal and ash, (162). This material, which would usually have been raked from the flue after firing, probably represents the residue from the final firing. The basal fill of stokehole [095] was a black fine clay-silt, (097), rich in charcoal.

Two stake holes, [167] and [170], were exposed along the southern and western sides of the stokehole. Both were identical in size (0.12m diameter and 0.08m deep) and had been pushed into two pads of grey clay, (166) and (169), which had been sunk into the base of the stokehole to act as supports. The stakes are likely to have braced some kind of windbreak or baffle used to control the temperature and flow of hot gases within the flue chamber.

At some point, the western arm of the original corn-drier was modified by the addition of a secondary flue, [163], with a further stokehole/rake-out pit, [228], to the west. Flue [163], which was lined with chalk blocks, was orientated east – west and was 1.8m long, 1.0m wide and 0.28m deep. Its base was filled with black charcoal and ash, (164), which was sealed by demolition debris from the superstructure, (165). The rake-out pit, [228], contained a mixture of charcoal and ash, (229), as well as thirty sherds of mid 3rd century pottery.

When the second flue was constructed, a narrow vent was probably added immediately to its north, [781]. This shallow stone-lined chamber was 1.3m long, 0.5m wide and 0.35m deep. It was lined, and capped, with stones, and the stones were sealed with clay, (784). The internal chamber was filled with charcoal-rich black soil.

Following abandonment, the corn-drier was demolished and the main chamber was filled with stiff orange clay and fragments of chalk (demolition debris), (096) and (227).

Two soil samples from the drier were submitted with a view to identifying charred plant remains (Appendix 5); one from the fire pit (sample 3), one from the flue (sample 84). Both contained 74% grain, and in both barley appeared to represent the dominant cereal, representing 66% and 36 % respectively. Wheat was also present in both samples. It has been suggested that sprouted wheat grains were actually used as fuel in the final use of the corndrier.

?Corn-drier [120]/[262]/[557] (see plate 19)
A discrete area of limestone rubble was exposed within Enclosure 5 ([120]/[262]), which was thought to represent debris associated with a former corn-drier. This circular spread of limestone blocks and chunks sealed a Phase V ring gully [076]. The stones were mainly small to medium in size (up to 0.25m x 0.2m x 0.15m) and showed some signs of tooling.

Adjacent to the spread was pit [557] (fig. 103). This was part-filled with silt-sand layers ((579) – (581)), with two medium sized chunks of dressed limestone being recovered from the primary fill, (581). In context with the adjacent rubble spread, this 0.46m deep pit was interpreted as a rake-out pit associated with a second corn-drier within Enclosure 5. Seven sherds of pottery from its upper fill are of possible 3rd century date.

Burnt soil (065)
An extensive black sandy soil with occasional small to medium sized pieces of limestone was machine-excavated towards the south-east corner of the excavation. This 'layer' was originally identified during the previous excavation associated with the Phase 4 development of 'The Bridles' (Allen 2001). The burnt soil is thought to represent dumping and discard from protracted industrial activities, probably associated with the corn-driers. It was probably originally deposited as a mound that subsequently weathered to form a more vague and homogenised deposit across much of the south-east corner of the site.

Enclosure 6
Approximately 11m to the north of Enclosure 3 was a detached square enclosure, [334]/[404]/[416]/[490]/[530]; fig.'s 94, 96, 97, 99 – 102). This feature extended approximately 21m by 20m in plan, and seemed to have an entrance within its southern boundary; a series of gaps along its east side are not thought to represent further entrances, rather they probably result from truncation of the ditch during machine stripping.

There was an absolute lack of internal cut features associated with this enclosure, which perhaps provides an indication that it was used for stock control. A shallow posthole, [468], was exposed on the internal edge of the eastern side of the entrance (fig. 98). This was c. 0.15m deep, and its fill, (469), contained no finds. It is difficult not to conclude that this feature once contained a post supporting a gate that would have ensured that any stock could be prevented from escaping from the enclosure. There is little evidence relating to any specific stock, and the two cattle bones that were recovered from the fill sections are not necessarily helpful. Human bone fragments were recovered from one context, (462). An examination of the molluscan assemblage from the enclosure ditch suggests that this feature was not hedged (Appendix 5), and if it was fenced, there are no associated post holes to verify this.

It is of some interest that the body of an elderly person, probably a woman aged 60+, was buried across the entrance to the enclosure (see inhumation (559) below). The spatial relationship appears to suggest that the grave was deliberately positioned across the entrance, although there was no direct stratigraphic relationship to confirm this. Nevertheless, this could indicate that the deceased had a link with the enclosure, the burial possibly sanctifying and initiating activity within it, or equally, perhaps

representing a symbolic 'closing' or abandoning the enclosure at the end of its utilisation.

A steep-sided circular posthole, [524] was exposed just beyond the south-east corner of enclosure 6 (fig. 95). This was 0.55m in diameter and 0.37m deep, and its fill incorporated limestone chunks that had been used as packing at the base of the post itself, (526). Although a direct relationship between this feature and Enclosure 6 was not established, the recovery of two large sherds of mid 3rd century pottery would suggest a date in phase VII.

Pit group on open ground between enclosures

A cluster of eleven pits was exposed to the west of Enclosure 5, and south-south-west of Enclosure 6 - [249], [379], [392], [394], [396], [402], [425], [471], [484], [485] and [486]: fig.'s 104 - 110. These pits were predominantly round or oval in plan, measuring between 0.72m and 1.7m in diameter, and 0.14m to 0.35m deep. Seven sherds of Roman pottery were recovered from pit [471] (not closely dateable), and two sherds of mid 3rd century pottery came from pit [484]. The purpose of these pits was not established, but their location outside of the enclosures might suggest that they were intended for the disposal of refuse or for certain types of relatively unpleasant industrial processing. The presence of wet ground along the former watercourse to the west mitigates against these features being used for storage of food stuffs.

Inhumation burials (See Appendix 7 and plates 20 - 29)

Eleven inhumation burials have been attributed to Phase VII. Of these, six appeared to form a north – south line running along the eastern edge of, and extending northwards from, Enclosure 6 - (616), (634), (637), (640), (645) and (646). Another, (559), was aligned from east to west and extended across the probable entrance to Enclosure 6. To the south, there was one burial within Enclosure 5, (242), and three within Enclosure 4 - (607), (622) and (626)[1].

Inhumation (616)

This burial lay in a poorly defined grave that was orientated north-south, on the same line as the eastern side of Enclosure 6. It appeared to be in a supine position, and the fragmentary remains were possibly those of a male aged 35 – 44 years. Although very few bones had survived, it was possible to determine that the individual had had a broken lower arm. The break had healed and had probably occurred a number of years prior to death.

Inhumation (634)

The remains were in a poorly defined, heavily truncated grave that was orientated from north to south. Only pelvic fragments and the upper and lower limbs on the right side had survived. It has been estimated that the individual was over 13 years at time of death.

[1] The human remains from burial (622) and the majority of burial (626) could not be located in post-excavation, an absence that cannot be explained.

Inhumation (637)
This shallow grave was truncated by a later burial, (640), which had removed the lower limbs. The body was that of a young to mature adult male (22 – 30 years) standing approximately 1.75m tall.

Inhumation (640)
The grave contained the poorly preserved remains of a mature to older adult (30 – 65 years) with mild osteoarthritis of the right shoulder. This was perhaps an indication of a lifestyle with an emphasis on upper body activities.

Inhumation (645)
This north – south aligned grave was rectangular in shape, and the occurrence of nails in the fill suggests that the body was originally contained within a coffin. The body had been laid out with both arms straight by the sides. The individual (possibly a female) died between the age of 15 and 17 years old. Analyses of the teeth showed that the premolars were affected by *enamel hypoplasia*, a condition that indicates a period of arrest followed by resumed growth. It can be caused by a traumatic episode such as illness, malnutrition or extreme emotional stress, and appears to have occurred when the individual was 4 or 5 years of age. They had also suffered from a condition known as *osteochonditis dissecans* in the right knee. This would have caused considerable pain, making physical activities, even walking, difficult.

Inhumation (646)
This body was on its back in a rectangular north – south orientated grave. The arms lay straight and the legs were crossed at the ankles. The remains were probably those of a male aged 40 – 50 years old, measuring 1.65m in height. At the time of death he had few teeth, and those that survived were very worn. He also had osteoarthritis in his left forearm and right hip, and this would have caused discomfort, possibly even a limp. Otherwise, he was a physically strong and active man prior to death.

Inhumation (559)
This burial was within a rectangular grave placed across the entrance to Enclosure 6. The body, probably a female, lay in a supine position and was orientated east – west, with the left arm resting over the pelvic area and the right across the chest. Both knees were slightly bent and drawn up towards the left side of the body. The woman was 60+ when she died and was 1.47m tall. Carious or periodontal disease had probably resulted in the loss of all teeth prior to death. She was also afflicted with spinal joint disease and osteoarthritis, although these would not have caused any severe problems.

Inhumation (242)
This crouched burial was placed within an east – west aligned grave inside Enclosure 5. This was a young child aged 1 – 3 years, which had been heavily truncated by later activities. Consequently, little could be concluded from the remains.

Inhumation (607)
This burial was situated towards the north-eastern corner of Enclosure 4. It was that of a child aged 6 – 13 years, which had been placed in a small oval grave that was orientated from north-west to south-east. The skeletal material was fragmentary and incomplete, although sufficient survived to suggest that the body had been placed in a supine position.

Inhumation (626)
This was located towards the northern edge of Enclosure 4. The majority of the human remains could not be located in post-excavation, although the excavation records clearly state that an almost complete skeleton was retrieved. Only a skull and the first four vertebrae were submitted for analysis, these belonging to a juvenile to younger adult male (16 – 24 years) with dental disease in almost all teeth. An abscess and accompanying carious lesion would have been very painful, and would perhaps have resulted in diminished immunity. His poor dental health may have developed from a diet rich in sugars and/or carbohydrates.

6.9 **Phase VIII: Romano-British** (late 3rd – 4th century AD): see fig. 111

The final phase of Romano-British activity is represented by a single settlement enclosure located at the south-eastern corner of the trench. A circular building was situated inside the enclosure, with another possible structure lying immediately to the north. A single crouched inhumation and a cremation were also attributed to this phase, as they were both contained in features that had cut through Phase VII features. It is possible that elements of the previous phase, such as Enclosures 5 and 6, continued in use alongside the newly created Enclosure 7.

Enclosure 7: fig.'s 113 - 115
The north-west corner of an enclosure, [037]/[028], which was probably sub-rectangular, was exposed at the southern edge of the trench. The east-west aligned element, ditch [028], ran along the southern edge of the partially filled ditch, [064], that had divided Enclosures 4 and 5 during the previous phase of activity. This relationship suggests that [037]/[028] represents a remodelling of Enclosure 4. At the same time many of the other existing elements of the landscape are likely to have been retained.

Ditch [028] was moderately steep sided, and the fill was found to contain pottery of mid 3rd – 4th century date, along with some residual sherds produced in an Iron Age tradition.

Building 4: fig. 112
Situated within Enclosure 7, the western edge of this ring gully overlay the remains of the square corn-drier that had been constructed and used in Phase VII. Approximately 60% of this gully, [005], was exposed and had an internal diameter of c. 10.3m. Its fill was very dark and appeared to incorporate large quantities of burnt material, which was probably waste derived from episodes of crop processing during the previous phase. A sherd of probable Iron Age pottery was recovered from (006), the fill of the gully; its form/date suggests that it had been redeposited.

?Building 5: fig. 116
A short section of curvilinear gully, [681], was exposed c. 5m to the north of Enclosure 7. This feature had steep sides and possibly represented the remains of an eaves drip gully surrounding another circular structure, of c. 5m diameter. Pottery recovered from its fill was of 3rd – 4th century date.

Cremation (093): fig. 83
A human cremation, (093), was found within a shallow pit, [094], that had been cut into the fill of the terminal of a Phase VII ditch, [122]. This cremation was not contained within a pottery vessel, and is likely to have either been contained within an organic bag or to have been a loose deposit placed straight into the ground. Only a small amount of cremated bone was present, the fill of the pit also containing a single sherd of pottery and an iron object, possibly a nail.

Cremations were commonly associated with the Roman military in the north of England. Such burials are characterised by a small quantity of cremated bone, which would have been placed in a small square hole, and was often accompanied by pyre debris, and occasionally with small pieces of pottery (Taylor 2001). It seems unlikely that the cremation recovered from Barnetby could be indicative of a direct military presence, as the archaeological features exposed represent elements of a relatively small farming community. However, it is not inconceivable that this deposit represents the remains of an individual who died elsewhere in Britain or the wider Roman Empire. Such a person may or may not have been in the Roman army, but regardless, may have had a strong desire to be buried in the place they were born and/or brought up. Cremation may have been the easiest means of achieving this, reducing the corpse to a compact and easily transportable form. Indeed, the presence of only small quantities of cremated bone in military contexts might indicate that it was common for the pyre remains to be divided, part being buried at the place of death, with other components being transported to places of significance to the deceased, effectively reiterating their personal biography. Alternatively, the deceased individual may have had no connection with the military at all. If this were the case, cremation would have been chosen by the deceased individual, or their next of kin, and would be more likely to have reflected a particular set of religious beliefs.

Inhumation (219) : plate 29
A crouched burial, (219), was found within a sub-rectangular pit, [220], to the north of Enclosure 7 and to the west of Building 5. The grave contained a 3 – 5 year old who had been placed on its right side, and was orientated from east to west, with its face to the north. The burial was not associated with grave goods, but the crouched posture almost certainly reflects a continuation of pagan customs. Such practices were condoned up to 395 AD, when paganism was banned (Taylor 2001). However, it is not inconceivable that some individuals or communities would continue to utilise and implement these practices as a form of resistance to official imperial policy.

7.0 Un-phased Iron Age and Romano-British features: see fig. 117

A significant number of features represented elements of the Late Iron Age and Romano-British occupation of the site, but could not be directly attributed to any of the phases into which activity has been divided.

Building 6 (Ring gully [133]; fig.'s 118 & 119)
Approximately half of the gully survived, as later activity had removed the southern arc of the feature. Although this may have been an eaves drip gully, the feature was steep-sided suggesting that it had been a foundation trench for the wall posts. It was c. 0.6m wide and 0.04 – 0.26m deep, and had an internal diameter of c. 9.7m. Three sherds of Iron Age pottery were recovered from the fill of the excavated sections.

Pit [025]: fig. 120
A shallow pit at the south-east corner of the trench. It was lined with grey/yellow clay, (027), and was filled with brown sandy silt, (026). The presence of a lining suggests that this undated feature may have retained water.

Pit [112]
This rectangular pit contained a singe sherd of 2nd – 3rd century pottery, which suggests that it should be a product of activity associated with Phases V, VI or VII.

Posthole [226]: fig.123
A posthole, c. 0.9m in diameter and 0.47m deep, with near vertical sides, was exposed in the south-eastern quadrant of the site. The fill of [226] was truncated by a Phase VII feature, posthole [223]. If the Phase VII posthole represented a direct replacement of the early feature, it would suggest that [226] would belong within Phase VI.

Posthole [254] : fig.124
This feature was located immediately to the north of the ring gully defining Building 1 (Phase III). However, there was no direct relationship between the two features to prove contemporaneity, and therefore it is not possible to determine whether they were associated. A well-defined post pipe, (251), was visible within the fill.

Ditch [258]
This broadly linear north-south aligned feature, with irregular sides and a rounded base. It was approximately 20m long and had a bulbous and irregular southern end, which suggested that it was the product of more than one event; however, it was not possible to differentiate the elements of these different episodes. A Phase VIb ditch that followed a perpendicular alignment had been cut through the fill of [258].

Pit [266]: fig.125, plate 30
This feature lay in the south-western quadrant of the trench, and was situated between Post Alignment 1 (Phase VIb) and Enclosure 3 (Phase V, and possibly redefined in Phase VIa). It had steep sides and a flat base and had been cut through the fill of the ring gully defining Building 6 (unphased - probably Late Iron Age). The fill, (268), of [266] contained four large fragments of flint, derived from a single nodule, and seven sherds of LIA-type pottery. It appeared that the pit had been deliberately backfilled, subsequent consolidation of the fill creating a slight depression that had filled with alluvium, (267), which presumably indicates that the nearby channel was still given to occasional flooding.

Postholes [285] and [287]
These postholes were exposed in the south-eastern quadrant of the excavation. Both had vertical sides.

Ditch [298]/[325]
Spatially, this relatively short north to south aligned linear feature appeared to be a repair/redefinition of the southern end of the axial Phase III field boundary [290]/[359]. However, two sherds of pottery recovered from the fill of [325] were produced during the late 2nd to 3rd centuries AD, and thus significantly post-date the Phase III activity.

Posthole [336]
Situated at the centre of the site, this small feature was heavily truncated by ditch [334], which was a component of the Phase VII Enclosure 6.

Pit [340]
The remains of a shallow pit more than 0.8m long, 0.6m wide and 0.16m deep was exposed whilst excavating Phase VII ditch [404]. The latter truncated the fill of the pit and formed a component of the Phase VII Enclosure 6. The fill of [340] was a brown sandy silt that was devoid of artefacts.

Gully [351], pit [354] and posthole [356]: fig.'s 126 & 127
A small group of intercutting features located toward the centre of the southern half of the trench could not be assigned to individual phases.

Curvilinear gully [351] was 0.8m wide and only 0.13m deep. It probably pre-dated Phase VII, and possibly represented the remains of an eaves drip gully for a roundhouse.

Pit [354] was sub-round in plan and was c. 0.28m deep. It stratigraphic relationships suggested that it pre-dated Phase VI.

Posthole [356] was 0.28m in diameter and 0.16m deep. It could have been associated with any phase of activity.

Hollow [361]
This sub-rectangular hollow was only 0.12m deep and pre-dated Phase II. It was probably of natural origin.

Hollow [377]
This slightly irregular linear feature was aligned from north-west to south-east and was situated at the eastern edge of the trench. Excavation demonstrated that it was a wide, shallow hollow that not appear to contain any artefactual material. The fills, (375)/(376), were sealed by burnt soil (065), which is thought to represent ash and crop processing residues from an adjacent Phase VII corn drier.

Ditch [386] : fig.129
Situated a little to the north of hollow [377] and sharing a similar alignment, this feature appeared to pre-date Phase VI features.

Pit [387]
A pit measuring 2m in length, 0.9m wide and 0.24m deep was cut by Phase I ditch [337]. It had moderately steep sides and a flat base, and was filled with light brown sandy silt. This was the only (undated) feature to be confidently assigned to pre-Phase I activity.

Ditch [400]
This was a ditch, c. 0.8m wide and 0.17m deep, running west-north-west to east-south-east, the fill of which was truncated by Phase VII features.

Ditch [140]: fig.121
This curvilinear ditch was situated to the west of the stream channel, at the south-west corner of the trench. It was steep-sided and was filled with lenses of silt and clay deposited by the adjacent stream. It is possible, given its proximity and relationship to the stream, that this ditch could have functioned as a flood defence for the land to west. However, it was relatively slight for this purpose and may have been better suited to reinforcing the conceptual and physical boundary represented by the stream itself.

Ditch [146]: fig.121
This was a recut of [140] situated to the west of the stream. It had relatively steep sides and a rounded base, being 0.86m wide and 0.37m deep. It was filled with a series of laminated silty and clayey deposits, indicative of fluctuating water levels in the vicinity of the nearby stream. Associated pottery was of Roman date.

Gully [407]: fig.131
This shallow gully remains undated.

Gullies [409], [411] and [413]: fig. 131
All three linear features ran north – south and pre-dated Phase VI. They were all shallow and had U-shaped profiles (0.06m – 0.12m deep).

Posthole [421]: fig. 132
This posthole was 0.43m in diameter and 0.5m deep. Although there was no associated dating evidence, it was truncated by Phase IV ditch [515].

Gullies [423] and [473]: fig. 133
These features were situated between Building 2 and the stream channel. A single piece of possibly Late Iron Age pottery was recovered from [473].

Posthole [448]: fig. 134
This posthole truncated Roman ditch [450]. It had a diameter of 0.3m and a depth of 0.57m.

Ditch [450]/[452]/[520]: fig. 134
This moderately steep-sided ditch cut through the fills of the former stream. The excavated section, [520], suggested that this area was still very damp, as its clay fill appeared to represent a deposit forming in standing water. A single, possibly residual, sherd of pottery was recovered from the fill of [450], (449). Stratigraphically, this feature must relate to the later phases of Romano-British activity.

Hollow [456]
This natural solution hollow was bowl-shaped, measuring 0.33m in diameter and 0.21m deep.

Gully [458]: fig. 135
A gully, c. 0.24m wide and 0.05m deep, which was truncated by a Phase VII pit ([464]).

Pit [464]
A fairly large pit, c. 2.9m by 1.1m wide, and only 0.28m deep, which post-dated Phase II ditch [321].

Gully [473]
This feature was tentatively dated to the Late Iron Age, as a single sherd of pottery was recovered from its fill.

Gullies [481] and [483]: fig. 136
These curvilinear gullies were heavily truncated by later activities, which commenced in Phase VI. Little remained of the features, and it has not been possible to determine their function.

Ditch [502]: fig. 137
This ditch appeared to have been deliberately backfilled, by (503), (504) and (505), and these fills were cut by Phase V ditch [506].

Curvilinear ditch [528]: fig. 138
This short length of ditch definitely pre-dated Phase VII. It was unusual in that its eastern terminal appeared to splay out into the more rounded shape of a pit. No finds were recovered from its orange/brown sandy silt fill, (529).

Ditch [600]: fig. 139
This undated ditch was over 2m wide and 0.4m deep.

Postholes [628], [629] and [632]: fig.'s 140 & 141
Three postholes were excavated in the south-eastern quadrant of the site. These were between 0.32m and 0.51m deep. It was not possible to determine whether they were of Iron Age or Romano-British date.

Firepit [643]
This oval firepit was originally exposed in Trench 2 of the 2000 evaluation. Although it was originally thought to be of Iron Age date, further excavation in 2001 recovered a single sherd of Romano-British pottery.

Gully [683]: fig. 142
It was not possible to assign this feature to a phase or period. It had concave sides and a rounded base, and ran from north-west to south-east, near the northern edge of the trench.

Hollow [684]: fig. 143
This undated hollow was filled with alluvial material, (701).

Fire-pit [685]: fig. 144
The remains of a fire-pit was excavated towards the centre of the site. The pit was oval in plan, measuring 0.98m long, 0.8m wide and 0.22m deep, with clear evidence of *in-situ* burning. Its apparent isolation is puzzling, as fire-pits are generally found within structures or as components of industrial working areas. Whilst it is possible that an associated structure did not survive, the lack of domestic debris in the vicinity of the feature renders this an unlikely explanation. A further possibility is raised by

the location of mid 3rd century burials adjacent to the pit. If the features were in some way related, then the fire may have been use to cook food, either as a meal for the mourners, or for the deceased. The absence of animal bone within the graves would perhaps indicate the former.

Gully [693]: fig. 145
This gully was exposed during removal of burnt soil layer (065), thus indicating that it pre-dated Phase VII. It was not possible to determine the full extent of the gully, which was c.0.45m wide and 0.18m deep.

Gully [698]: fig. 146
A shallow gully extended north-east – south-west, perpendicular to Phase II gully [007]/[086]. It was not possible to resolve the relationship between the two gullies through excavation, and [698] remains unphased. It was c. 0.5m wide and approximately 0.28m deep, and was filled with brown sandy silt, devoid of artefacts, (702).

Pit [716]: fig. 147
A section across a Phase IV ditch ([656]) exposed an earlier pit, [716]. This feature was more than 0.7m in width and extended c. 0.18m beneath the base of the later ditch. It was filled with grey/brown silty sand. There were no associated finds.

Postholes [769], [771] and [773]: fig. 148
A small group of three postholes were exposed at the north-west corner of the site. These were of a similar size and shape, each being circular in plan, with gradually sloping sides and concave bases, 0.08m to 0.18m deep.

Gully [778]: fig. 149
This curvilinear gully continued beyond the northern edge of the excavation. It was c.0.35m wide and 0.1m deep, and the excavated sections were completely devoid of finds.

Posthole/pit [778]: fig. 150
This feature remains undated. It was circular with fairly steep sides and a rounded base.

Stone Spread [791]: fig. 151
A linear spread of limestone rubble was exposed within the north-west quadrant, overlying alluvium (004). Interpretation of this feature is a problem, as it was not directly associated with any other features.

7.1 Evaluation trenches (in development Phase 6 area): fig.'s 152 - 156

Three evaluation trenches were opened to assess the archaeological potential of the Phase 6 development area, which was situated immediately to the west of the main excavation. The numbering of the trenches took into account the previous numbering used during the archaeological evaluation in 2000 (Allen and Palmer-Brown 2000). As there was such a wealth of archaeological remains in the main excavation area, it

was deemed appropriate to simply record the trenches in plan, with a representative section to show the depths of deposits.

Trench 8
Trench 8 was 20m long and was orientated from east to west, adjacent to the southern boundary of the field. A single linear feature running from north-west to south-east was exposed towards the centre of the 20m long trench. Two possible pits were also exposed.

Trench 9
This was 20m long, and was orientated from east to west within the southern half of the Phase 6 area. Three north to south aligned linear features were exposed, as well as the plough-damaged remains of a human skull discovered at the western end of the trench. The latter suggested that a north – south aligned grave extended to the north of the trench.

Trench 10
This 15m long trench was orientated from north to south, parallel with the field boundary. It was positioned to examine the north-western corner of the field. No significant archaeological deposits were exposed.

8.0 Summary of the archaeological phases

Several phases of investigation have demonstrated that the site contains a substantial and significant quantity of archaeological deposits, which represent the residues of activities that took place throughout the Later Iron Age and Romano-British periods. In addition, there are more ephemeral traces of earlier activity in the Neolithic and Bronze Age.

The earliest artefactual material comprises a small quantity of worked flint and a single rim sherd of Neolithic Mortlake style Peterborough ware. Peterborough ware appears to have been introduced around 3300BC and represents a persistent stylistic tradition of material culture that continued to be produced until after 2500BC. Yet despite this sustained period of production, it appears that pottery was not in everyday use at this time and was reserved for a series of specialised functions (Allen & Hopkins 2000).

Fragments of Mortlake ware are commonly recovered as stray finds from within secondary contexts (Thomas 1999). However, they are also frequently associated with funerary and cursus monuments, caves and watercourses. Even in these latter contexts it is common for only a single sherd from any one vessel to be recovered, and these isolated fragments tend to be decorated. This suggests that they were deliberately selected and purposefully deposited in some form of ritual context (Allen & Hopkins 2000). The sherd from Barnetby corresponds well with this pattern of deposition, and it is therefore appropriate to consider whether it is likely to have constituted part of a structured deposit associated with a monument or landscape feature. The sherd was found within alluvium flanking the bed of a small, relict stream, and it is possible that it was this feature that was the original focus of the ceramic deposit.

Other evidence of Neolithic activity in the immediate vicinity includes a polished stone axe discovered c.400m to the south-east of the site. Unstratified finds of stone axes are often considered to be casual losses, yet the means of their acquisition was anything but casual and often involved long-distance exchange (Edmonds, 1995). This would suggest that these items had a great deal of implicit value, which would tend to contradict notions that their owners would abandon them so readily. Research has indicated that wetland environments, watercourses, and their margins, were foci for the ritual deposition of axes during the Neolithic (*q.v.* Bradley, 1990). Mortlake pottery was placed in the same depositional environments, which suggests that deliberate social processes provide the best explanation for the presence of an axe and a fragment of Neolithic pottery at Barnetby.

The worked flints recovered during the current programme (11 in total) included a Sutton Type barbed and tanged arrowhead and several scrapers (Appendix 6). The assemblage was of a broadly Bronze Age tradition, although such traditions did continue through the Iron Age. Approximately 66% of the flints were either finished tools or utilised flakes, suggesting that they were not produced on site.

The relatively small assemblage of earlier prehistoric material indicates that some activity occurred within this part of the Kirmington Gap from the earlier Neolithic onwards. This is not terribly surprising, given that the Gap would have been a major natural route enabling movement between the Ancholme Valley and the east coast near Grimsby, via the Lincolnshire Wolds. Activity within the Gap may extend as far back as the Palaeolithic period; suggested by flint tools found at a brickyard to the north of Kirmington (May 1976).

Sub-surface features dating to the Later Iron Age represented the first phase of intensive human activity. These remains were limited to a single settlement enclosure and several small gullies, the latter believed to be the ephemeral remains of a field system. These features had been created to the east of the shallow, meandering stream. A burial was found in a shallow grave that had been cut into the fill of the enclosure ditch. The body was that of a woman aged 27-49 years, who appeared to have been bound and decapitated. A shallow pit situated c. 3m to the north contained an articulated skull from a woman of similar age. It is possible that this is one of only a very small group of burials thought to be of Iron Age date that have been found anywhere in Lincolnshire. However, the possibility that the burial is significantly later is entertained, and English Heritage have generously agreed to fund the radiocarbon dating of these remains. Unfortunately this date was not available at the time of writing.

The Phase I remains were supplemented and partially replaced by a series of curvilinear and linear gullies. These Phase II features represent a development of the system of fields and paddocks that were initially established in the earlier phase and were subsequently to be maintained and developed into the Romano-British phases of occupation. Phase II activity also included the creation of a small group of pits at the north-eastern corner of the site.

A third phase of Iron Age activity witnessed a re-alignment of the field system, including the appearance of a large sub-rectangular field that was more than 100m

long and over 20m wide. An irregular ditch was created to redefine and extend the area of the Phase 1 enclosure. A roundhouse, Building 1, was constructed immediately to the north of the enclosure and to the south of the field system, near the eastern edge of the site. A small patch of clay situated within the area enclosed by the ring gully defining Building 1, may represent the remains of an associated trough hearth.

Towards the end of the Iron Age (Phase IV), a much more regular pattern of small rectilinear fields had emerged, the entrances to which appeared to be located at the field/paddock corners. The latter is generally a feature incorporated to assist in stock management (Pryor 1998). A square or sub-rectangular enclosure was created to the south-east of the site, its north-western corner being exposed in the trench. This enclosure contained at least two deep pits, their dimensions suggesting they were used for storage. The enclosure ditch also cut across the southern edge of Building 1,which had been created and used in the previous phase.

The onset of Romano-British influence is not characterised by any major archaeological changes, rather, the tradition of organic development continued. During this initial phase of Romano-British activity the settlement enclosure at the south-eastern corner of the site was enlarged, and a roundhouse, Building 2, was constructed within it. At the same time, more substantial ditches were created to redefine the more westerly elements of the field system. It is also possible that the area immediately to the north of the settlement enclosure was no longer physically differentiated, thus creating a relatively large block of pasture.

Initially, Phase VIa witnessed the possible redefinition of the settlement enclosure with two linear ditches. This was followed, in Phase VIb, by the creation of a few large ditches that divided the site into two main blocks of land, one to the south and the other to the north. These relatively large fields each appeared to be bounded on their western sides by a fence or palisade, and were probably divided from each other by a broad droveway.

By the mid 3rd century AD (Phase VII) the land was again subject to a major re-organisation, with the previous system being replaced by at least three sub-rectangular enclosures. Two of these compounds contained stone-built corn-driers, while the third probably functioned as a livestock enclosure. Certain areas of the site were now utilised for the disposal of the dead. The majority of the burials (11 of 14) are believed to date to the mid 3rd century AD. They were all inhumations, six of which were orientated from north to south, and five from east to west. The north – south orientated burials had a close association with the eastern edge of Enclosure 6, continuing along a line projected to the north of this feature, as though possibly following a hedge line, or other feature leaving no archaeological trace. East to west aligned burial (559) was situated across the probable entrance to the same enclosure, and could represent a 'foundation' or 'closing' deposit marking the activation or abandonment of the enclosure itself.

A function could not be ascribed to a group of pits situated between the enclosures and the former watercourse running along the western edge of the trench. The lack of artefactual material in the fills suggests that they were unlikely to be pits used for

domestic refuse. However, their shallowness and location close to wet ground also suggests that they would have been unsuited to storage of foodstuffs.

The final phase of activity appears to have occurred in the late 3rd century, and may have continued into the early 4th century. Again, a square or sub-rectangular ditched enclosure was created at the south-eastern corner of the site. This feature, Enclosure 7, contained at least one circular structure, Building 4. To the north of Enclosure 7 were the ephemeral remains of another possible roundhouse, Building 5; this putative structure would have been much smaller than its neighbour. A crouched inhumation and a cremation burial have also been ascribed to Phase VIII, and may have been contained within the surviving elements of Enclosure 5, which had been created during the previous phase.

The area examined in this phase of the archaeological investigation appears to have been abandoned by or during the early part of the 4th century AD. There is no direct archaeological evidence to indicate why this area suddenly ceased to be utilised after five or six centuries of activity. Certainly, in the later phases of Romano-British activity there appears to have been an increasing emphasis upon arable production, with the creation of a number of stone built corn driers. It is therefore possible that factors such as over-exploitation of the land, climatic change or variations in local or regional markets may have reduced the profitability of the activities that had been carried out here.

Alternatively, this 'abandonment' may be largely illusory and may simply reflect a shift in the foci of activity. Previous excavations at Barnetby have produced varying results, which appear to support notions of episodic settlement migration. The initial evaluation in 2000, of the whole area comprising Phases IV, V and VI of the Bridles development, exposed features primarily relating to Late Iron Age and early Roman activity. Subsequent investigations at the south-west corner of the Phase IV area uncovered very little evidence of Iron Age activity, but indicated that this area was utilised relatively intensively during the 2nd century AD. In contrast, the recent investigations in the Phase V area have provided further evidence of Late Iron Age occupation and 3rd century AD activity, but relatively little material that could be directly ascribed to the later 1st or 2nd centuries AD. These spatial and chronological changes in the distribution of material culture strongly suggest that activity zones migrated. Consequently, it is possible that the focus of activity during the 4th century lies outside of the areas that have been investigated to date.

9.0 Discussion

The last two centuries of the British Iron Age have received a much greater level of archaeological attention than the preceding half millennium. This in large part is due to the increased visibility of later Iron Age populations, which appear to have made far greater use of diagnostic forms of material culture, such as pottery. Additionally, increasing interaction with the advancing Roman Empire provided new models for elite behaviour and social display, and undoubtedly influenced the introduction of coinage and nucleated settlements (Burnham 1995; Millett 1990).

In the East Midlands such proto-urban communities lacked the large defensive earthworks characteristic of the southern hillforts, but still appear to have functioned as economic, political and social central places. There are a number of such sites in Lincolnshire, including Dragonby, Ludford and Owmby in Lindsey and, Old Sleaford and Thistleton in Kesteven (May 1996). Published investigations of Iron Age settlements in the county have tended to focus upon such major sites, which subsequently developed into Romano-British population centres.

Despite the presence of these large centres, the most common form of settlement was the small farmstead, hundreds of which were dispersed across the county. However, relatively few have been excavated and most have only been identified because of a particular set of morphological attributes that are identifiable in aerial photographs (Winton, 1998). The small number of later Iron Age settlements that have been excavated or sampled include enclosures near Harby (Tann 1997), Chapel Heath Navenby (Palmer-Brown, 1994), Stenigot Reservoir (Armour-Chelu 1997), and Mill Drove, Bourne (Tipper & Field 1995). The continuity between the locations of the larger Late Iron Age and Romano-British settlements is also a common feature of these smaller, dispersed communities. This relationship being amply demonstrated by the site at Barnetby, where the sub-surface features almost exclusively date from the later 1st millennium BC to the earlier 1st millennium AD.

It is useful to consider the reasons for this apparent stability following the ascension of a new political regime. To do so, it is initially beneficial to consider the nature of the later Iron Age activity on the site. Prior to the Late Iron Age the site appears to have been an area of open countryside, which would probably have been utilised by people as pasture, for hunting and for other 'off-site' activities. Consequently, the initial occupation, in Phase I, would currently be referred to as a 'green-field development'.

This colonisation of a previously uninhabited area could reflect one of several processes. The inhabitants' previous settlement may have become polluted, either physically or spiritually, or otherwise unsuitable for continued occupation. Alternatively, the features exposed during the excavation may represent an expansion of an existing settlement situated somewhere in the immediate environs of 'The Bridles'. Such an expansion would be likely to reflect a growth in the local population. Similarly, a potential increase in the number of people living locally also raises the possibility that this site was a new foundation, representing a satellite of an established community situated elsewhere in the Kirmington Gap, or its environs.

A progressive increase in the population density of the British Isles throughout the 1st millennium BC has long been recognised (Bradley, 1978; Millett, 1990). This would have led to the incremental growth in the size and number of settlements and would also have stimulated an increase in both the area utilised for agricultural production and the intensity of that exploitation. The latter would have been facilitated by technological advances, which included the introduction of iron-tipped ploughshares, the rotary quern and cereal crops suited to heavier soils (Haselgrove *et al.* 2001). Additionally, climatic amelioration after 400 BC would have had profound effects upon agricultural productivity.

Initially, the form and nature of the Phase 1 and 2 activity appears difficult or impossible to determine. There was a substantial feature, Enclosure 1, at the south-eastern corner of the site, and a few short sections of ditch to its north-west. Evidently, these features do not represent a complete picture of the initial occupation of the site, as a significant percentage of the associated ditches and pits must have been destroyed by subsequent activity. However, it is precisely this repetition of the spatial form and structure, evident in the succeeding phases, which provides strong indications regarding the form of the initial activity during the later Iron Age.

The primary focus of activity in Phases 1 to 4 was the enclosure situated at the south-eastern corner of the site. Each enclosure ditch represented a redefinition of its predecessor, either imitating the form of the earlier feature, as with Phases 1 and 3, or merely replicating its location, as with Phases 3 and 4. It is therefore necessary to acknowledge that the features created at each stage would have been produced in reference to the extant elements of the preceding phases, the latter surviving either as functional boundaries and structures, or partially infilled earthworks.

The settlement enclosure did not exist in isolation, but was surrounded by elements of a contemporary field system. The primary axis of the field system ran from north to south, and although not mirroring the exact alignment of the stream, was probably laid out in reference to it. The position of these main north–south orientated boundaries was remarkably consistent throughout the Iron Age. In contrast, the shorter ditches dividing these strips into fields and paddocks were frequently moved, creating fields of varying dimensions. Despite this, the overall form of the field system appears to have remained relatively stable.

The field system can be characterised as follows. A long narrow strip of land, c. 18m wide, ran up the western edge of the site, with the stream defining one of its edges and the rest of the field system to the east. Given the proximity of boggy ground along the margins of the stream, it seems most likely that this area would have been utilised for seasonal pasture and/or hay meadow. Running from north to south along the centre of the trench was a ladder-like strip of small fields or paddocks, c. 20m wide and between 8.5m and 40m long. The relatively small size of these plots suggests that they may have been used as small, enclosed arable fields during the spring and summer, the boundaries preventing incursions by animals. Following harvest they could have contained livestock brought back from summer pasture, the animals initially eating the stubble and then stored winter fodder. Causeways between the longitudinal and lateral boundaries, which are best preserved in Phase IV, are likely to indicate that the fields were constructed with corner entrances. The latter are features that would have been provided for the purpose of simplifying stock movement, the flanking boundaries funnelling animals toward each entrance (Pryor 1998).

The eastern side of the trench appears to have been divided into much larger plots, which were more than 25m wide and between 35 and 65m long. It is possible that each of these bigger fields was also used for arable production, their size being more suitable for ploughing than the smaller plots to the west that were probably turned by mattock and hoe. Alternatively these larger fields may have been solely utilised for livestock, containing breeds that were not subject to relatively long term seasonal movement. The benefits of a transhumant pastoral system in a mixed farming economy are well understood. They include removing the danger of livestock eating

or trampling crops prior to harvest, combined with fertilising the fields after harvest and, the easy containment and management of animals during the worst weather (*ibid.*)

The sequence of boundary redefinition between Phases I and V indicates that there was trend toward an increase in size with each successive event. Nevertheless, even allowing for a degree of truncation, the majority of the boundaries defining the different phases of the field system are unlikely to have been big enough to have effectively prevented the movement of people or livestock across them. Pryor (*ibid.*) notes from his experiences with livestock, that even a 0.5m deep ditch with an equivalent flanking bank would not constrain the movement of sheep or cattle. Rather he suggests that the objective of the ditch digging is the generation of the bank, as this loose, free-draining material provides the ideal substrate for the propagation of hardwood cuttings. In the late autumn cuttings from hawthorn, sloe and dog rose could be pushed in the bank and would take root the following spring. Within five years this would produce a stock proof barrier. Furthermore, this practice proves to be a more efficient means of creating a hedge than planting seed, as the latter tends to get eaten by birds and rodents. It was certainly a technique widely used during the 19th century Enclosures of common land, even proving successful on clay soils.

The construction of four (inter-cutting and possibly successive) cigar-shaped corn-driers immediately to the east of the current site during the mid 2nd century AD (Allen 2001), represents the first significant adaptation to the agricultural system that had been in operation for many generations. They were replaced in the mid 3rd century AD by two larger corn-driers, one square, the other T-shaped, situated in Enclosures 4 and 5.

Corn-driers were enclosed structures with a central chamber that was probably divided by a raised wooden floor. A fire was set within the flue entrance and vents, or chimneys, allowed the hot gases to flow through the structure warming the central chamber. Although these structures are termed corn-driers their function remains unresolved. Previously it was assumed that they were used to dry grain following wet harvests (Goodchild 1943). Later experiments at Butser Ancient Farm showed this was unlikely due to the time and effort required to dry even a small sample of grain (Reynolds and Langley 1979). In fact, it is hard to see a need for a corn-drier at all. Traditional methods of storing sheaves of harvested corn in stacks, barns or covered areas have proved adequate for hundreds of years.

A more plausible function for these structures is for the roasting of germinated grain as a precursor to the brewing of beer (Van Der Veen 1989). For this process, the grain is steeped in water and then left on a floor to allow it to germinate, a process known as 'chitting'. Following germination the grain is roasted in a kiln or oven, producing malt, the main raw ingredient for the manufacture of beer. The environmental analysis has demonstrated the presence of quantities of charred, germinated wheat on the site (Appendix 5). This may provide corroborative evidence for this hypothesis, as although most modern beers are brewed using barley, wheat can also be used for this purpose (e.g. weizen bier brewed in Germany).

The first identifiable raised structure, Building 1, was constructed during Phase III. It was a roundhouse of c. 9.7m diameter that was located immediately to the north, and

outside of, the newly redefined south-eastern enclosure (Enclosure 1). Given the proximity of Building 1 to the earlier enclosure, it seems likely that any Phase I or II structures would have been situated to the immediate south-east of the trench, and that this roundhouse probably represents an expansion of the initial settlement resulting from a growth in the community. A shallow, clay lined hollow, [041], was identified within the area enclosed by the ring gully defining Building 1. The location, dimensions and form of the hollow suggested that it represented the remains of a trough hearth situated within the structure. Its position toward the south-eastern edge of the building would also support this proposal. Comparative analysis of material culture found within Iron Age houses indicates that the living space was highly structured, with the south-eastern quadrant generally being used for eating and food preparation (M. Parker-Pearson *pers. comm.*).

It is possible that this building was relatively short-lived, as the northern boundary of the Phase IV settlement enclosure cut across the southern half of it. However, it is also possible that each successive phase corresponds to a relatively long period of activity. In modern small scale farming it is not uncommon for ditches to only be cleaned out once every generation, this occurring in conjunction with the relaying and repair of any attendant hedgerows (Pryor 1998). As well as improving the functional attributes of the boundary, events of redefinition would also have had significant symbolic and social aspects that would helped to define and order the community (*q.v.* Hingley 1990). This would also reflect the ever-increasing time depth underpinning the routine activities undertaken within and around the homestead.

The construction of Building 2 has been placed in Phase V. However, this phasing would mean that there was no building at this location throughout Phase IV. An alternative scenario, which would provide a greater degree of continuity, would have seen Building 1 being demolished at the beginning of Phase IV. Almost immediately, the ditch of Enclosure 2 would have been created, cutting through the southern edge of the old structure, and Building 2 would then have been erected with its southern edge overlying the northern edge of Building 1; effectively, Building 2 would be a direct replacement that had migrated slightly to the north. Subsequently, in Phase V, the settlement enclosure (Enclosure 3) would have been enlarged to include the still extant Building 2; the north-western terminal of the enclosure ditch curving around the building.

The artefactual remains suggest that Phase V either represents the transition from Iron Age to Roman dominion, or the first period at which a significant Roman influence can be detected. However, despite the introduction of new, and essentially alien, pottery forms, the layout of the settlement is largely unaffected by the Roman conquest of the region during the mid 1st century AD. The building and its associated enclosure still occupied approximately the same area, with elements of the field system again being redefined to the north-west. Even the Phase VIa features could be interpreted as a further enhancement of the existing system, which would essentially indicate that there were no major changes to the form of this small part of the landscape until around the end of the 2nd century AD.

This high level of continuity exhibited by the morphology of the settlement is also exhibited in other aspects of the archaeological record. Even into the final phase of occupation, Phase VIII, circular wooden structures such as Building 4 were still been

constructed. This represents a maintenance of the traditional form of dwelling and thus presumably the patterns and structures of inhabitation relating to them. Effectively this is a rejection of Roman architectural styles, one of the principal characteristics of *Romanitas*.

Examination of the pottery also indicates a reticence to adopt Roman material culture. Darling (Appendix 3) notes that there is no Roman pottery that can be definitely attributed to the 1st century, and similarly there is very little from the 2nd century. From a pottery specialist's perspective this suggests that there was a break in activity on the site. However, the repetitive behaviour exhibited in the layout of the enclosures and field systems does not support such a notion. It is possible that this hiatus in part reflects chronological and spatial variations in depositional practices. Nevertheless, given that the inhabitants of this community retained many other traditional aspects of settlement, such as architectural forms, it is also possible that the virtual absence of 1st and 2nd century Roman pottery was also a deliberate characteristic of this social group. Consequently, these people may have chosen to continue manufacturing their own pottery in traditional styles well into the 2nd second century, a practice that would be difficult or impossible to detect using typological analysis. While these people may have been unable to physically resist their Roman overlords, whether immigrants or an enculturated indigenous elite, the material and spatial conservativism exhibited at Barnetby may have represented a form of passive resistance to Roman cultural imperialism.

The high degree of continuity also strongly suggests that the same kinship group occupied the site throughout its existence. This observation assists in determining the status of the settlement and its inhabitants. The upper echelons of Iron Age society will have been the people who either benefited or suffered most, depending upon their political affiliations, as a result of the Roman invasion. Consequently, the inability to even determine exactly at what point the settlement came under Roman dominion suggests that it inhabitants were not members of the indigenous elite[2]. This observation also appears to be born out by the later Roman pottery assemblage. There is little samian, no fragments of mortaria, a single sherd of Nene Valley colour coated ware, and only two fragments from amphorae, which together suggest that little 'exotic' material was reaching the site. It therefore appears that this settlement represents a relatively ordinary farming community inhabited by an Iron Age/Romano-British peasant family group.

The majority of the Iron Age pottery that was recovered also represents relatively low status coarse wares. The main exceptions were a small assemblage of fine wares recovered from Phase IV ditch [515], situated toward the north-eastern corner of the trench. This material included wheel finished fabrics that had rouletted decoration, lattice decoration or vertical stroke burnishing, all of which are paralleled at the larger proto-urban sites in this area, particularly Dragonby (and probably Kirmington). The fact that much of this material was recovered from one isolated context suggests that it relates to an unusual episode of activity. A number of isolated pits were created in the same area during Phase II. While these features might provide some indication that there is another settlement enclosure just to the north of the trench, it is also

[2] It seems likely that either Phases IV or V span the mid-1st century AD, but this cannot be confirmed on the evidence available. Certainly there does not appear to have been a cataclysmic episode when the settlement was raised to the ground by the conquering army.

possible that they represent the material residues of atypical activities, such as a particular type of feasting, that were conducted outside the settlement enclosure. The use of relatively high status pottery would not be out of keeping for such unusual events.

10.0 Acknowledgments

Pre-Construct Archaeology (Lincoln) would like to thank Keigar Homes Ltd. for this commission. Dr Jeremy Hill of the British Museum is thanked for providing comments regarding the decapitated burial and Mike Parker-Pearson for information on the internal layout of Iron Age houses. Thanks are also extended to English Heritage for providing the funding for the excavation and post-excavation analysis of the human burials. PCA (Lincoln) would also like to thank Mike Hemblade, Kevin Leahy and Alison Williams of North Lincolnshire Museum for helpful comments during the excavation. Excavation was carried out under the direction of the writer, ably assisted by two supervisors, Chris Clay and Simon Savage, and a team of experienced archaeologists: Pete Barnes, Dave Bower, Aaron Chapman, Rachael Gardner, Mike Garrett, Asha Hutchinson, Sean Jackson, Phil Lings, Wayne Livesey, Lorna Peterson, Sean Rhodes, Alec Russell and Dougie Young. Irene McGrath is also thanked for taking the time to metal detect the site. Simon Savage produced the drawings within the report, taken from original drawings provided by the site staff.

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12.0 Site archive

The site archive (documentary and physical) for this project is in preparation and will be deposited at Scunthorpe Museum and the North Lincolnshire Archives Office (documentary) within six months.

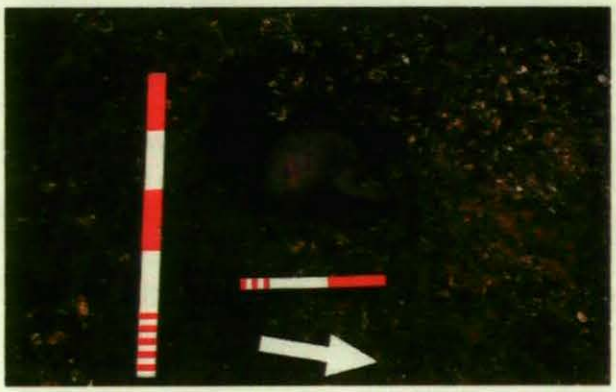
APPENDIX 1: Colour Plates

Pl. 1: Aerial photographic location of site in relation to Barnetby le Wold. West is to the top of the page.

Pl. 2: Detailed aerial photograph of site. North is to the top of the page.

Pl. 3: Site during excavation. Taken from SW corner, looking NE.

Pl. 4: Possible LIA burial (090) (Phase I). Looking E.



Pl. 5: Skull (116) in pit [115]. Looking W.

Pl. 6: Machine-cut section through watercourse (004) at S end of site, looking SE.

Pl. 7: Pit [609]/[611] containing antler pick. SSE facing section, looking NNW.

Pl. 8: Possible storage pit [044], looking SE. NW facing section

Pl. 9: Pit [699], WNW facing section, looking ESE.

Pl. 10: Ring gully [076] butt-end. NNE facing section, looking SSW

Pl. 11: West-facing section through pit [136], looking NE.

Pl. 12: Post-alignment 1 after excavation, looking S.

Pl. 13: Post-alignment 2 after excavation, looking NNW.

Pl. 14: Square corndrier after excavation, looking W. Central flue chamber on left side of picture.

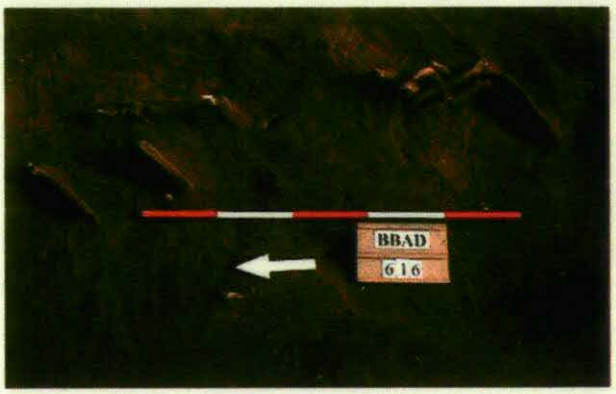
Pl. 15: Similar square corndrier excavated at Hibaldstow in 1988 (source: P. Lings).

Pl. 16: T-shaped corndrier after part-excavation of central flue chamber, looking NE.

Pl. 17: T-shaped corndrier. Possible vent at west end of chamber to top of picture, looking W.

Pl. 18: T-shaped corndrier fully excavated. Looking N.

Pl. 19: Possible demolished corndrier rubble (120)/(262) overlying Phase V ring gully [076]. Looking NE.



Pl. 20: Inhumation (616), looking E.

Pl. 21: Inhumation (634), looking E.

Pl. 22: Inhumations (637) (upper) and (640) (lower), looking S.

Pl. 23: Inhumation (645), looking S.

Pl. 24: Inhumation (646), looking S.

Pl. 25: Inhumation (559), looking S.

Pl. 26: Inhumation (242), looking S.

Pl. 27: Inhumations (622) (left) and (626) (right), looking E.

Pl. 28: Child inhumation (607), looking SSW. (adult inhumation is (622)).

Pl. 29: Inhumation (219), looking NE.

Pl. 30: Close-up of pottery from pit [266] fill (268), looking SW.

APPENDIX 2: Early prehistoric pottery report
Barnetby Le Wold, North Lincs, BBAD, TA 0570 0995
by Carol Allen *23 April, 2002*

1 Quantity and Context

A single sherd of prehistoric pottery was found in context 004 of the excavation, which represented alluvium at the west end of the site. The sherd is a rim and neck which weighs 23 g. The sherd has been recorded and reported according to the Prehistoric Ceramics Group Guidelines (PCRG 1997).

2 Fabric

This pottery has a flint tempered fabric designated FLMC. The sherd is tempered with angular flint (FL), in moderate quantity (M, 10-19%) which is angular, poorly sorted and of low sphericity. The flint is of coarse (C, 1-3 mm) and occasionally very coarse (V, >3 mm) size. The sherd is irregularly fired, with orange to dark brown exterior, black interior and brown core, with a wall thickness of about 8mm. There is nothing to suggest that the sherd contains tempering which is not locally obtainable. The sherd is moderately abraded, but the fabric is hard and well fired.

3 Form, Decoration and Date

The sherd forms the rim and collar of a Neolithic Mortlake impressed ware pot. It has a deep flat and out-turning rim with whipped cord decoration in herringbone on the inner part of the rim and diagonal rows on the exterior of the rim. No decoration is apparent on the remaining interior or exterior of this sherd. A sketch of the sherd is attached. This type of Peterborough ware of the middle to later Neolithic is known at other sites in Lincolnshire and on sites in southern Britain (Smith 1965, fig 33). Pots with similar rim type and similar decoration are known in Lincolnshire at Billingborough (Chowne *et al* 2001, fig 20), and at Kirkby on Bain (Allen 2001). The angular flint tempered fabric is also common in this period in the county (Allen and Hopkins 2000, fig 8)

4 Dating

Middle Neolithic impressed wares of Peterborough type were a stylistic development from earlier Neolithic bowls (Gibson and Kinnes 1997). Radiocarbon dates have confirmed that Peterborough wares were in use between about 3400 and 2500 cal BC (*ibid*, 67) and also beyond that time (Thomas 1999, 109). At present, there are not sufficient dates to make it clear if there are any regional variations apparent in this dating, but indications are that this type of pottery was probably current in Lincolnshire in the later 4th and the 3rd millennium BC.

5 Discussion

This piece of pottery is moderately abraded, but it was well fired and still exhibits some decoration. The findspot within alluvium, and the abrasion suggests that the sherd has been moved and may originally have been deposited in a pit which has subsequently been disturbed. This type of pottery, which originated in the late 4th or 3rd millennium BC, is not a common find and this sherd is therefore of considerable interest. Also it is very likely that it has not been moved far, otherwise it could not have survived for over 5000 years. This strongly suggests that there must have been

middle Neolithic occupation with the vicinity of the findspot and that there is possibility of further artefacts or features of similar period being located nearby.

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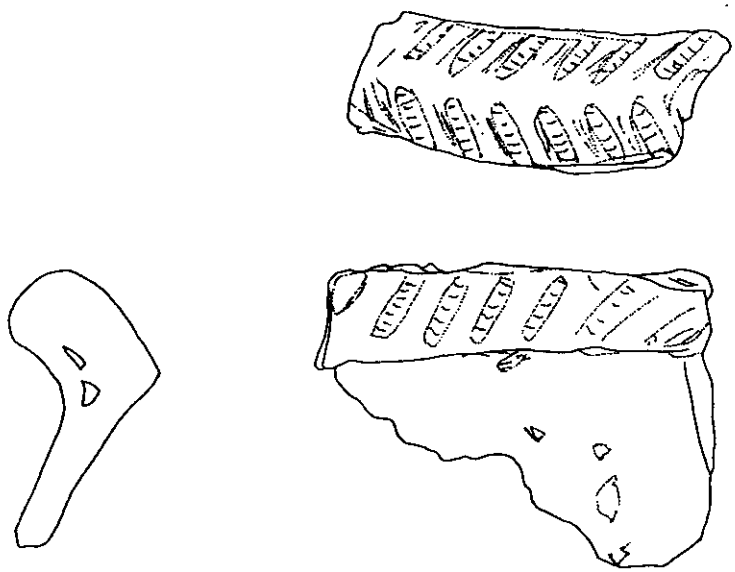

Barnetby le Wold
Mortlake Sherd (c.3400 – 2500 BC)
Scale 1:1

APPENDIX 3: Iron Age and Roman pottery and tile report

REPORT 108 ON POTTERY FROM BARNETBY LE WOLD, BBAD

for PRE-CONSTRUCT ARCHAEOLOGY

by Margaret J. Darling, M.Phil., F.S.A., M.I.F.A.

18 June 2002

QUANTITY AND CONDITION

The finds total 670 sherds or fragments, weighing 20.066kg from 98 contexts. This includes pottery, tile and fired clay fragments as detailed in table 1. In addition, pottery from soil samples totalled 183 sherds, weighing 0.458kg.

Table 1

Type	Fragments	Weight kg
Pottery	598	13.607
Pottery x samples	182	0.457
Tile	28	4.583
Fired clay	45	1.877
Total	853	20.524

Fragments of tile and fired clay from the soil samples weighed 2.895kg.

The condition is average, with some abrasion; no problems are anticipated for long term storage. The pottery has been archived using count and weight as measures according to the guidelines laid down for the minimum archive by *The Study Group for Roman Pottery*. The pottery from soil samples and the finds of tile and fired clay have been recorded on separate archive databases, the record of finds of tile and fired clay being confined to weight alone (Appendix 2). Copies of the archive databases are attached (and can be supplied on disk), and will be curated for future study.

QUANTITIES AND DATES

The quantities and dates are detailed in Appendix 1 for the main excavated pottery and tile finds. The pottery divides almost equally between late Iron Age and Roman. The pottery finds from the soil samples are mostly very small crumbs, making it impossible to differentiate Iron Age and Roman shell-gritted sherds clearly, the latter being mainly from hand-made dales ware jars. Samples containing only shell-gritted fragments have therefore been dated as IA/Roman. A rim sherd from a Neolithic Peterborough ware Mortlake vessel from context 004 dating 3500-2500 B.C. is included in the totals but is the subject of a separate report. There was also a chip of probable shale, not pottery, from context 567, likely to be a glacial erratic.

The distribution of the pottery alone across the site is shown in table 2.

Table 2 Pottery spatial distribution

Location	Sherds	%	Weight	%	g/sherd
South-east	501	65.9	9605	69.0	19.2
South-west	94	12.4	552	4.0	5.9
North	165	21.7	3751	27.0	22.7
Unlocated	20		156		7.8
Total	780	100	14064	100	

The main Iron Age emphasis appears to lie in the south-east corner, with less positively dated Iron Age features in the south-west area. The ditch 515 at the north edge of the site also contains a notable Iron Age assemblage. The low average sherd weight from the south-west area is notable, while the higher sherd weight from the north sector arises mainly from the ditch 515, and a single large sherd from a Roman dales ware jar in the post-hole 524.

The distribution of tile (excluding finds from the soil samples) is shown in Table 3:

Table 3 Tile spatial distribution

Location	Fragments	Weight	%
South-east	20	1833	41.5
South-west	5	1693	38.4
North	2	887	20.1
Unlocated	1	170	
Total	28	4583	

The tile fragments clearly belong with Roman activity on the site, and it is notable that the bulk of the fired clay fragments derive from contexts dated to the Roman period, most coming from the south-east area. The fragmentary finds of brick/tile and fired clay from the soil samples are listed in Appendix 2. The identification of tiny fragments as being possible brick or tile from ring gully 005, and linear ditches 061 and 072 is debatable, and these could be fired clay.

The stratified occurrence of fired clay is shown in table 4.

Table 4 Fired clay by phase

Phase	Weight	%
I-IV	240	6.42
II	15	0.40
III	89	2.38
IV	16	0.43
V	11	0.29
VI	24	0.64
post-VI	41	1.10
VII	3212	85.97
VIII	57	1.53
-	31	0.83
Total	3736	100

This shows the bulk of the fired clay fragments coming from Phase VII, with over 56% of all finds coming from corn driers (259, 260, 095, 163 and 161), and another large deposit in the rectilinear ditch (536).

Sherd links have been noted between contexts 075 and 102, linear ditch 104 (Phase VI) as sherds of the same vessel, and between context 365, linear ditch 330 (Phase IV) and context 484 (Phase VII), a pit, as joining sherds.

OVERVIEW FABRICS

The fabrics from the main excavated contexts (excluding sherds included in the soil samples) are detailed in Table 5. This shows the fabrics likely to belong to the Iron Age first and, discounting the fired clay and tile fragments, the pottery divides broadly between the Iron Age and Roman periods.

Table 5 Fabrics

Fabric	Code	Sherds	%	Weight	%
Coarse	COAR	2	0.30	5	0.02
Grey minimal shell	GYMS	15	2.24	233	1.16
IA type quartz-gritted	IASA	6	0.90	77	0.38
Shell-gritted common coarse	SHCC	84	12.56	2300	11.46
Shell-gritted common fine	SHCF	9	1.35	224	1.12
Shell-gritted common medium	SHCM	119	17.79	2406	11.99
Shell-gritted sparse fine	SHSF	65	9.72	789	3.93
Shell-gritted sparse medium	SHSM	6	0.90	110	0.55
		306		**6144**	
Flint-gritted Neolithic	PREH	1	0.15	25	0.12
Amphorae Dressel 20	DR20	2	0.30	76	0.38
Dales ware shell-gritted	DWSH	88	13.15	3397	16.93
Grey	GREY	171	25.56	3560	17.74
Nene Valley colour-coated	NVCC	1	0.15	19	0.09
Oxidized	OX	5	0.75	59	0.29
Oxidized light	OXL	1	0.15	10	0.05
Parisian type	PART	2	0.30	48	0.24
Samian Central Gaulish	SAMCG	5	0.75	77	0.38
Samian East Gaulish?	SAMEG?	1	0.15	7	0.03
Shell-gritted	SHEL	6	0.90	271	1.35
Vesicular	VESIC	13	1.94	164	0.82
Tile	TILE	23	3.44	4331	21.58
Fired clay	FCLAY	44	6.58	1876	9.35
Post-Roman	PRO	1	0.15	2	0.01
Total		670		20066	

The fabrics from the soil samples could not be as closely defined, most being tiny chips. This is particularly difficult with shell-gritted sherds since the Roman dales ware jars found on the site are also hand-made, and it is impossible to differentiate small chips between Iron Age medium shell-gritted and dales ware. All such fragments have been recorded as undifferentiated shell-gritted fabric (SHEL). The fabrics from the samples are in Table 6.

Table 6 Fabrics from samples

Fabric	Code	Sherds	%	Weight	%
Grey	GREY	32	17.58	287	62.80
Grey minimal shell	GYMS?	1	0.55	2	0.44
Oxidized	OX	3	1.65	3	0.66
Shell-gritted common medium	SHCM	1	0.55	6	1.31
Shell-gritted	SHEL	144	79.12	153	33.48
Shell-gritted sparse fine	SHSF	1	0.55	6	1.31
Total		182	100	457	100

DISCUSSION

The quantities of pottery, tile and fired clay (excluding finds from samples) by phase are shown in table 7.

Table 7 Quantities by phase

Phase	Sherds	%	Weight	%
LIA	7	1.04	56	0.28
I	9	1.34	131	0.65
I-IV	14	2.09	1779	8.87
II	5	0.75	60	0.30
III	20	2.99	261	1.30
post-III	2	0.30	42	0.21
IV	159	23.73	3763	18.75
V	67	10.00	1437	7.16
V-VIII	1	0.15	19	0.09
pre-VI	2	0.30	29	0.14
VI	69	10.30	2053	10.23
VIa	10	1.49	656	3.27
post-VI	2	0.30	312	1.55
VII	179	26.72	6139	30.59
VII-VIII	54	8.06	1459	7.27
VIII	43	6.42	1142	5.69
-	14	2.09	444	2.21
?	13	1.94	284	1.42
Total	670	100	20066	100

This shows concentrations in Phases IV and VII, most of the finds coming from Phases VI-VIII. A large group of pottery came from the Phase IV linear ditch 515 (including many joining sherds of 13 illustrated vessels, Nos 1-13; average sherd weight of 25g), and a smaller group from the ring gully 061 in Phase V (illustrated No 23), both of late Iron Age date. The larger groups from the later phases of the site include the silting and dumped deposit in the ditch 104 Phase VI of mid 3rd century date (illustrated Nos 27 and 34); from the corndrier flue 163 (Phase VII) which included some residual Iron Age sherds, the pit 228 (phase VII, illustrated Nos 31-32), and the linear ditch 028 (phase VIII, illustrated No 29), all suggesting dates in the mid to late 3rd century. The industrial residue from 065 and related layers also produced a fairly large group of similar dating (Phases VII-VIII, illustrated No 24).

The earliest occurrence of Roman sherds appears to be in Phase III where a fragment of the neck of a shell-gritted jar came from the linear ditch 058 which could be from a dales ware jar. A grey plain-rimmed dish No 30 occurred in the ditch 325, phased as post Phase III. More definite

evidence for pottery of 3rd century date came from contexts in Phase IV. The rim and shoulder of a dales ware jar (illustrated No 33) came from the linear ditch 330 (context 365), which joined to sherds in the pit 484 of Phase VII. A further tiny chip of grey ware came from the ditch 330. Tiny sherds of Roman pottery also occurred in the linear ditches 056 and 146, but both sherds were very abraded, and may be intrusive in those deposits. The mixed pottery from the layer 004 phased to I-IV included a wide range from the Neolithic rim to Roman grey sherds and tile fragments.

IRON AGE POTTERY

Apart from the single Neolithic vessel, all the Iron Age vessels appear to be classic late Iron Age types, many of which are likely to continue in use into the Roman period. All the forms and fabrics are typical of late Iron Age pottery in Lincolnshire, and particularly in the Lindsey area, the main type site being the settlement at Dragonby (May 1996). A notable vessel is the small bowl decorated with rouletting, No 3, of which similar examples occur at Dragonby, Kirmington (Elsdon 1975, fig 19.3-8), Grimsby and Ludford, a style of later La Tene decoration related to, but distinct from, a similar style of decoration using rouletting (technically and stylistically different) which occurs in Kesteven to the south, centring on Ancaster and Sleaford (Elsdon 1996, 434-438; Elsdon 1997, 108, plate 17; figs 59-61; figs 73-75). Lattice decoration, as on No 5, is also a common feature of pottery from the later stages at Dragonby, as are the cordons (Nos 2 and 19) and the vertical stroke burnishing seen on the basal zone of No 6 (which also occurs at Old Sleaford, Elsdon 1997, fig 58, 89). The small bowl No 18 is a rarer form, but similar vessels occur in Lincolnshire at Old Sleaford (Elsdon 1997, fig 75, 340) in a semi-fine shell-gritted fabric. It is possible that the rouletted finer bowl No 3 (as Dragonby, Elsdon 1996, fig 19.48, 510) might have been traded from elsewhere in the area. While the overall style of the pottery at Barnetby is in the same tradition as the later vessels at Dragonby, the vessels almost certainly came from potters working in the locality. The proximity of the major Iron Age site at Kirmington suggests the Barnetby le Wold site falls into the sphere of influence of that site (May 1996, 439, fig 24.6).

The coarser cooking and storage vessels also fits in the regional styles of late La Tene pottery in Lindsey, and only one of the rims have the angular bevelled interior so often seen in the Iron Age tradition cooking pots in use in the legionary fortress in Lincoln. The lid-seated jar No 23 is a less common form, and lids, as No 22, are relatively rare in Iron Age assemblages (several occur at Old Sleaford including a wheel-made example, Elsdon 1997, fig 57, 73).. Although this lid-knob comes from a Phase VIII deposit and is wheel-made, the fabric is certainly in the Iron Age tradition.

The bulk of the illustrated Iron Age pottery comes from the linear ditch 515 (Nos 1-13), the group being well balanced between hand-made or wheel-finished coarser vessels, and the finer smaller jars and bowls. The other sherds include Nos 16 and 17 from Phase I, and others from Phases III-VIII. This pottery is an important addition to our knowledge of later La Tene pottery in this area.

ROMAN POTTERY

The sherds broadly attributable to the Roman period total 294, weighing 7.517kg, the bulk being grey quartz-gritted GREY and dales ware shell-gritted DWSH accounting for 87-92%. This is a relatively small sample for analysis, but investigation to examine the classes of vessels and the possible functions shows this group to be unusually unbalanced as a functional assemblage. Functional analysis is based on the combinations of fabric and form, each combination being assigned an assumed function. The vessel classes are shown in table 8 and the presumed functions in table 9.

Table 8	Vessel classes			
Class	Sherds	%	Weight	%
Amphora	2	1.06	76	1.23
Bowl	17	9.04	726	11.79
Bowl or dish	6	3.19	147	2.39
Beaker	4	2.13	60	0.97
Dish	5	2.66	112	1.82
Jar	142	75.53	4545	73.79
Jar or bowl	8	4.25	382	6.20
Jar beaker	2	1.06	37	0.60
Lid	1	0.53	15	0.24
Strainer	1	0.53	59	0.96
Sub-total	***188***		***6159***	
Unidentified	106		1358	
Total	294	100.00	7517	100.00

Table 9	Functions			
Function	Sherds	%	Weight	%
Amphora	2	1.05	76	1.22
Liquid holder	4	2.11	141	2.27
Drinking	6	3.16	97	1.56
Tableware	6	3.16	84	1.35
Table/Kitchen	21	11.05	882	14.21
Kitchen	151	79.47	4927	79.38
Sub-total	***190***		***6207***	
Unidentified	104		1310	
Total	294	100.00	7517	100.00

The functional analysis has been compared to similar analyses for both urban and rural sites in the area of similar date range. While kitchen vessels and jars predominate in most assemblages, particularly for rural sites, the percentage here is extremely high, virtually double what might be expected, and there are notable omissions and rarities in the assemblage for the Roman period. The main period represented by the Roman pottery is the later 3rd century, and this could explain the paucity of samian vessels (only six sherds, including two decorated forms, showing abrasion; from phases VI-VII), but the extreme rarity of NVCC Nene Valley colour-coated ware (a single body sherd) is inexplicable, given the quantity of dales ware shell-gritted jars which occur contemporaneously with the main occurrence of NVCC. There are no sherds from mortaria which would be expected in any normal domestic assemblage, and just two fragments of Dressel 20 amphorae, which would, in any event, be rarer in the 3rd century. The samian dates to the mid to later 2nd century, and there are some coarse ware vessels for which a 2nd century date would be applicable. A jar decorated with linear rustication, represented by 19 sherds from the storage pit 136 of Phase VI, could date to the early to mid 2nd century, and there are two sherds of Parisian ware, possibly from the same closed form, perhaps a flask or beaker for which a mid to late 2nd century date would be applicable (Phases VI and VII).

The bulk of the coarse pottery would, however, fit the 3rd century, the latest forms being two grey bead-and-flange bowls (Nos 27-28 from ditch 104 Phase VI and gully 681 Phase VIII) and a shell-gritted plain-rimmed dish (No 32 from pit 228 Phase VII), which would fit into the later 3rd to early 4th century. Wide-mouthed bowls, which are classic forms for the 3rd century in this area, are also notably rare, with only a maximum of six vessels, mostly of 3rd century rather than later types. These are similar to vessels from the Barnetby Top kilns (Samuels 1979, fig 5). At least one of the shell-gritted dales ware is wheel-made (a neck probably from this type of jar from Phase III, and

rims from the same jar, No 33). This type of jar also appears on the site of the Barnetby Top kilns (Samuels 1979, fig 6) in both shell-gritted and grey fabrics.

Notable finds in the Roman assemblage include the tile fragments, with at least two fragments of combed flue-tiles likely to have come from either a heated hypocaust room or a bath-house, alongside roofing and other tiles. Their scattered occurrence across the site suggests they arrived as rubble for re-use and do not necessarily constitute evidence for the close proximity of a building. Some fragments of shell-gritted fabric which appear to be probably from tiles rather than vessels came from the industrial residue 065 of Phase VII-VIII, one fragment being 26mm thick. These do not appear to be the fabric of the shell-gritted tiles known from the Bedfordshire-Northamptonshire area, and are likely to be from local clays.

The overall impression of the Roman assemblage is that this came from occupation in the area, the main emphasis being in the later 3rd century, just possibly extending into the early 4th century. Such occupation is likely to start in the 2nd century. The earliest date is perhaps the early 2nd century on the evidence of the rusticated jar; the samian and Parisian ware sherds belong more to the mid to late 2nd century. It is impossible to date the tile fragments but they provide evidence for the existence at some date of a heated building. This should indicate a high status establishment, such as a villa.

OCCUPATION

A peculiarity of the total assemblage of pottery from the site is the apparent gap between the late Iron Age occupation and the later Roman activity. Much of the late Iron Age pottery could continue in use into the Roman period, perhaps into the 2nd century, although the general impression is that there are few vessels likely to last much beyond the later 1st century. In the Roman assemblage, there is no certain evidence for 1st century pottery, and a notable rarity of pottery which can be dated to the earlier years of the 2nd century. Indeed there is little pottery datable before the 3rd century. The tile fragments suggest rubble from a demolished adjacent building, and while it is conceivable that this could be of earlier Roman date, the main Roman activity on the site appears to lie in the later 3rd century, possibly into the early 4th century.

The evidence suggests a break in the continuity of activity on the site but this may be due to the vagaries of rubbish deposition. The agricultural nature of the activity in the Roman period is not necessarily conducive to the deposit of contemporary rubbish, except perhaps at times when other materials, such as tiles and building material, are moved to the site for specific reasons, such as the construction of corn driers. Thus the abnormal Roman assemblage could result from a short-lived episode. Even the few sherds of samian could have been included as residual sherds in a deposit of essentially 3rd century date. These, together with the Parisian sherds and the fragments of the rusticated jar, do, however, indicate occupation within the area in the 2nd century, preceding the main period of Roman activity in the 3rd century.

Earlier excavations at Barnetby le Wold (BBAC, Darling 2000; Darling 2001) have produced differing results, the work in 2000 producing pottery broadly datable to the Late Iron Age and into the Roman period, with some fabrics not occurring in the current site assemblage, and only limited 3rd century pottery. Excavations in 2001 on the other hand produced much more 2nd century Roman pottery, but little of Late Iron Age date. The occupation and activity in the area is complex, and all excavated material will need re-assessment when excavations are complete.

FABRICS DEFINITION

Publication of *The National Roman Fabric Reference Collection*, abbreviated NRFRC (Tomber and Dore 1998), obviate the need to describe the major imported and widely traded Romano-British wares in detail.

Code	Fabric
COAR	Coarse tempered fabric, in a Iron Age pottery tradition, poorly mixed dark grey fabric with red-brown surfaces, only from cxt 188.
GYMS	Grey minimal shell. A fabric group to cover sherds, usually wheel-made, grey with minimal very sparse fine shell inclusions. Normally from vessels typical of the later Iron Age, but possibly continuing into the early Roman period.
IASA	Sand-tempered IA tradition. Quartz-gritted fabrics used for forms of late Iron Age type, probably continuing into the Roman period.
SHCC	Shell-gritted, common coarse inclusions.
SHCF	Shell-gritted, common fine inclusions.
SHCM	Shell-gritted, common medium inclusions.
SHSF	Shell-gritted, sparse fine inclusions.
SHSM	Shell-gritted, sparse medium inclusions.
PREH	Flint-gritted Neolithic. A single rim from a Peterborough ware Mortlake vessel.
DR20	Amphorae Dressel 20 amphorae. Peacock & Williams 1986 Class 25; **NRFRC Baetican (Early) Amphorae 1 BATAM1; (Late) Amphorae 2 BATAM 2 (3)**
DWSH	Shell-gritted dales ware jars, hand-made and wheel-finished from sources in north Lincolnshire around the Humber area. **NRFRC DAL SH**
GREY	Grey, undifferentiated quartz-gritted grey fabrics, hard wares with sparse to common quartz inclusions.
NVCC	Nene Valley colour-coated ware, **NRFRC = LNVCC** A single beaker base from cxt 688.
OX	Oxidized, miscellaneous oxidized wares. This coding comprises all miscellaneous oxidized sherds, usually in varying red-brown shades and degrees of grittiness, for which no significant fabric groupings are evident. Only open forms appeared, two decorated with rouletting.
OXL	Oxidized light, Oxidized lighter red-brown. A single flaked body sherd in light cream-brown fabric, possibly from an amphora or mortarium.
PART	Parisian type ware. Fabric colour ranging from light grey, grey-brown to dark grey, usually with a sandwich effect with a lighter cortex. Fine grained with smooth fracture, small quartz grains occurring usually very sparsely but occasionally more frequently. Rare clay pellets of the same colour as the matrix also occur. Known to have been made at Market Rasen, Lincs. **NRFRC: LMR FR**, (Elsdon 1982) and at the Rossington Bridge Doncaster kilns (Buckland et al 2001). Only two body sherds, both from a closed vessel, possibly a flask, with rouletted decoration.
SAMCG	Samian Central Gaulish, from Lezoux. **NRFRC : LEZ SA**
SAMEG?	Samian East Gaulish? mostly from Rheinzabern or Argonne. **NRFRC: RHZ SA; ARG SA**
SHEL	Shell-gritted, miscellaneous shell-gritted ware, code used mainly for tiny chips of indeterminable date from samples. Also includes five fragments (252g) of what appear to be tile, 26mm thick in a coarse shell-gritted fabric of local origin, from context 065, a spread of industrial residue.
VESIC	Vesicular sherds, vesicules probably due to loss of shell-gritting due to sub-soil conditions or usage.
TILE	Tile, Roman building tile
FCLAY	Fired clay, fired clay fragments
PRO	Post-Roman

CATALOGUE ILLUSTRATED VESSELS

The pottery is illustrated as the principal group of Iron Age pottery from the Ditch 515, followed by other Iron Age vessels, and finally the Roman period pottery.

The sequence of the catalogue is: No, Fabric, details, cut, deposit, **Phase**, Context C##, original drawing No. D##

Cut 515, Linear ditch, Phase IV

1 GYMS? Cordoned jar, dark grey, minimal shell inclusions. 515 linear ditch **IV** C516 D06
2 GYMS Cordoned bowl, dark grey, very sparse shell. 515 linear ditch **IV** C516 D05
3 SHSF Bowl everted rim, dark grey, curving rouletted decoration, cf Elsdon 1996, fig 19.48, 510. 515 linear ditch **IV** C419 D02
4 SHSF Bowl everted rim, dark grey with brown cortex. 515 linear ditch **IV** C516 D04
5 SHSF Bowl everted rim, scored lattice decoration, dark grey, red-brown cortex. Latticing occurs in a similar fashion at Dragonby (Elsdon 1996, fig 19.31, 216). 515 linear ditch **IV** C516 D03
6 SHSF Bowl everted rim, dark grey, burnished. The vertical burnished lines in the basal area are a common feature of vessels at Dragonby (Elsdon 1996, fig 19.49, 542). Profile drawn from over-lapping sherds. 515 linear ditch **IV** C516 D07
7 SHCM Handmade? Cookpot, dark grey, red-brown cortex, sooted. 515 linear ditch **IV** C516 D10
8 SHCM Handmade? Cookpot, dark grey, brown surface, sooted; burnt. 515 linear ditch **IV** C516 D08
9 SHCM Handmade cookpot; dark grey, burnt internal deposit. 515 linear ditch **IV** C516 D13
10 SHCM Handmade? Jar curved rim; dark grey. 515 linear ditch **IV** C516 D11
11 SHCM Handmade? Bowl everted rim; dark grey; burnt internal deposit. 515 linear ditch **IV** C516 D12
12 SHCC Handmade? Large jar; dark grey, red-brown cortex/interior. 515 linear ditch **IV** C516 D09
13 SHCC Handmade Large jar/bowl, dark grey fabric, red-brown exterior; burnt/sooted. 515 linear ditch **IV** C419 D01

Other Iron Age vessels

14 GYMS? Beadrim jar; dark grey; hardly any shell inclusions. - - - C383 D30
15 GYMS Handmade closed form; dark grey, zones burnished line decoration. 698 gully **II** C702 D20
16 SHSF Jar everted rim; dark grey; sparse shell. 046 linear ditch **I** C045 D34
17 SHSF Jar everted rim; dark grey, thin brown surface; sparse shell. 046 linear ditch **I** C045 D14
18 SHSF Handmade bowl; dark grey. 076 ring gully **V** C082 D25
19 SHSF Cordoned bowl?; dark grey, slight brown cortex. 022 ring gully **III** C039 D17
20 SHCM Wheel-thrown? Beadrim jar; dark grey. 625 grave cut skeleton **VII** C626 D33
21 SHCM Cookpot bevelled interior rim;dark grey, red-brown surfaces. 044 grain storage pit **IV** C047 D15
22 SHCF Wheel-thrown lid knob, string marked; dark grey, traces of burning. 005 ring gully **VIII** C006 D18
23 SHCC Handmade large jar with cupped rim; dark grey; very fragmented. Profile reconstructed from non-joining sherds. 061 ring gully **V** C069 D27

Roman vessels

24 GREY Jar collared rim, cf Rookery Lane (Webster 1960, fig 3, 15). - below (002) colluvium industrial **VII-VIII** C065 D31
25 GREY Jar or beaker, burnished line decoration. 009 linear ditch **VII** C130 D19
26 GREY Bowl triangular rim. 374 hollow VII C372 D29
27 GREY Flanged bowl. 104 linear ditch **VI** C102 D22
28 GREY Flanged bowl. 681 curvilinear gully **V** C680 D26
29 GREY Bowl, cf Barnetby Top, (Samuels 1979, fig 5, 14). 028 linear ditch **VIII** C128 D16
30 GREY Plain-rim dish. 325 same as [290] linear ditch **III** C325 D24
31 GREY Plain-rim dish; dark grey. 228 pit **VII** C229 D36
32 SHEL Plain-rim dish; dark grey; wheel-made? 228 pit **VII** C229 D28
33 SHSM Dales ware jar; dark grey, red-brown cortex; sparse shell. 330;484 linear ditch; pit **IV;VII** C365;C484 D23
34 DWSH Dales ware jar; mis-shapen, sooted. 104;075 ditch;burnt deposit **VI** C102;C075 D21
35 DWSH Dales ware jar; abraded. 524 post hole **VII** C525 D35
36 VESIC Lid-seated jar, abraded, lost sparse shell? 617 grave cut **VII** C618 D32

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APPENDIX 1

SUMMARY OF DATING AND QUANTITIES BY PHASE

Cut	Deposit	Phase	Description	Cxt	Sherds	Weight	Date	Comments
046	linear ditch	I	silting	045	2	48	LIA	
046	linear ditch	I		046	3	32	LIA	
046	linear ditch	I	silting	050	3	48	LIA	
098	linear ditch	I	silting	100	1	3	LIA	
007	linear ditch	II	silting	042	3	18	LIA	
007	linear ditch	II	silting	055	1	27	LIA	
106	linear ditch	II	silting	105	1	15	UNDATABLE	
-	floor surface?	III	hollow	041	2	45	LIA	
022	ring gully	III	silting	039	11	66	LIA	
022	ring gully	III	silting	039S	8	3	IA/ROM	
022	ring gully	III	silting	244-5S	9	15	IA/ROM	
051	linear ditch	III	silting	052	1	44	LIA	
058	linear ditch	III	silting	059	4	35	LIA/ROM?	J NECK COULD BE 3C?
359	linear ditch	III	silting	633	2	71	LIA	
-	alluvium	I-IV	Alluvium	004	10	1703	ROM	SOME LIA;NEOL RIM
-	below (002) colluvium	I-IV	Alluvium	004S	5	4	ROM	
613	pit burnt deposit	I-IV	burnt deposit	614	4	76	LIA?	
022	ring gully	IV	silting	024	3	144	LIA	
044	post hole	IV	silting	043	1	12	LIA	
044	post hole	IV	silting	047	3	133	LIA	
056	linear ditch	IV	silting	054	3	42	LIA	
056	linear ditch	IV	silting	155	8	49	ROM	ONLY 1 ROM BS ABR
146	linear ditch	IV	silting	150	2	5	ROM	VABR
330	linear ditch	IV	silting	329	1	20	LIA?	
330	linear ditch	IV	silting	365	1	27	M3+	
330	linear ditch	IV	silting	381	4	54	ROM	ONLY TINY CHIP ROM
513	gully	IV	silting	512S	5	2	IA/ROM	
515	linear ditch	IV	silting	419	15	626	LIA	2 VESSEL ONLY
515	linear ditch	IV	silting	419S	8	11	IA/ROM	
515	linear ditch	IV	silting	516	115	2608	LIA	
699	pit	IV	silting	700	3	43	LIA	
699	grain storage pit	IV	silting	700S	6	2	IA/ROM	
133	ring gully	LIA	silting	134S	2	6	IA?	
133	ring gully	LIA	silting	160	4	1	LIA?	
133	ring gully	LIA	silting	160S	22	25	IA/ROM	
266	pit	LIA	silting	267S	4	1	ROM	
266	pit backfill	LIA	backfill	268	2	39	LIA?	
266	pit	LIA	backfill	268S	7	2	IA/ROM	
473	gully	LIA	silting	472	1	16	LIA?	
325	linear ditch	post-III	linear ditch	325	2	42	L2-3	
061	linear ditch	V	silting	069	53	1203	LIA	
061	ring gully	V	silting	069S	16	30	IA/ROM	
076	ring gully	V	silting	077	5	14	POSTRO 13-14C	SOME ABR
076	ring gully	V	silting	078S	3	12	ROM	
076	ring gully	V	silting	125S	5	2	IA/ROM	
076	silting?	V	silting	137	2	48	LIA	
076	ring gully	V	silting	263S	7	7	ROM	

083	?	V	silting	082	2	42LIA	
104	linear ditch	V	silting	274	2	973C?	INTRUS MED TILE?
137	?	V	silting	137S	4	5ROM?	
294	linear ditch	V	silting	347	2	20LIA/EROM?	
553	linear ditch	V	silting	554	1	13ROM	ABR
481	curvilinear gully	pre-VI	silting	480	2	29LIA?	ABR
-	crem in ditch 104	VI	dumped deposit	075	17	1194M3+	
104	linear ditch	VI	silting	102	20	424M3	
104	linear ditch	VI	silting	103	1	36ROM	
136	storage pit?	VI	silting	135	19	214EM2	
174	post hole	VI	silting	188	2	5ROM?	
178	post hole	VI	post hole	178	3	41M3	
182	post hole	VI	post hole	182	1	7M3	
321	linear ditch	VI	silting	323	3	423C PROB	ONE VABR
761	post hole	VI	post hole	761	3	903C PROB	
072	linear ditch	VIa		072	2	221ROM	
072	linear ditch	VIa	silting	074	7	401M2-3	SAMIAN+GREY NON-DIAGNOSTIC
072	linear ditch	Via	silting	074S	4	1IA/ROM	
332	linear ditch	VIa	silting	331	1	34ML2	SAMIAN ONLY
450	linear ditch	post-VI	silting	449	1	8LIA	
452	linear ditch	post-VI	silting	451	1	304ROM	ABR
452	linear ditch	post-VI	silting	451S	1	2ROM	
-	burnt deposit	VII	burnt deposit	261	4	187M3+	
009	linear ditch	VII	silting	130	6	125M3 OR LATER	
064	post hole	VII	silting	063	4	34M3	RESID IA
067	post hole	VII	silting	062	7	170M3 OR LATER	SOME ABR
095	fire pit charcoal	VII	charcoal layer	097	8	551M3+	V.BURNT
161	corn drier charcoal	VII	charcoal deposit	162	7	521M3+	
161	t-shaped corndrier	VII	charcoal deposit	162S	9	9IA/ROM	
163	flue corn drier	VII	silting	165	36	662M3+	SOME RESID LIA
220	grave cut; backfill	VII	backfill	218	1	5ROM	
220	grave cut skeleton	VII	skeleton	219	5	817ROM	
223	post hole	VII	silting	221	1	9LIA?	
223	post hole	VII	backfill	222	5	156M3+	
228	pit	VII	silting	229	30	497M3+	
259	square corn drier	VII	dumped deposit	152	2	39UNDATABLE	
260	corn drier flue	VII	ash layer	151S	1	2ROM	
260	square corn drier flue	VII	silting	302	4	73ROM	
260	corn drier flue	VII	silting	302S	2	6IA/ROM	
260	square corn drier flue	VII	burnt deposit	430	2	7M3?	
334	linear ditch	VII	silting	333	1	4ROM	
404	enclosure ditch	VII	silting	492	1	4M3	
404	enclosure ditch	VII	silting	532	4	2742-3C	
404	enclosure ditch	VII	silting	532S	1	50ROM	
416	linear ditch	VII	silting	467	1	5ROM	
471	post hole	VII	silting	470	7	41ROM	ABR
484	pit	VII	pit	484	2	38M3	
524	post hole	VII	backfill	525	2	834M3	ABR

530	gully	VII	silting	568S	1	1	IA/ROM	
536	rectilinear ditch	VII	silting	732	22	852	UNDATABLE	
557	fire pit	VII	burnt deposit	561	7	1093	C?	SOME ABR
557	fire pit	VII	burnt deposit	561S	4	6	IA/ROM	
617	grave cut backfill	VII	backfill	618	2	363	C?	ABR
625	grave cut skeleton	VII	skeleton	626	1	12	LIA	
651	silting	VII	silting	588	2	28	M3+	
652	gully	VII	silting	653S	1	2	IA?	
677	grave cut backfill	VII	backfill	676	1	2	UNDATABLE	
679	curvilinear gully	VII	silting	688	4	47	ML3	
005	ring gully	VIII	silting	006	5	202	LIA/EROM?	
005	ring gully	VIII	silting	006S	1	1	ROM	
005	ring gully	VIII	silting	018S	5	2	IA/ROM	
028	linear ditch	VIII	silting	029	2	25	ROM	
028	linear ditch	VIII	silting	060	1	10	ROM	
028	linear ditch	VIII	silting	128	19	485	M3-4	SOME ABR
037	linear ditch	VIII		037	2	150	ROM	
037	linear ditch	VIII	silting	038	4	17	LIA	ABR/FRAGMENTED
094	cremation pit	VIII	cremation	093S	2	2	IA?	
681	curvilinear gully	VIII	silting	678S	5	10	ROM	
681	curvilinear gully	VIII	silting	680	10	253	M3-4	
681	curvilinear gully	VIII	silting	680S	13	105	ROM	
681	curvilinear gully	VIII	burnt deposit	767S	13	127	ROM	
065	industrial residue	VII-VIII	industrial residue	065	42	1256	ML3	
065	industrial residue	VII-VIII	industrial residue	139	7	110	M3	
065	industrial residue	VII-VIII	industrial residue	172	5	93	M3	
643	fire pit	V-VIII	burnt deposit	644	1	19	ROM	
-	colluvium	-	Colluvium	002	8	245	ROM	ROM TILE;IA POT
-	-	-	-	121S	6	3	IA/ROM	
-	-	-	-	440S	3	2	IA/ROM	
065	subsoil?	-	-	383	6	199	M3+	
112	pit	?	silting	111	1	112	-3C	
374	linear ditch	?	silting	372	5	191	M3+	
683	gully	?	silting	682	2	15	LIA?	
698	gully	?	silting	702	5	67	M3?	
					853	20524		

APPENDIX 2

BRICK/TILE AND FIRED CLAY FROM SOIL SAMPLES

Cut	Deposit	Phase	Details	Cxt	FindNo	Type	Weight
390	linear ditch	I	silting	391	14	brick/tile	1
022	ring gully	III	silting	039	47	fired earth/clay	7
500	gully	III	silting	501	82	fired earth/clay	1
515	linear ditch	IV	silting	419	80	fired earth/clay	1
699	pit	IV	silting	700	72	fired earth/clay	3
061	linear ditch	V	silting	069	46	brick/tile	1
076	ring gully	V	silting	078	48	fired earth/clay	3
076	ring gully	V	silting	125	5	fired earth/clay	1
076	ring gully	V	silting	263	50	fired earth/clay	6
550	linear ditch	V	silting	551	79	fired earth/clay	1
072	linear ditch	VIa	silting	074	71	brick/tile	1
452	linear ditch	post-VI	silting	451	74	fired earth/clay	41
095	fire pit	VII	charcoal layer	097	3	brick/tile/clay lining	113
095	fire pit	VII	charcoal layer	097	3	fired earth/clay	8
161	corn drier	VII	charcoal deposit	162	84	brick/tile	1
161	corn drier	VII	charcoal deposit	162	84	fired earth/clay	159
259	square corn drier	VII	dumped deposit	152	11	fired earth/clay	664
259	corn drier	VII	dumped deposit	306	12	brick/tile/clay lining	214
259	corn drier	VII	dumped deposit	306	12	fired earth/clay	1
259	corn drier	VII	demolition deposit	310	13	brick/tile/clay lining	494
259	corn drier	VII	demolition deposit	310	13	fired earth/clay	2
260	corn drier flue	VII	ash layer	151	10	brick/tile	121
260	corn drier flue	VII	ash layer	151	10	fired earth/clay	3
260	corn drier flue	VII	silting	269	8	fired earth/clay	762
260	corn drier flue	VII	silting	281	9	brick/tile	1
260	corn drier flue	VII	silting	281	9	fired earth/clay	34
260	square corn drier flue	VII	silting	302	20	brick/tile/clay lining	32
392	post hole	VII	silting	393	68	fired earth/clay	1
404	enclosure ditch	VII	silting	566	53	fired earth/clay	4
557	fire pit	VII	burnt deposit	561	81	brick/tile	54
557	fire pit	VII	burnt deposit	561	81	fired earth/clay	64
652	gully	VII	silting	653	69	fired earth/clay	1
679	curvilinear gully	VII	silting	688	86	fired earth/clay	5
005	ring gully	VIII	silting	006	32	fired earth/clay	2
005	ring gully	VIII	silting	012	31	fired earth/clay	2
005	ring gully	VIII	silting	018	30	brick/tile	1
679	curvilinear gully	VIII	silting	678	87	fired earth/clay	37
681	curvilinear gully	VIII	burnt deposit	767	85	brick/tile	2
681	curvilinear gully	VIII	burnt deposit	767	85	fired earth/clay	15
022	ring gully			244-5	45	fired earth/clay	6
-	void	-	-	121	49	fired earth/clay	1
-	void	-	-	440	25	fired earth/clay	3
685	pit burnt deposit	?	burnt deposit	686	55	fired earth/clay	21
							2895

Cxt	Cut	Type	Locn	Cxt	Phase	Details	Cxt	Fabric	Form	Manuf+	V	D?	DNo	Detail	Link	Shs	Wt
002	-	colluvium		002	-	Colluvium	002	SHCC	JBBR	HM?	1?		-	RIM FRAG;NON J BSS;DKGRY;RB INT;DIAM C20	-	7	75
002	-	colluvium		002	-	Colluvium	002	ZDATE	-	-	-		-	ROM	-	-	-
002	-	colluvium		002	-	Colluvium	002	ZZZ	-	-	-		-	ROM TILE;IA POT	-	-	-
002	-	colluvium		002	-	Colluvium	002	TILE	-	-	-	-	-	FRAG VABR;30MM;1 EDGE	-	1	170
004	-	alluvium	C	004	I-IV	Alluvium	004	PREH	MORTLAKE	HM;CORD	-	D	-	RIM;H'BONE CORD IMPR TOP/EDGE;FLINT TEMP;P'BORO WARE;NEOL	-	1	25
004	-	alluvium	C	004	I-IV	Alluvium	004	ZZZ	-	-	-	-	-	BAG W NEOLITHIC ORIG MKED 587	-	-	-
004	-	alluvium	C	004	I-IV	Alluvium	004	SHCM	B?	HM?	-	-	-	RIM CURVED FRAG;DKGRY THRO	-	1	9
004	-	alluvium	C	004	I-IV	Alluvium	004	SHCM	B?	HM?	-	-	-	RIM BEADED INTURNED;DKGRY;RB EXT;VESIC	-	1	19
004	-	alluvium	C	004	I-IV	Alluvium	004	GREY	-	-	-	-	-	BS	-	1	12
004	-	alluvium	C	004	I-IV	Alluvium	004	GREY	BCAR?	-	-	-	-	RIM FRAG;THIN WALL;SIM B334 TYPE	-	1	9
004	-	alluvium	C	004	I-IV	Alluvium	004	FCLAY	-	-	-	-	-	LGE FRAG RB THRO;>45MM;ONE IRREG SURF	-	1	240
004	-	alluvium	C	004	I-IV	Alluvium	004	ZDATE	-	-	-	-	-	ROM	-	-	-
004	-	alluvium	C	004	I-IV	Alluvium	004	ZZZ	-	-	-	-	-	SOME LIA	-	-	-
004	-	alluvium	C	004	I-IV	Alluvium	004	TILE	TEG?	-	-	-	-	FRAG VABR;18MM;NO EDGES;?TEGULA	-	1	160
004	-	alluvium	C	004	I-IV	Alluvium	004	TILE	BOND?	-	1	-	-	FRAGS J;35MM;CORNER;14X16CM	-	3	1229
006	005	ring gully	A	006	VIII	silting	006	SHCF	L?	WM	1	D	18	KNOB;PT WALL;STRING MK;DKGRY;TRACES BURNING	-	2	155
006	005	ring gully	A	006	VIII	silting	006	IASA?	-	WM	1	-	-	BSS;DKGRY QTZ;11MM THICK;?BASAL ZONE	-	3	47
006	005	ring gully	A	006	VIII	silting	006	ZDATE	-	-	-	-	-	LIA/EROM?	-	-	-
024	022	ring gully	A	024	IV	silting	024	SHCM	JL?	HM?	1?	-	-	BSS;RB EXT/HALF;GRY INT/HALF FAB	-	3	144
024	022	ring gully	A	024	IV	silting	024	ZDATE	-	-	-	-	-	LIA	-	-	-
029	028	linear ditch	A	029	VIII	silting	029	GREY	JBK?	-	-	-	-	BS F.THIN WALL;LTGRY	-	1	15
029	028	linear ditch	A	029	VIII	silting	029	GREY	CLSD	-	-	-	-	BS THICKER DKGRY;QTZ	-	1	10
029	028	linear ditch	A	029	VIII	silting	029	ZDATE	-	-	-	-	-	ROM	-	-	-
037	037	linear ditch	A	037	VIII		037	TILE	FLUE	COMB	-	-	-	FRAG/FLAKE;20MM;DEEP COMBING	-	2	150
037	037	linear ditch	A	037	VIII		037	ZDATE	-	-	-	-	-	ROM	-	-	-
038	037	linear ditch	A	038	VIII	silting	038	SHSF	-	-	-	-	-	BSS/CHIPS;DKGRY;HM/WM?;ABR/FRAGMENTED	-	4	17
038	037	linear ditch	A	038	VIII	silting	038	ZDATE	-	-	-	-	-	LIA	-	-	-
038	037	linear ditch	A	038	VIII	silting	038	ZZZ	-	-	-	-	-	ABR/FRAGMENTED	-	-	-
039	022	ring gully	A	039	III	silting	039	SHSF	BCOR	WM	1	D	17	RIM/SHLDR;CORDONED;DKGRY;SL.BN CORTEX;DIAM18	-	8	56
039	022	ring gully	A	039	III	silting	039	SHSF	-	WM	-	-	-	BS;DKGRY;SL.GROOVE	-	1	7
039	022	ring gully	A	039	III	silting	039	SHCM?	-	-	-	-	-	CHIP ONLY;DKGRY	-	1	2
039	022	ring gully	A	039	III	silting	039	IASA?	-	-	-	-	-	CHIP ONLY;DKGRY;COMMON BLK FE INCLS	-	1	1
039	022	ring gully	A	039	III	silting	039	ZDATE	-	-	-	-	-	LIA	-	-	-
041	-	floor surface?	A	041	III	hollow	041	SHCM	J?	HM	-	-	-	BS DKGRY;WIPE/BURNISH EXT	-	1	11
041	-	floor surface?	A	041	III	hollow	041	SHCM	JB	HM	-	-	-	BS DKGRY/RB SURFS;HARD;>13MM THICK	-	1	34
041	-	floor surface?	A	041	III	hollow	041	ZDATE	-	-	-	-	-	LIA	-	-	-
042	007	linear ditch	A	042	II	silting	042	SHCM	-	HM?	-	-	-	BS;RB FAB;GRYISH SURFS	-	1	7
042	007	linear ditch	A	042	II	silting	042	SHSF	-	-	-	-	-	BS DKGRY THINNISH WALL;WM?	-	1	4
042	007	linear ditch	A	042	II	silting	042	SHSF	-	-	-	-	-	BS DKGRY;V SPARSE SHELL;FLINT;?BURNISH EXT	-	1	7
042	007	linear ditch	A	042	II	silting	042	ZDATE	-	-	-	-	-	LIA	-	-	-
043	044	post hole	A	043	IV	silting	043	SHCM	-	HM	-	-	-	BS DKGRY	-	1	12
043	044	post hole	A	043	IV	silting	043	ZDATE	-	-	-	-	-	LIA	-	-	-
045	046	linear ditch	A	045	I	silting	045	SHSF	JBEV	-	-	D	14	RIM/PT WALL;DKGRY;THIN BN SURF;V SPARSE SHELL;DIAM19-20	-	1	36
045	046	linear ditch	A	045	I	silting	045	SHSF	JEV	-	-	D?	-	RIM/PT WALL;DKGRY;SPARSE SHELL;DIAM13	-	1	12
045	046	linear ditch	A	045	I	silting	045	ZDATE	-	-	-	-	-	LIA	-	-	-
046	046	linear ditch	A	046	I		046	SHCM	J?	-	-	-	-	RIM CHIP ONLY	-	1	3
046	046	linear ditch	A	046	I		046	SHSF	-	-	-	-	-	BS DKGRY	-	1	4
046	046	linear ditch	A	046	I		046	SHCM	-	-	-	-	-	BS DKGRY;RB/BN SURFS	-	1	25
046	046	linear ditch	A	046	I		046	ZDATE	-	-	-	-	-	LIA	-	-	-

Cxt	Cut	Type	Locn	Cxt	Phase	Details	Cxt	Fabric	Form	Manuf+	V	D?	DNo	Detail	Link	Shs	Wt
047	044	post hole	A	047	IV	silting	047	SHCM	JBLS	-	1	D	15	RIMS/PT WALL;DKGRY;RB SURFS;WM;DIAM18	-	3	133
047	044	post hole	A	047	IV	silting	047	ZDATE	-	-	-	-	-	LIA	-	-	-
050	046	linear ditch	A	050	I	silting	050	SHCM	-	-	-	-	-	BS GRY;RB SURFS	-	1	13
050	046	linear ditch	A	050	I	silting	050	SHCF	-	-	-	-	-	BS DKGRY	-	1	8
050	046	linear ditch	A	050	I	silting	050	SHSF	-	-	-	-	-	BS DKGRY;RB SURF;FINE-MED SPARSE	-	1	27
050	046	linear ditch	A	050	I	silting	050	ZDATE	-	-	-	-	-	LIA	-	-	-
052	051	linear ditch	A	052	III	silting	052	SHCC	JL?	HM?	-	-	-	BS;DKGRY;RB SURFS;INT SURF LOST	-	1	44
052	051	linear ditch	A	052	III	silting	052	ZDATE	-	-	-	-	-	LIA	-	-	-
054	056	linear ditch	A	054	IV	silting	054	SHCM	-	HM	-	-	-	BS DKGRY/BN SURF	-	1	34
054	056	linear ditch	A	054	IV	silting	054	SHSF	-	HM	-	-	-	BSS DKGRY;THIN BN SURF;WM?	-	2	8
054	056	linear ditch	A	054	IV	silting	054	ZDATE	-	-	-	-	-	LIA	-	-	-
055	007	linear ditch	A	055	II	silting	055	SHCM	-	HM	-	-	-	BS DK GRY	-	1	27
055	007	linear ditch	A	055	II	silting	055	ZDATE	-	-	-	-	-	LIA	-	-	-
059	058	linear ditch	A	059	III	silting	059	SHCM	-	-	-	-	-	CHIP ONLY;DKGRY;RB CORTEX	-	1	3
059	058	linear ditch	A	059	III	silting	059	SHSF	-	WM?	-	-	-	BS;THIN WALL;DKGRY	-	1	3
059	058	linear ditch	A	059	III	silting	059	SHSM?	J?	WM	-	-	-	NECK/SHLDR;DKGRY;RB CORT;CURVED>RIM;ROM CF JDWX365	-	1	16
059	058	linear ditch	A	059	III	silting	059	FCLAY	-	-	-	-	-	FRAG;?FINGER IMPRINT	-	1	13
059	058	linear ditch	A	059	III	silting	059	ZDATE	-	-	-	-	-	LIA/ROM?	-	-	-
059	058	linear ditch	A	059	III	silting	059	ZZZ	-	-	-	-	-	J NECK COULD BE 3C?	-	-	-
060	028	linear ditch	A	060	VIII	silting	060	OXL	-	-	-	-	-	BS LTBN;?FLAKED;A/M?	-	1	10
060	028	linear ditch	A	060	VIII	silting	060	ZDATE	-	-	-	-	-	ROM	-	-	-
062	067	post hole	A	062	VII	silting	062	SAMCG	31?	-	-	-	-	RIM FRAG/WALL	-	1	10
062	067	post hole	A	062	VII	silting	062	SAMCG	BD	-	-	-	-	BS FLAKED;ABR	-	1	4
062	067	post hole	A	062	VII	silting	062	DWSH	J	-	-	-	-	BS	-	1	19
062	067	post hole	A	062	VII	silting	062	GREY	BWM?	-	1	-	-	BASE;LGEISH;THICK;PROB BWM	-	3	128
062	067	post hole	A	062	VII	silting	062	GREY	-	-	-	-	-	BS	-	1	9
062	067	post hole	A	062	VII	silting	062	ZDATE	-	-	-	-	-	M3 OR LATER	-	-	-
062	067	post hole	A	062	VII	silting	062	ZZZ	-	-	-	-	-	SOME ABR	-	-	-
063	064	post hole	A	063	VII	silting	063	DWSH	JDW	-	-	-	-	RIM FRAG ONLY;SOOTED;BURNT DEP INT	-	1	16
063	064	post hole	A	063	VII	silting	063	SHCM	JB	-	-	-	-	RIM FRAG ONLY;DKGRY;RB INT;HM?	-	1	10
063	064	post hole	A	063	VII	silting	063	SHSF	-	-	-	-	-	BS OXID RB;THIN WALL;PROB WM	-	1	2
063	064	post hole	A	063	VII	silting	063	GREY	-	-	-	-	-	BS;ROM	-	1	6
063	064	post hole	A	063	VII	silting	063	ZDATE	-	-	-	-	-	M3	-	-	-
063	064	post hole	A	063	VII	silting	063	ZZZ	-	-	-	-	-	RESID IA	-	-	-
065	065	industrial residue	B	065	VII-VIII	industrial residue	065	SAMCG	37	-	-	-	-	BS OVOLO;CANTHARUS DEC	-	1	18
065	065	industrial residue	B	065	VII-VIII	industrial residue	065	DWSH	JDW	HM	-	-	-	RIM;BS	-	2	44
065	065	industrial residue	B	065	VII-VIII	industrial residue	065	GREY	BWM	-	-	-	-	RIM ONLY;LGE 34CM DIAM;NR B.TOP NO8	-	1	79
065	065	industrial residue	B	065	VII-VIII	industrial residue	065	GREY	JCR	-	1	D	31	RIM/SHLDR;CF RL/SP;DIAM12	-	2	93
065	065	industrial residue	B	065	VII-VIII	industrial residue	065	GREY	BCAR?	BVL	-	-	-	BODY;CARINATION;BVL ABOVE;NOT B334	-	1	17
065	065	industrial residue	B	065	VII-VIII	industrial residue	065	GREY	DPR	-	-	-	-	RIM/WALL;LTGRY	-	1	28
065	065	industrial residue	B	065	VII-VIII	industrial residue	065	GREY	BK	-	-	-	-	BASE;GROOVE U'SIDE;AS RPNV27 BUT SHALLOWER	-	1	28
065	065	industrial residue	B	065	VII-VIII	industrial residue	065	GREY	J?	-	-	-	-	BASE 100% THICK/HEAVY	-	1	259
065	065	industrial residue	B	065	VII-VIII	industrial residue	065	GREY	-	-	-	-	-	BSS;MIXED	-	25	389
065	065	industrial residue	B	065	VII-VIII	industrial residue	065	SHEL	TILE?	-	-	-	-	FRAGS;26MM THICK;RB THROUGH	-	2	204
065	065	industrial residue	B	065	VII-VIII	industrial residue	065	SHEL	TILE?	-	-	-	-	FLAKES SAME FAB;RB THROUGH	-	3	48
065	065	industrial residue	B	065	VII-VIII	industrial residue	065	TILE	-	-	-	-	-	FRAG CORNER;C 15MM THICK	-	1	43
065	065	industrial residue	B	065	VII-VIII	industrial residue	065	TILE	-	-	-	-	-	CHIP;BURNT	-	1	6
065	065	industrial residue	B	065	VII-VIII	industrial residue	065	ZDATE	-	-	-	-	-	ML3	-	-	-
069	061	linear ditch	B	069	V	silting	069	SHCC	JL	HM	1	D	27	RIMS CUPPED;DKGRY;VARYING SURF;V FRAG	-	53	1203

Cxt	Cut	Type	Locn	Cxt	Phase	Details	Cxt	Fabric	Form	Manuf+	V	D?	DNo	Detail	Link	Shs	Wt
069	061	linear ditch	B	069	V	silting	069	ZDATE	-	-	-	-	-	LIA	-	-	-
072	072	linear ditch	A	072	VIa		072	TILE	FLUE?	COMB	1	-	-	FRAGS;16MM;FRAG COMB & SIDE CUT	-	2	221
072	072	linear ditch	A	072	VIa		072	ZDATE	-	-	-	-	-	ROM	-	-	-
074	072	linear ditch	A	074	VIa	silting	074	SAMCG	30?	-	-	-	-	BS DECOR;TREE;ANIMAL	-	1	11
074	072	linear ditch	A	074	VIa	silting	074	GREY	JB	-	1	-	-	BSS JOINING	-	2	67
074	072	linear ditch	A	074	VIa	silting	074	GREY	JB	-	-	-	-	BASE STRING;FLINT;CHALK? INCLS	-	1	90
074	072	linear ditch	A	074	VIa	silting	074	GREY	-	-	-	-	-	BSS	-	2	13
074	072	linear ditch	A	074	VIa	silting	074	ZDATE	-	-	-	-	-	M2-3	-	-	-
074	072	linear ditch	A	074	VIa	silting	074	ZZZ	-	-	-	-	-	SAMIAN+GRY NON DIAGNOSTIC	-	-	-
074	072	linear ditch	A	074	VIa	silting	074	TILE	FLUE	COMB	-	-	-	FRAG;VABR;20MM;DEEP COMBING	-	1	220
075	-	crem in ditch 104	B	075	VI	dumped deposit	075	DWSH	JDW	-	1	D	21	RIM/WALL/BASE;COMP PROF POSS;SOOT EXT;MIS-SHAPEN;SAME IN	102	16	1173
075	-	crem in ditch 104	B	075	VI	dumped deposit	075	GREY	-	-	-	-	-	BS	-	1	21
075	-	crem in ditch 104	B	075	VI	dumped deposit	075	ZDATE	-	-	-	-	-	M3+	-	-	-
077	076	ring gully	B	077	V	silting	077	SHCM	-	HM?	2?	-	-	BSS;GRY;BN'ISH SURFS;F.THIN WALL;VABR	-	4	12
077	076	ring gully	B	077	V	silting	077	PRO	-	-	-	-	-	HDLE FRAG GLAZED;BEVERLEY ORANGE TYPE E13-M14;BEVO2T	-	1	2
077	076	ring gully	B	077	V	silting	077	ZDATE	-	-	-	-	-	POSTRO	-	-	-
077	076	ring gully	B	077	V	silting	077	ZZZ	-	-	-	-	-	SOME ABR	-	-	-
082	083	?	B	082	V	silting	082	SHSF	B	HM	-	D	25	RIM/WALL;SL.CURVE RIM;DKGRY;DIAM12	-	1	39
082	083	?	B	082	V	silting	082	SHCF	-	HM?	-	-	-	CHIP ONLY;RB FAB;DKGRY SURFS	-	1	3
082	083	?	B	082	V	silting	082	ZDATE	-	-	-	-	-	LIA	-	-	-
097	095	fire pit	B	097	VII	charcoal layer	097	DWSH	J	HM	-		-	BS	-	1	30
097	095	fire pit	B	097	VII	charcoal layer	097	FCLAY	-	-	-		-	FLAKES;LUMP;V.BURNT	-	6	72
097	095	fire pit	B	097	VII	charcoal layer	097	ZDATE	-	-	-		-	M3+	-	-	-
097	095	fire pit	B	097	VII	charcoal layer	097	ZZZ	-	-	-		-	V.BURNT	-	-	-
097	095	fire pit	B	097	VII	charcoal layer	097	FCLAY	-	-	-	-	-	LGE LUMP;BURNT OXID/BLK;IRREGULAR	-	1	449
100	098	linear ditch	A	100	I	silting	100	SHSF	-	-	-	-	-	BS TINY ONLY;HM/WM?;DKGRY	-	1	3
100	098	linear ditch	A	100	I	silting	100	ZDATE	-	-	-	-	-	LIA	-	-	-
102	104	linear ditch	B	102	VI	silting	102	DWSH	J	-	1	-	21	BSS J;SAME AS D21 FROM	075	2	40
102	104	linear ditch	B	102	VI	silting	102	DWSH	JDW	-	-	-	-	RIM FRAG ONLY	-	1	11
102	104	linear ditch	B	102	VI	silting	102	DWSH	JDW	-	-	-	-	NECK/SHLDR	-	1	27
102	104	linear ditch	B	102	VI	silting	102	DWSH	JDW	-	1?	-	-	BSS FRAGMENTED	-	9	29
102	104	linear ditch	B	102	VI	silting	102	PART	CLSD	ROUZ	-	-	-	BS WALL 2 ZONES ROUZ	-	1	28
102	104	linear ditch	B	102	VI	silting	102	GREY	J	-	-	-	-	BASE PLAIN	-	1	60
102	104	linear ditch	B	102	VI	silting	102	GREY	-	-	-	-	-	BSS	-	2	14
102	104	linear ditch	B	102	VI	silting	102	GREY	BFB	-	-	D	22	RIM/WALL;STUBBY FLANGE;LOW BEAD;DIAM18-19	-	1	54
102	104	linear ditch	B	102	VI	silting	102	ZDATE	-	-	-	-	-	M3	-	-	-
102	104	linear ditch	B	102	VI	silting	102	TILE	BOND?	-	1	-	-	FRAGS;25MM;BURNT POST FRACTURE	-	2	161
103	104	linear ditch	B	103	VI	silting	103	GREY	J	-	-	-	-	BASE FRAG	-	1	36
103	104	linear ditch	B	103	VI	silting	103	ZDATE	-	-	-	-	-	ROM	-	-	-
105	106	linear ditch	B	105	II	silting	105	FCLAY	-	-	-	-	-	LUMP;LGE INCLS CHALK	-	1	15
105	106	linear ditch	B	105	II	silting	105	ZDATE	-	-	-	-	-	UNDATABLE	-	-	-
111	112	pit	B	111	?	silting	111	GREY	JEV?	-	-	-	-	SHLDR/NECK;LTGRY	-	1	11
111	112	pit	B	111	?	silting	111	ZDATE	-	-	-	-	-	2-3C	-	-	-
128	028	linear ditch	A	128	VIII	silting	128	DWSH	JDW	-	-	-	-	RIM FRAG ONLY	-	1	25
128	028	linear ditch	A	128	VIII	silting	128	DWSH	J	-	-	-	-	BSS;TWO VABR	-	4	72
128	028	linear ditch	A	128	VIII	silting	128	GREY	BWM	-	-	-	-	RIM ONLY;LGE U'CUT;CF B.TOP NO1	-	1	99
128	028	linear ditch	A	128	VIII	silting	128	GREY	BWM	-	-	D	16	RIM/MOST WALL;NR B.TOP NO14;DIAM21	-	1	88
128	028	linear ditch	A	128	VIII	silting	128	GREY	J?	-	1	-	-	BSS F.THIN WALL;SOOTED;SANDY	-	3	23
128	028	linear ditch	A	128	VIII	silting	128	GREY	-	-	-	-	-	BSS	-	6	123

Cxt	Cut	Type	Locn	Cxt	Phase	Details	Cxt	Fabric	Form	Manuf+	V	D?	DNo	Detail	Link	Shs	Wt
128	028	linear ditch	A	128	VIII	silting	128	GREY	-	-	-	-	-	BSS;GRY/BN SURF EXT	-	2	44
128	028	linear ditch	A	128	VIII	silting	128	GREY	BD?	-	-	-	-	BS	-	1	11
128	028	linear ditch	A	128	VIII	silting	128	ZDATE	-	-	-	-	-	M3-4	-	-	-
128	028	linear ditch	A	128	VIII	silting	128	ZZZ	-	-	-	-	-	SOME ABR	-	-	-
130	009	linear ditch	A	130	VII	silting	130	DWSH	JDW	-	-	-	-	RIM/NECK;BURNT DEP INT RIM	-	1	14
130	009	linear ditch	A	130	VII	silting	130	DWSH	J	-	-	-	-	BS	-	1	4
130	009	linear ditch	A	130	VII	silting	130	GREY	BWM	-	-	-	-	RIM FRAG ONLY;U'CUT RIM;RL TYPE	-	1	14
130	009	linear ditch	A	130	VII	silting	130	GREY	JB	-	-	-	-	BASE PLAIN	-	1	65
130	009	linear ditch	A	130	VII	silting	130	GREY	-	-	-	-	-	BS GROOVED	-	1	6
130	009	linear ditch	A	130	VII	silting	130	GREY	JBK	BARCS	-	D	19	RIM/NECK;DIAM 14?	-	1	22
130	009	linear ditch	A	130	VII	silting	130	ZDATE	-	-	-	-	-	M3 OR LATER	-	-	-
135	136	storage pit?	C	135	VI	silting	135	GREY	JRUST	RLIN	1	-	-	BASE FTRG;BSS;LTGRY FAB;DKER SURFS	-	19	214
135	136	storage pit?	C	135	VI	silting	135	ZDATE	-	-	-	-	-	EM2	-	-	-
137	076	silting?	B	137	V	silting	137	SHCM	-	HM	2	-	-	BSS GRY;BN EXT SURFS;ONE BURNT INT	-	2	48
137	076	silting?	B	137	V	silting	137	ZDATE	-	-	-	-	-	LIA	-	-	-
139	065	industrial residue	B	139	VII-VIII	industrial residue	139	DWSH	J	HM	-	-	-	BSS	-	5	94
139	065	industrial residue	B	139	VII-VIII	industrial residue	139	GREY	JCUR	-	-	-	-	RIM FRAG ONLY	-	1	11
139	065	industrial residue	B	139	VII-VIII	industrial residue	139	TILE	-	-	-	-	-	FRAG	-	1	5
139	065	industrial residue	B	139	VII-VIII	industrial residue	139	ZDATE	-	-	-	-	-	M3	-	-	-
150	146	linear ditch	C	150	IV	silting	150	GREY	-	-	-	-	-	BS VABR	-	1	2
150	146	linear ditch	C	150	IV	silting	150	VESIC	-	-	-	-	-	BS VABR	-	1	3
150	146	linear ditch	C	150	IV	silting	150	ZDATE	-	-	-	-	-	ROM	-	-	-
150	146	linear ditch	C	150	IV	silting	150	ZZZ	-	-	-	-	-	VABR	-	-	-
152	259	square corn drier	A	152	VII	dumped deposit	152	FCLAY	-	-	-	-	-	LUMPS;OXID;LGE CHALK INCLS	-	2	39
152	259	square corn drier	A	152	VII	dumped deposit	152	ZDATE	-	-	-	-	-	UNDATABLE	-	-	-
155	056	linear ditch	A	155	IV	silting	155	SHCF	-	-	1	-	-	BSS DKGRY;RB THIN SURF;FINE-MED	-	2	23
155	056	linear ditch	A	155	IV	silting	155	SHCM	-	HM?	2-3	-	-	BSS DKGRY;SOME RB SURF	-	3	19
155	056	linear ditch	A	155	IV	silting	155	SHSF	-	-	-	-	-	BSS DKGRY;SL.RB CORT	-	2	3
155	056	linear ditch	A	155	IV	silting	155	GREY	-	-	-	-	-	BS QTZ GRIT;ABR	-	1	4
155	056	linear ditch	A	155	IV	silting	155	ZDATE	-	-	-	-	-	ROM	-	-	-
155	056	linear ditch	A	155	IV	silting	155	ZZZ	-	-	-	-	-	ONLY 1 ROM BS ABR	-	-	-
160	133	ring gully	C	160	LIA	silting	160	VESIC	-	-	-	-	-	CRUMBS	-	4	1
160	133	ring gully	C	160	LIA	silting	160	ZDATE	-	-	-	-	-	LIA?	-	-	-
162	161	corn drier	B	162	VII	charcoal deposit	162	DWSH	J	-	-	-	-	BASE/WALL/BSS;LGE PT LOWER JAR	-	7	521
162	161	corn drier	B	162	VII	charcoal deposit	162	ZDATE	-	-	-	-	-	M3+	-	-	-
165	163	flue corn drier	B	165	VII	silting	165	DWSH	J	HM	-	-	-	BASE/BS;LGE J	-	2	233
165	163	flue corn drier	B	165	VII	silting	165	DWSH	J	HM	-	-	-	RIM FRAG;WALL/BASE SH	-	2	94
165	163	flue corn drier	B	165	VII	silting	165	GREY	J	BVL	1	-	-	BS ZONE BVL ON SHLDR;DKGRY;LTER CORTEX	-	2	32
165	163	flue corn drier	B	165	VII	silting	165	GREY	CLSD	-	1	-	-	BSS;F.THIN WALL	-	4	40
165	163	flue corn drier	B	165	VII	silting	165	GREY	CLSD	-	1	-	-	BSS;GRY CORE;BNISH SURFS	-	2	18
165	163	flue corn drier	B	165	VII	silting	165	GYMS	BNK?	-	1	-	-	BSS BASAL >CURVE GIRTH;TINY SHELL FLAKES;DKGRY	-	2	73
165	163	flue corn drier	B	165	VII	silting	165	FCLAY	-	-	-	-	-	LUMP;DKGRY;CHALK INCLS	-	1	18
165	163	flue corn drier	B	165	VII	silting	165	SHCM	J?	HM	1	-	-	BSS FRAGMENTD;GRY;RB INT;SL.VESIC	-	21	154
165	163	flue corn drier	B	165	VII	silting	165	ZDATE	-	-	-	-	-	M3+	-	-	-
165	163	flue corn drier	B	165	VII	silting	165	ZZZ	-	-	-	-	-	SOME RESID LIA	-	-	-
172	065	industrial residue	B	172	VII-VIII	industrial residue	172	DWSH	J	HM	2	-	-	BSS	-	2	78
172	065	industrial residue	B	172	VII-VIII	industrial residue	172	OX	CLSD	-	-	-	-	BS;GRY CORED;LTBN SURFS	-	1	5
172	065	industrial residue	B	172	VII-VIII	industrial residue	172	GREY	-	-	-	-	-	BSS;F.THIN WALL	-	2	10
172	065	industrial residue	B	172	VII-VIII	industrial residue	172	ZDATE	-	-	-	-	-	M3	-	-	-

Cxt	Cut	Type	Locn	Cxt	Phase	Details	Cxt	Fabric	Form	Manuf+	V	D?	DNo	Detail	Link	Shs	Wt
178	178	post hole	C	178	VI	post hole	178	DWSH	J	-	-	-	-	BSS	-	2	29
178	178	post hole	C	178	VI	post hole	178	GREY	DPR	-	-	-	-	RIM FRAG/WALL	-	1	12
178	178	post hole	C	178	VI	post hole	178	ZDATE	-	-	-	-	-	M3	-	-	-
182	182	post hole	C	182	VI	post hole	182	DWSH	JDW	-	-	-	-	RIM FRAG	-	1	7
182	182	post hole	C	182	VI	post hole	182	ZDATE	-	-	-	-	-	M3	-	-	-
188	174	post hole	C	188	VI	silting	188	COAR	-	-	1	-	-	BSS J;COARSE POOR MIX DKGRY;RB SURFS	-	2	5
188	174	post hole	C	188	VI	silting	188	ZDATE	-	-	-	-	-	ROM?	-	-	-
218	220	grave cut	B	218	VII	backfill	218	TILE?	-	-	-	-	-	CHIP	-	1	5
218	220	grave cut	B	218	VII	backfill	218	ZDATE	-	-	-	-	-	ROM	-	-	-
219	220	grave cut	B	219	VII	skeleton	219	GREY	JB	-	1	-	-	BASE STRING;DKGRY COARSE QTZ FAB	-	2	102
219	220	grave cut	B	219	VII	skeleton	219	ZDATE	-	-	-	-	-	ROM	-	-	-
219	220	grave cut	B	219	VII	skeleton	219	TILE	TEG?	-	1	-	-	FRAGS;37MM;SOME BURNING;BOTTOM EDGE;PT FLANGE&NOTCH	-	3	715
221	223	post hole	B	221	VII	silting	221	SHCM?	-	HM	-	-	-	BS FLAKED;ID NOT DEF	-	1	9
221	223	post hole	B	221	VII	silting	221	ZDATE	-	-	-	-	-	LIA?	-	-	-
222	223	post hole	B	222	VII	backfill	222	DWSH	JDW	-	1	D?	-	RIM/PT BODY;SOOT INT RIM	-	3	112
222	223	post hole	B	222	VII	backfill	222	DWSH?	J	-	-	-	-	BS;HM;PROB DW RATHER THAN IA	-	1	34
222	223	post hole	B	222	VII	backfill	222	DWSH?	J	-	-	-	-	BS;HM;PROB DW;OXID.RB ?SURF LOST	-	1	10
222	223	post hole	B	222	VII	backfill	222	ZDATE	-	-	-	-	-	M3+	-	-	-
229	228	pit	B	229	VII	silting	229	PART	CLSD	-	-	-	-	BS SHLDR/NECK? SM FLASK	-	1	20
229	228	pit	B	229	VII	silting	229	OX	CLSD	ROUZ	-	-	-	BS SHLDR? W 2 ROWS ROUL;RB FAB;LTER EXT SURF	-	1	28
229	228	pit	B	229	VII	silting	229	GREY	DPR	-	-	D?	-	RIM;COMP PROF;ST.WALL;DKGRY	-	1	21
229	228	pit	B	229	VII	silting	229	SHEL	DPR	-	-	D	28	COMP PROF;DKGRY;WM?	-	1	19
229	228	pit	B	229	VII	silting	229	DWSH	JDW	HM	-	-	-	RIM FRAG	-	1	14
229	228	pit	B	229	VII	silting	229	DWSH	J	HM	-	-	-	BSS	-	3	31
229	228	pit	B	229	VII	silting	229	GREY	CLSD	-	1	-	-	BSS;GREY CORE SANDW FAB	-	6	97
229	228	pit	B	229	VII	silting	229	GREY	JB	-	-	-	-	BASE FRAG;STRING	-	1	28
229	228	pit	B	229	VII	silting	229	GREY	J?	BVL	1	-	-	BSS;LTGRY	-	13	235
229	228	pit	B	229	VII	silting	229	GREY	-	-	-	-	-	BS LTGRY & DKGRY FLAKE	-	2	4
229	228	pit	B	229	VII	silting	229	ZDATE	-	-	-	-	-	M3+	-	-	-
261	-	burnt deposit	B	261	VII	burnt deposit	261	DWSH	JDW	-	2	-	-	BSS;2 JOIN;HM	-	3	110
261	-	burnt deposit	B	261	VII	burnt deposit	261	GREY	BD	-	-	-	-	BASE	-	1	77
261	-	burnt deposit	B	261	VII	burnt deposit	261	ZDATE	-	-	-	-	-	M3+	-	-	-
268	266	pit	C	268	LIA	backfill	268	VESIC	-	HM	1	-	-	BSS;DKGRY;BN EXT	-	2	39
268	266	pit	C	268	LIA	backfill	268	ZDATE	-	-	-	-	-	LIA?	-	-	-
274	104	linear ditch	B	274	V	silting	274	GREY	-	-	-	-	-	NECKED BASE OR LID KNOB;STRING MK	-	1	42
274	104	linear ditch	B	274	V	silting	274	ZDATE	-	-	-	-	-	3C?	-	-	-
274	104	linear ditch	B	274	V	silting	274	ZZZ	-	-	-	-	-	INTRUS MED TILE?	-	-	-
274	104	linear ditch	B	274	V	silting	274	TILE	PEG TILE	-	-	-	-	FRAG;15MM;ONE EDGE;PIERCED HOLE;BURNT ?IN USE;12-15C	-	1	55
302	260	square corn drier flue	A	302	VII	silting	302	GREY	-	-	-	-	-	BS	-	1	12
302	260	square corn drier flue	A	302	VII	silting	302	FCLAY	-	-	-	-	-	LUMPS;BURNT;LGE CHALK INCLS	-	3	61
302	260	square corn drier flue	A	302	VII	silting	302	ZDATE	-	-	-	-	-	ROM	-	-	-
323	321	linear ditch	D	323	VI	silting	323	GREY	JEV	-	1	-	-	RIM FRAGS J;HEAVY TYPE	-	2	38
323	321	linear ditch	D	323	VI	silting	323	GREY	-	-	-	-	-	COARSE LUMP;VABR	-	1	4
323	321	linear ditch	D	323	VI	silting	323	ZDATE	-	-	-	-	-	3C PROB	-	-	-
323	321	linear ditch	D	323	VI	silting	323	ZZZ	-	-	-	-	-	ONE VABR	-	-	-
325	325	linear ditch	B	325	post-III	linear ditch	325	GREY	DPR	-	-	D	24	COMP PROF;THICK WALL;DIAM13	-	1	32
325	325	linear ditch	B	325	post-III	linear ditch	325	GREY	J?	LA	-	-	-	BS;LTGRY	-	1	10
325	325	linear ditch	B	325	post-III	linear ditch	325	ZDATE	-	-	-	-	-	L2-3	-	-	-
329	330	linear ditch	B	329	IV	silting	329	SHCF	-	HM?	-	-	-	BS;GRYBN THRO	-	1	20

Cxt	Cut	Type	Locn	Cxt	Phase	Details	Cxt	Fabric	Form	Manuf+	V	D?	DNo	Detail	Link	Shs	Wt
329	330	linear ditch	B	329	IV	silting	329	ZDATE	-	-	-	-	-	LIA?	-	-	-
331	332	linear ditch	B	331	VIa	silting	331	SAMCG	31	-	-	-	-	FTRG	-	1	34
331	332	linear ditch	B	331	VIa	silting	331	ZDATE	-	-	-	-	-	ML2	-	-	-
331	332	linear ditch	B	331	VIa	silting	331	ZZZ	-	-	-	-	-	SAMIAN ONLY	-	-	-
333	334	linear ditch	D	333	VII	silting	333	OX	-	-	-	-	-	BS;RB SURFS	-	1	4
333	334	linear ditch	D	333	VII	silting	333	ZDATE	-	-	-	-	-	ROM	-	-	-
347	294	linear ditch	C	347	V	silting	347	SHCF	-	HM?	-	-	-	BS;DKGRY	-	1	7
347	294	linear ditch	C	347	V	silting	347	IASA?	-	-	-	-	-	BS;DKGRY;HARD SANDY	-	1	13
347	294	linear ditch	C	347	V	silting	347	ZDATE	-	-	-	-	-	LIA/EROM?	-	-	-
365	330	linear ditch	B	365	IV	silting	365	SHSM	JDW	-	-	D	23	RIM/SHLDR;DKGRY;RB CORTEX;SPARSE MID SHELL;DIAM14;JOINS	484	1	27
365	330	linear ditch	B	365	IV	silting	365	ZDATE	-	-	-	-	-	M3+	-	-	-
372	374	linear ditch	B	372	?	silting	372	DWSH	J	-	2	-	-	BSS	-	2	41
372	374	linear ditch	B	372	?	silting	372	GREY	-	-	1	-	-	BSS J	-	2	19
372	374	linear ditch	B	372	?	silting	372	GREY	BTR	-	-	D	29	COMP PROF;DIAM 15	-	1	131
372	374	linear ditch	B	372	?	silting	372	ZDATE	-	-	-	-	-	M3+	-	-	-
381	330	linear ditch	B	381	IV	silting	381	SHCM	-	HM	-	-	-	BS;DKGRY;BN INT	-	1	34
381	330	linear ditch	B	381	IV	silting	381	SHCM	JB	HM?	-	-	-	RIM FRAG DAMAGED;RB;GRYBN SURF	-	1	10
381	330	linear ditch	B	381	IV	silting	381	GREY	-	-	-	-	-	CHIP TINY	-	1	1
381	330	linear ditch	B	381	IV	silting	381	FCLAY	-	-	-	-	-	LUMP;OXID;CHALK INCLS	-	1	9
381	330	linear ditch	B	381	IV	silting	381	ZDATE	-	-	-	-	-	ROM	-	-	-
381	330	linear ditch	B	381	IV	silting	381	ZZZ	-	-	-	-	-	ONLY TINY CHIP ROM	-	-	-
383	065	subsoil?	B	383	-	-	383	DWSH	J	-	1	-	-	BASE 100%;BSS;L'SCALE DEPOSIT INT	-	4	174
383	065	subsoil?	B	383	-	-	383	GYMS?	JBR	-	1	D	30	RIM/PT BODY;DKGRY;HARDLY ANY SHELL;DIAM ?18	-	2	25
383	065	subsoil?	B	383	-	-	383	ZDATE	-	-	-	-	-	M3+	-	-	-
419	515	linear ditch	F	419	IV	silting	419	SHCC	JBL	HM	1	D	01	RIM/PT WALL;BURNT/SOOT LWR WALL;DKGRY;RB EXT;DIAM40?	-	14	595
419	515	linear ditch	F	419	IV	silting	419	SHSF	BEV	ROUL	-	D	02	RIM/PT WALL;DKGRY;CURVING ROUL;CF DRAGB;DIAM 13	-	1	31
419	515	linear ditch	F	419	IV	silting	419	ZDATE	-	-	-	-	-	LIA	-	-	-
419	515	linear ditch	F	419	IV	silting	419	ZZZ	-	-	-	-	-	2 VESS ONLY	-	-	-
430	260	square corn drier flue	A	430	VII	burnt deposit	430	GYMS?	-	-	-	-	-	BS SMALL;DKGRY	-	1	2
430	260	square corn drier flue	A	430	VII	burnt deposit	430	DWSH?	J	HM	-	-	-	BS;ID NOT POSITIVE	-	1	5
430	260	square corn drier flue	A	430	VII	burnt deposit	430	ZDATE	-	-	-	-	-	M3?	-	-	-
449	450	linear ditch	C	449	post-VI	silting	449	SHCF	-	-	-	-	-	BS;DKGRY;WM?	-	1	8
449	450	linear ditch	C	449	post-VI	silting	449	ZDATE	-	-	-	-	-	LIA	-	-	-
451	452	linear ditch	C	451	post-VI	silting	451	TILE?	-	-	-	-	-	FRAG;ABR;LTRB;LTER SURF;F.FINE FAB	-	1	304
451	452	linear ditch	C	451	post-VI	silting	451	ZDATE	-	-	-	-	-	ROM	-	-	-
451	452	linear ditch	C	451	post-VI	silting	451	ZZZ	-	-	-	-	-	ABR	-	-	-
467	416	linear ditch	D	467	VII	silting	467	GREY	-	-	-	-	-	BS;F.FINE FAB	-	1	5
467	416	linear ditch	D	467	VII	silting	467	ZDATE	-	-	-	-	-	ROM	-	-	-
470	471	post hole	C	470	VII	silting	470	GREY	CLSD	-	1	-	-	BSS;RB FAB;GRY SURFS;ABR	-	7	41
470	471	post hole	C	470	VII	silting	470	ZDATE	-	-	-	-	-	ROM	-	-	-
470	471	post hole	C	470	VII	silting	470	ZZZ	-	-	-	-	-	ABR	-	-	-
472	473	gully	C	472	LIA	silting	472	IASA?	-	-	-	-	-	BS;DKGRY;BN EXT;BURNT;DEPOSIT INT	-	1	16
472	473	gully	C	472	LIA	silting	472	ZDATE	-	-	-	-	-	LIA?	-	-	-
480	481	curvilinear gully	B	480	pre-VI	silting	480	SHSM	-	HM?	1?	-	-	BSS;VABR;DKGRY;BN SURFS;VSPARSE SHELL	-	2	29
480	481	curvilinear gully	B	480	pre-VI	silting	480	ZDATE	-	-	-	-	-	LIA?	-	-	-
480	481	curvilinear gully	B	480	pre-VI	silting	480	ZZZ	-	-	-	-	-	ABRADED	-	-	-
484	484	pit	C	484	VII	pit	484	ZDATE	-	-	-	-	-	M3	-	-	-
484	484	pit	C	484	VII	pit	484	SHSM	JDW	-	-	D	23	RIM/SHLDR;DKGRY;RB CORTEX;SPARSE MID SHELL;DIAM14;JOINS	365	2	38
492	404	enclosure ditch	D	492	VII	silting	492	DWSH?	J	-	-	-	-	BS	-	1	4

Cxt	Cut	Type	Locn	Cxt	Phase	Details	Cxt	Fabric	Form	Manuf+	V	D?	DNo	Detail	Link	Shs	Wt
492	404	enclosure ditch	D	492	VII	silting	492	ZDATE	-	-	-	-	-	M3	-	-	-
516	515	linear ditch	F	516	IV	silting	516	SHSF	BEV	SLA	1	D	03	COMP PROF;FTRG;DKGRY;RB CORT;D16?	-	13	165
516	515	linear ditch	F	516	IV	silting	516	SHSF	BEV	-	-	D	04	RIM/PT WALL;PLAIN;DKGRY;BN CORT;DIAM 16	-	1	46
516	515	linear ditch	F	516	IV	silting	516	GYMS	BCOR	-	1	D	05	RIM/PT WALL;DKGRY;VSPARSE SHELL;2+CORDONS	-	2	43
516	515	linear ditch	F	516	IV	silting	516	GYMS?	BNK	-	1	D	06	RIM/PT WALL;DKGRY;SHEL?;DIAM18?;CORDS ON SHLDR	-	4	48
516	515	linear ditch	F	516	IV	silting	516	SHSF	BEV	-	1	D	07	COMP PROF POSS;NONJ;DKGRY;BURNISH;DIAM18?;FTM	-	19	247
516	515	linear ditch	F	516	IV	silting	516	SHSF	B?	HM	1	-	-	BSS;2 JOIN;BURNISH;HM	-	3	68
516	515	linear ditch	F	516	IV	silting	516	GYMS	B?	-	1	-	-	FTRG ONLY;DIAM9	-	2	28
516	515	linear ditch	F	516	IV	silting	516	SHCM	BBR	HM?	1	D	08	RIM/MOST WALL;DKGRY;BN SURF;SOOT/BURN;DIAM17	-	13	414
516	515	linear ditch	F	516	IV	silting	516	SHCC	JS	HM?	-	D	09	RIM/PT SHLDR ONLY;DKGRY;RB CORT/INT;DIAM32	-	1	108
516	515	linear ditch	F	516	IV	silting	516	SHCC	JS	HM?	1	-	-	RIM FRAGS;BSS;DKGRY;BN INT	-	6	220
516	515	linear ditch	F	516	IV	silting	516	SHCC	JS?	HM?	-	-	-	BSS;DKGRY;RB INT	-	2	55
516	515	linear ditch	F	516	IV	silting	516	SHCM	BNAT	HM?	1	D	10	RIM/PT SHLDR;DKGRY;RB CORT;SOOTED;DIAM16	-	2	31
516	515	linear ditch	F	516	IV	silting	516	SHCM	JCUR	HM?	1	D	11	RIM/PT WALL;DKGRY;DIAM16	-	4	64
516	515	linear ditch	F	516	IV	silting	516	SHCM	BEV	HM?	1	D	12	RIM/PT WALL;DKGRY;BURNT DEP INT	-	2	26
516	515	linear ditch	F	516	IV	silting	516	SHCM	JEV	HM	1	D	13	COMP PROF;DKGRY;BURNT DEP INT	-	38	1033
516	515	linear ditch	F	516	IV	silting	516	SHCM	JB	-	-	-	-	FRAG RIM ONLY	-	1	5
516	515	linear ditch	F	516	IV	silting	516	SHCM	-	-	-	-	-	BS DKGRY;RB SURFS	-	1	4
516	515	linear ditch	F	516	IV	silting	516	FCLAY	-	-	-	-	-	FLAKE;GRASS/STRAW MARKED	-	1	3
516	515	linear ditch	F	516	IV	silting	516	ZDATE	-	-	-	-	-	LIA	-	-	-
525	524	post hole	D	525	VII	backfill	525	DWSH	JDW	-	-	D?	-	RIM/SHLDR;LGE JAR;ABR	-	1	192
525	524	post hole	D	525	VII	backfill	525	ZDATE	-	-	-	-	-	M3	-	-	-
525	524	post hole	D	525	VII	backfill	525	ZZZ	-	-	-	-	-	ABR	-	-	-
525	524	post hole	D	525	VII	backfill	525	TILE	TEG	-	-	-	-	FRAG;15-20MM;PRE-F.DAMAGE >FLANGE	-	1	642
532	404	enclosure ditch	D	532	VII	silting	532	GREY	-	-	-	-	-	BS	-	1	9
532	404	enclosure ditch	D	532	VII	silting	532	GREY	CLSD	LA	1	-	-	BSS	-	2	20
532	404	enclosure ditch	D	532	VII	silting	532	ZDATE	-	-	-	-	-	2-3C	-	-	-
532	404	enclosure ditch	D	532	VII	silting	532	TILE	IMB	-	-	-	-	FRAG;18-26MM;ONE EDGE	-	1	245
554	553	linear ditch	D	554	V	silting	554	GREY	-	-	-	-	-	BS;F.FINE;ABR	-	1	13
554	553	linear ditch	D	554	V	silting	554	ZDATE	-	-	-	-	-	ROM	-	-	-
554	553	linear ditch	D	554	V	silting	554	ZZZ	-	-	-	-	-	ABR	-	-	-
561	557	fire pit	B	561	VII	burnt deposit	561	DR20	A	-	-	-	-	BS;RB;ABR	-	1	65
561	557	fire pit	B	561	VII	burnt deposit	561	DR20?	A?	-	-	-	-	BS;LTBN;ABR/FLAKE;BURNT	-	1	11
561	557	fire pit	B	561	VII	burnt deposit	561	GREY	J?	LA	1?	-	-	BSS;DKGRY;RB CORT SANDWICH	-	2	13
561	557	fire pit	B	561	VII	burnt deposit	561	OX	CLSD	ROUL	-	-	-	BS THIN WALL;RB EXT;GRY INT	-	1	4
561	557	fire pit	B	561	VII	burnt deposit	561	DWSH?	J	-	-	-	-	BS VABR;PROB DWSH	-	1	5
561	557	fire pit	B	561	VII	burnt deposit	561	FCLAY	-	-	-	-	-	LUMP;RB>LTBN	-	1	11
561	557	fire pit	B	561	VII	burnt deposit	561	ZDATE	-	-	-	-	-	3C?	-	-	-
561	557	fire pit	B	561	VII	burnt deposit	561	ZZZ	-	-	-	-	-	SOME ABR	-	-	-
588	651	silting		588	VII	silting	588	DWSH?	J	HM	-	-	-	BASE FRAG;BURNT	-	1	24
588	651	silting		588	VII	silting	588	GREY	-	-	-	-	-	BS	-	1	4
588	651	silting		588	VII	silting	588	ZDATE	-	-	-	-	-	M3+	-	-	-
614	613	pit		614	I-IV	burnt deposit	614	VESIC	-	HM?	1	-	-	BSS GRY FAB;LTBN SURFS;VESIC;DIFF TYPE SHELL	-	4	76
614	613	pit		614	I-IV	burnt deposit	614	ZDATE	-	-	-	-	-	LIA?	-	-	-
618	617	grave cut	D	618	VII	backfill	618	GREY	-	-	-	-	-	BS	-	1	4
618	617	grave cut	D	618	VII	backfill	618	VESIC	JLS	-	-	D	32	RIM/SHLDR;NOT CLASSIC JDW;ABR;LOST SPARSE SHELL?	-	1	32
618	617	grave cut	D	618	VII	backfill	618	ZDATE	-	-	-	-	-	3C?	-	-	-
618	617	grave cut	D	618	VII	backfill	618	ZZZ	-	-	-	-	-	ABR	-	-	-
626	625	grave cut	A	626	VII	skeleton	626	SHCM	JBR	WM?	-	D?	-	RIM FRAG ONLY;DKGRY;HARD;DIAM14	-	1	12

Cxt	Cut	Type	Locn	Cxt	Phase	Details	Cxt	Fabric	Form	Manuf+	V	D?	DNo	Detail	Link	Shs	Wt
626	625	grave cut	A	626	VII	skeleton	626	ZDATE	-	-	-	-	-	LIA	-	-	-
633	359	linear ditch	D	633	III	silting	633	GYMS	-	-	-	-	-	BS;DKGRY;WM	-	1	3
633	359	linear ditch	D	633	III	silting	633	ZDATE	-	-	-	-	-	LIA	-	-	-
633	359	linear ditch	D	633	III	silting	633	FCLAY	-	-	-	-	-	LUMP;LTRB;LGE CHALK INCLS	-	1	68
644	643	fire pit	E	644	V-VIII	burnt deposit	644	GREY	BD?	-	-	-	-	BASE FRAG;VDKGREY	-	1	19
644	643	fire pit	E	644	V-VIII	burnt deposit	644	ZDATE	-	-	-	-	-	ROM	-	-	-
676	677	grave cut	E	676	VII	backfill	676	FCLAY	-	-	-	-	-	LUMP;BURNT	-	1	2
676	677	grave cut	E	676	VII	backfill	676	ZDATE	-	-	-	-	-	UNDATABLE	-	-	-
680	681	curvilinear gully	B	680	VIII	silting	680	DWSH	J	HM	2	-	-	BSS;1 FINE SHEL;BOTH HM	-	2	44
680	681	curvilinear gully	B	680	VIII	silting	680	GREY	BD	-	-	-	-	BASE FRAG	-	1	29
680	681	curvilinear gully	B	680	VIII	silting	680	GREY	JB	-	-	-	-	BASE FRAG	-	1	30
680	681	curvilinear gully	B	680	VIII	silting	680	GREY	BK?	-	-	-	-	BSS THIN WALL	-	2	13
680	681	curvilinear gully	B	680	VIII	silting	680	GREY	-	-	-	-	-	BSS 1 F.LGE BWM?	-	2	94
680	681	curvilinear gully	B	680	VIII	silting	680	GREY	L?	-	-	-	-	RIM? FRAG;VBURNT GRY>RB	-	1	15
680	681	curvilinear gully	B	680	VIII	silting	680	GREY	BFB	-	-	D	26	RIM/PT WALL;DIAM18	-	1	28
680	681	curvilinear gully	B	680	VIII	silting	680	ZDATE	-	-	-	-	-	M3-4	-	-	-
682	683	gully	E	682	?	silting	682	VESIC	-	HM	-	-	-	BS;DKGRY;BN EXT;?LOST SHELL	-	1	13
682	683	gully	E	682	?	silting	682	SHCM	-	HM?	-	-	-	BS;DKGRY THRO;PROB IA	-	1	2
682	683	gully	E	682	?	silting	682	ZDATE	-	-	-	-	-	LIA?	-	-	-
688	679	curvilinear gully	B	688	VII	silting	688	NVCC	BK	-	-	-	-	BASE FTM;RB FAB	-	1	19
688	679	curvilinear gully	B	688	VII	silting	688	OX	CLSD?	-	-	-	-	FTM BASE;PINKISH FAB;?SLIPPED RB	-	1	18
688	679	curvilinear gully	B	688	VII	silting	688	GREY	CLSD	-	2	-	-	BSS F.THIN WALLED	-	2	10
688	679	curvilinear gully	B	688	VII	silting	688	ZDATE	-	-	-	-	-	ML3	-	-	-
700	699	pit	A	700	IV	silting	700	SHCM	-	HM?	1	-	-	BSS J;DKGRY;RB SURFS;HM?	-	2	24
700	699	pit	A	700	IV	silting	700	SHCM	-	HM?	-	-	-	BS;DKGRY;BN SURFS	-	1	19
700	699	pit	A	700	IV	silting	700	ZDATE	-	-	-	-	-	LIA	-	-	-
702	698	gully	A	702	?	silting	702	DWSH?	J	-	-	-	-	BS;HM;MORE DW THAN IA	-	1	37
702	698	gully	A	702	?	silting	702	GREY	BGF?	-	-	-	-	RIM FRAG ONLY	-	1	6
702	698	gully	A	702	?	silting	702	GREY	-	-	-	-	-	BS	-	1	9
702	698	gully	A	702	?	silting	702	SHSF	-	-	-	-	-	BS;THINNISH WALL;DKGRY;WM?	-	1	4
702	698	gully	A	702	?	silting	702	GYMS	-	HM;BDL	-	D	20	BS;DKGRY;ZONES BDL ALTERNATING	-	1	11
702	698	gully	A	702	?	silting	702	ZDATE	-	-	-	-	-	M3?	-	-	-
732	536	rectilinear ditch	B	732	VII	silting	732	FCLAY	-	-	-	-	-	LUMPS;FRAGS;SOME J;?STICK W GRAIN IMPRESS;18MM DIAM;DAUB?	-	22	852
732	536	rectilinear ditch	B	732	VII	silting	732	ZDATE	-	-	-	-	-	UNDATABLE	-	-	-
761	761	post hole	E	761	VI	post hole	761	SAMEG?	BD	-	-	-	-	FRAG	-	1	7
761	761	post hole	E	761	VI	post hole	761	GREY	ST	-	-	-	-	JAR LIKE BASE;FTM;HOLES PIERCED PRE-F	-	1	59
761	761	post hole	E	761	VI	post hole	761	FCLAY	-	-	-	-	-	LUMP;BURNT	-	1	24
761	761	post hole	E	761	VI	post hole	761	ZDATE	-	-	-	-	-	3C PROB	-	-	-

[redacted]netby [redacted]d Pott[redacted]m env[redacted]ntal s[redacted] [redacted] [redacted] [redacted] [redacted] [redacted]sampl[redacted] [redacted] [redacted] [redacted] [redacted] [redacted] [redacted] [redacted] 27[redacted] 18:2[redacted] [redacted] [redacted] [redacted]

Cut	Deposit	Locn	Cxt	Phase	Descript	Cxt	Fab	Form	Manuf+	D?	DNo	Details & <sample No>	Shs	Wt
022	ring gully	A	039	III	silting	039S	SHEL	-	-	-	-	CHIPS<47>	8	3
-	alluvium	C	004	I-IV	Alluvium	004S	GREY	-	-	-	-	CHIPS <62>	3	3
-	alluvium	C	004	I-IV	Alluvium	004S	GREY	-	-	-	-	CHIPS <63>	2	1
513	gully	D	512	IV	silting	512S	SHEL	-	-	-	-	CHIPS<25>	5	2
515	linear ditch	F	419	IV	silting	419S	SHSF	BEV	ROUL	D	02	BS <80>	1	6
515	linear ditch	F	419	IV	silting	419S	SHEL?	-	-	-	-	CHIPS <80>	7	5
699	pit	A	700	IV	silting	700S	SHEL?	-	-	-	-	CHIPS<72>	6	2
133	ring gully	C	134	LIA	silting	134S	SHEL?	-	-	-	-	BS/FLAKE <52>	2	6
133	ring gully	C	160	LIA	silting	160S	SHEL	-	-	-	-	BSS 2+C20 CRUMBS <7>	22	25
266	pit	C	267	LIA	silting	267S	GREY?	-	-	-	-	CHIPS<22>	4	1
266	pit	C	268	LIA	backfill	268S	SHEL?	-	-	-	-	CHIPS<23>	7	2
061	linear ditch	B	069	V	silting	069S	SHEL	-	-	-	-	CHIPS<46>	16	30
076	ring gully	B	078	V	silting	078S	GREY	DPR	-	-	-	RIM FRAG <48>	1	11
076	ring gully	B	078	V	silting	078S	GREY?	-	-	-	-	CHIPS <48>	2	1
076	ring gully	B	125	V	silting	125S	SHEL?	-	-	-	-	CHIPS <5>	5	2
076	silting?	B	137	V	silting	137S	SHEL	-	-	-	-	BS/CHIPS <6>	3	4
076	silting?	B	137	V	silting	137S	OX?	-	-	-	-	CHIP <6>	1	1
076	ring gully	B	263	V	silting	263S	SHEL?	-	-	-	-	CHIP/CRUMBS <50>	6	6
076	ring gully	B	263	V	silting	263S	GREY	-	-	-	-	CHIP <50>	1	1
072	linear ditch	A	074	VIa	silting	074S	SHEL?	-	-	-	-	CHIPS<71>	4	1
452	linear ditch	C	451	post-VI	silting	451S	GREY	-	-	-	-	CHIP <74>	1	2
161	corn drier	B	162	VII	charcoal deposit	162S	SHEL?	-	-	-	-	CHIPS <84>	9	9
260	corn drier flue	A	151	VII	ash layer	151S	GREY	-	-	-	-	BS <10>	1	2
260	square corn drier flue	A	302	VII	silting	302S	SHEL?	-	-	-	-	CHIPS<20>	2	6
404	enclosure ditch	D	532	VII	silting	532S	GREY	-	-	-	-	BS <65>	1	50
530	gully	D	568	VII	silting	568S	SHEL?	-	-	-	-	CHIP <54>	1	1
557	fire pit	B	561	VII	burnt deposit	561S	SHEL	-	-	-	-	CHIPS <81>	4	6
652	gully	C	653	VII	silting	653S	GYMS?	-	-	-	-	TINY RIM CHIP <69>	1	2
005	ring gully	A	006	VIII	silting	006S	GREY?	-	-	-	-	CHIP <32> SOME SHELL	1	1
005	ring gully	A	018	VIII	silting	018S	SHEL	-	-	-	-	CHIPS<30>	5	2
094	cremation	C	093S	VIII		093S	SHEL	-	-	-	-	CHIP;VABR;SHELL LEACHED;NO INT SURF <004>	1	1
094	cremation	C	093S	VIII		093S	FCLAY	-	-	-	-	CHIP;NO SURFS;<004>	1	1
094	cremation	C	093S	VIII		093S	ZDATE	-	-	-	-	IA?	-	-
094	cremation	C	093S	VIII		093S	ZZZ	-	-	-	-	FAB SHEL NOT DWSH	-	-
679	curvilinear gully	B	678	VIII	silting	678S	GREY	BK	-	-	-	FTM/FTRG BASE <87>	1	7
679	curvilinear gully	B	678	VIII	silting	678S	SHEL?	-	-	-	-	CHIPS <87>	3	2
679	curvilinear gully	B	678	VIII	silting	678S	OX	-	-	-	-	CHIP <87>	1	1
681	curvilinear gully	B	680	VIII	silting	680S	GREY	-	-	-	-	BS/CHIPS <86>	7	97
681	curvilinear gully	B	680	VIII	silting	680S	SHEL	-	-	-	-	CHIPS <86>	5	7
681	curvilinear gully	B	680	VIII	silting	680S	OX	-	-	-	-	CHIP <86>	1	1
681	curvilinear gully	B	767	VIII	burnt deposit	767S	GREY	-	-	-	-	BS/CHIPS <85>	6	58
681	curvilinear gully	B	767	VIII	burnt deposit	767S	SHEL	-	-	-	-	BS/CHIPS <85>	6	17
681	curvilinear gully	B	767	VIII	burnt deposit	767S	GREY	-	-	-	-	BS SANDY <85>	1	52
022	ring gully	A	III			244-5S	SHCM	JB	-	-	-	TINY RIM FRAG <45>	1	6
022	ring gully	A	III			244-5S	SHEL?	-	-	-	-	CHIP/CRUMBS <45>	8	9
-	void		121	-	-	121S	SHEL?	-	-	-	-	CHIPS <49>	6	3
-	void		440	-	-	440S	SHEL?	-	-	-	-	CHIPS <28>	3	2
													183	458

RB POT DRAWINGS

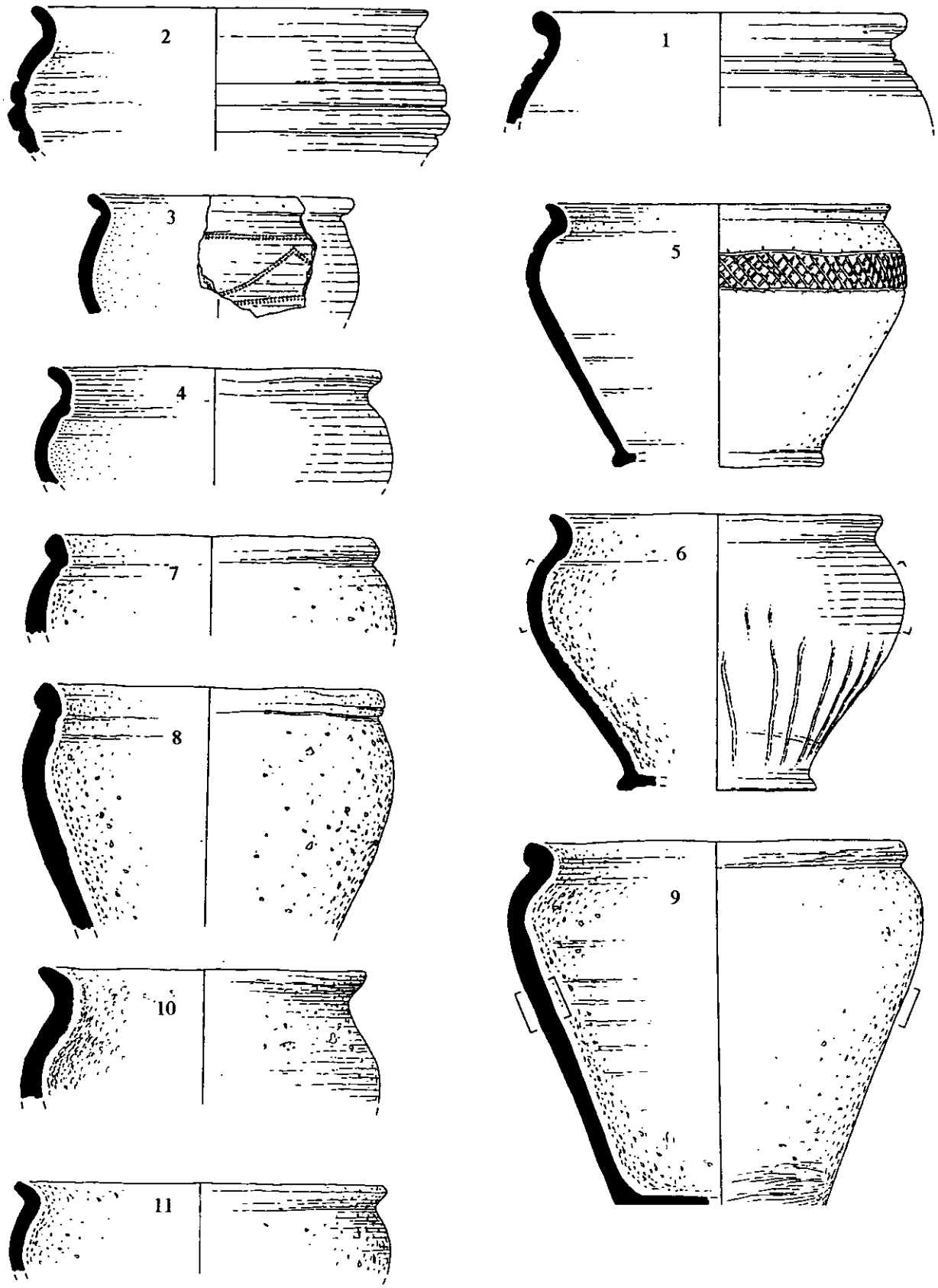
Scale bar

completely wrong

drawings appear to

lie between 1:4 &

1:3 ??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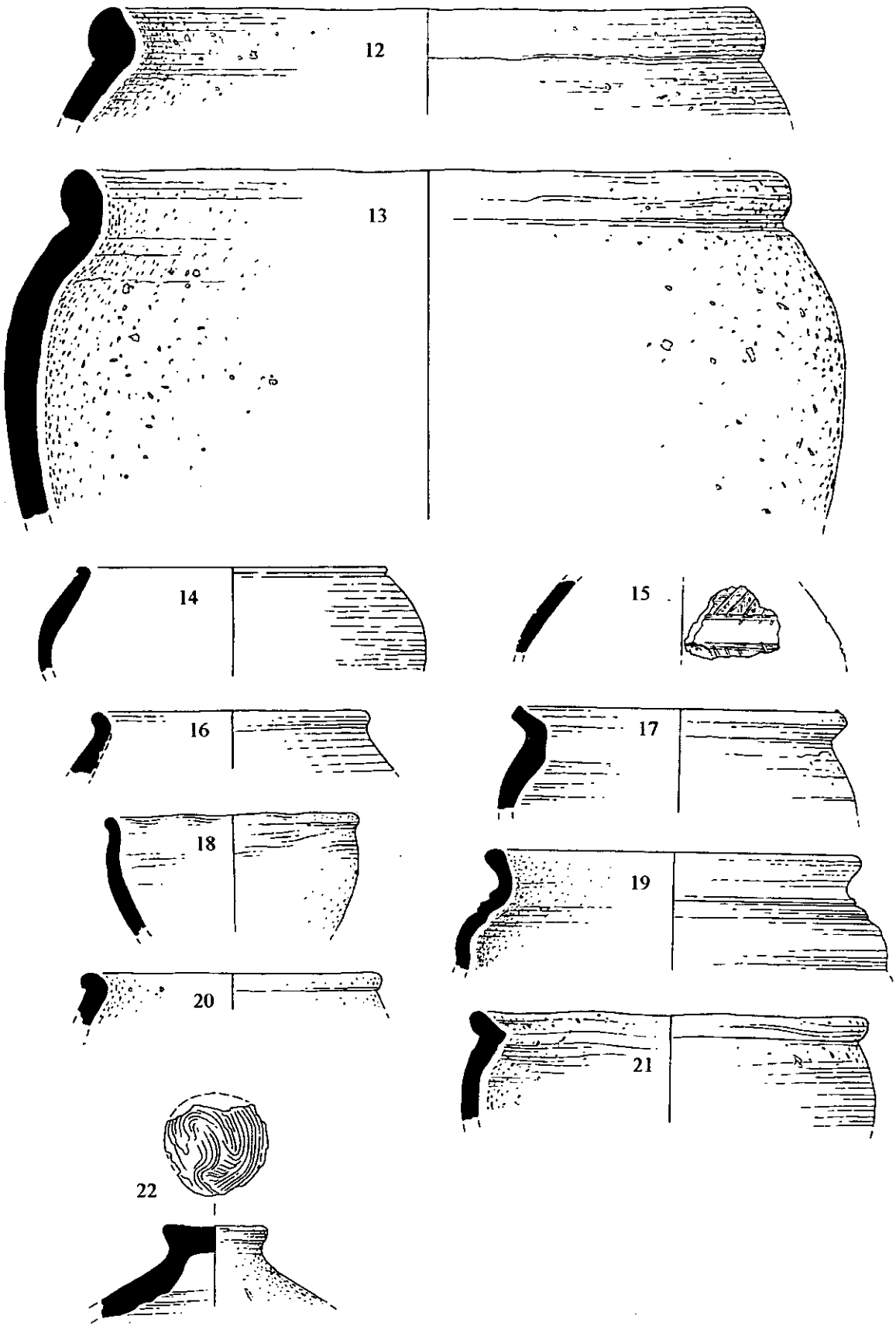
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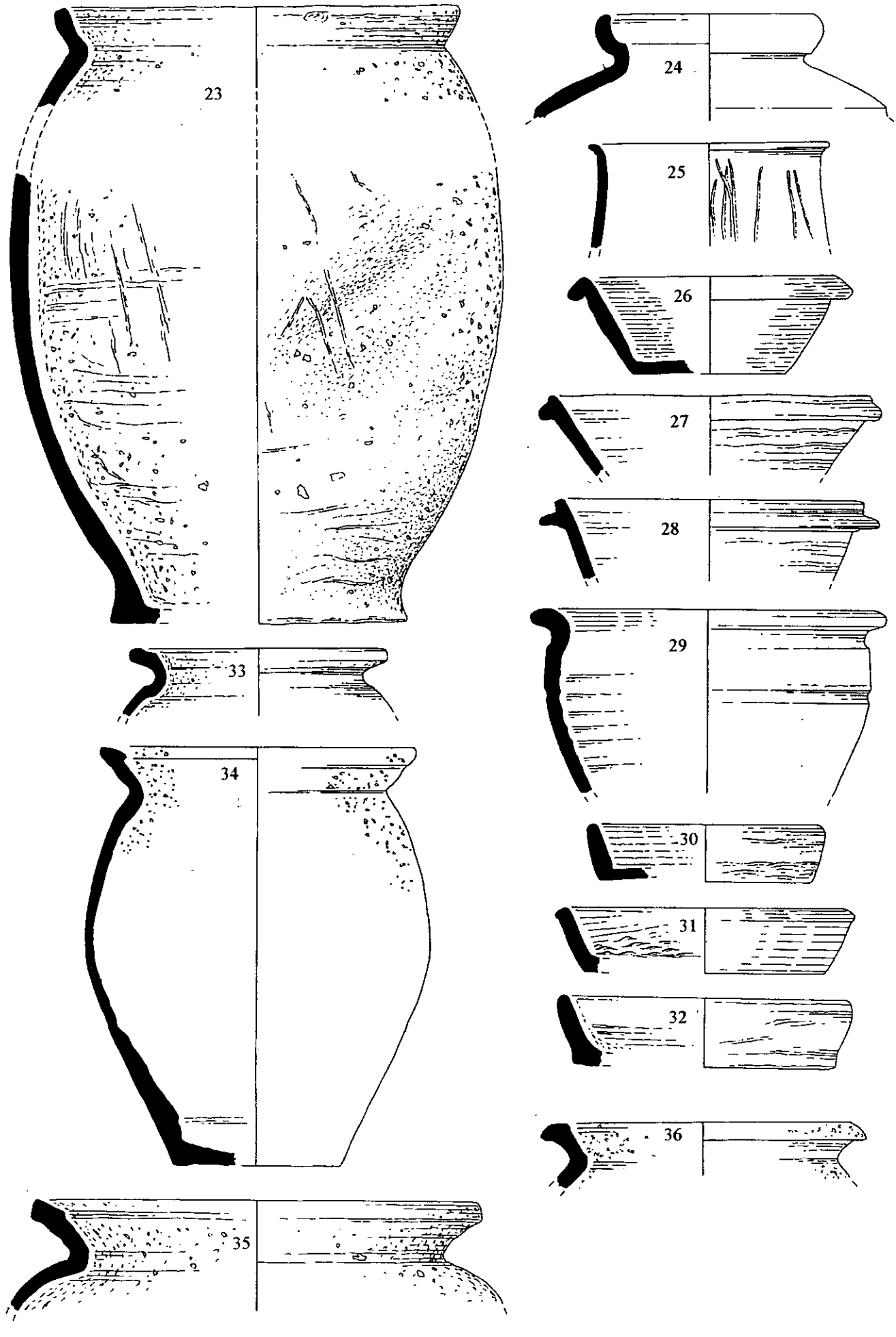
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APPENDIX 4: Registered finds by Jenny Mann

Introduction

The registered finds of iron, silver, copper alloy and lead, and a small number of additonal iron finds extracted during the processing of soil samples, were submitted for examination following X-radiography and remedial treatment by the Lincolnshire County Council Heritage Service Conservation Department. These were examined in conjunction with the relevant X-ray plates, and recorded and sketched (at 1:1) where necessary on standard finds cards to basic archive level. A small group of additional material (glass, slag, cinder, coal and mortar) extracted from the soil samples was also examined and listed. All of the metal, especially the ironwork, is corroded.

The Finds

The only intrinsically datable finds are Roman and medieval; these comprise two coins <2, 5>, a brooch fragment <1> and a complete lead ampulla<4>. The brooch was unstratified while all of the others came from colluvium [002].

Late Prehistoric/Iron Age

Just four finds were recovered from pre-Roman contexts. Three of these are small fragments of cinder, coal and iron recovered during the processing of a soil sample from the fill [501] of a Phase III ditch ([500]); the fourth is a single iron nail <48> from the fill of a Phase IV ditch ([367]).

Roman

Most of the finds from Roman contexts are iron nails, including almost two dozen (<20-40, 47>) recovered from the fill [676] of grave [677]. A tiny crumb of colourless glass came from the fill [213] of posthole [186], but this is too small to identify more closely. An unstratified copper alloy brooch and a single coin from colluvium [002] are the only notable items.

Only a fragment of the head and upper bow of the brooch <1> survives; this is of copper alloy but shows evidence of plating (probably tinning). The upper part of the head is rolled over to house the axis bar of a hinged pin, the stump of which remains *in situ*; the upper bow is fluted, with small incisions on the ridges between the fluting producing a 'beaded' effect, and has small, weakly moulded terminal knobs. It is of Hod Hill type (Camulodunum XVIII, Class B), datable to the Claudio-Neronian period, mid- to later 1st century AD (Brailsford 1962, 9; for a brooch with similar decoration, see Frere 1984, Fig 8, 39). The coin <2>, a copper alloy *sestertius* of Marcus Aurelius (161-80 AD), is corroded and worn but can be dated to 164 AD or later.

Medieval

Two medieval pieces were recovered from colluvium [002]. A silver coin <5> is very worn but what little is visible suggests this to be a medieval penny, almost certainly of late 13th or 14th-century date (Edward I-III?). The lead ampulla <4> is a pilgrim souvenir of common medieval form: a miniature, double-handled flask-shaped vessel designed to hold holy water; it is most likely to be of 14th or 15th-century date. This could be worn, using the handles as suspension loops for a cord or chain. The obverse is decorated with a scallop-shell motif while the reverse is plain; the vessel is complete although slightly squashed and bent across the centre, and the handle loops are obscured by dirt and corrosion products. The scallop shell, the badge of St James of Compostela and of pilgrimage itself, was adopted by Canterbury and other medieval shrines. Similar ampullae recovered throughout the country show two distinct styles, one of which - as on the Barnetby ampulla - resembles a cockle shell rather than a scallop, but it is as yet uncertain whether this distinction is of any significance in terms of either dating or manufacture (see Spencer 1990, 58-9: Type II; Fig 179).

Recommendations

All finds should be retained and stored appropriately.

References

Brailsford, J.W., 1962 *Antiquities from Hod Dill in the Durden Collection,* **1**

Frere, S., 1984 *Verulamium Excavations III, Oxford University Committee for Archaaeology Monogr,* **1**

Spencer, B., 1990 *Pilgrim Souvenirs and Secular Badges, Salisbury and South Wiltshire Museum Medieval Catalogue,* **2**

Archive List

Registered Finds

Context	Finds No.	Material	Object	Date/Comments
U/S	1	Copper alloy	Brooch	Roman; Claudio-Neronian, mid-later 1st C. Hod Hill type (Camulodunum XVIII, Class B)
002	2	Copper alloy	Coin	Roman; Marcus Aurelius 164-80 AD. *Sestertius*
065	3	Copper alloy	Sheet	
002	4	Lead	Ampulla	Medieval; 14th/15thC. Complete
002	5	Silver	Coin	Medieval; Edward I-III? Late 13th-14thC
002	6	Copper Alloy		Mount/fitting?
002	7	Copper alloy	Sheet	Decorated
003	8	Copper alloy	Wire	Pin/needle?
128	12	Iron	Nail	
241	13	Iron	Strip	
154	15	Iron	Nail	
662	19	Iron	Nail	
676	20-40	Iron	Nails	
218	41	Iron	Nail?	
261	42	Iron	Nail	
102	43	Iron	Nail?	
302	44	Iron	Nail	
172	45	Iron	Nail	
430	46	Iron	Nail	
676	47	Iron	Nail?	
366	48	Iron	Nail	
618	49	Iron	Nail	

Other

097		Iron		Frag. (extracted from sample 3)
097		Slag		4gm fuel-ash? (extracted from sample 3)
152		Slag		Crumb; fuel-ash? (extracted from sample 11)
213		Glass		Crumb; colourless. Roman? (extracted from sample 70)
302		Iron	Hobnail	(extracted from sample 20)
333		Iron	Wire	(extracted from sample 64)
462		Mortar		2gm (extracted from sample 19)
501		Iron		Frag. (extracted from sample 82)
501		Cinder		2gm (extracted from sample 82)

501		Coal		5gm (extracted from sample 82)
678		Iron	Hobnail	(extracted from sample 67)

jm
12/06/02

APPENDIX 5

Environmental Archaeology Report - St Barnabas Road, Barnetby le Wold BBAD , Phase 5

Introduction

Excavations conducted by Pre-Construct Archaeology on land off St Barnabas Road, Barnetby le Wold continued investigations of Iron Age and early Romano-British settlement. Previous phases had identified Iron Age ditch systems and a Romano-British kiln structure, thought to be a series of intercutting, cigar shaped, corn driers. During the current phase of the excavation a collection of animal bone was recovered by hand and seventy five bulk soil samples were taken for environmental assessment as well as twelve pollen samples. Sixty nine of the bulk samples were submitted to the Environmental Archaeology Consultancy for processing and full post-excavation analysis (Table 1).

Table 1: Barnetby le Wold - Phase 5. Samples taken for environmental analysis

sample	context	Vol (l)	Description	phase
1	075	-	Deposit in pot in ditch 104	VI
2	075	-	Deposit in pot in ditch 104	VI
3	097	26	Fill of firepit	VII
4	093	<10	Fill of cremation pit 94	VIII
5	125	11	Fill of ditch terminus 76	V
6	137	11	Fill of ditch terminus 76	V
7	160	7	Fill of 133	LIA
8	269	30	Fill of corn drier 259	VII
9	281	12	Fill of corn drier 259	VII
10	151	30	Fill of corn drier 259	VII
11	152	24	Fill of corn drier 259	VII
12	306	11	Fill of corn drier 259	VII
13	310	12	Burned clay fill c-d 259	VII
14	391	4.5	Fill of gully 390	I
15	401	3	Fill of linear terminus 400	Pre VII
16	289	5	Fill of gully 337	I
17	459	1	Fill of gully terminus 458	Pre VII
18	461	8	Fill of linear terminus 460	IV
19	462	5	Fill of linear terminus 416	VII
20	302	12	Fill of flue 260, c-d 259	VII
21	466	11.5	Fill of linear 404	VII
22	267	12	2nd fill of pit 266	V
23	268	10	1st fill pit 266	V
24	467	6	Fill of ditch terminus 416	VII
25	512	30	Fill of gully terminus 513	IV
26	529	20	Fill curvilinear ditch 528	Pre VII
27	556	20	Fill ditch 555	II
28	440	9.5	- Fill pit 541	-
29	442	10	Fill pit 543	VII
30	018	26	Fill ring gully 5	VIII
31	012	10	Fill ring gully 5	VIII
32	006	21	Fill ring gully 5	VIII
33	141-145	Pollen	Fill of linear ditch 140	IV
34	141-145	Pollen	Fill of linear ditch 140	IV
35	141-145	Pollen	Fill of linear ditch 140	IV
36	141-145	Pollen	Fill of linear ditch 140	IV
37	522	Pollen	Fill of linear ditch 520	Roman
38	522	Pollen	Fill of linear ditch 520	Roman
39	522	Pollen	Fill of linear ditch 520	Roman
40	522	Pollen	Fill of linear ditch 520	Roman
41	655	Pollen	Fill of gully 654	VII
42	655	Pollen	Fill of gully 654	VII
43	655	Pollen	Fill of gully 654	VII
44	655	pollen	Fill of gully 654	VII

Table 1: continued. Samples taken for environmental analysis

sample	context	Vol (l)	Description	phase
45	244/245	20	Fill ring gully 22	III
46	069	19	Fill ring gully 76	V
47	039	20	Fill ring gully 22	III
48	078	20	Fill ring gully 76	V
49	121	20	Fill ring gully 76	-
50	263	20	Fill ring gully 76	V
51	217	19	Fill ring gully 216	VII
52	134	20	Fill ring gully 133	LIA
53	342	28	Fill ditch 404	VII
54	568	30	Fill ditch 530	VII
55	686	29	Fill pit 685	?
56	687	5	Fill of linear ditch 474	II
57	339	29	Fill ditch 338	VII
58	566	30	Fill ditch 404	VII
59	567	30	Fill ditch 404	VII
60	492	30	Fill ditch 404	VII
61	004	27	Wet area deposits	I-IV
62	004	27	Wet area deposits	I-IV
63	004	25	Wet area deposits	I-IV
64	333	30	Fill ditch 334	VII
65	532	29.5	Fill ditch 404	VII
66	533	30	Fill ditch 404	VII
67	534	67	Fill ditch 404	VII
68	393	20	Fill posthole 392	VII
69	653	18	Fill ring gully 652	VII
70	186	5	Fill posthole 184	VI
71	074	30	Fill ditch 72	VIa
72	700	30	Fill grain storage pit 699	IV
73	048	2	Fill pit 44	IV
74	451	30	Fill ditch 452	VII
75	403	20	Fill pit 402	VII
76	726	5	Fill gully 725	II
77	723	20	Fill ditch west terminus 722	II
78	724	17	Fill ditch east terminus 722	II
79	551	30	Fill ditch 550	V
80	419	30	Fill ditch 515	IV
81	561	21	Fill firepit 557	VII
82	501	20	Fill gully 500	II
83	706	20	Fill ditch 312	VI
84	162	26	Fill corn drier 161	VII
85	767	28	Fill ring gully 681	VIII
86	680	28	Fill ring gully 681	VIII
87	678	28.5	Fill ring gully 681	VIII

Methods

The soil samples were processed in the following manner. Sample volume and weight was measured prior to processing. The samples were washed in a 'Siraf' tank (Williams 1973) using a flotation sieve with a 0.5mm mesh and an internal wet-sieve of 1mm mesh for the residue. Both residue and flot were dried and the residues subsequently re-floated to ensure the efficient recovery of charred material and mollusc shells. The dry volume of the flots were measured, and the volume and weight of the residue recorded. A total of 1349.5 litres of soil was processed in this way.

The residue was sorted by eye, and environmental and archaeological finds picked out, noted on the assessment sheet and bagged independently. A magnet was run through each residue in order to recover magnetised material such as hammerscale and prill. The residue was then discarded. The flot of each sample was studied under a low power binocular microscope at

magnifications of up to x30. The presence of environmental finds (i.e. snails, charcoal, carbonised seeds, bones etc) was noted and their abundance and species diversity recorded on the assessment sheet. The flot was then bagged. The flot and finds from the sorted residue constitute the material archive of the samples.

The individual components of the samples were then preliminarily identified and the results are summarised below in Tables 2 and 3. The botanical and molluscan remains from the samples were taken further and the results are presented in Tables 4 and 7.

Results

The site lies in a limestone area and the residue of the samples was generally composed of limestone gravels and brash. However some of the soils are de-calcified resulting in the degradation, sometimes severe or complete, of terrestrial snails and some bone material, in other deposits these elements have survived well. Nowhere on the site was there any anoxic or waterlogged preservation and as the pollen analysis showed (see below) even in the 'stream' sediments survival was very poor. This has restricted the productive environmental studies to the charred plant remains, animal bones and terrestrial snails and the location of all the studied samples is indicated on Figure 1. In addition to the environmental material other archaeological finds were recovered and recorded from the soil samples.

Pottery, fired earth, animal bone, hammerscale, and a few flints, slag, coal and brick/tile fragments, and five iron and one non-ferrous object were recovered from the bulk samples. The density of finds was low in most samples although ring gullies 22, 76 and 681 produced the bulk of the pottery (Table 2) and accounted for 30% of the animal bone although only 13% of the total number of samples. These patterns clearly reflect the distribution of occupation activities across the site (Figs. 2 and 3) indicating that the house gullies contained some of the highest densties of occupation debris, with nearby features and pits also fairly rich, while other areas of the site, particularly the central enclosure in phase VII, were largely devoid of rubbish. One contrast to this pattern is the relatively high concentrations of bone and pottery in the deposits downslope along the western margin of the site (samples 61-63) which appear to have included dumped occupation material. The distribution of charred plant remains (Fig. 1 and see below) shows a similar concentration in the south-east corner of the site although the presence of two corn-driers is responsible for several of the richest samples. The quantities of charcoal in the samples was generally small, sometimes comprising less of the flot than the cereal remains. This combined with its very fragmented state prohibited further analysis.

The bulk of the fired clay in the samples derives from the corn-drier structures 161 and 259. Some of this includes tempered clays with flat surfaces and presumably is structural and not merely the clay floor of the firepit or flues. Finds of flint, slag and iron are occasional and the distribution of hammerscale extracted from the samples although reflecting the overall distribution of finds is at such low densities that there is no evidence that iron smithing occurred within the excavated area, although it probably did eslewhere on the site. One or two samples beyond the major focus of occupation contain a few flakes of scale (Fig. 2) but these could have been the chance inclusion of material being blown around the site, or even more recent contamination.

Figure 1. Location of all the environmental samples

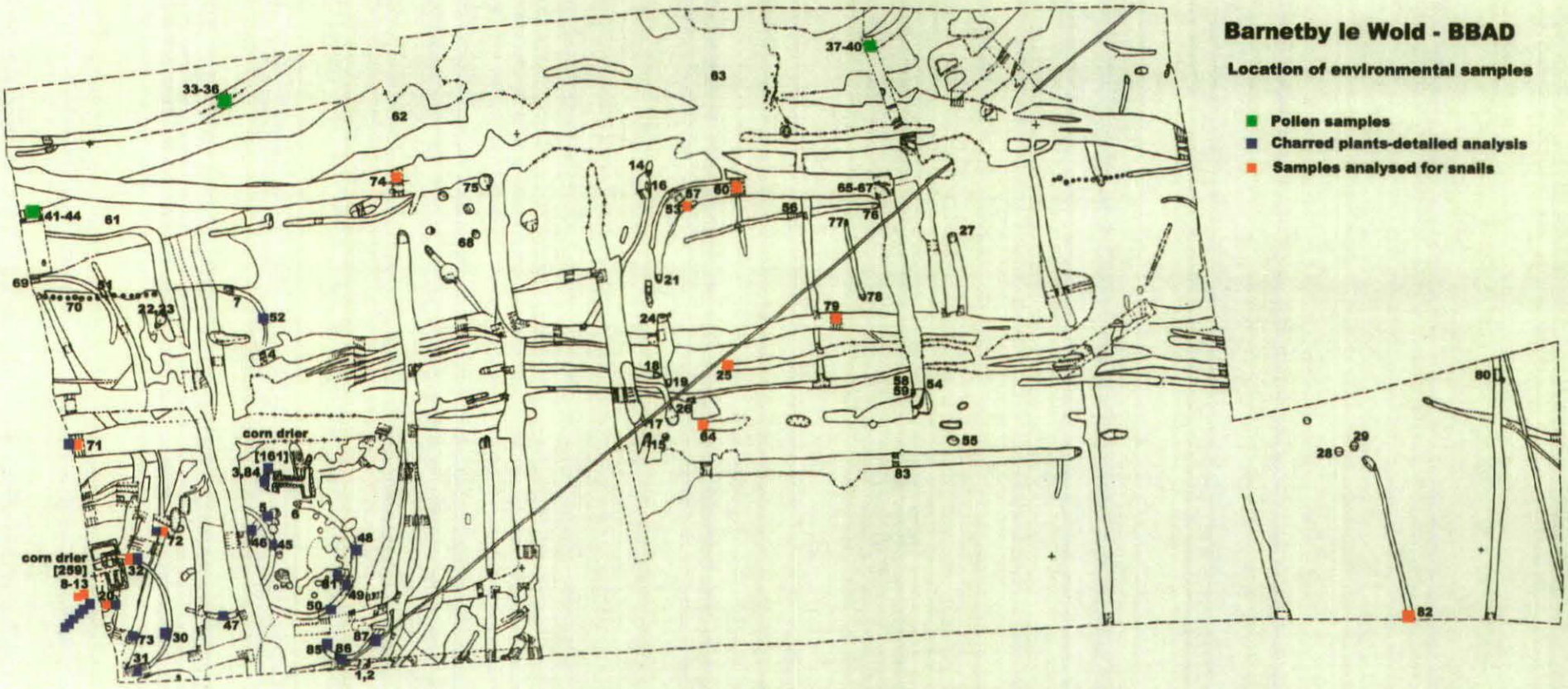


Table 2: Barnetby Le Wold – BBAD. Archaeological finds from the samples

sample	cont.		vol.	wt. kg.	residue vol. in ml	pot *	Fe no.	slag wt. g.	coal wt. g.	hammer-scale no.	flint no.	fired earth	bone wt g.	comment
3	97	Fill of firepit	26	29.5	2250		1	5	1	2		127	22	
5	125	Fill of ditch terminus 76	11	15.5	1200	6/3						2	19	
6	137	Fill of ditch terminus 76	11	12	850	4/6				1			37	
7	160	Fill of 133	7	9	300	42/23							27	
8	269	Fill of corn drier 259	30	34	6500					1	1	778	2	
9	281	Fill of corn drier 259	12	12	600					1		36	1	Brick/tile – 1 small piece
10	151	Fill of corn drier 259	30	35	3250	1/3			2	2		6	30	125g tempered fired clay with flat surfaces
11	152	Fill of corn drier 259	24	29	5500					4		276	3	
12	306	Fill of corn drier 259	11	12	2250					2		219	2	
13	310	Burned clay fill c-d 259	12	18	5250							505	2	
14	391	Fill of gully 390	4.5	6	225								1	Brick/tile 1g
15	401	Fill of linear terminus 400	3	7.5	650								<1	
16	389	Fill of gully 337	5	6	300								<1	
17	459	Fill of gully terminus 458	1	3.25	900									
18	461	Fill of linear terminus 460	8	9	550								1	
19	462	Fill of linear terminus 416	5	11	900					1	1		16	?mortar
20	302	Fill of flue 260, c-d 259	12	14	1300	2/7	1			5		35		
21	466	Fill of linear 404	11.5	14	900								2	
22	267	2nd fill of pit 266	12	15	150	4/1							3	
23	268	1st fill pit 266	10	10.25	400	7/3							2	
24	467	Fill of ditch terminus 416	6	7.5	350									
25	512	Fill of gully terminus 513	30	49.5	10500	5/4							2	
28	540	Fill pit 541	9.5	10.5	300	3/4						6	<1	
29	542	Fill pit 543	10	11.5	1400									
30	18	Fill ring gully 5	26	20	1750	6/3							20	Brick/tile 1g.
31	12	Fill ring gully 5	10	12	1250					1		3	6	
32	6	Fill ring gully 5	21	26	2500	1/1				1		5	19	
45	244/245	Fill ring gully 22	20	28	1750	12/17						8	24	
46	69	Fill ring gully 76	19	27.5	1500	17/32							51	Brick/tile-2g
47	39	Fill ring gully 22	20	25.5	1500	8/4				1		8	47	
48	78	Fill ring gully 76	20	25	900	3/14				5		6	15	
49	121	Fill ring gully 76	20	25.5	800	6/4				1		1	22	
50	263	Fill ring gully 76	20	27	900	8/9							4	Brick/tile – 9g.
51	217	Fill ring gully 216	19	27	600					1			10	
52	134	Fill ring gully 133	20	29	2500	2/8				1			4	
53	342	Fill ditch 404	28	38	1500								3	
54	568	Fill ditch 530	30	38.5	2500	1/1				3			1	

Table 2: continued. Archaeological finds from the samples

sample	cont.		vol.	wt. kg.	residue vol. in ml	pot *	Fe no.	slag wt. g.	coal wt. g.	hammer-scale no.	flint no.	fired earth	bone wt g.	comment
55	686	Fill pit 685	29	34.5	900					1		24		
57	339	Fill ditch 338	29	36	2000					1			1	
58	566	Fill ditch 404	30	38	3000					1		7	2	
59	567	Fill ditch 404	30	42	1750					4			9	
60	492	Fill ditch 404	30	38	3750								1	
61	4	Wet area deposits	27	33	1250								34	
62	4	Wet area deposits	27	34	1100	3/4				1			24	
63	4	Wet area deposits	25	35.5	2750	2/1				1			18	
64	333	Fill ditch 334	30	37	3750					1			10	Non-ferous x 1
65	532	Fill ditch 404	29.5	41.5	3250	1/52				1			2	
66	533	Fill ditch 404	30	35.5	4250	1/1				2			2	
67	534	Fill ditch 404	30	37.5	6250					1			3	
68	393	Fill posthole 392	20	25	1000					2		<1	1	
69	653	Fill ring gully 652	18	24	600	1/3						1	4	
70	186	Fill posthole 184	5	7.5	200								<1	Glass x 1 (modern?)
71	74	Fill ditch 72	30	37	3500	4/2				2			38	Brick/tile x 1 (tiny)
72	700	Fill grain pit 700	30	40	5750	7/2				5		6	45	
73	48	Fill pit 44	2	5.5	700					1				
74	451	Fill ditch 452	30	39.5	8250	1/3				3		45	31	
75	403	Fill pit 402	20	28.5	7000		1			1			6	
76	726	Fill gully 725	5	7.5	450								2	
77	723	Fill ditch west terminus 722	20	24	600					3			1	
78	724	Fill ditch east terminus 722	17	20.5	600								1	
79	551	Fill ditch 550	30	37.5	2500							1	4	
80	419	Fill ditch 515	30	40	4500	8/11				6		4	14	
81	561	Fill firepit 557	21	26	1500	4/7				6		67	2	Brick/tile - 57g
82	501	Fill gully 500	20	24	1500		1		5	8		1	1	Cinder - 1g.
83	7.6	Fill ditch 312	20	23	400					5			1	
84	162	Fill corn drier 161	26	32	3000	9/10				3		162	2	Brick/tile - 1g.
85	767	Fill ring gully 681	28	33	1500	13/131				3		17	20	Brick/tile - 2g.
86	680	Fill ring gully 681	28	30.5	1500	13/108				2		7	9	
87	678	Fill ring gully 681	28.5	32	1450	5/12	1		1	6		40	34	

(* sherd count/weight in g.)

Table 3: Environmental finds from the samples

sample	cont.	vol	flot vol in ml.	charcoal *	charrd grain *	chaff *	charrd seed *	burnt bone *	snail */#	Identified material – see Table 4 for details of richer charred plant assemblages and Table 7 for the snails	phase
28	440	9.5	<1	1/1	1		1	1	1/1	Wheat, sedge	
49	121	20	1	2/3	2	1	1		3/2	Sheep/goat, cattle, water vole, field vole, frog/toad	
55	686	29	<1	1/0	1				2/1	Cereal	
7	160	7	<1	0/1			1	1	1/1	Grass, Cattle size	LIA
23	268	10	<1	0/1	1		*		1/1	Wheat, Rodent	LIA
52	134	20	5	1/1	4		2	2	2/1		LIA
61	004	27	<1	0/1			1		2/1	Knotgrass, Cattle, rodent, frog/toad	I-IV
62	004	27	<1	2/2	1		1	1	1/1	Barley, grass, Sheep/goat, cattle size, water vole, rodent	I-IV
63	004	25	<1	0/2	1	1			1/1	Spelt, cereal, Cattle, house mouse, field vole, bank vole, frog/toad	I-IV
14	391	4.5	<1	0/1	1		*		1/1	Cereal	I
16	289	5	<1						1/1		I
76	726	5	<1		*				1/1		II
77	723	20	<1	1/1				1	2/1		II
78	724	17	<1	1/1	1			1	2/1	Barley	II
82	501	20	35	1/2		1	1	1	5/2	Spelt, docks, Field vole	II
45	244	20	<1	2/3	2	1	2	2	2/1	Eggshell, sheep/goat, rodent, frog/toad	III
47	039	20	1	2/3	3		2	1	3/2	Cattle, sheep/goat, pig, house mouse	III
18	461	8	<1	0/1			*		1/1		IV
25	512	30	<1	0/1	1		*		3/2	Cereal	IV
72	700	30	5	2/2	2		1		5/2	Cattle, common shrew, field vole, small bird, frog/toad	IV
73	048	2	40	2/3	5	5	3	1	2/1	Sheep/goat, water vole	IV
80	419	30	<1	1/2	1	1	1		2/1	Barley, grass, hemp nettle, sedge, small legume, Sheep/goat, cattle, vole	IV
5	125	11	1	2/3	2		1	2	2/2	Sheep/goat, sheep size, mouse, rodent, frog/toad	V
6	137	11	1	3/4	1		1	2	3/2	Spelt, orache, dock, Sheep/goat, rodent, snake, frog/toad	V
22	267	12	<1	0/1			*	1	1/1		V
46	069	19	1	2/3	2	1		1	2/2	Human, sheep/goat, cattle, pig, house mouse, rodent, frog/toad	V
48	078	20	5	2/4	3	4	2	2	3/1	Field vole, frog/toad	V
50	263	20	4	2/2	2	2	2	1	2/1	cat?, mouse, shrew, newt	V
79	551	30	1	0/2	1			1	3/2	Barley, Sheep/goat, mouse (house?), frog/toad	V
70	186	5	<1	1/1	*						VI
71	074	30	2	2/2	2	1	1	1	3/2	Cattle, pig, field vole, common shrew, rodent, small bird, newt, frog/toad, eel, small fish	VIa
83	706	20	<1	1/2	1	1	1	1	2/1	Cereal, wheat, dock	VI
74	451	30	<1	1/1	1				2/2	Wheat, Cattle, frog/toad	>VI
15	401	3	<1	1/1					1/1		<VII
17	459	1	<1	0/1	*		*		1/1		<VII
3	097	26	95	3/5	5	2	5	2	4/2	Cattle size, frog/toad, eel	VII
8	269	30	60	2/3	5			1	2/2	House mouse, snake, newt, frog/toad, rat?	VII
9	281	12	4	2/2		1		1	5/2	Mouse, rodent, frog/toad	VII

Table 3: continued. Environmental finds from the samples

sample	cont.	vol	flot vol in ml.	charcoal *	charrd grain *	chaff *	charrd seed *	burnt bone *	snail */#	Identified material – see Table 4 for details of richer charred plant assemblages	Phase
10	151	30	36	2/2		2		1	5/2	Cattle, pig, sheep/goat, house mouse, common shrew, frog/toad, small bird	VII
11	152	24	25	2/5		1		1	4/2	House mouse, newt, snake, frog/toad	VII
12	306	11	2	1/3	2	1	1		3/2	House mouse, snake, lizard?, newt, frog/toad	VII
13	310	12	1	1/2	3	1	2		3/2	Field vole, newt	VII
19	462	5	<1	0/1			*	1	2/1	Sheep/goat, human	VII
20	302	12	6	1/3	5	1	2	1	3/2	Field vole, common shrew, newt, frog/toad	VII
21	466	11.5	<1		1		*		1/1	Barley	VII
24	467	6	<1	0/1					1/1		VII
29	442	10	<1	0/2				1	1/1	Human	VII
51	217	19	<1	1/1	1			2	1/1	Barley, Sheep/goat	VII
53	342	28	<1	0/1	*		1		3/2	Grass, campion	VII
54	568	30	<1	1/1	1		1		2/2	Cereal	VII
57	339	29	<1	1/1	1		1	1	2/2	Barley, oat, grass	VII
58	566	30	<1	0/2	1		1		2/1	Cereal, grass, Frog/toad	VII
59	567	30	<1	0/1	1		1		2/1	Cereal, grass, Poss. horse?	VII
60	492	30	<1		1		1	1	3/2	Barley	VII
64	333	30	<1	1/1			1	1	3/2	Small grass, Human, frog/toad	VII
65	532	29.5	<1	0/1	1				3/2	Cereal, Field vole	VII
66	533	30	<1	0/1	1		1		2/1	Legume	VII
67	534	67	<1	0/1		1	1		2/1	Spelt, grass, Sheep/goat	VII
68	393	20	<1	1/1	1	1			2/1	Spelt, cereal, Pig	VII
69	653	18	<1	1/2	1			1		Cereal	VII
75	403	20	<1						1/1	Rodent	VII
81	561	21	8	1/3	4	2	2		2/1	Mole, vole, field vole	VII
84	162	26	130	3/4	5	5	2	1	5/2	House mouse, frog/toad	VII
30	018	26	1	2/3	2	1	1	1	1/1	Cattle, sheep/goat, pig, field vole, wood mouse, newt, frog/toad	VIII
31	012	10	<1	0/1	1		1		1/1	Sheep/goat, rodent, frog/toad	VIII
32	006	21	25	2/3	5	2	2	1	3/2	Cattle, horse, small bird, field vole, newt, frog/toad	VIII
85	767	28	55	3/3	5	5	3	1	3/1	Pig, cattle size, house mouse, common shrew, field vole, frog/toad, eel	VIII
86	680	28	6	3/4	5	2	3	1	3/1	Sheep/goat, common shrew, vole, snake, small bird, frog/toad, eel	VIII
87	678	28.5	15	3/4	4	4	2		2/1	Sheep/goat, cattle size, field vole, small bird, frog/toad	VIII

* frequency 1=1-10; 2=11-50; 3=51-150; 4=151-250; 5=>250 items

diversity 1=1-3; 2=4-10; 3=11-25 taxa

+ fragments <2mm, abundance follows frequency

Figure 2. Concentrations of pottery and hammerscale in the samples

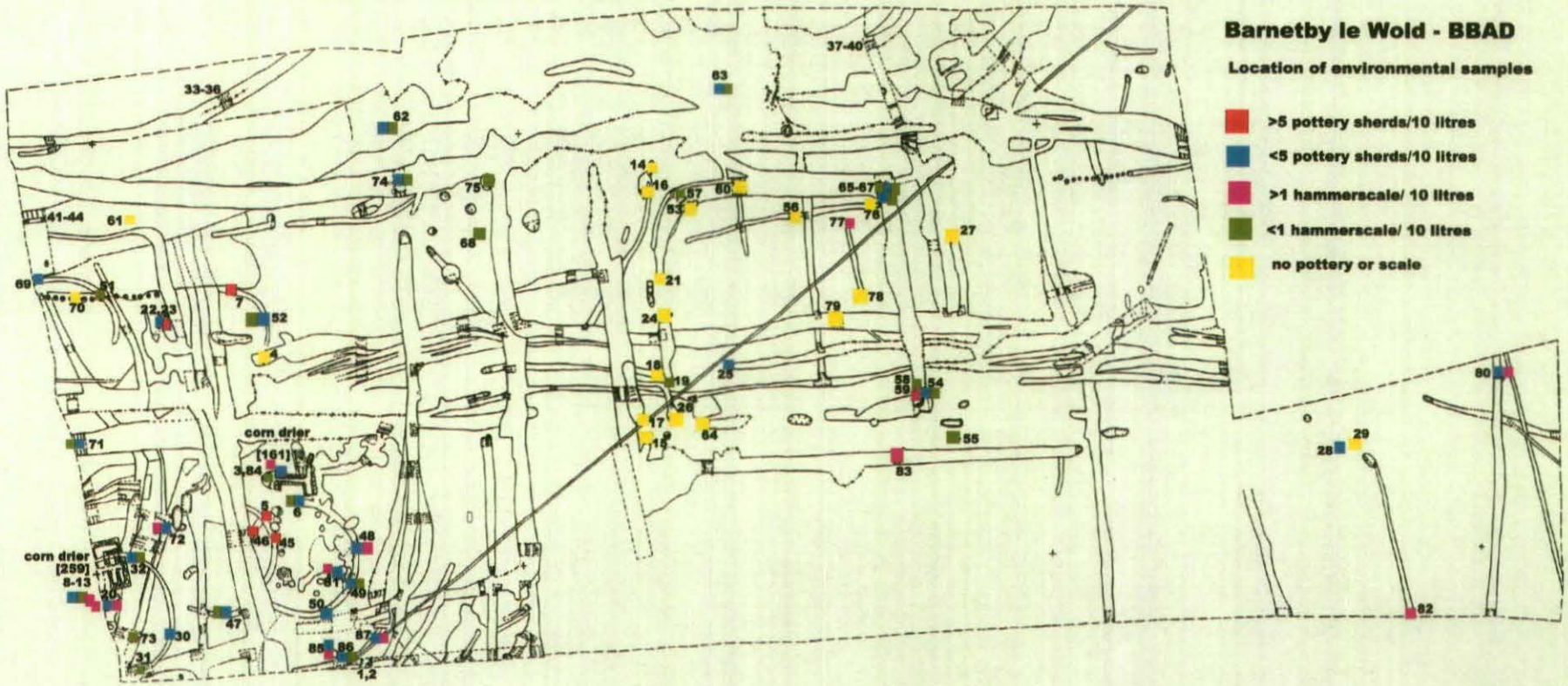
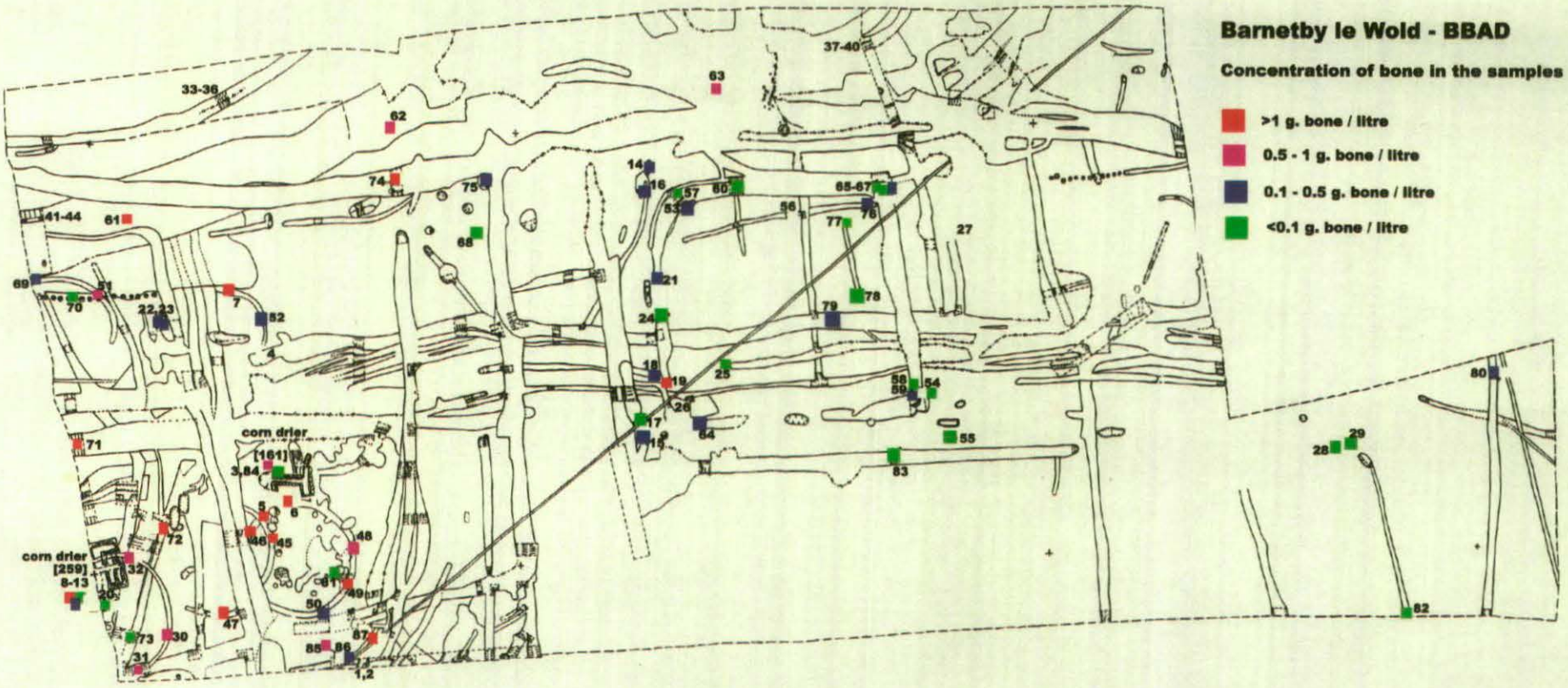


Figure 3. Concentration of animal bone by weight in the environmental samples



The Botanical remains
Andrea Snelling

The flots from each sample were separated by size, through a stack of sieves for ease of sorting. For sample 85 (context 767), only a quarter of the flot was sorted due to the abundance of plant material. This was achieved by sieving the flot and taking out a quarter from each sieve stage. For sample 84 (context 162), the sorted grain fraction was divided into two, due to the large number of grains present. This was done by covering the bottom of a petri dish with grain and dividing it in half each time, so that an equal distribution of the grain >2mm could be counted. In both cases, the figures presented in Table 4 reflect the total number of seeds for that sample, such that they have been multiplied up to represent a fully sorted sample. The charred plant remains were sorted from the flot and a binocular microscope (up to x30 magnifications) was used for the identification of the botanical material. Modern reference material and reference manuals were used to aid identification. Identification of the cereal grains and chaff follows Van der Veen (1992). Counts were made of the charred seeds, with embryo ends only counted for the cereals and grasses. Chaff fragments have all been counted individually, with each glume base counting as one and spikelet forks counting as two. For the half fragments of legumes, the total was divided by two to give a minimum number of individuals and any fragments, for all species, were recorded on an abundance rating and are not included in any quantitative analysis (see Table 4). To work out the glume:grain ratio, the indeterminate cereal grains were divided proportionately between the wheat and barley grains. The taxonomy of the identified wild plant remains follows Stace (1997).

Fragments (non-embryo ends) of grain and grasses were present in most samples with more than 10 items, in some cases in very large numbers (Table 4). It should be remembered, therefore, that the figures presented for the grain and grasses are an indication of the minimum number of individuals and that the real total could be much higher. The abundance of these fragments is recorded in Table 4, however only those greater than 2mm were picked out of the samples.

The general preservation of the material was variable but in general moderate, with 49% of the grain unidentifiable even to genus and many showing distortion. The large number of fragments in the samples attests to the fact that fragmentation has occurred, although the presence of chaff, sometimes in large quantities indicates fairly good preservation in some cases. The general absence of barley and other free threshing cereal chaff in the samples could be a result of preservation bias, as Boardman and Jones (1990) have shown that the chaff of free threshing wheat rarely survives on archaeological sites.

Modern weed seeds were present in most of the samples and included species such as *Stellaria media* (chickweed), *Veronica hederofolia* (ivy-leaved speedwell), *Sambucus* spp. (elder), and *Chenopodium* spp (goosefoot) Modern root fragments were fairly prolific and the blind burrowing snail, *Cecilioides acicula*, was present and abundant in many samples. This material is generally considered to be intrusive and is treated here as contaminant.

Of the sixty nine processed bulk samples, twenty seven contained more than 10 identifiable items (Table 3) and these were entered onto an Excel spreadsheet for further analysis (Table

4). The number of items per litre in all of these samples is very variable, ranging from 1.1 to 1317 and come from contexts relating to the Iron Age through to the 4th Century AD.

Figure 1 shows the distribution of these 27 samples and it is clear that they are all concentrated in the southeast corner of the site.

Both wheat and barley were identified, with the majority of the identified wheat being spelt (*Triticum spelta*). Occasional compact grains were identified which have been recorded as c.f. *Triticum aestivum/durum* (bread club wheat) and a few fragments of free threshing rachis confirm their presence on site. The majority of the wheat chaff has been identified as spelt wheat. The identified barley grains appear to be of the hulled variety (*Hordeum vulgare*) with both twisted and straight grains identified. A large number of the grains were too distorted to discern this however, so it is possible that both the six-row and two-row varieties were present.

A range of wild plant species were recovered and included hazelnut (*Corylus avellana*) and other nut fragments in two samples (Table 4) which could have been collected for food. The other wild species include weeds of arable and disturbed ground such as corn cockle (*Agrostemma githago*), wild radish (*Raphanus raphanistrum*), common fumitory (*Fumaria officinalis*), stinking mayweed (*Anthemis cotula*), knot grass (*Polygonum aviculare*), black bindweed (*Fallopia convolvulus*) and a number of the grasses including heath grass (*Danthonia decumbens*), brome (*Bromus* spp.) and oat (*Avena* spp); grassland /meadow plants, e.g. ribwort (*Plantago lanceolata*), sheeps sorrel (*Rumex acetosella*) and sedges (*Carex* spp.); and hedge/rough ground plants, e.g. nipplewort (*Lapsana communis*). Many of these plants however can grow in more than one habitat which limits their use for ecological interpretation.

Simple ratio analyses were carried out on the samples, firstly to determine the wheat chaff to wheat grain ratio. If the ratio is greater than one, ie more chaff to grain, the sample is likely to represent a fine sieving residue; if the ratio is much less than one, where there would be more grains than glumes, then this is thought to represent cleaned grain. If the figure is very close to one, then the sample is either made up of complete ears or grain stored as semi-cleaned spikelets. A similar ratio method was not carried out for barley as there was not enough barley chaff identified. The ratio between the number of weed seeds and the total number of grains can also be measured, with a low figure (more grain), suggesting a cleaned product and a high number (more weeds) suggesting cleaning residues (Table 4).

Seven samples did not contain any wheat chaff and come from Late Iron Age, early Roman and Late Roman contexts (samples, 52, 45, 47, 72; 5, 11 and 31). Grain is dominant in six of the samples and barley appears to be slightly better represented, although in all bar one case more than 50% of the cereal is unidentifiable even to genus (Table 4). Sample 45 contains slightly more weeds than grain, which would imply a cleaning residue and over 90% of the grain in this sample was unidentifiable. If barley is the dominant crop, then the absence of chaff in all bar one of the samples (sample 11), where there are a few fragments of possible barley rachis, may be a result of a preservation bias as the chaff of free threshing crops is less likely to survive (Boardman and Jones 1990). The most common weeds in these samples are the grasses that are of a similar size to the grain, which would generally be removed at a final stage in the processing sequence. The absence of chaff and the high percentage of

unidentifiable grain could suggest that these samples represent the remnants of a spoiled cleaned crop, mixed with cleaning residue material.

Five samples had a chaff to grain ratio of greater than one, from phases IV, V and VIII. Four of these samples (30, 48, 85 and 87) are associated with ring gully structures (005, 076 and 681 respectively), the fifth and richest in chaff (73) comes from an isolated pit feature, cut into a ditch, within ring gully 005. Again more than 50% of the cereal grain is unidentifiable to genus. All of these chaff rich samples have a low weed to grain ratio, which would suggest that the grain is in a relatively clean state. The weeds that are present in these samples are dominated by grass seeds which are more or less of a similar size to the grain. The high proportions of chaff, which is up to 14 times more prolific than the grain and the low density of weeds, which are predominantly grasses of a similar size to the grain, could point to these samples representing a very final stage (14) in Hillman's (1981) crop processing sequence, whereby the chaff and larger weeds are hand sorted from the prime grain ready for processing or consumption.

Sample 50 from ring gully 076 has an approximate 1:1 ratio of chaff to grain, which is often indicative of semi-cleaned grain, where the grain is stored in its spikelets. Sample 46, from ring gully 076 has an approximate 1:1 ratio of weeds:grain, with the weeds dominated by grasses. 82% of the grain is unidentifiable and could represent semi-cleaned grain or a mixed assemblage.

In the remaining samples cereal grain is the dominant fraction of the charred botanical component. Eight of these samples are associated with corn drying features from the mid 3rd century AD and the other five come from the ring gullies and ditches near these features. Three of the samples are associated with ring gullies (samples 49, 32 and 86 from gullies 076, 005 and 681 respectively) from phases V (1st- 2nd C AD) and VIII(late 3rd- 4th C AD). Both barley and spelt wheat are represented, and in sample 86 a couple of tentative identifications of free threshing wheat although the majority of the cereal, in all three cannot be identified to genus. Sample 81 is a pit inside the ring gully from phase VII (Fig. 1) with little chaff and weed compared to grain. Wheat is slightly more dominant than barley out of the grain that is identifiable, with spelt grains and chaff both present. Sample 71, a phase VI ditch (2nd- 3rd C. AD) contains 86% grain of which 82% cannot be taken to genus. The dominance of grain in these samples alludes to semi-cleaned prime grain, although a certain amount of mixing may have occurred, given that the samples were taken from ditches and gullies.

The distribution of the samples discussed above in relation to their function is depicted in Figure 4. It is clear that chaff rich samples can be found in structures which also contain samples with no chaff and are grain dominated. This implies that specific areas were not designated for particular cleaning processes and that dumping of material was random within these structures, thus allowing at least some mixing to occur.

Two corn drying ovens were identified on site, both dating to the mid 3rd century (phase VII). The first, context 161, is a typical 'T' shaped structure and two samples were taken. From the southern end, an area recorded as a fire pit was sampled (sample 3) and a further sample was taken from along the flue (sample 84). Both samples are fairly similar in their composition, both containing 74% grain, a proportionately similar amount of weeds, but sample 84 contains slightly more chaff. Grasses were the commonest weeds recorded, although docks, small

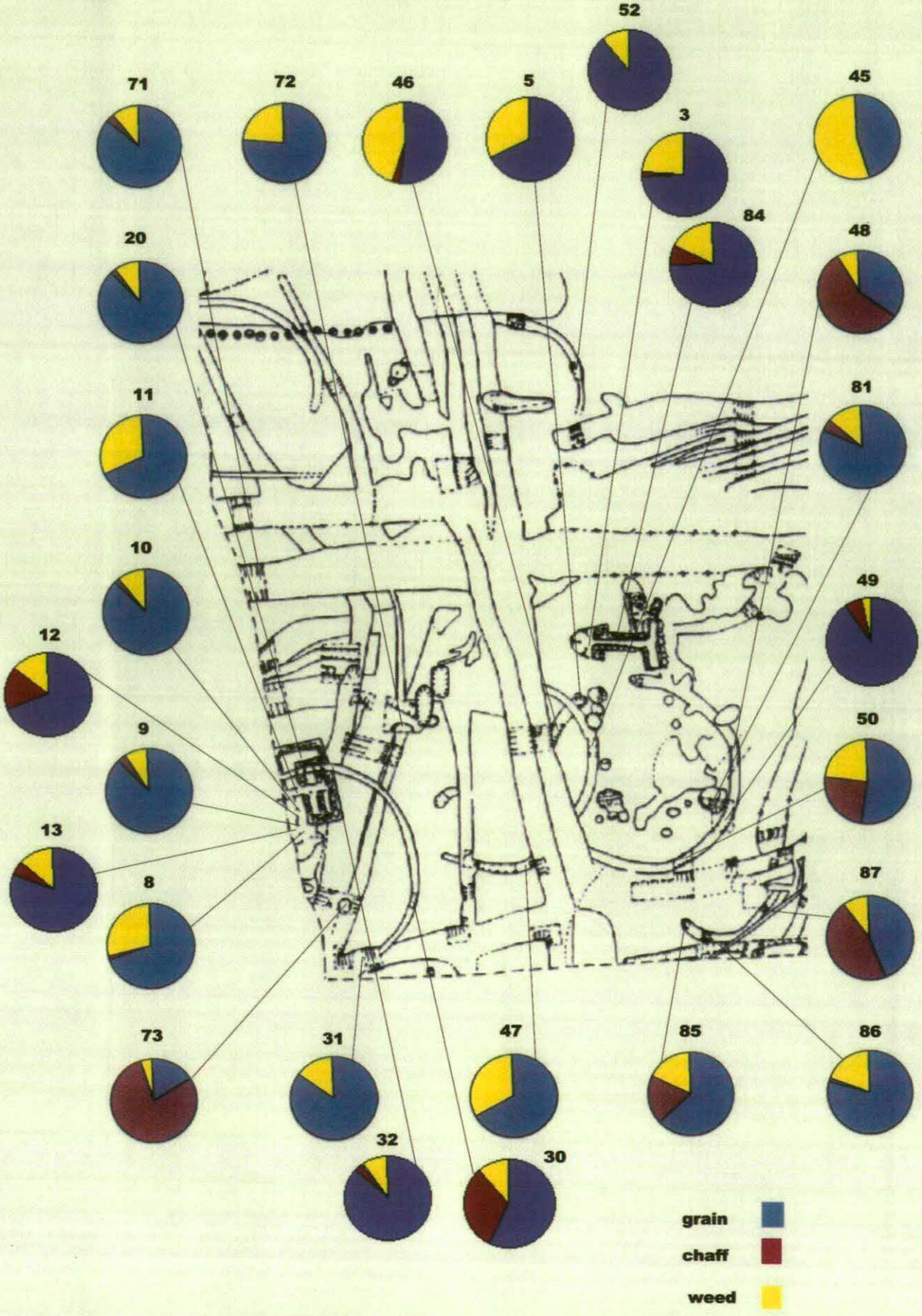


Figure 4. The proportions of grain, chaff and weed among the charred plant remains from the larger assemblages and their location.

legumes and goosefoot were also fairly common, as well as a very small unidentified seed, recorded as type AAA. In both samples barley appears to be the dominant identified cereal, representing 66% and 36% respectively of the total grain. Of the wheat grains generally, greater than 5% but less than 75% show evidence of sprouting (the latter of which is an arbitrary figure used by Van der Veen (1989) to discern whether germination was deliberate: i.e. above 75% sprouted grains indicates deliberate germination). Some of the coleoptiles are detached but are generally less than the length of the grain. It is possible that the sprouted wheat grain, the weeds and the chaff may have been used for fuel in the final use of the corn drier. There is documentary evidence to suggest that the favourite fuel for all sorts of grain parching was a mixture of straw and chaff, with some wood and/or peat (Hillman 1982). The relatively small amounts of charcoal (Table 3) recovered from the samples would support this conclusion for the grain driers. Mixing with the grain could occur if grain that had filtered down from the drying floor was raked back to the stoking pit (Van der Veen 1989).

For corn drier 259, a square shaped structure, seven samples were taken. One sample (12) was taken from the stoke hole area and four from along the main flue (11, 13, 8 and 9). Sample 20 came from the northern end of the north-south flue and sample 10 from the eastern end of the northern east-west flue.

Cereal grain constitutes over 65% of the samples with evidence for both wheat and barley in all samples. Wheat is dominant in five of the samples (8, 9, 10, 11 and 20) and barley in samples 12 and 13. Sprouted wheat grains are present in all of the samples, generally making up around 30% of the wheat total. A couple of the samples have less than 5% with evidence for sprouting. Some of the sprouts are still attached to the grains and it is evident that they are fairly variable in length, although all appear to be shorter than the grain. There are also a moderate number of detached coleoptiles. In all cases the indeterminate cereal is equal to or greater than the dominant crop. In all bar one sample, chaff formed less than 10% of the sample but it made up 17% of sample 12. It is possible that chaff could have been used as part of the fuel of the drier although given the small amount of material present it is difficult to say for sure. Weeds, which are dominated by grasses in all samples, make up less than 30% of the total. Other common species include goosefoot, bindweed, docks and legumes, both large and small. Sample 8 has the greatest diversity of species.

Van der Veen's (1989) study of the composition of samples from corn driers as an indication of function, would suggest that these grain dominant samples are likely to represent almost fully processed grain. The precise action being taken on the grain is however difficult to ascertain. It is clear that some of the grain has sprouted but the percentage of sprouted grain in any one sample is probably less than 30%. Van der Veen suggests that if a corn drier were used for malting then a very high percentage of grain, >75% would show evidence of sprouting. Of course this figure is fairly arbitrary, but certainly >30% would be expected. It is possible that this structure was used to try and save spoiled grain, given the variability of the sprout lengths and the low percentage of sprouted specimens. The general similarity in composition of the samples in the flues would suggest a fairly even distribution of the various component parts of the sample. It is possible that grain from the drying floor will have trickled down into the flues and that chaff and weeds, having been used as fuel were carried by the hot air around the structure and the two subsequently mixed. It is suggested by the excavation team that after the structure was demolished at the end of its life the flue chambers were backfilled. Although they are likely to still preserve the remnants of the final use of the

Table 4: The charred plant remains from the richer samples

	phase	?	LIA	III	III	IV	IV	V	V	V	V	VIa
	context	121	134	244	39	700	48	125	69	78	263	74
	sample	49	52	45	47	72	73	5	46	48	50	71
	vol. soil (l)	20	20	20	20	30	2	11	19	20	20	30
	vol. flot (ml)	1	5	<1	1	5	40	1	1	5	4	2
Cereal												
Triticum spelta	spelt wheat	4					15			15		2
Triticum cf. *spelta*	cf spelt wheat		1		1		3		2	2	2	4
T. cf. aestivum/durum	cf free threshing wheat						3					
Triticum spp.	wheat spp.	4			2		11			3		
cf. *Triticum* spp.	cf wheat spp.		1	1								1
Hordeum vulgare	barley	5	60				33	2		13	1	3
cf. *Hordeum vulgare*	cf barley	4	32		5	1	23	3	1	7	1	
indet. cereal		39	113	12	50	25	358	12	14	76	34	46
indet frags.		**	***		*	*	*****		*	***	*	*
Chaff												
cf. *Hordeum* rachis internode	barley rachis						16			1		
Triticum spelta	spelt wheat	2					1190		1	70	13	2
Triticum spp.	wheat	2					859			115	5	
Triticum cf. aestivum/durum	cf free threshing wheat						4					
indet												
Weeds												
Ranunculus repens type L.	buttercup				1							
Fumaria officinalis L.	common fumitory											
Chenopodium album L.	fat hen		9									
Chenopodium spp.	goosefoot			3			2				1	
Atriplex spp.	oraches											
Montia fontana chondrosperma (Fenzl) Walters	blinks											
Agrostemma githago L.	corn cockle											
Silene spp.	campion			1	1		1					
Prunus/Crataegus spp.	plum/hawthorn family											
Polygonum aviculare L.	knotgrass											
Fallopia convolvulus (L.)A. Love	black bindweed		1									
cf. *Fallopia convolvulus*(L.)A. Love												
Polygonum spp.	knotgrasses											
Rumex acetosella Raf.	sheep's sorrel											
Rumex spp.	docks		2		2		26				1	
cf. *Rumex* spp.							2					
Cruciferae	cabbage family											
Raphanus raphanistrum	wild radish											
Vicia/Lathyrus/pisum	vetches/pea						1?	1		2		
Fabaceae (small)	pea family						2			3		
Umbelliferae	carrot family											
Galeopsis tetrahit L.	hemp nettle											
cf. *Teucrium* spp. L.	germander											
cf. *Plantago lanceolata* L.	ribwort plantain			1								
Sheradia arvensis	field madder											
Carduus spp.	thistle											

* = Abundance 1-10, ** = 11-50, *** = 51-150, **** = 151-250. ***** = 250+

Table 4: The charred plant remains from the richer samples (cont'd)

	phase	?	LIA	III	III	IV	IV	V	V	V	V	VIa
	context	121	134	244	39	700	48	125	69	78	263	74
	sample	49	52	45	47	72	73	5	46	48	50	71
	vol. soil (l)	20	20	20	20	30	2	11	19	20	20	30
	vol. flot (ml)	1	5	<1	1	5	40	1	1	5	4	2
Lapsana communis L.	nipplewort											
cf. *Anthemis cotula* L.	stinking mayweed											
Compositae	daisy family											
Matricaria spp.	mayweed											
Tripleurospermum inodurum	scentless mayweed											
Carex spp	sedges		2		1							
cf. *Avena* spp.	oat	1			4	1	3		1	2		3
cf. *Agrostisspp.*	bent											
cf. *Bromus* spp.	brome		1		2		5					
Danthonia decumbens	heath grass											
Poacecae indet.	grasses	1	2	8	11	5	68	6	13	13	11	1
Poaceae indet (small)					1			*				
Poaceae frag				**					*		**	
type AAA												
indet.			7	3	6	2	10	1	1	6	4	1
Corylus avellana L.	hazelnut frag.									2		
other nut frag.												
other frags.												
Rhizome frag				*	*		*	*	*			
Total		**62**	**231**	**29**	**87**	**34**	**2634**	**25**	**33**	**328**	**73**	**63**
grain		56	207	13	58	26	446	17	17	116	38	56
weeds		2	24	16	29	8	119	8	15	26	17	5
chaff		4	0	0	0	0	2069	0	1	186	18	2
weed:grain		0.04	0.12	1.23	0.5	0.31	0.267	0.47	0.88	0.22	0.45	0.09
chaff:grain (spelt)		0.15					13.94		0.09	3.19	0.95	0.06
seeds/litre		3.1	11.6	1.45	4.35	1.13	1317	2.27	1.74	16.4	3.65	2.1

* = Abundance 1-10, ** = 11-50, *** = 51-150, **** = 151-250. ***** = 250+

Table 4: The charred plant remains from the richer samples (cont'd)

	phase	vii	vii	vii	vii	vii	vii	vii	vii	vii	vii	viii	viii	viii	viii	viii	viii
	context	97	162	269	281	151	152	306	310	302	561	18	12	6	767	680	678
	sample	3	84	8	9	10	11	12	13	20	81	30	31	32	85	86	87
	vol. soil (l)	26	26	30	12	30	24	11	12	12	21	26	10	21	28	28	28.5
	vol. flot (ml)	95	130	60	4	36	25	2	1	6	8	1	<1	25	55	6	15
Cereal																	
Triticum spelta	spelt wheat	13	322	131	18	179	82	3	7	28	39			35	208	14	10
Triticum cf. spelta	cf. spelt wheat	53	244	66	12	52	25		5	20	19	2	4	35	84	11	18
T. cf. aestivum/durum	cf. free threshing wheat		3												20	2	
Triticum spp.	wheat spp.	41	124	23	2	25	5	2	2	5	8			40	112	24	5
cf. *Triticum* spp.	cf wheat spp.	4	24		2				1	28				35	4	1	2
Hordeum vulgare	barley	611	953	125	10	49	63	7	12	43	30	3		15	596	46	30
cf. *Hordeum vulgare*	cf. barley	124	61	44	6	16	13	4	8	18	10	1	1	12	276	23	18
indet. cereal		276	1072	338	48	266	111	17	48	199	141	14	12	247	1768	156	99
indet frags.		****	*****	*****	***	*****	****	*	**	*****	***	**	**	*****	***	***	
Chaff																	
cf. *Hordeum* rachis internode	barley rachis	1	2					3									
Triticum spelta	spelt wheat	19	145	13	2	10		5	5	7	10	6		15	672	4	109
Triticum spp.	wheat	6	142	6	2	3			1	1	5	5		3	276	2	80
Triticum cf. aestivum/durum	cf. free threshing wheat		4														1
indet																	6
Weeds																	
Ranunculus repens type L.	buttercup	1															
Fumaria officinalis L.	common fumitory	15													4		
Chenopodium album L.	fat hen			4													
Chenopodium spp.	goosefoot	37		57			31							1		5	
Atriplex spp.	oraches	3		6		1	7		1								
Montia fontana chondrosperma (Fenzl) Walters	blinks						1										
Agrostemma githago L.	corn cockle			1							1						
Silene spp.	campion					1	1							1			1
Prunus/Crataegus spp.	plum/hawthorn family																1
Polygonum aviculare L.	knotgrass		1	1			2								4		
Fallopia convolvulus (L.)A. Love	black bindweed		1	23			2			1				2	4	2	
cf. *F. convolvulus*(L.)A. Love																	1
Polygonum spp.	knotgrasses	1															
Rumex acetosella Raf.	sheep's sorrel	3															
Rumex spp.	docks	42		18		7	7			1	4			5	52	8	4
cf. *Rumex* spp.			120														
Cruciferae	cabbage family			1			5										
Raphanus raphanistrum	wild radish		2	2											4	1	
Vicia/Lathyrus/Pisum	vetches/pea	1	1	12	1	2	5			1			1	1	8		1
Fabaceae (small)	pea family	23		17		2	8		3	2				1	20		1
Umbelliferae	carrot family			1													
Galeopsis tetrahit L.	hemp nettle			3			1										
cf. *Teucrium* spp. L.	germander										1						
cf. *Plantago lanceolata* L.	ribwort plantain	5				1					1				4		
Sheradia arvensis	field madder			3													
Carduus spp.	thistle	3													4		

* = Abundance 1-10, ** = 11-50, *** = 51-150, **** = 151-250. ***** = 250+

Table 4: The charred plant remains from the richer samples (cont'd)

	phase	vii	vii	vii	vii	vii	vii	vii	vii	vii	vii	viii	viii	viii	viii	viii	viii
	context	97	162	269	281	151	152	306	310	302	561	18	12	6	767	680	678
	sample	3	84	8	9	10	11	12	13	20	81	30	31	32	85	86	87
	vol. soil (l)	26	26	30	12	30	24	11	12	12	21	26	10	21	28	28	28.5
	vol. flot (ml)	95	130	60	4	36	25	2	1	6	8	1	<1	25	55	6	15
Lapsana communis L.	nipplewort		4	2													
cf. *Anthemis cotula* L.	stinking mayweed	1		1													
Compositae	daisy family					2											
Matricaria spp.	mayweed	1															
Tripleurospermum inodurum	scentless mayweed			1													
Carex spp	sedges	15		2			2		1	1	3			3	12	2	2
cf. *Avena* spp.	oat			21	2	5	16		2	1	8			6	192	19	3
cf. *Agrostis* spp.	bent			2													
cf. *Bromus* spp.	brome	7	21	2		8	3	1		3	2			1	64	4	1
Danthonia decumbens	heath grass	1					1										
Poaceae indet.	grasses	86	518	62	6	26	24	6	5	28	21	4	2	27	476	25	22
Poaceae indet (small)						2											
Poaceae frag		***	**	**	**	**		*	*	****		**		****			
type AAA		42		11			4										
indet.		77	4	49	1	14	22		2						24	1	6
Corylus avellana L.	hazelnut frag.									1							
other nut frag.				1								**					
other frags.		***															
Rhizome frag		*															
Total		**1512**	**3768**	**1048**	**112**	**671**	**441**	**48**	**103**	**387**	**303**	**35**	**20**	**485**	**4888**	**350**	**421**
grain		1122	2803	727	98	587	299	33	83	341	247	20	17	419	3068	277	182
weeds		364	672	302	10	71	142	7	14	38	41	4	3	48	872	67	43
chaff		26	289	19	4	13	0	8	6	8	15	11	0	18	948	6	190
weed:grain		0.32	0.24	0.42	0.1	0.12	0.47	0.21	0.17	0.11	0.17	0.2	0.18	0.11	0.28	0.24	0.24
chaff:grain (spelt)		0.17	0.31	0.04	0.06	0.03		0.5	0.33	0.04	0.1	1.57	0	0.05			2.47
seeds/litre		58.2	145	34.9	9.33	22.4	18.4	4.36	8.58	32.3	14.4	1.35	2	23.1	175	12.5	14.8

* = Abundance 1-10, ** = 11-50, *** = 51-150, **** = 151-250. ***** = 250+

drier, backfilling of the chambers will have resulted in a large amount of mixing, which would make interpretation very difficult.

The two grain driers were functional during the same phase (mid 3rd century), although whether they were used concurrently is not known. The precise function of the driers is also difficult to ascertain on the basis of the charred botanical composition of the samples but they should not be regarded as single function structures. Experimental evidence from work by Reynolds and Langley (1979) and Reynolds (1981) questions the function of these structures as corn driers such that 'unless the grain is spread so thinly on the floor as to be uneconomic of time and effort, the mechanics of these structures with their solid floors are such that they cannot be considered to be effective for the purpose assigned to them' (Reynolds 1981 41). An alternative function was suggested, that they were used as malting floors. Of course it is not known what type of floor these structures used, but Van der Veen (1989) suggests that ethnographic evidence all points to the use of a permeable floor, which would have important implications with regard to function.

The presence of some sprouted grain in the samples from the two corn driers at least points to the possibility of malting in these structures. It may be that in the past the processes of malting were not as refined as they are today and that the low percentages of sprouted grain with sprouts of different length may represent poorly germinated grain, or be the product of post-depositional mixing. All of the sprouted grain appears to be wheat and none of the identified barley showed signs of sprouting. Barley is most commonly used in modern day Britain for brewing beer although wheat is also occasionally brewed. Van der Veen (1989) indicates that historical evidence points to the use of wheat (and other cereals) for the brewing process.

The composition of the samples taken from the drying ovens on this site are very mixed. This is in contrast to the results obtained from the four cigar shaped ovens from Phase 4 (BBAC) where definite areas of the oven could be suggested on the basis of the botanical assemblages. These structures are again Romano-British in date, although it is not known whether they are contemporary with the structures identified in this phase. The relationship between the three styles of corn drier on one site is an interesting one and requires further investigation as their structure and function are poorly understood.

It is clear from the results obtained from the 27 richer samples that both barley and spelt wheat were important crops on this site from the Iron Age through to the Roman period. In general the total number of wheat grains is less than the total number of barley grains for the whole site by about 9%. Although oats are present in most samples it is not possible to tell from the grains whether they are the wild or cultivated variety, for which you need the lemma. It is likely, given the relatively low numbers of oat identified that they are weeds within other cereal crops. Malting and other grain processing may have taken place in the two grain drying structures, although the primary function of the structures is not discernable.

Despite the differences in composition in some of the samples, clear spatial patterning of activities was not evident and so specific working areas could not be identified. The presence of large amounts of chaff in a few of the contexts indicates that some form of crop processing activities were taking place and given the relatively low numbers of weeds in these samples, they probably represent a late stage in the sequence.

The density of charred plant material indicates that cereals probably formed an important part of the economy throughout the occupation of this site, which may have been a farmstead or could have formed the periphery of a larger settlement. It is not discernable from the charred botanical assemblage the size or type of community in occupation.

Animal Bone

James Rackham

An assemblage of 322 bone fragments were recovered by hand during the excavation and a much larger number of fragments, many of them unidentifiable, from the soil samples. The hand collected bones have been identified and recorded following the procedures of the Environmental Archaeology Consultancy (see attached Key) and the catalogue is attached to this report. This material is summarised in Table 5 by phase. During the recording each fragment was assigned a preservation category and over 70% of the fragments were designated as showing evidence of surface erosion and pitting, while the remainder, apart from four bones in very poor condition, were deemed to be in good condition. Much of this eroded bone was quite robust although somewhat brittle and it is not immediately apparent that the

preservation condition was bad enough for the complete loss of bones. However this does indicate a significant preservational problem that might, in some deposits, have affected the survival of bone, particularly those from juvenile animals or those already partly chewed by scavenging dogs. 6% of the bones show evidence of dog gnawing but the erosion and pitting of the surface of many bones may have obscured this evidence on some. Less than 2% of the fragments were calcined through burning another possible, although probably insignificant, indication of post-depositional loss. The fragmentation index for the bone is 0.75 (total number of zones/total number of fragments) indicating significant fragmentation. Human, horse, cattle, pig, sheep/goat, sheep, dog and red deer bones have been identified in the sample.

Table 5: Frequency of bone fragments of each taxa in the hand colleted assemblage by phase

species	LIA	I	II	III	I-IV	IV	V	Pre VI	VI	VIa	VII	VII-VIII	VIII	ROM	
Human										1	6				
Horse		4	1	1	1	2	1				2	1	4	1	
Cattle		15	3	2	4	23	9		5	6	22	1	11		1
Cattle size		1		3	1	12	10		5	6	41	2	8		2
Sheep/goat		8		3		9	16		2	1	5	3	5		1
Sheep						1	1					1			
Sheep size	2			1		3	7		1		1		1		
Pig		1		1		1	7	1	1	2	2		4		1
Dog						2			2		1				
Red deer			1												
Small animal						1									
Unidentified									1	1	2				
Totals	2	29	5	11	6	54	51	1	17	17	82	8	33	1	5
Grand total															**322**

At first glance the fragment numbers indicate that cattle dominate the assemblage, but with the problems of preservation and survival alluded to above this needs to be reviewed. The proportion of cattle to sheep fragments (102:56) and cattle to sheep zones (127:69) is very similar so there is no appreciable difference in fragmentation between the species. The most abundant cattle bone, the tibia, is represented by 6 different bones while that of sheep, the humerus, by 4. This would suggest that cattle do in fact dominate the hand collected assemblage. Nevertheless the frequency with which the different species occur in the soils samples is markedly different (Table 6). Samples with sheep bones and teeth considerably outnumber those with cattle. Many of the sheep bones are small fragments and teeth that are unlikely to have been recovered by hand during excavation and since the sheep at the site are also generally small gracile animals, whose bones can fragment into relatively small pieces, it seems probable that the hand collected animal bone assemblage includes a serious bias against sheep. The importance of sheep, and perhaps to a lesser extent pigs is therefore probably severely underestimated by the hand collected bone assemblage.

With these problems of taphonomy and recovery, and the small size of the sample, it would not be realistic to consider whether there were any changes in the relative importance of the major farm animals during the history of the site.

Table 6: comparison of different measures of relative abundance

	Cattle	sheep	pig
Fragments	102	56	21
Zones	127	69	23
MNE	6	4	3
No. samples	18	11	7

These difficulties with the sample also prejudice the usefulness of other aspects of the study, such as the slaughter patterns, since biases may have operated on different age groups. Among the cattle bones only one bone (out of 31), a distal humerus, is unfused indicating the presence of a calf, but at least two mandibles and two maxilla (out of 14) indicate juvenile and immature cattle in the bone sample. Among the sheep bones fragments with unfused epiphyses (2 out of 11) indicate animals killed before about 18-24 months, while five mandibles and two maxilla (7 out of 9) still carry deciduous teeth indicating a significant cull of immature sheep. The samples for pig are too small to deserve comment.

Cattle, sheep and pigs appear to be the only food animals in the hand collected assemblage but the soil samples have recovered a few other taxa that may have been food items. Several vertebrae of eel, *Anguilla anguillis*, were found in four of the samples, and their occurrence in one of the house gullies and one of the corn driers suggests that these probably derive from food remains. A couple of other small fish vertebrae testify to other species being present. Occasional small bird bones in the samples may also have derived from food waste but could as easily be part of the natural death assemblage.

The few horse bones which occur throughout the phases include small pony sized animals and larger horses, but direct comparisons cannot be made since so few measurements were possible. Human bones and teeth were recovered from contexts 74, 462 and 676, the latter to incisors. In 462 the presence of a large part of the shaft of a tibia, a fragment of fibula shaft and a tarsus bone suggests that this may be part of the leg from a burial, the other contexts probably represent disturbed and reworked human material.

Two bones deserve some comment. A red deer antler, the only red deer bone from the site, was recovered from context 610. This is a large antler that appears to be sawn off below the coronet and above the trez tine and below the crown giving a significant length, 50cm, of antler. The bez tine is absent but the brow tine is still intact although its tip is broken and worn. A smoothing of one surface of the beam where it might have been held suggests that this was held and used as a pick. Its discard into a small pit, 609, at the northern end of the site does not appear to have been due to breakage since all but the tip of the tine were broken during recovery. A second small find, a sheep metatarsal has had its proximal end gouged out to form a hole, and a second hole made in the proximal anterior surface of the bone. The distal end of the shaft has been shaped to a point which has broken during recovery. The polish on the bone indicates that it was used, although whether as a crude awl or some other function is not known.

Despite the obvious problems with this assemblage and its small size cattle must have contributed the bulk of the meat to the diet, although sheep may have been economically important as a source of milk, wool and skins and pigs for meat. The lack of diversity in this

assemblage, such as the absence of chickens or wild animals, while possibly attributable to the small sample size and survival problems does suggest a 'conservative' farming system and diet with no indication of status. The eel is the only slightly unusual taxa and its absence on most sites is almost certainly due to the lack of sample processing and sorting.

Pollen analysis of late Iron Age and Roman ditches
Rob Scaife
The samples for pollen analysis, 33-44, were taken from two ditches and a gully or stream of Roman date (see Fig. 1) in order to reconstruct the local environment and land use around the site. A total of twelve samples taken at 3cm intervals were prepared. Standard techniques were used for extraction with samples of 2ml used.

These samples were predominantly minerogenic and appeared decalcified and oxidised. Examination of all samples failed to produce pollen in acceptable/countable quantities. Occasional spores of monolete fern types and degraded Lactucoideae (dandelion types) were observed. These are typical of poor pollen preserving environments and even here, the numbers seen were very small. The absence of pollen is attributed to the initial alkalinity of the site or post-depositional decalcification and changes in moisture content.

No further work is anticipated since further pollen concentration would if at all, only yield a highly skewed pollen assemblage.

Terrestrial Molluscs
James Rackham
The frequency of snails in the samples was very variable (Table 3). The burrowing snail *Cecilioides acicula* was almost ubiquitous and sometines very abundant but this snail lives underground feeding on grass roots and is known to burrow to depths over 1m and its occurrence in deposits otherwise devoid of snails through decalcification is an indication that it must be intrusive in most deposits. This taxa has not therefore been counted although a rough estimate of its abundance is noted in the analysed samples (Table 7). When snails occurred their preservation was also variable with some assemblages in excellent condition and others showing erosion of numerous shells in the sample with the possible loss of the more fragile taxa. Only one of the samples studied in detail showed this level of poor preservation, sample 53 from the central rectangular enclosure ditch.

Thirteen of the richest samples were studied. Several of the samples from corn drier 259 were amongst the richest but only three have been selected for detailed analysis.

All the assemblages are dominated by shells of *Trichia hispida*, a snail of catholic habit found in a wide range of habitats although most abundant in meadows and marshes (Evans 1972). A general dominance of grassland elements is also evident with *Vallonia excentrica* and *V. costata* relatively abundant, and occasional shells of *Vertigo pygmaea* and *Pupilla muscorum*. The Phase II linear gully at the northern end of the site produced the largest snail assemblage from the site. This was divided into two for study. *Trichia hispida* is the major taxa in this gully with grassland/open country and other catholic species also common. Three taxa normally associated with shaded habitats also occur, *Oxychilus alliarus*, *Punctum pygmaeum* and *Vitrina pellucida*. Evans (1972) notes that these latter two frequently occur in poor habitats such as an unstable surface or short grazed grassland with areas of bare ground.

Trichia striolata is a synanthropic snail occuring in man-made habitats such as arable land and gardens, often in considerable abundance, but its contribution in this Iron Age gully is very small. A single shell of *Lymnaea truncatula* is the only evidence of a damp or wettish environment in this gully.

Table 7: Molluscan taxa recorded from the samples

Sample	82	25	72	32	79	71	74	60	64	53	20	11	13
Context	501	512	700	6	551	074	451	492	333	342	302	152	310
Phase	II	IV	IV	V	V	VIa	VII	VII	VII	VII	VII	VII	VII
Feature	gully	gully	pit	gully	ditch	ditch	ditch	ditch	ditch	ditch	flue	st-hl	st-hl
								encl	encl	encl	259	259	259
Open country													
Cecilioides acicula	***	****	****	***	**	***	*	**	***	**	***	***	***
Helicella itala	23												
Helicella sp.		1	4										
Vertigo pygmaea	31		3	3	2	2	1		2		2	2	
Vertigo sp.	15		2			2							
Pupilla muscorum							1	3		1			
Vallonia costata		1	91	14	5	2	1				6	10	3
Vallonia excentrica	52	12	49	7	27	20	3	12	10	18	8	4	4
V. pulchella/excentrica	6			1		1							
Vallonia sp.	55	6	90	10	14	32	1	5		15	5	9	13
Catholic													
Trichia hispida	367	53	247	69	69	97	24	97	40	120	43	32	14
Trichia striolata	3												
Helix hortensis/nemoralis	4		3	2								1	
Helix sp.	14		6								1	2	1
Cochlicopa lubrica	12		27	2	1	4				1	4	4	1
Cochlicopa lubricella				2								2	1
Cochlicopa sp.	44	1	58	8		7	2	2	2	2		1	3
Shade loving													
Discus rotundatus				8		5	1				6	52	51
Oxychilus alliarus	20	1	20	1							3	10	5
Oxychilus sp.	5			2		2	2						1
Nesovitrea hammonis		1	1			1							
Aegopinella nitidula												3	
Aegopinella pura				2								1	1
Vitrea contracta											3		
Vitrea crystalina						1?						17	9
Vitrea sp.			13									24	9
Euconulus fulvus			7										
Zonitoides nitidus			1										
Punctum pygmaeum	98												
Vitrina pellucida	27												
Marsh													
Carychium sp.			25		1	2	3				1	4	6
Succinea sp.			6	5	1		2		1		1		
Oxyloma cf pfeifferi						1							
Lymnaea truncatula	1	3	26		2	1		1					
Planorbis leucostoma			1				1						

frequency *=1-10; **=11-50; ***=51-150; ****=151-250; *****=>250 shells;
habitat groupings broadly taken from Evans, 1972; Macan 1977; Ellis 1969; Cameron and Redfern 1976

Shade loving taxa occur sporadically in the other samples but only form a major component in the samples from the phase VII corn drier 259. The three studied samples include two from the stoke-hole area of the structure, samples 11 and 13, and sample 20 from one of the internal flues. The relative abundance of snails in samples 8-13, all from the stoke-hole and flue areas of the structure strongly suggests that these snails represent 'colonisation' of the structure after it ceased to function since they did not include burnt shells and would not have survived its use.

The dominance of the shade loving or woodland elements, particularly the abundance of *Discus rotundatus* and *Vitrea* sp., suggests a damp and shaded habitat and the fauna may have been introduced to the structure after its demolition and growth of vegetation around and over it, the rubble of the structure itself creating a suitable environment for the snails.

Three samples from another phase VII feature, the rectangular enclosure in the centre of the site, were studied. The snail assemblages were poor but are dominated by shells of *Trichia hispida* and *Vallonia* spp. With no shade-loving elements at all this assemblage is typical of a dry calcareous grassland and is interesting in this context since woodland elements might have been expected if the enclosure had been hedged.

Despite the fact that most of the assemblages derived from gullies or ditches the damp ground component is very small. Only two aquatic shells have been recovered from the site and these are of *Planorbis leucostoma*, a species characteristic of ponds and marshes than tend to dry up. Shells of *Succinea* sp. and *Lymnaea truncatula*, both species found in damp places in fields and ditches, occur sporadically with the assemblage in 'grain storage' pit 699 yielding the highest numbers. The abundance of snails in this pit is perhaps unexpected given the interpretation of the feature and suggests that the final infilling probably occurred slowly.

The assemblages overall indicate a dry, well drained, calcareous grassland, with some evidence for ground disturbance and bare patches among a short grazed turf. The absence of both woodland/shaded loving taxa and damp ground or aquatic species suggests that the ditches were largely dry and that they probably were not hedged. Perhaps the enclosure in the centre of the site was fenced rather than hedged, permitting grazing right to the edges of the ditch. The woodland elements in the stoke-hole and flue of corn-drier 259 suggests that these deposits were still incorporating material after the structure had gone out of use, and possibly become derelict or dismantled.

Small vetebrates

James Rackham

The small vertebrate remains from the bulk soil samples offer further insights into the local environment of the site. The following species have been identified house mouse (*Mus musculus* – 10 samples), wood mouse (*Apodemus sylvaticus* - 1), field vole (*Microtus agrestis*- 13), bank vole (*Clethrionomys glareolus* - 1), water vole (*Arvicola terrestris* - 3), common shrew (*Sorex araneus* - 7), mole (*Talpa europaea* – 1), a possible rat (? - 1), frog/toad, a newt, a snake and a possible lizard. The field vole occurs with the greatest frequency among the small mammals, followed by shrew, and these with the abundance of frogs/toads, newts and snakes is consistent with the grassland and meadow landscape suggested by the snails. Woodland and hedgerow environments are only represented by the bank vole and wood mouse, both of which occur only once in the 69 samples. The ten samples

that produced the house mouse bones tend to occur in the settlement area, particular the corn-driers, but two records occur in the central part of the site. This species is associated with habitation and needs buildings and shelter to survive in Britain and its distribution on site should generally mirror the main area of human activity and available food sources.

Discussion

One of the major problems associated with the assemblages from this site is the survival and preservation of the remains. Decalcification of some of the soils and the alkaline nature of the remainder have prevented the survival of organic remains including pollen and have destroyed some of the calcareous elements of the environmental record such as snails and bones. These survival problems and the fragility and brittleness of the animal bone has caused a level of fragmentation among the smaller species of mammal that has generated a bias against these taxa such that it is difficult to assess even the contribution made by these species to the animal economy of the site. Similar preservation problems are apparent for the botanical remains although they are a product of different processes. The probable poor survival of charred chaff, particularly barley, and the very high proportion of unidentifiable charred grain makes confident functional and economic interpretation of the charred plant remains difficult. With over 50% of the charred grain (including the indeterminate fragments noted in Table 4) either so 'blown up' or fragmented to prevent its identification to species there is even some doubt as to whether the proportions of the two main cereals, barley and spelt wheat, identified reflect their economic importance to the site. These assemblages therefore fall well short of the environmental potential of those recovered from sites where such preservation problems do not exist.

Despite this rather negative assessment of the assemblages the environmental evidence can make some contribution to the interpretation of the site, but the data do not afford an opportunity to consider changes through time and we cannot distinguish any changes in the economy through the Iron Age and Roman phases. The densities of finds in the soils samples re-inforce the conclusions reached on site that the occupation activity is heavily concentrated in the south east corner of the site. The occurrence of the highest concentrations of animal bone, pottery and other finds in this area indicates that this is the focus of domestic rubbish discard within the excavated area and little such activity took place elsewhere on the site except perhaps a tendency to dump rubbish along the line of the stream on the western side of the site. Very low densities of hammerscale in the samples suggests that although industrial activity must have been undertaken at the settlement it was not being carried out within the excavated area which appears largely agricultural and domestic in character.

The site appears to lie in a dry, well drained calcareous grassland, probably well grazed. There are few shade-loving mollusc species in the ditch fills which may reflect a lack of hedges in this part of the landscape. The contrasting assemblages from the corn-drier suggest that these deposits were forming during a period of abandonment and dereliction of this structure which might perhaps reflect a change in use or period of abandonment of the area between phase VII and the construction of the house associated with ring gully 5 in phase VIII.

The agricultural economy, either of or supplying the site, includes the processing and use of barley and spelt and the consumption of meat of cattle, sheep and pig, with possible eel, other small fish, wild bird and eggs (presumably chicken although no chicken bones were recovered) forming part of the diet. Sheep were clearly much more important than the hand

collected bone assemblage would suggest but cattle must have contributed most of the meat consumed. Despite the evidence for crop-processing activities, reflected in the corn-driers and the charred plant assemblages, these need not indicate that the site produced its own grain and we cannot be confident about identifying the site as a farmstead rather than part of a larger settlement in which agricultural and other activities occurred. The size of corn drier 259 suggests the processing of grain on some scale and perhaps the site, at least at this phase, represents a peripheral area to denser activity to the south. The environmental evidence affords minimal confirmation of the interpretation of the central enclosure in phase VII as a stock enclosure, except for the absence of occupation debris and the indications that the area was 'grazed' grassland but if it had had a horticultural function this might have produced a different snail fauna in the ditches.

A lack of diversity in the environmental assemblages suggests agricultural conservatism and lack of status in this part of the settlement. The inter-mixing of botanicial assemblages from several sources and possible crop processing stages would imply that all such activities were being undertaken at the site rather than the specific assemblages that might be expected from the processing area of a large agricultural operation. This might further indicate an unexceptional occupation involving both domestic and agricultural activities and the probable multi-function use for the corn driers.

These results raise some questions for the next phase of work at the site which occurs away from the focus of settlement at BBAD and may have greater potential for the more general environmental questions that it has not been possible to address from the samples from this site.

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THE ENVIRONMENTAL ARCHAEOLOGY CONSULTANCY

Key to codes used in the cataloguing of animal bones and marine shells

SPECIES:

SPECIES CODE			SPECIES CODE	
MAN	human		DOVE	Dove species
EQU	Horse		FER	Feral dove
EQSZ	Horse size		PART	Partridge
BOS	Cattle		SWAN?	Swan?
BOSL	Cattle-large		WOOD	Woodcock
CSZ	cattle size		CURL	Curlew
SUS	Pig		WADE	wader
OVCA	sheep or goat		CROK	Crow or rook
OVI	Sheep		CORV	Crow or rook
CRA	Goat		JACK	Jackdaw
SSZ	sheep size		OWL	Owl indet.
FEL	Cat		BUZZ	Buzzard
CAN	Dog		GULL	Gull sp.
AUR	Aurochs			
AUR?	Aurochs?		TURD	Turdidae
CER	red deer		BIRD	Identifiable but not id'd
DAM	Fallow deer		PASS	Passerine
CLS	roe deer		LBIRD	Large bird
LEP	Hare		UNIB	Bird indet
ORC	Rabbit			
LAG	Lagomorph		FROG	Frog
CARN	Carnivore		FRTO	Frog or toad
FOX	Fox			
POLE	Polecat/ferret			
WEA	weasel		GAD	Gadid, cod family
BADG	Badger		LING	Ling
SEAL	seal		HADD	Haddock
SQU?	Squirrel?		RAY	ray
BEAV	Beaver		FISH	Fish
ROD	Rodent		UNIF	Fish indet
RAT	Rat			
AGR	Field vole		OYS	oyster
ARV	Water vole		COK	Cockle
MUS	House mouse		MUSS	Common Mussel
SORA	Common shrew		WHELK	Common whelk
MOLE	Mole		HEL	Helix aspersa
SMA	Small mammal		HELIX	Helix sp.
UNI	Unknown		HELN	Helix nemoralis
			SNAIL	snail
CHIK	Chicken			
CHKZ	Chicken size		FOSS	Fossil bone
GOOS	Goose, dom			
GOOS?	Goose, dom.?			
GSSZ	Goose size			
GSSP	Goose species			
GOSZ	Goose, poss. Wild			
DUCK	Duck, domestic sp.			
DUCK?	Duck?			
DKSP	Duck species			
DSP	Duck species indet			
MALL	Duck, dom.			
TURK	Turkey			

BONE ELEMENT:

BONE CODE		BONE CODE	
SKEL	skeleton	SCP	scapula
SKL	skull	HUM	humerus
ANT	antler	RAD	radius
ANT?	antler?	ULN	ulna
ATT	antler tine	RUL	radius and ulna
HC	horn core	C/T	carpus/tarsus
TEMP	temporal	C23	carpus 2+3
FRNT	frontal	CAR	carpus
PET	petrous	CPA	accessory carpal
PAR	parietal	CPI	intermediate carpal
OCIP	occipital	CPR	radial carpal
ZYG	zygomatic	CPU	ulnal carpal
NAS	nasal	MTC	metacarpus
PMX	premaxilla	MC1-5	metacarpus 1-5
MAN	mandible	MTP	metapodial
MNT	mandibular tooth	MPL	lateral metapodial
DLI	deciduous lower incisor	INN	innominate
DLPM1-4	deciduous lower premolar 1-4	ILM	ilium
LI	lower incisor (and 1-3)	PUB	pubis
LC	lower canine	ISH	ischium
LPM1-LPM4	lower premolar 1-4	FEM	femur
LM1-LM3	lower molar 1 - molar 3	PAT	patella
MAX	maxilla	TIB	tibia
DUI	deciduous upper incisor	FIB	fibula
UI	upper incisor (1-3)	LML	lateral malleolus
UC	upper canine	AST	astragalus
DUPM	deciduous upper premolar	CAL	calcaneum
DUPM1-4	deciduous upper premolar 1-4	CQ	centroquartal
UPM1-UPM4	upper premolar 1-4	TAR3	tarsus 3
UM1-UM3	upper molar 1 - molar 3	T4	tarsus 4
MXT	maxillary tooth	TAR	tarsus
TTH	indeterminate tooth	MTT	metatarsus
INC	incisor	MT1-5	metatarsus 1-5
HYD	hyoid	MTL	lateral metatarsus
ATL	atlas	SES	sesamoid
AXI	axis	PH1	1st phalanx
CEV	cervical vertebra (and 3-7)	PH2	2nd phalanx
TRV	thoracic vertebra (and 1-13)	PH3	3rd phalanx
LMV	lumbar vertebra	PHL	lateral phalanx
SAC	sacrum	LBF	long bone
CDV	caudal vertebra	UNI	unidentified
VER	vertebra		
STN	sternum	CLV	clavicle
CC	costal cartilage	COR	coracoid
RIB1	first rib (2 etc)	CMP	carpo-metacarpus
RIB	rib	CMC	carpo-metacarpus
		WPH1-3	wing phalanges 1-3
URO	urostyle	WPH	wing phalanx
		LSA	lumbosacrale
DENT	dentary		
CLEI	cleithrum		
RAY	fin ray		
SHELL	shell		
UV	upper valve		
VAL	valve		

NUMBER: number of fragments in the entry

SIDE: W - whole L - left side R - right side F - fragment

FUSION: records the fused/unfused condition of the epiphyses
P - proximal; D - distal; E - acetabulum; N - unfused; F - fused; C - cranial; A - posterior

ZONES: records the part of the bone present.
The key to each zone on each bone is on page 4

BUTCHERY: records whether a bone has been chopped (CH), cut (KN), worked (W), burnt (C)

GNAWING: records if a bone has been gnawed by dogs (DG), cats (FEL) or rodents (RG)

TOOTH WEAR - Codes are those used in Grant, A. 1982 The use of tooth wear as a guide to the age of domestic animals, in B.Wilson, C.Grigson and S.Payne (eds) *Ageing and sexing animal bones from Archaeological sites*, 91-108.

Teeth are labelled as follows in the tooth wear column:

Deciduous	Permanent
f ldpm2/dupm2	F lpm2/upm2
g ldpm3/dupm3	G lpm3/upm4
h ldpm4/dupm4	H lpm4/upm4
	I lm1/um1
	J lm2/um2
	K lm3/um3

MEASUREMENTS :Any measurements are those listed in A.Von den Driesch (1976) *A Guide to the Measurement of Animal Bones from Archaeological Sites*, Peabody Museum Bulletin 1, Peabody Museum, Harvard, USA

PATHOLOGICAL: A 'P' indicates that the bone fragment carries a pathology

COMMENTS: This may include a short description of the fragments, any pathologies, butchery or gnawing evidence

PRESERVATION: records the condition of the bone in the following manner

1- enamel only surviving
2- bone very severely pitted and thinned, tending to break up; teeth with surface erosion and loss of cementum and dentine
3- surface pitting and erosion of bone, some loss of cementum and dentine on teeth
4- surface of bone intact, loss of organic component, material chalky, calcined or burnt
5- bone in good condition, probably with some organic component

ZONES - codes used to define the zones on each bone

SKULL	1. paraoccipital process	METACARPUS	1. medial facet of proximal articulation, MC3
	2. occipal condyle		2. lateral facet of proximal articulation, MC4
	3. intercornual protuberance		3. medial distal condyle, MC3
	4. external acoustic meatus		4. lateral distal condyle, MC4
	5. frontal sinus		5. anterior distal groove and foramen
	6. ectorbitale		6. medial or lateral distal condyle
	7. entorbitale		
	8. temporal articular facet	FIRST PHALANX	1. proximal epiphysis
	9. facial tuber		2. distal articular facet
	0. infraorbital foramen		
		INNOMINATE	1. tuber coxae
MANDIBLE	1. Symphyseal surface		2. tuber sacrale + scar
	2. diastema		3. body of illium with dorso-medial foramen
	3. lateral diastemal foramen		4. iliopubic eminence
	4. coronoid process		5. acetabular fossa
	5. condylar process		6. symphyseal branch of pubis
	6. angle		7. body of ischium
	7. anterior dorsal acsending ramus posterior M3		8. ischial tuberosity
	8. mandibular foramen		9. depression for medial tendon of rectus femoris
VERTEBRA	1. spine	FEMUR	1. head
	2. anterior epiphysis		2. trochanter major
	3. posterior epiphysis		3. trochanter minor
	4. centrum		4. supracondyloid fossa
	5. neural arch		5. distal medial condyle
			6. lateral distal condyle
SCAPULA	1. supraglenoid tubercle		7. distal trochlea
	2. glenoid cavity		8. trochanter tertius
	3. origin of the distal spine		
	4. tuber of spine	TIBIA	1. proximal medial condyle
	5. posterior of neck with foramen		2. proximal lateral condyle
	6. cranial angle of blade		3. intercondylar eminence
	7. caudal angle of blade		4. proximal posterior nutrient foramen
			5. medial malleolus
HUMERUS	1. head		6. lateral aspect of distal articulation
	2. greater tubercle		7. distal pre-epiphyseal portion of the diaphysis
	3. lesser tubercle		
	4. intertuberal groove	CALCANEUM	1. calcaneal tuber
	5. deltoid tuberosity		2. sustentaculum tali
	6. dorsal angle of olecranon fossa		3. processus anterior
	7. capitulum		
	8. trochlea	METATARSUS	1. medial facet of proximal artciulation, MT3.
	9.		2. lateral facet of proximal articulation, MT4
	0.		3. medial distal condyle, MT3
RADIUS	1. medial half of proximal epiphysis		4. lateral distal condyle, MT4
	2. lateral half of proximal epiphysis		5. anterior distal groove and foramen
	3. posterior proximal ulna scar and foramen		6. medial or lateral distal condyle
	4. medial half of distal epiphysis		
	5. lateral half of distal epiphysis		
	6. distal shaft immediately above distal epiphysis		
ULNA	1. olecranon tuberosity		
	2. trochlear notch- semilunaris		
	3. lateral coronoid process		
	4. distal epiphysis		

Archive Catalogue of Animal Bones from Barnetby Le Wold – Phase 5 - BBAD

context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment
002	BOS	PAT	1	F		1		DG				TOOTH MARKS-BROKEN
002	OVCA	HUM	1	L		690				SD-12		SHAFT-SL POROUS
002	SUS	RAD	1	F								MIDSHAFT FRAGMENT
004	BOS	CQ	1	L		1						HALF
004	BOS	FEM	1	F	PF	1	KN					PART OF CAPUT-CUT MARK BY LIGAMENT SEAT
004	BOS	RAD	1	L		3						PROXIMAL SHAFT FRAGMENT- 2 PIECES
004	CSZ	LBF	1	F								SHAFT FRAGMENT
004	EQU	CAL	1	R		23						PROX END BROKEN-SOME DAMAGE-ONY SIZE?
006	OVCA	TIB	1	R								DISTAL SHAFT
015	OVCA	RAD	1	L								DISTAL MIDSHAFT
015	OVCA	SCP	1	R		235				SLC-15.6		GLENOID-NECK AND DISTAL SPINE
024	BOS	HC	1	R		1				45-51.7 46-30 47-120		SHORT -VERY OVAL FORWARD AND SLIGHTLY UPWARD POINTING
024	BOS	LMV	1	F	CJAJ	234						CENTRUM-SAME ANIMAL AS ABOVE TRV
024	BOS	SKL	3	F								FRONTAL FRAGS
024	BOS	TRV	5	F	CJAJ	2345						ARTICULATED? - SAME ANIMAL- 10 PIECES
036	BOS	HUM	1	R	DF							FRAGMENT DISTAL END
036	BOS	MTT	1	F								SPLIT FRAGMENT PROX END
036	BOS	RAD	1	R								PROX SHAFT FRAGMENT
036	CSZ	LBF	1	F								SHAFT FRAGMENT- 2 PIECES
036	SUS	RIB	1	L								SHAFT- 2 PIECES
036	SUS	TIB	1	L		4		DG		SD-12.9		MIDSHAFT-SMALL-IMM-PROX END CHEWED
036	SUS	ULN	1	R		3					P	PROX MIDSHAFT-BONE GROWTH ONE SHAFT JUST BELOW PROX
037	BOS	MAN	1	F								VENTRAL FRAGMENT OF HORI RAMUS
037	EQU	LM	1	R							P	MEDIUM TO WELL WORN-LARGE CEMENTUM? GROWTH ON OUTSIDE OF ONE CUSP
038	BOS	UM1?	1	F					15			CUSPS BROKEN
038	OVCA	TIB	1	F				DG				DISTAL SHAFT FRAG-SMALL-GRACILE?-DISTAL END CHEWED
039	BOS	RAD	1	R	PF	1						MEDIAL HALF PROX END
039	CSZ	RIB	1	F								SHAFT FRAGMENT
039	SSZ	LBF	1	F								SHAFT FRAGMENT- 2 PIECES-HUM?-POSS PIG?

context	species	bone	no	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment
043	OVI	MAN	1	L		23			GH11I14J12 K12		P	ANT RAMUS WITH TOOTH ROW-M3 LOOSE-UNEVEN WEAR ON M1 AND 2
045	BOS	FEM	1	R	PF	34				SD-27.2		DHAFT-SMALL AND ADULT
045	BOS	FEM	1	R	PC	123				Bp-98.7 DC-40		PROX END
045	BOS	INN	1	F								PART ILIAL SHAFT
045	BOS	INN	1	L	EF	59						ILIAL PART ACETABULUM
045	BOS	TIB	1	L						SD-35.8 Sd-23.6		MIDSHAFT-2 PIECES
045	BOS	TIB	1	L		47				SD-40.4 Sd-29.7		MOST OF SHAFT
045	BOS	TIB	1	R	DJ	4567				SD-34.2 Sd-23.9		DISTAL 2 THIRDS--DISTAL END DAMAGED- 2 PIECES
045	EQU	MTT	1	R		12				Bd-47.4 SD-30		PROX END AND 2 THIRDS SHAFT
045	EQU	SCP	1	R		5						DISTAL CAUDAL MARGIN OF BLADE AND NECK
045	OVCA	RAD	1	R								MIDSHAFT-SMALL
045	SUS	CAL	1	R	PN	2						PROX EPI LOST-DISTAL END BROKEN
046	BOS	SKL	1	F								BASAL FRAGMENT OF HORN CORE BASE
046	BOS	SKL	1	R		0			fgh15I15J11 K3			MAXILLA AND OTHER FRAGS- 8 PIECES
046	BOS	ULN	1	R								PROX MIDSHAFT-JUV-POROUS-SMALL
046	OVCA	MTC	1	F								MIDSHAFT
046	OVCA	MTC	1	F								DISTAL SHAFT FRAGMENT
050	BOS	HUM	1	L		9						DISTAL SHAFT FRAGMENT#
050	BOS	RAD	1	R	DF	3456				Bd-68.3		DISTAL END AND 2 THIRDS SHAFT- 4 PIECES
050	EQU	RAD	1	R				DG		SD-24.2		DISTAL MIDSHAFT- 2 PIECES-VERY SMALL-PONY-MIDSHAFT CHEWED
052	OVCA	ULN	1	F	PF	1						FRAGMENT PROX END
056	BOS	CAL	1	R		2		DG				PROX END CHEWED OFF-DISTAL BROKEN
056	BOS	SKL	1	F								MEDIAL FRAGMENT PALATAL
056	BOS	SKL	1	R		8						TEMPORAL FACET- 2 PIECES
056	CAN	MTP	1	F								SHAFT FRAGMENT
056	OVCA	RAD	1	L						SD-12.3		DISTAL MIDSHAFT-POROUS-SMALL-IMM
056	SUS	SKL	1	R		8						MEDIAL PART TEMPORAL FACET
057	BOS	AXI	1	L								LEFT SIDE ANT CENTRUM
057	BOS	MAN	1	F								VENTRAL FRAGMENT HORI RAMUS- 2 PIECES
057	CSZ	RIB	1	F								SHAFT FRAGMENT

context	species	bone	no	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment
057	OVCA	MTT	1	R		12	W					PROX HALF-FACET GOUGED OUT-HOLE CUT IN PROX ANT SURFACE-SHAFT POLISH & SHARP-NEE
057	OVCA	RAD	1	R	PF	12	C			Bp-26.9		PROX END-CHARRED
057	OVCA	TIB	1	L		7		DG				DISTAL SHAFT-DISTAL CHEWED
057	OVCA	UM2	1	R					J8			COMPLETE
057	SMA	RIB	1	F								SHAFT FRAGMENT-SMALL-CAT SIZE BUT FLATTENED
057	SSZ	RIB	1	L								PROX SHAFT FRAGMENT
059	BOS	RUL	1	R	PF	123/23		DG				PROX END AND ULNAL ARTICULATION-PROX ULNA CHEWED
059	CSZ	TRV	1	F								SPINE FRAGMENT
059	OVCA	RAD	1	L		3				SD-13.3		PROXIMAL MIDSHAFT
060	EQU	PH2	1	F	PF	12						PART DISTAL ARTIC CHIPPED OFF
060	OVCA	FEM	1	L			KN					DISTAL MIDSHAFT-POROUS-CUT MARK ON PROX END-SMALL
060	SSZ	LBF	1	F								SHAFT FRAGMENT
060	SUS	ULN	1	R	PN	23				SDCO-23.7 DPA-31.8		PROX HALF MINUS EPI
062	BOS	HUM	1	R	DN	690				SD-16.2		SHAFT-VERY SMALL-CALF
062	BOS	TIB	1	R		4		DG		SD-29.9 Sd-20.8		SHAFT-PROX SPINE CHEWED
062	CSZ	RIB	1	F								SHAFT FRAGMENT
066	CAN	RAD	1	L		3						PROX SHAFT FRAGMENT
069	BOS	HUM	1	L		69		DG				DISTAL SHAFT-EPI CHEWED OFF
069	CSZ	SKL	1	F								INDET
069	OVCA	MAN	1	R		23			gh12			ANT RAMUS WITH DEC PREMOLAR ROW
069	SSZ	RIB	1	L								PROX SHAFT FRAGMENT-SMALL
072	BOS	HUM	1	R		69				SD-34.4		MID AND DISTAL SHAFT-LARGISH
072	CSZ	LBF	1	F								SHAFT FRAGMENT-MTP?
073	CSZ	LBF	1	F								SHAFT FRAGMENT- 2 PIECES
073	OVCA	MTT	1	L				DG		SD-11.8		SHAFT-BOTH ENDS CHEWED
074	BOS	AST	1	L		1						DAMAGED
074	BOS	CQ	1	F								FRAGMENT
074	BOS	MTT	1	L	DF	12345				GL-224 Bp-44 Dp-42.5 SD-23.8		COMPLETE-BROKEN DISTAL END- 3 PIECES
074	BOS	RAD	1	L	PF	2						FRAGMENT PROX END
074	BOS	SCP	1	F								NECK FRAGMENT
074	CSZ	LBF	1	F								SHAFT FRAGMENT

context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment
074	CSZ	RIB	1	L								PROX SHAFT
074	CSZ	UNI	3	F								INDET
074	MAN	TIB	1	F		4						SHAFT-ROBUST- 2 PIECES
074	OVCA	HUM	1	L		690		DG		SD-16.5		MID AND DISTAL SHAFT-ROBUST-BOTH ENDS CHEWED
074	SUS	HUM	1	R		69	KN					DISTAL SHAFT-CUT MARKS ACROSS Z9
074	SUS	LMV	1	F	ENCNA							LATERAL FRAGMENT- UNFUSED CENTRUM
074	UNI	VER	1	F								INDET
077	OVCA	ULN	1	R	PN	23						PROX HALF MINUS EPI
077	SUS	CAL	1	R		2		DG				MID PART -CHEWED
077	SUS	SKL	1	F								MAXILLA FRAG WITH PREMOLAR
082	CSZ	LBF	1	F								SHAFT FRAGMENT
082	CSZ	TRV	1	F								TRANS PROCESS
082	OVCA	CAL	1	R	PF	123				GL-48.2 Dd-20.4		COMPLETE
082	OVCA	MAN	1	R		23			fgh12			ANT RAMUS- 4 PIECES
082	OVCA	RAD	1	L								SPLIT MIDSHAFT FRAGMENT
082	OVCA	RAD	1	R	DF	456				Bd-25.6 Dd-17 SD-13.8		DISTAL HALF
082	SSZ	LBF	3	F								SHAFT FRAGMENT
082	SSZ	RIB	1	F								SHAFT FRAGMENT-SMALL
082	SSZ	TIB	1	L								ANT MIDSHAFT-VERY SMALL-POSS JUV SHEEP
082	SUS	HUM	1	R		690				SD-15		SHAFT
082	SUS	RAD	1	R	PF	13						PROX THIRD-PART PROX END DAMAGED
085	BOS	CEV	1	F		4						CENTRUM FRAGMENT
085	BOS	LM2	1	L					J7			
085	BOS	MAN	1	F		6						ANGLE
085	BOS	SCP	1	R								DISTAL SPINE FRAGMENT AND PART CRANIAL MARGIN OF BLADE
085	BOS	TIB	1	L		7						DISTAL SHAFT FRAGMENT
085	CSZ	CEV	1	F								ZYGAPOPHYSIS
085	CSZ	LBF	1	F								SHAFT FRAGMENT
085	CSZ	LBF	2	F								SHAFT FRAGMENT
085	CSZ	UNI	1	F								INDET
085	CSZ	UNI	1	F								INDET
085	EQU	FEM	1	L	DF	4567						DISTAL END- QUITE LARGE

context	species	bone	no.	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment
097	BOS	SCP	1	F			C					FRAGMENT CAUDAL MARGIN OF BLADE
099	BOS	AST	1	R		1						DAMAGED
099	BOS	RAD	1	R	PF	123						PROXIMAL END-DAMAGED
099	BOS	TIB	1	R		4						PROX SHAFT FRAGMENT- 4 PIECES
099	CSZ	UNI	1	F								INDET
099	EQU	PAT	1	F		1						PROX HALF
099	OVCA	FEM	1	R								MIDSHAFT
099	OVCA	MTC	1	F	DN	5				SD-10.7		DISTAL HALF SHAFT-SMALL
099	OVCA	MTT	1	F								MIDSHAFT-VERY GRACILE
099	OVCA	RIB	1	L			CH					PROX SHAFT FRAGMENT-PROX END CHOPPED
099	OVCA	TIB	1	R		4		DG		SD-11.1		SHAFT-BOTH ENDS CHEWED
102	BOS	ATL	1	R								POST LATERAL FRAGMENT
102	CSZ	RIB	1	F								SHAFT FRAGMENT
102	CSZ	RIB	1	F				DG				SHAFT FRAGMENT-ONE END CHEWED
102	SSZ	RIB	1	F								DISTAL SHAFT FRAGMENT
102	SUS	ULN	1	L		3		DG				PROX MIDSHAFT-PROX CHEWED-LARGE
102	UNI	UNI	1	F			KN					INDET-CUT MARKS
126	CSZ	LBF	2	F								SHAFT FRAGMENT
126	CSZ	LBF	1	F			C					CALCINED SHAFT FRAGMENT
126	CSZ	UNI	1	F								INDET
128	BOS	PH2	1	R	PF	12						PERIPHERAL DAMAGE
128	CSZ	RIB	1	F			CH					SHAFT FRAGMENT-CHOPPED
128	EQU	TIB	1	L	DF	4567				SD-40 Bd-73 Dd-44.5		DISTAL END AND SHAFT-LARGE- 2 PIECES
128	OVCA	MAN	1	R		23			GH12			ANT RAMUS
134	SSZ	LBF	1	F								SHAFT FRAGMENT- 2 PIECES
134	SSZ	RIB	1	F			C					CALCINED SHAFT FRAGMENT
137	BOS	CQ	1	F		1						HALF
137	BOS	PH2	1	L	PF	12						SL DAMAGE
137	BOS	TIB	1	R	DF	4567				SD-32.6 Sd-22.6 Bd-53.5 Dd-38		DISTAL END AND SHAFT
137	CSZ	RIB	1	F			CH					SHAFT FRAGMENT-ONE END CHOPPED
137	OVCA	INN	1	L		23						ILIAL SHAFT AND PART SCAR

context	species	bone	no?	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment
137	OVCA	INN	1	L		239		DG				ILIAL SHAFT-ANT CHEWED-POROUS-IMM?
137	OVCA	INN	1	L	EF	7						ISCHIAL SHAFT AND PART ACETAB
137	OVCA	MAN	1	L		4578						ASC RAMUS-SMALL-POROUS-IMM
137	OVCA	MTC	1	F								SPLIT MIDSHAFT FRAGMENT
137	OVCA	SCP	1	F								PART CAUDAL MARGIN OF BLADE
137	OVCA	SCP	1	L	DF	1235				GLP-25.9 BG-17.7 SLC-		GLENOID AND NECK
137	SUS	FEM	1	L	PJ	23						PROX END WITH PART EPI BUT CAPUT LOST
137	SUS	TRV	1	F		1						SPINE
139	BOS	RAD	1	L		3						PROX SHAFT FRAGMENT
139	CSZ	LBF	1	F								SHAFT FRAGMENT-POROUS?
139	CSZ	UNI	1	F								INDET
139	EQU	MPL	1	F								PROX HALF
139	OVCA	DLP4	1	L					h7			COMPLETE
139	OVCA	HUM	1	R	DF	67890	CH			SD-14.5 BT-28.7 HT-18.4		DISTAL END AND SHAFT-DISTAL AND MIDSHAFT CHOPPED
162	CSZ	RIB	1	F			C					CALCINED SHAFT FRAGMENT- 6 PIECES
172	OVCA	MTT	1	R	DN	125				L1-140 Bp-21.9 Dp-21 SD-13.6		DISTAL EPI LOST-LARGE-2 PIECES-YOUNG RAM?
172	OVI	PH1	1	L	PF	12				GL-39.6 Bp-12.5		COMPLETE
188	BOS	SKL	1	F								ANT NASAL FRAGMENT
218	OVCA	RAD	1	L								PROX SHAFT FRAGMENT
229	UNI	UNI	1	F								? FRAG SCAP
233	BOS	ULN	1	L								PROX MIDSHAFT- 2 PIECES
235	BOS	SCP	1	F		5						FRAGMENT CAUDAL MARGIN OF BLADE AND NECK
244	CSZ	RIB	1	F								PROX SHAFT FRAGMENT
244	OVCA	MTC	1	R		12						PROX HALF
244	SUS	SCP	1	L		35		DG				DISTAL PART BLADE-BOTH ENDS CHEWED
248	BOS	CAL	1	R	PF	12						DISTAL END BROKEN OFF
248	BOS	MAN	1	R		7						ANT PART ASC RAMUS AND M3 ALVEOLUS- 5 PIECES
248	EQU	LM	1	R								MED-WELL WORN
250	BOS	LM3	1	L					K12			ROOTS BROKEN OFF
261	OVCA	TIB	1	L		7						MID AND DISTAL SHAFT
267	CSZ	UNI	1	F								INDET- 3 PIECES

context	species	bone	no	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment
268	CSZ	UNI	1	F								INDET
268	SSZ	LBF	1	F								SHAFT FRAGMENT
274	BOS	FEM	1	R		34						SPLIT MIDSHAFT- 2 PIECES
274	BOS	MTC	1	L	DF	345				Bd-65 Dd-36		DISTAL END
274	EQU	SKL	1	F		2288456						FRAGMENTED- 46 PIECES- HALF THERE!
274	OVI	MAN	1	L		23			fgh16l12			ANT RAMUS
312	CAN	RAD	1	F								MIDSHAFT-SAME ANIMAL AS ABOVE?
312	CAN	ULN	1	L		2						PROX PART SHAFT WITH DISTAL FRAG PROX ARTIC
312	CSZ	LBF	1	F								SHAFT FRAGMENT-POSS HUMAN
312	CSZ	RIB	1	F								SHAFT FRAGMENT
323	BOS	UPM2	1	R								WELL WORN
323	CSZ	LBF	1	F								THICK SHAFT FRAGMENT
329	CSZ	RIB	2	F								SHAFT FRAGMENT
329	CSZ	RIB	1	F								SPLIT SHAFT FRAGMENT
329	OVCA	TIB	1	L			CH					MID AND DISTAL SHAFT-ERODED AND CHOPPED
333	CAN	RAD	1	F								PART RADIUS IN 312
333	CSZ	UNI	1	F								INDET
333	UNI	UNI	1	F								INDET
347	OVCA	TIB	1	R						SD-11.4		MIDSHAFT
365	BOS	LMV	1	F	CFAF	12345						SOME DAMAGE- 4 PIECES
383	CSZ	HUM	1	F		0						MIDSHAFT FRAGMENT- 3 PIECES
383	CSZ	HUM	1	R								DISTAL SHAFT FRAGMENT-POSS SAME AS ABOVE
383	CSZ	LBF	2	F								SHAFT FRAGMENT
383	EQU	AST	1	L		1						PERIPHERAL DAMAGE
383	OVCA	HUM	1	R		69		DG		SD-14.5		DISTAL SHAFT-DISTAL END CHEWED
383	OVCA	MTT	1	F								DISTAL SHAFT FRAGMENT
383	OVCA	MTT	1	L								MIDSHAFT
385	SUS	SKL	1	F		1						PARA-OCCIPITAL PROCESS
424	BOS	SKL	1	F					l12J7/l11J6			4 LOOSE TEETH FROM SAME SKULL-LEFT AND RIGHT SIDE
447	CSZ	UNI	1	F				DG				?PAT-CHEWED
449	EQU	UM	1	F								CUSP SURFACE ONLY-PROB SHED DEC PM
451	BOS	FEM	1	F	PF	1				DC-39.5		CAPUT

context	species	bone	no	side	fusion	zone	butchery	gnawing	toothwear	measurement	path.	comment
451	BOS	FEM	1	F	DF							DISTAL CONDYLE
451	BOS	INN	1	L								ISCHIAL FRAG ACETAB
451	BOS	LM1	1	R					I16			COMPLETE
451	BOS	LM3	1	R					K15			POST COLUMN OVERWORN
451	BOS	MAN	1	R		4						CORONOID
451	BOS	MAN	1	R		23						DIASTEMAL FRAGMENT AND VENTRAL RAMUS- 5 PIECES
451	BOS	MTC	1	R		12						PROX END AND SHAFT- 3 PIECES
451	BOS	TIB	1	R		4						PROX AND MIDSHAFT- 13 PIECES
451	BOS	UM	1	F					15			BROKEN
451	BOS	UM1	1	L					I16			WELL WORN
451	CSZ	LBF	4	F								SHAFT FRAGMENT
451	CSZ	LBF	9	F								SHAFT FRAGMENT-INDET
451	CSZ	SCP	1	F								DISTAL CAUDAL MARGIN OF BLADE
451	CSZ	UNI	11	F								INDET
451	EQU	LBF	1	F								SHAFT FRAGMENT
451	OVCA	TIB	1	L		4						PROX MIDSHAFT
462	MAN	TAR	1	F								FRAGMENT
462	MAN	TIB	1	F								SHAFT- 8 PIECES
462	MAN	FIB	1	F								MIDSHAFT FRAGMENT
462	MAN	UNI	1	F								?
467	BOS	MAN	1	R		23			fgh15I11J2			ANT RAMUS WITH TOOTH ROW
470	BOS	MTT	1	L		12						PROX END
470	CSZ	HUM	1	F								FRAGMENTED SHAFT- 12 PIECES
470	CSZ	LBF	5	F								SHAFT FRAGMENT
507	BOS	UM1	1	L					I12			ROOTS BROKEN
507	CSZ	FEM	1	F								FRAGMENT DISTAL CONDYLE
507	CSZ	HUM	1	R								DISTAL SHAFT FRAGMENT- 3 PIECES
507	CSZ	LMV	1	L								ANT ZYGAPOPHYSIS
507	OVCA	MAN	1	R					10			FRAGMENT WITH M2 OR 3 AT STAGE 10- 2 PIECES
507	SUS	MAN	1	F								RAMUS FRAG WITH PM ALVEOLI
516	BOS	FEM	1	F								DISTAL SHAFT FRAGMENT
516	BOS	SKL	1	F								PART NASAL- 3 PIECES

context	species	bone	no	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment
516	BOS	SKL	1	L								ZYGOMATIC ARCH
516	CSZ	LBF	1	F			C					BONE CHIP-CHARRED
516	CSZ	LBF	1	F								SHAFT FRAGMENT
516	CSZ	RIB	2	F								SHAFT FRAGMENT
516	CSZ	TIB	1	F								SPLIT SHAFT FRAGMENT
516	EQU	DLPM	1	R								VERY WORN DEC TOOTH
516	EQU	MAN	1	L		456						FRAGMENT POST RAMUS AND ASC RAMUS- 12 PIECES
516	OVCA	MTT	1	R		1						MIDSHAFT AND PART PROX END-VERY THIN AND GRACILE
516	OVCA	SCP	1	L		5		DG				CAUDAL MARGIN OF DISTAL BLADE-DISTAL CHEED
516	OVCA	TIB	1	L		4				SD-12.7		MIDSHAFT
516	SSZ	RIB	1	F								SHAFT FRAGMENT
516	SSZ	RIB	1	F			CH					SHAFT FRAG-REPEATEDLY CHOPPED- 2 PIECES
535	BOS	LM1	1	L					I8			
554	BOS	SCP	1	L								CAUDAL MARGIN OF NECK- 5 PIECES
559	CSZ	RIB	1	F								SHAFT FRAGMENT
559	SUS	HUM	1	R		6						SPLIT MIDSHAFT FRAGMENT- 2 PIECES
574	OVCA	TIB	1	L								DISTAL SHAFT-VERY ERODED
574	SSZ	LBF	1	F								SHAFT FRAGMENT-PSIZE
588	BOS	CAL	1	R	PF	2						PROX AND DISTAL ENDS BROKEN
588	BOS	SCP	1	L	DF	123						PART GLENOID-NECK AND DISTAL SPINE- 2 PIECES
588	BOS	SCP	1	R		23						GLENOID AND PART NECK- 2 PIECES
588	CSZ	RAD	1	F								PROX SHAFT FRAGMENT-?BOS
588	EQU	PH1	1	F		2						SHAFT AND PART DISTAL END-VERY SMALL-DONKEY/PONY/FOAL
588	SUS	FEM	1	L		4						DISTAL SHAFT FRAGMENT
610	CER	ANT	1	F			W					UNSHED ANT WITH BROW TINE-TREZ SAWN OFF-TOP OF BEAM SAWN & PEDICLE SAWN OFF-PICK
612	BOS	MTT	1	L	DF	345				Bd-47 Dd-27.8		DISTAL THIRD- 2 PIECES
614	BOS	SCP	1	R	DF	123				GLP-66 SLC-47.4 BG-43		GLENOID AND NECK
620	BOS	HUM	1	L		9						FRAGMENT DISTAL SHAFT
620	BOS	LM	1	F								ONE CUSP
620	BOS	SCP	1	R		135				SLC-45.3		GLENOID-NECK AND PART BLADE- 7 PIECES
620	CSZ	LBF	1	F								SHAFT FRAGMENT- 3 PIECES

context	species	bone	no	side	fusion	zone	butchery	gnawing	toothwear	measurement	path	comment
620	CSZ	LBF	2	F								SHAFT FRAGMENT
676	CSZ	RIB	1	L			CH	DG				PROX SHAFT FRAGMENT-PROX CHEWED-DISTAL CHOPPED
676	MAN	LI	2	W								COMPLETE
676	OVCA	RAD	1	L								DISTAL MIDSHAFT FRAGMENT
676	OVCA	UM2	1	R					J6			COMPLETE
702	OVCA	FEM	1	F								MIDSHAFT
706	BOS	MAN	1	L					GHIJ			FRAGMENTED-SAME ANIMAL AS ABOVE-PROBABLY MUCH OLDER-MAY
706	BOS	MAN	1	R					GHJ19K17			FRAGMENTED-VERY DEGRADED-VERY OLD-UNUSUAL PREMOLARS-OVERWORN ON POST M3
737	EQU	INN	1	R	EF	7						ISCHIAL SHAFT WITH PART ACETAB--5 PIECES-PONY SIZE

APPENDIX 6:

Barnetby-le-Wold

BBAD

Lithic Materials: Catalogue and Assessment

Report by Jim Rylatt – March, 2002

1.0 Catalogue

Eleven pieces of worked flint were recovered during the excavation:

Context No.	Description	
154	Barbed and tanged arrowhead	Sutton type arrowhead. Produced on secondary flake; c. 40% of the dorsal surface is cortical. Retouch is bifacial and is limited to the flake margin; predominantly small, parallel-sided oblique flakes, with two larger intrusive flakes separating the barbs from the tang. Tang and barbs are complete and rounded (Green type D). c. 2,500-1,000BC. Deep orangey-brown semi-translucent flint. 32 x 23mm.
172	Secondary flake	Irregular, squat, conchoidal flake, with cortical platform, pronounced bulb, and feathered termination. The flake edge is cortical. Dorsal surface has scars indicating removal of similar squat flakes from two platforms. Possible use-wear/slight retouch along part of distal end. Appears to be thermally altered, greasy lustre consistent with burning. Brownish-grey opaque flint, frequent chalky inclusions. 32 x 28mm.
172	Chunk	Thick, irregular, fragment, with triangular cross-section. Small area of abraded cortex survives at one end. One edge crudely retouched by removal of a series of oblique invasive flakes. Possible that the chunk has been burnt. Purplish-brown opaque flint.
333	Piercer (awl)	Squat conchoidal flake, with a cortical platform and diffuse bulb. Dorsal surface c. 70% cortical. Distal end has been retouched by removal of small semi-abrupt flakes. One lateral also similarly retouched, but a small spur left near proximal end. Flake edges are well abraded and rounded, probably due to movement within ploughsoil. Patinated dark grey flint. 32 x 34mm.
333	Utilised flake	Distal fragment of blade-like flake, with triangular cross-section. Dorsal surface has scars suggesting removal of both blades and flakes from two platforms. It has been abruptly retouched along one lateral edge as far as a small spur at the distal end, thereby creating a slightly notched or hooked piece. The area of retouch has less patination than the rest of the flake raising the possibility that it has been reutilised. Patinated brownish-grey opaque flint.

Context No.		Description
333	Thumbnail scraper	Relatively large, squat conchoidal flake, with cortical platform, and moderately diffuse bulb. The lateral edges have been relatively crudely retouched by the removal of a series of fairly large, irregular semi-abrupt flakes. Retouch around the distal end is more regular, a number of smaller, parallel-sided semi-abrupt and abrupt flakes having been removed. Some use-wear evident along one lateral edge. Possible that the piece has been burnt. Purplish-brown opaque flint, with some chalky inclusions. 39 x 36mm.
383	Tertiary flake	Small flake, with complex platform, diffuse bulb, and feathered termination. Dorsal surface has scars indicating removal of flakes from three platforms. Some post-depositional damage to flake edges. Variegated grey-brown opaque flint. 20 x 17mm.
558	Misc scraper	Irregular flake, with complex platform, diffuse bulb and feathered termination. Distal end and both lateral edges have irregular retouch – generally semi-abrupt/on the ventral face. One lateral edge almost denticulate due to removal of larger flakes. Coarse-grained pale pinkish-brown opaque flint, with pale inclusions. 33 x 32mm.
620	Chunk	Thick, irregular, fragment, with triangular cross-section. Area of thin abraded cortex survives along one end. Surfaces indicate flake removal from two+ platforms. Some post-depositional damage. Pinkish-brown opaque flint.
620	Tertiary flake	Irregular, squat flake, with flat platform, diffuse bulb and feathered termination. Dorsal scars suggest flake removal from two platforms. Banded pale grey to pale brown opaque flint. 18 x 26mm.
633	Thumbnail scraper	Large, thick, squat flake, with flat platform, moderately diffuse bulb, and feathered termination. The lateral edges and distal end have been relatively crudely retouched by the removal of a series of fairly large, irregular semi-abrupt and abrupt flakes (emphasis on function over style). Thin abraded cortex survives at centre of dorsal surface. Caramel-brown to deep orangey brown opaque flint, with some chalky inclusions. 40 x 47mm.

NB: Measurements are given only for complete flakes. The first figure relates to the maximum length, measured perpendicular to the striking platform; the second to maximum breadth, measured at a right angle to the length. Figures for the percentage of cortex relate to the total area of the dorsal surface and platform.

	Number present	Burnt	Broken	Retouched/ use-wear
Secondary flakes	1	1		1
Tertiary flakes	3		1	1
Chunk/chip	2	1		1
Piercer	1			1
Barbed & tanged arrowhead	1			1
Thumbnail scraper	2	1		2
Misc. scraper	1			1
Total	11	3	1	8

Table 1: Summary of the worked lithic material, showing attributes and modifications

2.0 Description and context

This is a very small assemblage, which restricts the level of information that can be derived from its analysis.

All of the lithic artefacts examined were produced from flint. Where cortical surfaces survived it was possible to establish that the raw materials were derived from secondary deposits. The irregular waste, secondary flakes and some of the tools have areas of thin, abraded cortex. Where relatively large areas of this surface survive, it generally exhibits a rounded profile. This indicates that the nodules utilised were water-transported pebbles and cobbles. This means of transportation limits the size of the constituent nodules, and also accounts for the considerable variation in the colour, composition and quality of the components of the assemblage.

Examination of the scars on the dorsal surfaces of the flakes indicates that almost all were the products of multiple-platform working. Although none were recovered, it is apparent that the cores would be characterised by a relatively random patterning of the relationships between the platforms. The flakes created by this relatively informal system of working tend to be squat and can often be relatively thick. Additionally, they have a greater tendency toward more pronounced bulbs and hinged terminations. Only one flake, from (333), has characteristics that suggest it is the product of an earlier tradition of flint knapping. It is a fragment of a relatively narrow and parallel-sided flake that is consistent with material produced from carefully maintained blade cores. It appears to have been reutilised after a period during which it had become lightly patinated, this possible reuse of older debitage perhaps explaining its difference to the other elements of the assemblage.

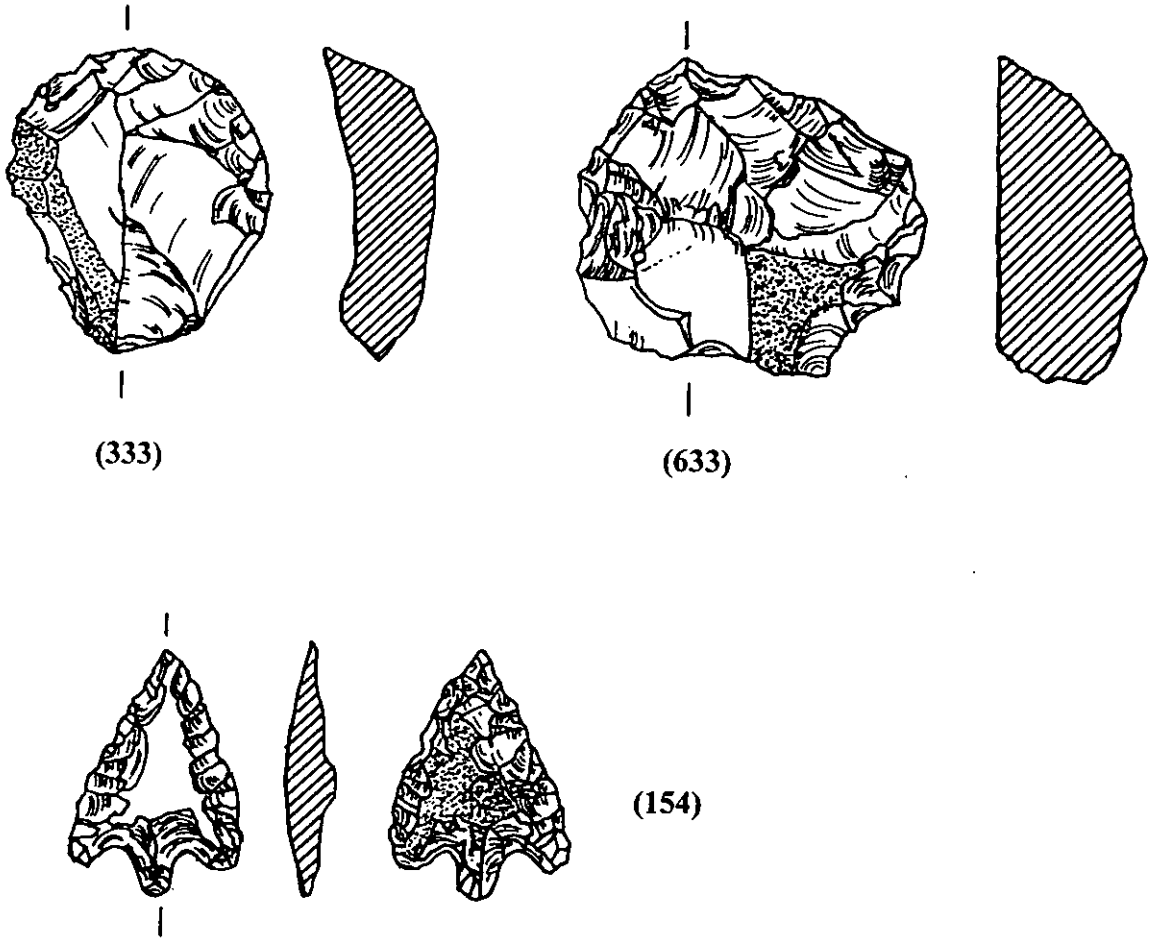
There were no cores or core fragments in the assemblage. However, there were two pieces of irregular waste (chunks) that are likely to be derived from core reduction. Despite this the absence of cores and a larger number of secondary flakes suggests that only the later stages of the core reduction sequence were undertaken on the site. This proposal receives some support from the observation that 72.7% of the assemblage was composed of finished tools or utilised flakes. This is a particularly large proportion, lacking the large amount of debitage created by core reduction. This suggests that flint knapping was undertaken away from the area of the archaeological investigation. The large percentage of utilised flakes suggests that there was some form of occupation either on the site or in its immediate environs, but the small quantities of flint recovered implies that this took the form of one or more temporary camps rather than any kind of sustained settlement.

3.0 Dating

The majority of the artefacts exhibit the morphological traits of a relatively informal pattern of core reduction that is characteristic of the Later Neolithic to Early Bronze Age. Indicators include the use of irregular multiple platform cores, combined with the production of relatively squat and irregular flakes. The barbed and tanged arrowhead found in (154) is of the ubiquitous Sutton type, and thus could have been produced at any time between c. 2,500BC and c. 1,000BC. The thumbnail scraper from (333) is better made than the other example, and although still relatively crude is likely to be of Early Bronze Age date. The other example, found in (633), may also have been manufactured in the Early Bronze Age, but it does have attributes that have been noticed in Late Bronze Age and Iron Age assemblages - particularly the irregularity of the initial flake and the retouch (Young & Humphrey, 1999). Given that previous archaeological investigations in the vicinity of the current site have detected the presence of Iron Age activity (Mark Allen, *pers. comm.*), such an attribution is entirely possible.

4.0 References

Young, R. & Humphrey, J. 1999 Flint use in England after the Bronze Age: a time for a re-evaluation? *Proceedings of the Prehistoric Society* 65: 231-242. .



Selection of worked flints from the excavation (number in brackets is the relevant context number).

APPENDIX 7

OSTEOLOGICAL ANALYSIS

OF THE

HUMAN REMAINS

FROM

BARNETBY-LE-WOLD, LINCOLNSHIRE

APRIL 2002

PREPARED FOR:	PREPARED BY:
PRE-CONSTRUCT ARCHAEOLOGY LINCOLN, 61 HIGH STREET, NEWTON ON TENT, LINCOLN, LN1 2JP	MOULI START 16 CARR ROAD WALKLEY SHEFFIELD S6 2WZ

1. INTRODUCTION

This report details the results of osteological investigations on human remains excavated from Barnetby-le-Wold, North Lincolnshire during 2001. The author was commissioned in November 2001 by Pre-Construct Archaeology, (Lincoln) to undertake an assessment of the osteological potential of these remains. 15 contexts, 14 of inhumed and 1 of cremated, human remains showed potential for detailed analysis and this work was therefore undertaken in April 2002 following confirmation of an available budget by English Heritage.

At the time of writing archaeological post excavation analyses are still underway and therefore it is not possible to give a detailed archaeological background for these osteological remains. Please refer to the completed final PCA Lincs report on Barnetby-le-Wold for this information. At this stage it is only possible to say that the bulk of these remains are believed to be Romano-British, although an exciting development is the possibility that contexts BBAD 090 and 116 are Iron Age in date.

2. MATERIALS

The evaluation of the human remains from Barnetby-le-Wold for detailed analysis involved a preliminary bench-top osteological assessment of each context. Table 1 overleaf is a catalogue of these contexts. For each a brief comment is made describing the material as presented to the author and the assessment of its potential for analysis is given.

TABLE 1: SUMMARY OF MATERIALS PRESENTED FOR ANALYSIS

CONTEXT	COMMENT	POTENTIAL FOR ANALYSIS
075	• Presented as two samples (#001 and #002) • Only a few tiny possible fragments of burnt bone in each, none large enough to determine whether animal or human	None
090	• Fragmentary, but relatively complete skeleton – no cranium present. • Adult skeleton; age and sex estimates are likely to be possible on closer analysis.	Good
093	• Cremated human remains • Fair amount of bone present, several large fragments >10mm identifiable as human • Warrants investigation and has potential for analysis	Fair
116	• Fairly complete but fragmentary adult cranium, plus a few vertebral fragments. • Dentition present (ante-mortem tooth loss)	Fair/poor
219	• Complete and well preserved • Child skeleton with complete dentition	Excellent
242	• Skeleton consists of complete cranium and rib fragments – no long bones/pelvis • Child skeleton	Good
559	• Fragmentary but fairly complete • Possible female prime/older adult (35+)	Good
607	• Skeleton consists of left leg, pelvis and sacral vertebrae • Child/infant skeleton <13 years old	Good
616	• Skeleton consists of right arm, leg and pelvis. • Adult skeleton, age and sex estimates are likely to be possible on closer analysis. • Well resolved angulated fracture at mid-point of right forearm (radius)	Good
626	• Cranium with full dentition plus a few vertebrae • Young adult (c.18-25)	Fair
634	• Skeleton consists of right upper and lower limbs, and pelvic fragments • Adult	Fair/poor
637	• Fairly complete skeleton missing lower limbs • Younger adult (20's), probably male	Good
640	• Skeleton consists of cranial fragments, arms, vertebrae, and rib and pelvic fragments • Adult	Fair/poor
642	• Skeleton consists of pelvic and lower limb fragments • Adult (c.25+)	Fair/poor
645	• Complete well preserved skeleton • Adolescent (16-20)	Excellent
646	• Fairly complete well preserved skeleton • Adult with ante-mortem tooth loss of third molar • Severe osteoarthritis of right hip	Good

2.1. CONDITION OF MATERIALS: COMPLETENESS AND PRESERVATION

2.1.1. INHUMATIONS

The condition of the materials under study varies enormously. None of the 14 inhumed contexts could be considered to be wholly complete and all have suffered

some degree of post-mortem damage or loss. The term post-mortem damage means any damage that occurred after death including that due to taphanomic processes as well as excavation and post-excavation processes. Some contexts, for example BBAD 559 had most bones represented by fragments or nearly complete bones, and small hand bones had survived. However, in some cases, particularly among the sub-adult individuals, only scraps of bones from parts of bodies survived.

In the majority of the sample the ends of long bones had degraded and small hand and feet bones were either wholly or largely missing. Cortical integrity, meaning the condition of the outermost layer of a bone, varied throughout the sample. At the assessment stage it appeared that cortical integrity was good overall. However, the more detailed scrutiny of a full osteological analysis revealed that this was not as good as initially perceived. Despite the lack of obvious root damage, in many cases the taphonomic environment had degraded cortical bone at least to some extent.

Unfortunately the incompleteness and state of preservation of the sample necessarily introduces limits to the quality and depth of the analyses possible. For example, given that most of the ends of long bones were degraded to some extent, metric observations often were either impossible or had to be estimated. Pathological observations were also severely compromised because they rely on the observation of patterns of change throughout an entire skeleton. The variable state of cortical integrity could well have 'hidden' changes to the surface of some bones. The absence of evidence cannot be taken to equate with the absence of disease in this sample.

2.1.2. Cremation contexts

Two contexts thought to possibly represent the remains of cremation burials were initially presented for analysis, namely BBAD 075 and 093.

BBAD 075 arrived as two samples (numbered 001 and 002). Both of these consisted largely of some sort of soft white stone possibly chalk. Only very tiny fragments of burnt organic material that could have been bone were present. It is not possible to determine the origin of these fragments and BBAD 075 is not considered to represent a cremation burial of human remains.

BBAD 093 on the other hand is a significant, though small, deposit of burnt human bone weighing 198.43g. Recognisable elements of human bone were obvious at the bench-top assessment phase, and this context is considered complete and well preserved enough to warrant a detailed osteological analysis.

2.1.3. Reassignment of BBAD 642 as BBAD 646

At the end of the osteological analysis stage of this report it had become apparent that there were a few problems with the contexts initially presented to the author. BBAD 642 had been labelled as such, but examination of the on-site records kindly provided by PCA Lincs revealed that BBAD 642 was in fact a cut rather than a skeleton context number. Fortunately it was possible osteologically to match the bones labelled BBAD 642, largely feet and pelvic bones, with missing bones from BBAD 646. Pathological changes in corresponding bones from these two contexts confirmed that they had originated from the same body. Therefore the remains that had been labelled BBAD 642 have been re-designated as part of BBAD 646, and throughout the report this individual is referred to simply as BBAD 646. This reassignment brings the number of inhumed contexts to 13.

3. METHODOLOGIES

This section of the report provides details of the various osteological research areas set out in the bench-top assessment and the specific analyses employed in addressing them. This report follows international guidelines for the minimum standard of osteological analyses and recording (Buikstra & Ubelaker 1994). If these standard are deviated from in any way mention is made of this in the text.

This sample contains both inhumations and cremations. Quite obviously the study of a complete skeleton is a different undertaking to a cremation burial, which consists of a pile of small fragments of burnt bone the majority of which are less than 10mm in size. Although some areas of enquiry are the same for both, it is far easier, for example, to safely assign a sex estimation to an individual with a complete pelvis and skull than to our pile of fragmentary cremated bone. Additionally, a cremation offers information about ritual and technology that an inhumation does not and therefore some areas of investigation are wholly different for a cremation.

In order to present these investigations and their results in the most simple and accessible way, this section of the report presents the methodologies employed for the inhumations and the cremation context separately. There may be some instances of repetition but overall the aim is to produce an accessible and clear report.

3.1. METHODOLOGIES: INHUMATIONS

In each case all of the bone originating from each individual context was laid out and identified to skeletal element on the bench-top. Each fragment was then recorded on both a written and pictorial inventory on a skeletal recording form. These skeletal recording sheets from part of the primary record for the excavations at Barnetby-le-Wold and they are therefore included as Appendix 1 of this report. Following the inventory of each individual, the following analyses were applied.

3.1.1. AGE-AT-DEATH ESTIMATION

Multi-factorial age-at-death estimates yield the most accurate results possible (Lovejoy *et. al.* 1985a). Therefore wherever possible several ageing techniques were employed to arrive at a final estimate. Table 2 below summarises the methods used to estimate age-at-death.

TABLE 2: AGE-AT-DEATH ESTIMATION METHODS

AGEING METHOD	REFERENCE
Pubic symphysis	Brooks & Suchey 1990
Auricular surface	Lovejoy *et. al.* 1985b
Dental attrition	Miles 1963
Dental eruption	Smith 1991
Ectocranial suture closure	Meindl & Lovejoy 1985
Epiphyseal fusion	Schwartz 1995
Long bone length	Hoppa 1991

The problems associated with assigning accurate age-at-death estimates, particularly for adults, are well known (Saunders 1992: Molleson & Cox 1993). In order to avoid introducing bias into the results produced by these problematic age-at-death estimation methods, broad age categories were used. When dealing with adults it is preferable to discuss age-at-death in terms of biological rather than chronological

age. For example, two individuals who are both chronologically sixty years old may be vastly different in terms of their biological age with one severely affected by osteoarthritis with very limited movement, and the other a fit and active adult regularly walking long distances. Therefore descriptive terms are used in general. However, since most osteological age-at-death estimation techniques present suggested chronological age ranges this convention is also followed in this report. The table below presents the age categories used during this analysis with both biological descriptive age categories and suggested corresponding chronological year ranges.

TABLE 3: AGE CATEGORIES UTILISED IN THIS REPORT

AGE CATEGORY	BIOLOGICAL AGE	CHRONOLOGICAL AGE (YEARS)
FE	foetal	9 - 39 weeks gestation
NE	neonate	birth-1 month
IN	infant	1 month-11 months
C1	younger child	1-6 years
C2	older child	7-12 years
JU	juvenile	13-17 years
YA	younger adult	18-25 years
PA	prime adult	26-45 years
OA	older adult	46+ years
AA	unaged adult	18+ years

3.1.2. SEX DETERMINATION METHODS

The determination of biological sex is based on the observation of morphological traits of the pelvis and cranium (skull and mandible), and on metric data recording overall size and robusticity. Again, osteological minimum standards were followed (Buikstra & Ubelaker 1994). Table 4 below presents details of sex determination methods employed.

TABLE 4: SEX DETERMINATION METHODS

SEX DETERMINATION METHOD	REFERENCE
Morphological observation of the os coxa	Buikstra & Ubelaker 1994; Steele & Bramblett 1988; Phenice 1969
Morphological observation of the cranium	Buikstra & Ubelaker, 1994; Steele & Bramblett 1988
Metric evaluation of post cranial elements	Steele & Bramblett 1988; Bass, 1987

Five categories of biological sex based on the combination of some or all of the techniques in Table 4 are used for this analysis. These are M (male); M? (probably male); ? (indeterminate); F? (probably female); F (female).

3.1.3. PALAEOPATHOLOGY: SKELETAL AND DENTAL

Of central importance to the study of pathological bones from human skeletons is thorough descriptive analysis (Ortner & Putschar 1984; Buikstra & Ubelaker 1994). As standard all pathological lesions, and morphological abnormalities of bones and teeth were described in detail using standard modern clinical terminology.

These descriptions of lesions, or abnormalities, of bone and teeth and their exact anatomical location are crucial to the process of producing a differential diagnosis with the ultimate aim of suggesting what disease process may be responsible for

their manifestation in the individual concerned. Additionally, they allow any future researchers to use the raw data collected from this skeletal sample. Observation of pathological manifestation of bone was limited by the fragmentary and incomplete nature of this sample and absence of evidence in the skeleton does not equate to the absence of pathological conditions in life.

The standard of dental recovery and preservation varied enormously through the sample with a total lack of dentition in some cases and almost complete sets of teeth available in others. Dental pathology was scored and assessed using the techniques set out in Table 5 below.

TABLE 5: DENTAL PATHOLOGY GRADING SYSTEMS

DENTAL PATHOLOGY	REFERENCE
caries	Lukacs 1989
antemortem tooth loss	Lukacs 1989
absesses	Hillson 1996; Lukacs 1989
calculus	Hillson 1996; Brothwell 1981
periodontal disease	Brothwell 1981
enamel hypoplasia	Lukacs 1989

Osteologists often further classify pathological lesions into disease categories. This helps to group together similar conditions and so allow overall patterns of health to be easily visualised in one sample and then compared to another. It also helps to overcome some of the problems that arise in the diagnosis of disease when only the bones, and usually not even all of these, are available. This is most useful when the pathological classification 'non-specific infection' is considered. An area of non-specific infection on a leg bone for example could be the result of several different processes. It could be due to gangrenous changes in soft tissue, infection through a broken skin lesion, a secondary spread of organisms from some other primary site of infection, or an as yet unidentified specific infection such as leprosy or syphilis. As osteologists we are often not privy to the underlying cause of the bony lesion that we see, yet it is still valuable to consider patterns of this kind of change from the individual bone or skeleton, right up to population level. For this reason the disease categories presented in Table 6 below are used throughout.

TABLE 6: PATHOLOGICAL CATEGORIES

CODE	DESCRIPTION	CODE	DESCRIPTION
TB	trauma to bone	D	dental disease
TS	trauma to soft tissue	M	metabolic disease
NI	non-specific infection	E	endocrine disease
SI	specific infection	NP	neo-plastic disease
SJD	spinal joint disease	AI	auto-immune disease
OJD	other joint disease	O	other
CD	congenital or developmental disease		

It should be remembered that the majority of diseases that people are subject to affect the soft tissues and leave no trace on their skeletal remains. The palaeopathology discussed here is only a fraction of the pathology that would have been present in these people during their lifetimes.

3.1.4. METRIC DATA

Metric measurements were taken and recorded as part of a thorough osteological analysis of skeletal material. These measurements are taken for three main purposes. The first is to enable an estimation of stature during life from long bone measurements. The ideal is only to use measurements from complete whole long bones, however when skeletal remains are fragmentary or incomplete as is often normal in archaeological skeletal collections, measurements are estimated where it is considered secure to do so. The resulting measurements are compared to standard tables to estimate stature during life (Trotter 1970). Stature is not estimated for sub-adult skeletons for two reasons. First, long bone measurements are used to age sub-adult skeletons and the same measurements cannot then be used to estimate stature where age would have to be taken into account. Secondly, Trotter's (*ibid.*) standards are for use only with adult remains.

The second reason for recording metric data is to aid in the determination of sex as discussed in Section 3.1.2 above. Finally, metric cranial and postcranial data are recorded as standard in order to allow comparison of this skeletal group to any other. This third aim is severely hampered in this specific sample due to its fragmentary nature. For example not one single cranial measurement was possible because no crania were sufficiently 'whole'.

3.1.5. NON-METRIC DATA

Non-metric traits are minor morphological variations in the human skeleton (Berry & Berry 1967). The international standards followed elsewhere in this report suggest that non-metric traits should be recorded as a standard part of a complete osteological analysis in order to examine relatedness (Buikstra & Ubelaker 1994). However, in this case the sample was too fragmentary and incomplete, and cortical integrity too poor to allow accurate recording of these traits.

3.2. METHODOLOGIES: CREMATION BBAD 093

BBAD 093 was investigated and recorded, as with the inhumation burials, according to suggested international minimum standards (Buikstra & Ubelaker 1994; McKinley & Roberts 1993).

3.2.1. FRAGMENTATION

All the processes that it has been subject to up to the point of analysis affect the degree of fragmentation of a cremation. These include:

1. movement of hot brittle bone during cremation (including pyre collapse and human action)
2. cooling of bone, either naturally or by some other process
3. collection of bone from the pyre site following cremation
4. deliberate crushing of bone
5. transportation to burial site and any movement during this time
6. burial itself
7. taphonomic processes (processes burial is subject to while in the ground)

8. excavation and post-excavation processes

(after McKinley 1989 & 1994)

Therefore it is important to assess the degree to which any cremation is fragmented.

Standard osteological procedures regarding the processing of cremation material recommend sieving of cremated bone through 2mm and 10mm sieves (McKinley & Roberts 1993). The resulting two fractions, [>2mm-<10mm] and [>10mm], are then weighed and a percentage of fragmentation calculated. The following classifications of fragmentation are then applied:

- Highly fragmented = 60-100% of remains in [>2mm-<10mm] fraction
- Moderately fragmented = 30-59% of remains in [>2mm-<10mm] fraction
- Poorly fragmented = 0-29% of remains in [>2mm-<10mm] fraction

3.2.2. Identification of Skeletal Elements and Extraneous Material

All of the cremated material from both fractions was hand sorted and identified using a reference skeleton and an anatomy text (McMinn & Hutchings 1993). At this stage of analysis all extraneous material is removed and recorded. The term 'extraneous material' covers any material that is *not* human cremated bone. This includes animal bone; pyre goods burnt with the body and included in the burial; grave goods not burnt with the body, but included in the burial; pyre debris including burnt flint, charcoal, and cremation slag.

The identified human cremated bone is then recorded on a pictorial and written inventory on each recording form, presented along with the inhumation recoding forms in Appendix 1. These identified fragments were then grouped into five body area categories suggested by standard texts (McKinley 1989; Trotter & Hixon 1974) for ease of comparison. These five categories are:

- Cranial (includes cranium, mandible and all dentition)
- Axial skeleton (vertebrae, sternum, ribs)
- Upper limb (arm, hand and shoulder girdle bones)
- Lower limb (leg, foot and pelvic girdle bones)
- Unidentified fraction (NID)

Generally 20 - 50% of a cremation burial is identifiable by the specialist (McKinley 1989), and therefore it is very important to consider the unidentified fraction as this usually comprises the majority of bone fragments. It is not considered necessary to count the number of unidentified fragments. Maximum fragment size within each of the five categories was also recorded.

3.2.3. Weight of Cremated Bone: Bias in Body Area and Deposition

Once hand sorting and identification is complete and all extraneous material has been removed each of the five body area categories within each spit are weighed separately respecting divisions into [>2mm-<10mm] and [>10mm] fractions (after McKinley 1989). Each body area is then represented as a percentage of the total weight of bone present, and comparisons of these to a modern complete cremated

person will reveal any bias in the areas of the body collected for burial (McKinley 1989). All weights are to the nearest tenth of a gram.

3.2.4. Colour and Surface Changes

Several factors influence the colour of cremated bone including time and oxygen available for combustion during cremation, evenness of pyre conditions and diagenetic changes occurring after burial. However the factor most implicated in the final colour of cremated bone is the maximum temperature reached by bone in the pyre. Colour alone is insufficient to identify the precise maximum temperature reached, rather it is used as a guide to the range of probable temperatures reached during the cremation process (Shipman *et. al.* 1984; McKinley 1989; Nicholson 1993; Stiner & Kuhn 1995).

Research has been conducted into colour and surface changes undergone by bone during burning under controlled conditions to varying temperatures (Shipman *et. al.* 1984; Nicholson 1993). These studies utilised animal bone and idenify colour ranges to specific temperature ranges following the Munsell colour guide. These have been adapted for use with all species of bone and general colour descriptions are applied after Shipman *et. al.* (1984):

Table 7: Colour stages and temperatures ranges of burnt bone (after Shipman *et. al.* 1984)

Stage	Temperature Range/°C	Colour Description
I	20-285	commonly neutral white, pale yellow and yellow
II	285-<525	common colours are reddish brown, very dark grey brown, neutral dark grey, reddish yellow
III	525-<645	neutral black predominates with medium blue, and some reddish-yellow
IV	645-<940	neutral white predominates, with light grey-blue and light grey also present
V	940+	neutral white with some medium grey and reddish-yellow

The term 'well calcinated' refers to stage's **IV** and **V** of colour change, and the term 'less calcinated' refers to stage **III**. Dental tissues show similar colour changes and therefore the same classifications are applied (Shipman *et. al.* 1984).

When bones are subject to temperatures sufficient to induce calcination their external surfaces are likely to split, crack and warp. Patterns of cracking, fissuring and warping are diagnostic indicators of whether a corpse was fleshed or not when burnt (Buikstra & Ubelaker 1994). Dry bone, in other words de-fleshed, has a low organic content and tends to crack parallel to the main axis of the bone with little warpage. Green fleshed bone with a higher organic content cracks into a 'checked' pattern due to deep parallel and perpendicular cracks, or with a curved pattern, and is more subject to warpage (Buikstra & Ubelaker 1994). Therefore, the surface appearance of cremated bone has the potential to tell us about ritual in terms of whether bodies were 'fresh' and fleshed, or de-fleshed before being cremated.

Colour again is important when investigating the condition of the corpse because when fleshed, certain parts of the skeleton - for example joints - are more protected by soft tissue than others. Therefore, the difference between colour changes in different areas of the body is also important in the investigation of ritual.

3.2.5. Minimum Number of Individuals (MNI)

One of the primary aims of an investigation of any deposit containing cremated material is to establish the number of individuals present. It is common for more than one individual to be present in a cremation context, either through intentional action, contamination at the pyre site, or later ritual activities. The MNI for a cremation burial is established using the same procedures as applied to inhumed remains, either duplication of skeletal elements or developmental inconsistencies. Developmental inconsistencies encompasses differences in sex, for example a very male looking skull is unlikely to have come from the same person as a very female looking pelvis, and differences in age, a child's leg bone will not have come from the same person as an adult arm bone.

3.2.6. Age-at-death Determination

The difficulties inherent in determining the chronological age of an individual from its biological remains, even when a complete skeleton is available, are widely known (Molleson & Cox 1993). In the case of cremations these problems are exaggerated still further by the fragmentation, shrinkage, warpage and colour changes undergone by bone during the cremation process. For example, the most accurate method for determining age-at-death is based on visual observation of the os pubis, yet McKinley estimates that only 4% of all cremations contain the correct part of the pubic symphysis intact (1989). The primary methods of age determination useful with regard to cremation are: dental development (Smith 1991); stage of epiphyseal union (Schwartz 1995); and ectocranial suture closure (Meindl & Lovejoy 1985). A secondary method for age-at-death determination applies the fact that it is usual for the crowns of erupted teeth to shatter during the cremation process (McKinley, 1989). Therefore, if permanent tooth roots are found with missing shattered (as opposed to broken) crowns, it is assumed these were fully erupted at the time of death.

The age categories applied to BBAD 093 are the same as those used for the inhumation burials as set out in Table 3.

3.2.7. Sex Estimation

As with the determination of age-at-death, the estimation of sex for cremated burials is hampered by fragmentation, incompleteness, shrinkage and warpage of bone. Therefore, as well as the methods set out in Table 4 for inhumed remains, a relatively controversial method for estimating the sex of a cremated individual from thickness of cranial elements and long bones is also used where possible (Gejvall 1963).

3.2.8. Pathological Investigation

It is occasionally possible to observe pathological manifestations in cremation burials despite their fragmentary and incomplete nature (Reinhard 1994). Any observed pathological manifestations are recorded following osteological standards as described in Section 3.1.3.

4. BIOGRAPHIES

The inhumed and cremated skeletal materials recovered from the excavations at Barnetby-le-Wold, obviously, are the remains of once living people. The aim of this section of the report is to translate osteological data into an idea of the biological quality of life of these people during their lifetimes. Osteological parameters are translated into more accessible terms, so a YA male skeleton becomes a young man and so on.

4.1. BBAD 090

Context: BBAD 090 lay in rectangular poorly defined grave cut with an east-west orientation. This was an unusual burial in many respects, it is headless and one foot appears to have been buried separate from the body within the same cut to the southwest. The possible circumstances by which these separations came about, and their implications, is discussed fully in Section 5.4. This part of the report is concerned with the biological identify of BBAD 090.

Condition: As already outlined above, BBAD 090 is missing a head. BBAD 090 is one of the most complete postcranial skeletons in this collection. Small hand and feet bones survive, as do all limb bones and most of the spine.

Age-at-death: prime to older adult (27-49 years): This age-at-death estimate was based on the morphology of the right pubic symphyseal face (stage IV, 27-49 years). This is the most accurate ageing method applied to adult human skeletons.

Sex estimation: F: This sex estimation is based on morphological observations of the pelvis (4 strongly female traits). Post-cranial measurements of the femoral head and glenoid cavity of the scapula confirmed this female estimation.

Stature: 4'11": Based on right femur and left fibula estimates.

Skeletal pathology: *Spinal joint disease* was diagnosed in the following vertebrae: C6, T1, T2, T3, T5, and T7. This condition was more prevalent on the right side of these vertebrae. This level of *spinal joint disease* is quite normal given the age-at-death estimate of this individual. *Osteoarthritis* was observed in 1 (of 9) right and 3 (of 8) left ribs at their vertebral ends. Once again, this is a usual finding in the skeleton of an individual in this age category.

Summary: This woman had reached the fourth or fifth decade of her life. She had successfully survived the dangers of childhood. Depending on her place in the age range predicted from her skeleton (27-49 years) she was either well into or leaving her childbearing years, another dangerous period of a woman's life in the past. It is likely that she was a mother and could have been a grandmother. She probably felt twinges in her back because of the observed osteoarthritis, but these are a normal part of ageing. The questions surrounding the circumstances of her burial make this woman even more interesting.

4.2. BBAD 093

BBAD 093 was the only cremation burial among the collection under study in this report. It is therefore presented in a slightly different way to the other inhumed remains. Presented here are the biological variables recovered from the analysis of these cremated human bones. The remaining information that relates to ritual and technology are presented in the Results and Discussion Section of this report.

Context: BBAD 093 was contained within an irregular rounded cut that itself cut into a ditch fill (BBAD 101). Machine truncation of this feature occurred at least to some extent.

Condition: The truncation of this feature, perhaps along with incomplete original deposition, resulted in only 198.43g of cremated bone being recovered, and 68.7% of this cannot be identified to a specific bone.

Demography 1 adult (18+ years) of unknown sex: There were no doubled elements or developmental inconsistencies among the cremated remains, and therefore an MNI of one individual has been concluded. Unfortunately no demographically diagnostically important parts of the skeleton were identified among the cremated bone of BBAD 093, not even tooth roots that are often recovered from cremation burials. The adult age-at-death determination is based on the robusticity of the humeral and femoral shaft fragments recovered. These shaft fragments gave strongly male (M) sex estimations using Gejvall's (1963) method that utilises measurements of bone thickness. However, this is a controversial method, only 2 of 7 possible observations could be made and no other evidence supported this male estimation. Therefore, BBAD 093 remains of unknown biological sex.

Pathology: Despite the small amount of bone present, and the even smaller portion of this identified to body part, evidence of skeletal pathology was recorded. The superior process of an upper thoracic vertebra in the area from T1 to T4 was recovered with mild osteophytic growth and mild porosity. The combination of these two changes allows the diagnosis of *spinal joint disease* to be made. It is unlikely that a child would present evidence of this condition and so this diagnosis re-enforces the adult age-at-death estimate.

Summary: The interpretation of this context is necessarily limited by the small amount of material present. It cannot be securely said that BBAD 093 definitely is a cremation 'burial', rather that it is probably such. The person whose remains these are was an adult, perhaps older than their twenties as evidenced by spinal joint disease.

4.3. BBAD 116

Context: BBAD 116 was recovered from one of the most unusual contexts of all those reviewed in this report. Skeletally, it comprises of a cranium, including the mandible, and the first cervical vertebrae (atlas). These were contained in a small oval discreet pit that cut into a north-south running linear ditch (BBAD 239).

Quite obviously the circumstances under which this head burial occurred are extremely interesting, but this section of the report is concerned with the biological identity of BBAD 116. For a detailed consideration of the implications of this burial please see the Results and Discussion section of this report.

Condition: The cranium and atlas of BBAD 116 are in very good condition. Cortical integrity was good and an almost complete dentition was recovered.

Age-at-death: prime to older adult (36-50): Because BBAD 116 was in good condition, it was possible to produce a secure multi-factorial age-at-death estimation. Dental attrition gave an estimate of 36-50 years and the ectocranial suture closure estimate broadly agreed (composite vault score 15; 31-65 years). Dental attrition is the more reliable of these aging methods, and so this is the range used.

Sex estimation: F: The good condition of these remains also allowed a secure sex estimation to be made on the basis morphological traits of the cranium (7 strongly female and one F? traits.

Dentition and dental pathology:

	Right									Left							Total
caries				4									1				2
calculus					s								s				2
maxilla	-	-	**6**	**5**	**4**	**x**	**/**	**/**	**x**	**/**	**3**	**/**	**x**	**/**	**x**	**x**	**4**
mandible	**x**	**7**	**6**	**5**	**4**	**3**	**2**	**/**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**14**
calculus		s	m	m	m	m	m		s	s	s	s	m	m	s	s	14
periodontal		m	m	m	m	m	m		m	m	m	m	m	m	m	m	14
caries													1	1	1		3

Key

#	tooth and socket present (i.e. 8 or 7 or 6 etc.)
-	jaw absent
/	tooth lost post mortem (after death)
X	tooth lost ante mortem (i.e. during life)
periodontal disease	graded as slight (s), moderate (m) and severe (g)
calculus	graded as slight (s), moderate (m) and severe (g)
caries	1 = small pit, 2 = <50% crown destroyed, 3 = >50% crown destroyed, 4 = crown destroyed

An adult dentition normally consists of 32 teeth or tooth sockets. The jaws of BBAD 116 are fairly complete with only 2 tooth sockets and 6 teeth absent through post-mortem loss. Of the remaining 24 possible observations, 6 teeth have been lost *ante-mortem* during the lifetime of BBAD 090/116 leaving 18 teeth remaining.

None of these remaining 18 teeth are disease free. All but 2 of the 18 teeth present in the jaws of BBAD 116 are affected by *calculus*, 9 teeth by *slight calculus* and 7 by *moderate calculus*. Of the 16 teeth displaying calculus, 14 also have *periodontal disease*. *Caries* affects 5 teeth: the crown of the maxillary right first molar is totally destroyed leaving only the root in the jaw; the left maxillary canine displays a small carious pit on the mesial inter-proximal surface; and the mandibular left second premolar, and first and second molars all have small carious pits at the buccal (cheek side) CEJ (cemento-enamel junction).

Given the age-at-death of BBAD 116, this level of dental disease is not unusual and should not be taken to reflect either a particularly poor level of dental hygiene or a particularly sugar-rich diet.

Summary: BBAD 116 had reached a good age for her time having made it into her fourth or fifth decade. She survived childhood, was probably nearing the end of her relatively dangerous childbearing years and may have been perimenopausal. Her dental health was actually rather good for a woman her age. She still had the majority of her molars and the nasty carious lesion she was subject to had not, as yet, led to a spread of infection or abscess. There are no clues as to the cause of her death on her skeletal remains. Quite obviously when faced with a lone head and atlas these bones were closely scrutinized for any signs of how the separation of her head from her neck had come about – there were no cut marks or crushed areas of bone detected. Once more the reader is referred to the Results and Discussion

section for a full consideration of the circumstances that might have led to this lady becoming bodyless.

4.4. BBAD 219

Context: BBAD 219 was a crouched burial within a sub-rectangular cut with a roughly east-west orientation. The head of BBAD 219 was at the eastern end of its grave cut, and it lay on its right-hand side therefore facing north. The left arm of BBAD was bent at the elbow with its hand over its abdomen. Both knees were bent and the legs drawn up on the right side of the grave.

Condition: BBAD 219 had a fairly complete skeleton. Some of the small bones of the hand and all of the face of this individual survived albeit in a fragmentary manner. Cortical integrity was good. The young age-at-death of this individual meant that a mixed dentition was recovered, 14 deciduous teeth were present and erupted into their place in the jaws, and 3 partially formed permanent teeth were also recovered.

Age-at-death: younger child (3-5 years): The most reliable method for ageing sub-adults is state of dental development and eruption. Fortunately in the case of BBAD 219 a nearly complete and fully erupted deciduous dentition was available, and the alveolar bone above the first permanent molars showed the first stages of starting to resorb in order to allow eruption of the underlying tooth in the following 12-24 months (Smith 1991). Dental development gave an estimated age of 4 years +/- 12 months. Age-at-death estimates were also made on the long bones (4 years) and the stage of epiphyseal fusion (3-8 years).

Dentition and dental pathology:

14 of a possible 20 deciduous, or 'baby', teeth were present with 6 lost post-mortem. All of these 14 were fully erupted and none had any signs of dental pathology. This absence of dental pathology is not surprising given that these teeth have only been present as erupted teeth for a maximum of 3 or 4 years. Three 'adult' permanent teeth, all first molars, were observable, as yet unerupted, within the jaws of BBAD 219.

	Right					Left					Total
maxilla	e	d	c	b	/	/	b	c	d	e	8
mandible	e	d	/	/	/	/	b	c	d	e	6

Key

- # tooth and socket present (i.e. a or b or c)
- L tooth present, socket absent
- / tooth lost post mortem (after death)

Summary: No skeletal or dental pathology was observed in the remains of BBAD 219. This means that we have no clue as to why this young child died. Estimates of child mortality in the past run as high as 50% before the age of 5, after which mortality goes down considerably (Chamberlain 1994) and so the death of one so young must sadly have been a regular occurrence. What can be said is that this child was clearly deemed to have deserved the same burial circumstances as the adults that make up this collection.

4.5. BBAD 242

Context: BBAD 242 was a crouched burial within a rectangular cut with an east-west orientation. This young child lay on its right-hand side facing north and, like the child BBAD 219, the head of this individual lay at the eastern end of the grave cut. This burial has been heavily truncated and it is not possible to determine the exact position of arms and legs.

Condition: The truncation of this burial has resulted in a less than half complete skeleton. Most of the bones from the left side of the skeleton are missing, although fortunately the left side of the mandible survives. Cortical integrity was poor implying that taphonomic processes were not ideal which in turn explains the generally poor preservation of bone – no small hand or feet bones survive and all ends of long bones are degraded.

Age-at-death: younger child (1-3 years): The most reliable method for ageing sub-adults is state of dental development and eruption (Smith 1991). The deciduous dentition present in varying stages of eruption gave age estimates ranging from 1 ½-3 years. 4 permanent teeth were present, and they gave an estimate of 1.8-2.4 years. Epiphyseal fusion gave a range of >9months- <3 years. When all of these estimates are combined, a sensible age-at-death estimate for BBAD 242 is 1-3 years.

Dentition and dental pathology:

	Right					Left					Total
maxilla	/	/	c	b	/	-	-	-	-	-	2
mandible	PE	d	-	-	-	/	b	c	d	PE	6

Key

#	tooth and socket present (i.e. a or b or c)
-	jaw absent
/	tooth lost post mortem (after death)
PE	partially erupted

8 of a possible 20 deciduous teeth and 4 un-erupted permanent teeth were observed in the jaws of BBAD 242. None of these showed signs of dental pathology.

Summary: No skeletal or dental pathology was observed in the partial remains of BBAD 242. This is not surprising given the young age of this individual and the standard of preservation of its skeleton. This young child is a similar age and buried in a similar crouched fashion to BBAD 219. As observed for BBAD 219, estimates of child mortality in the past run as high as 50% and so the death of this young child would sadly not have been unusual.

4.6. BBAD 559

Context: BBAD 559 lay in a rectangular grave cut with well defined steep sloping sides. The grave had an east-west orientation with the head at the western end of the cut facing skywards. The body lay in a supine posture with the left arm resting over the pelvic area and the right across the chest. Both knees were slightly bent and drawn towards the left side of the body. This burial had again been subjected to some a degree of truncation and the knees and face of this individual are two areas that have suffered as a result. At the foot of the grave cut for BBAD 559 lies another

grave cut (BBAD 575) that at the time of excavation appeared to be an infant burial numbered BBAD 574. Unfortunately the very friable nature, and generally poor preservation of these remains means that BBAD 574 did not survive the lifting process and therefore no osteological analysis of this sub-adult is possible

Condition: BBAD 559 is relatively complete, although most bones are fragments rather than complete bones. Cortical integrity was poor and none of the ends of long bones survive. The truncation of the face area had consequences for dental evidence, and only a fragment of the right mandible remains.

Age-at-death: 60+ years: Fortunately several ageing techniques could be applied to this individual. The age estimate was based on the morphology of the auricular surface (Phase 8, 60+ years), state of epiphyseal fusion and dental eruption (adult) and ectocranial suture closure (vault score 18, 35-60 years). The final age-at-death estimate was determined to be 60+ years based on the more reliable auricular surface method, and the advanced state of these changes within this final age-at-death category.

Sex estimation: F?: This probably female sex estimation is based on the combination of morphological observations of the cranium (2 strongly female) and pelvis (3 strongly female, one indeterminate, one male trait).

Stature: 4'10": Based on an average of the estimated produced for the right ulna and tibia, and left humerus and ulna.

Dentition and dental pathology:

	Right								Left								Total
maxilla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0**
mandible	x	x	x	x	x	x	x	-	-	-	-	-	-	-	-	-	**0**

Key

- \- jaw absent
- X tooth lost ante mortem (i.e. during life)

In terms of dentition, most of the right side of the mandible was present, however in all 6 possible socket observations teeth had been lost *antemortem*. The most distal 2 of these sites (right second and third mandibular molars) are still actively remodelling, implying that these teeth were lost in the last few years. The remaining socket sites have completely remodelled and so these teeth have been lost for longer. This *antemortem tooth loss* was likely the end result either of a carious or periodontal disease process.

Skeletal pathology: The poor state of preservation of this individual means that pathological observations are limited. Only 5 vertebrae survive, and 3 of these are diagnosed with *spinal joint disease*. The superior processes of the sacrum also showed degenerative changes, although these are classified as *osteoarthritis* rather than spinal joint disease.

Where other joint surfaces survive they show signs of *osteoarthritis*. This is true of the left acetabulum (the pelvic half of the hip joint) that shows a slight degree of both osteophytic growth and porosity. The hip and knee joints are the most commonly affected by *osteoarthritis* in both modern and archaeological populations, so its presence in this older lady is not unusual. On the right side of the pelvis the auricular surface, or sacro-iliac joint (the joint between the pelvis and spine), shows

severe *osteoarthtirtic* changes that are long-standing in nature (this auricular surface was excluded from the age-at-death estimation because of its pathological state). What might have caused this *osteoarthritis*? Normal age related degeneration is the first explanation, or perhaps this is just an extension or result of the *spinal joint disease* already noted. An alternative rests with the effect that childbearing and birth have on this joint. Through pregnancy the ligaments at this joint soften and stretch, and the process of giving birth puts considerable strain on this joint. It is feasible that damage might have been done to the soft tissue elements of this joint by pregnancy, and that if this was followed by subsequent pregnancies more damage might have resulted.

Summary: This rather short older lady was prey to some of the normal aches that accompany getting older – osteoarthritis of the back and hip, although these are not severe manifestations and would only have given her occasional twinges rather than being movement or lifestyle limiting conditions. The bony changes at her right sacro-illiac joint were more severe and might be the result of either traumatic births or simply an extension of the changes in her spine. Despite the severity of the changes at this joint, again this condition might have had little effect on her daily life. This is normally a very immobile joint moving only during pregnancy and childbirth. If the osteoarthritis at this joint was in any way limiting it would have been as the result of pain rather than reduced movement range. Since there is little correlation between the degree of bony change and the level of pain experienced in osteoarthritis, we cannot suppose that this joint was necessarily very painful. The socket sites of her jaw that we have available for inspection have all lost their teeth. If the missing ¾ of her jaw were in a similar state she might have had to endure a rather pappy soft diet.

Viewed with modern values these remains might speak of an infirm elderly lady. Rather the loss of a woman who had several generations' worth of knowledge and value above and beyond physical strength might have had economic as well as emotional consequences.

4.7. BBAD 607

Context: BBAD 607 lies in a small ovoid poorly defined grave cut with a northwest-southeast orientation. The sides of this cut sloped gradually and unfortunately this burial had been heavily truncated. This appears to be a supine burial, although the truncation of the cut and incomplete nature of the body make it quite difficult to tell body attitude. On-site records note body attitude as follows: the left arm was lying straight beside the body with the left hand beside the pelvis; the right arm lying across the chest and abdomen with the right hand now inside the pelvis; the right leg was crossed to the left side of the grave, and the left leg lay extended.

Condition: BBAD 607 does not survive in a good state of preservation. The upper and lower thirds of the skeleton are missing leaving only the lower arms, pelvis, lower spine and upper leg bones. Cortical integrity is poor and overall bone survival is not good.

Age-at-death: older child (6-<13 years): No dentition survived and so the most reliable method for ageing sub-adults could not be applied to BBAD 607. The pelvis had not yet undergone tripartite fusion (<13 years) and the state of fusion of the vertebrae gave an estimate of c.6 years. Long bone lengths were estimated, and these estimated measurements gave an age of 6-7 years. The most reliable age range is that based on epiphyseal fusion.

Summary: BBAD 607 is a very incomplete and fragmentary skeleton that originates from a slightly older child than BBAD 219 (3-5 years) or BBAD 242 (1-3 years). This child appears to have been buried in a supine rather than the crouched attitude, perhaps reflecting a difference in the social perception of an older child as compared to a younger. BBAD 607 had made it past his or her 5th birthday and given that child mortality starts to fall dramatically after this age, this might well have been a socially important milestone on the way to adulthood. Unfortunately this child did not survive to reach puberty. It must be remembered that this difference in burial attitude may well be related to the date of burial rather than age of the child buried, the archaeological evidence will shed light on this matter. No evidence of dental or skeletal pathology were recovered.

4.8. BBAD 616

Context: BBAD 616 lies in a poorly defined grave cut, itself cutting into and running along the outside edge of an enclosure ditch (BBAD 404). The fill surrounding BBAD 616 contained an iron nail, a pot rim sherd and some charcoal fragments. It will be interesting to see if this iron nail resembles the ferrous object recovered with the cremation burial BBAD 093. Is this nail part of a coffin-type construction or is it perhaps some form of grave good?

Very little remains of the skeleton of BBAD 616, but it appears that this was a supine burial with a north-south orientation the head being at the north end. A left tibia and ulna were recovered in disturbed positions within the cut. Osteological analysis determined that these displaced bones do in fact belong to BBAD 616, and so some disturbance event must have occurred at some point in the past. The right arm, pelvis and leg of BBAD 616 remain in articulation: the right arm lies across the body with the hand (if it survived) placed over the pelvic area, and the right leg is extended. The incompleteness of this skeleton necessarily introduces some caution into any reconstruction of burial attitude, particularly given the displaced nature of the left arm and leg bones. BBAD 616 is not directly associated with any other grave cuts.

Condition: As already mentioned, this is a very incomplete skeleton. The skull is entirely missing, as is most of the pelvis, although the right foot is partially preserved. Those bones that do survive paradoxically have a fair level of cortical preservation.

Age-at-death: prime adult (35-44 years): This age-at-death estimate is based largely on observation of the morphology of the right auricular surface (Phase 3-4; 35-44 years). The only other evidence available is the fused state of the proximal femur (20+ years).

Sex estimation: M?: Those sexually diagnostic traits that were observable in the skeleton of BBAD 616 were all strongly male (4 traits in the pelvis) as was the only possible metric measurement of the femur head. The final sex estimation must be probably, rather than definitely, male because so much of the skeleton is missing.

Stature: 5'10": Based on an average of the stature estimates from the right humerus, and left and right ulna.

Skeletal pathology: Despite the incomplete state of BBAD 616, skeletal pathology was observed in the lower right arm. A well-resolved oblique *fracture* is present in the mid-shaft of the right radius. There was a total lack of apposition of the broken ends of this break, meaning that the broken ends had slipped past each other,

resulting in a considerable shortening of the healed radius. This shortening is the result of the pull of muscles that run across the break, and a normal consequence of an un-splinted fracture of the lower arm.

The *fracture* has healed well and was probably sustained a fair number of years before this person's death. The callous that forms around a break as part of the healing process is covered by well-organised smooth bone and in life an unusual looking bump would have shown on the surface of this person's forearm. There are consequences of this fracture, and the subsequent shortening of the radius, and these can be seen both on the radius and ulna. A new 'pseudo joint' has formed in the area of the healed bony callous between the radius and ulna. This 'pseudo joint' is delineated by *osteoarthritic* changes on the mid-shafts of both bones. The radial tuberosity, a normal site of articulation between the radius and ulna, has been placed under new strains by the shortened length of the radius and this presents with *osteoarthritis*. The distal radius and most of the wrist bones are missing post-mortem, but the distal ulna, site of articulation with the radius and triquetrum of the wrist, is again affect by *osteoarthritis*. All of these *osteoarthropathies* are secondary to the radial *fracture*.

Of all the limb segments the forearm is the most mobile because the radius moves around the stable ulna in order to allow us to rotate our hands through the 180° (pronation and supination). Our legs and feet are comparably immobile – you cannot turn the sole of your foot, twisting your tibia around your fibula, to face the sky while your knee remains stationary. If movement in the forearm was at all hampered by this fracture, rotation of the shoulder joint easily compensates for this and a full range of movement of the entire arm and hand would have been possible, although perhaps looking slightly odd. Given that the radius articulated distally with the wrist bones (carpals), the angle at which the hand sat at the end of this person's arm would have been a little odd with the thumb pulled slightly outwards (abducted) from its normal position.

Summary: This probably male person was in the prime of their life. They had sustained a serious fracture of the right forearm that has subsequently healed very well, and which probably did not overly limit this individual. The osteoarthritic changes noted in the arm resulting from this fracture are signs that the new shape of the forearm was adapted to and used possibly to near the same effect as an un-fractured forearm. Had this person continued to live into old age, these arthropathies may have become limiting and painful.

4.9. BBAD 626

Context: BBAD 626 lay within a linear grave cut with an east-west orientation, with the head lying at the eastern end of the cut. The burial appears to be supine. An iron nail was recovered from this fill of this burial, perhaps a coffin nail or grave good.

Condition: Only a skull and the first four cervical vertebrae represent BBAD 626. Cortical integrity is good and the cranium is almost complete if fragmentary. A complete set of jaws survives allowing a good assessment of dental health.

Age-at-Death: juvenile to younger adult (16-24 years): This age-at-death assessment is based on the pattern of dental attrition which gives the age range 16-24 years. The mandibular third molars (wisdom teeth) are partially erupted giving an age-at-death estimate of 15-21. Given the erratic timing of wisdom teeth, the broader age range based on dental attrition is favoured.

Sex estimation: M: An almost complete cranium was available for assessment and all sexually diagnostic traits were present. 6 were strongly male, 3 were probably male and one was indeterminate.

Dentition and dental health:

	Right																Left		Total
			A																1
caries			2																1
periodontal		s	s	s	s	s	s		s	s	s	s	s	s	s				13
calculus		g	g	g	g	m	m		s	s	s	s	s	s	s				13
maxilla	**N**	**7**	**6**	**5**	**4**	**3**	**2**	**/**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**			**13**
mandible	E	**7**	**6**	**5**	**4**	**3**	**2**	**/**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	E			**15**
calculus		g	g	m	m	m	m		m	m	m	s	s	s	s				13
periodontal		s	s	s	s	s	s		s	s	s	s	s	s	s				13
caries															1				1

Key

#	tooth and socket present (i.e. 8 or 7 or 6 etc.)
-	jaw absent
/	tooth lost post mortem (after death)
x	tooth lost ante mortem (i.e. during life)
N	not present
E	erupting
A	abscess
periodontal disease	graded as slight (s), moderate (m) and severe (g)
calculus	graded as slight (s), moderate (m) and severe (g)
caries	1 = small pit, 2 = <50% crown destroyed, 3 = >50% crown destroyed, 4 = crown destroyed

The dental health of this young man is particularly bad, especially given that he might well still have been his teens when he died. The third molars are in the process of erupting. These wisdom teeth are unaffected by dental disease, unlike all of the other teeth in his jaw.

Dental *calculus* affects all but the two wisdom teeth present in these jaws. The pattern of its deposition is slightly odd with the right side of the mouth affected more severely than the left. 6 teeth on the right side of the jaw are severely affected by *calculus* and the crowns of these teeth are almost entirely obscured excepting the occlusal biting surfaces. The deposition of this level of mineralised plaque on the teeth has led in all cases to a slight degree of *periodontal disease*. The alveolar bone around the roots of these teeth has started to recede and this man might have suffered with painful gums.

There is little doubt that the *abscess* and accompanying *carious lesion* in the maxillary right first molar would have been very painful indeed. The *caries* has not only destroyed about 30% of the tooth crown, but this infection has spread killing the living pulp of the tooth and then on down the root canal leading to an infection within the maxilla, an *abscess*. As a response to the pus that was building up at the roots of this tooth, bone has resorbed and opened up a hole in the buccal (cheek) side of the maxilla and the roots of this tooth can be clearly seen through it. It is not likely that this tooth would have survived much longer, and the infection may have then spread to the neighbouring teeth. This would have been intensely painfulUnfortunately the maxillary sinus and other parts of this man's skull are missing post-mortem, but there is a possibility that the bacteria and infection already present in the root canal and buccal maxilla could spread further still. This infection

could have become systemic and at the least made this man feel very unwell and experience a diminished immunity, and at worst could have led to something more sinister. One other tooth, the left second mandibular molar, also has a small *carious* pit on it's buccal (cheek) side.

As mentioned above, no enamel hypoplasia was recorded in this man's teeth, if this condition had been present it can predispose teeth to caries and abscess. The absence of enamel hypoplasia lines might suggest that this young man did not suffer an episode of great stress in his child hood sufficient to lead a period of arrested growth. The types of episodes of stress that leave these arrested growth lines in the enamel of teeth are usually a serious period of illness, a period of malnutrition or starvation, and even great emotional upset (Hillson 1996).

Why was this young man's dental health so poor? Diet, dental treatment and genetic factors all have a role in dental health. He may have been genetically prone to dental disease, either through a weakness in the microscopic structure of his teeth (although no enamel hypoplasia was recorded) or a familial immunological susceptibility. There seems no reason to assume that this man's dental hygiene was worse than the other skeletons under study, although this could have been true. The biggest single factor at a population level in the prevalence of caries is sugar (Hillson 1996). It is problematic to extrapolate from the population to the individual level, but this man could perhaps have had a diet more rich in carbohydrates or sugars than the other skeletons under study.

Summary: BBAD 626 was a young man either in his later teens or early twenties. His dental health was poor, he was already on the way to loosing teeth antemortem, and his mouth would have been in considerable pain. This infection was spreading and could have gone on to spread further through his body perhaps making him systemically unwell. One explanation for this poor dental health might be a diet rich in sugars and/or carbohydrates. The lack of signs of periods of arrested growth in his teeth childhood might suggest a relatively stress free childhood.

4.10. BBAD 634

Context: BBAD 634 lies in a very poorly defined shallow grave cut with a north-south orientation. This feature had been heavily truncated and no finds, other than skeleton BBAD 634 were recovered.

From what does remain of skeleton BBAD 634 this was a supine burial with the head at the northern end of the cut. The on-site records, including a photograph, make it appear as though the lower arm bones (radius and ulna) were 'folded back' by the upper arm bone (humerus) on both sides. This is an unusual burial posture and the only instance of this kind among these skeletons.

Condition: BBAD 634 is poorly preserved and very incomplete represented only by fragments of the arms (including scapulae and right clavicle) and upper legs. No cranium or pelvis remains at all.

Age-at-death: juvenile-adult unknown age (13+ years): Neither the pelvis nor cranium survive, so the majority of ageing techniques cannot be applied to this individual. It can only be said that the surviving limb bones are too large and robust to have come from anyone younger than about 13, the lower limit of the juvenile category.

Summary: BBAD 634 is so poorly preserved and truncated that it is only possible to determine that this individual is older than about 13. It was not possible to determine biological sex, stature, or to assess dental pathology. No skeletal pathology was observed in those bones that did survive.

4.11. BBAD 637

Context: BBAD 637 lies in an ecliptical shallow grave cut which the later deposit of skeleton BBAD 640 cuts into. The feet and legs of BBAD 637 are therefore missing because of this disturbance. The fill of this grave contained only the skeleton BBAD 637, there are no grave goods recorded. The burial had a north-south orientation with the head of BBAD 637 lying at the southern end of the grave. This was a supine burial, the face of BBAD 637 was looking skywards and its arms lay straight by its sides with the hands resting beside the pelvis.

Condition: Unfortunately the cortical integrity of BBAD 637 was poor introducing limitations to the quality of pathological observations. Despite this, the ends of long bones have survived intact, as have the clavicles and substantial parts of the scapula, hand bones and parts of vertebrae. The face of BBAD 637 is largely missing, resulting in an incomplete dentition, and the remaining cranium is fragmentary and incomplete.

Age-at-death: young to prime adult (22-30 years): The most reliable method for aging an adult skeleton is observation of the pubic symphysis. A fragment of the right pubic symphysis was preserved (Phase I-II) giving and age estimate of 20-35 years. Dental attrition gave an estimate of 22-30 years, and the pattern of epiphyseal fusion gave a lower estimate of >21-25 years (fused iliac crest) and <25-30 years (unfused sternal clavicle). A sensible combination of these estimates is 22-30 years.

Sex estimation: M: This securely male determination of biological sex in based on a combination of observations of morphologically diagnostic traits in the cranium (6 male, 1 probably male and 1 indeterminate) and pelvis (4 strongly male).

Stature: 5'9": Based on an agreement of the stature estimates produced by the right humerus, ulna and radius and left radius.

Dentition and dental pathology:

	Right																Left		Total
calculus		s													s	s			3
maxilla	-	L	-	-	-	-	-	-	-	-	-	-	/	6	L	-			3
mandible	N	7	6	5	4	3	2	L	-	-	-	4	5	6	7	N			11
calculus		s	s	s	s	s		s				s	s	s	s				11
periodontal		s	s	s															3
caries															1				1

Key

#	tooth and socket present (i.e. 8 or 7 or 6 etc.)
-	jaw absent
/	tooth lost post mortem (after death)
N	not present
periodontal disease	graded as slight (s), moderate (m) and severe (g)
calculus	graded as slight (s), moderate (m) and severe (g)
caries	1 = small pit, 2 = <50% crown destroyed, 3 = >50% crown destroyed, 4 = crown destroyed

16 teeth survive to be assessed from the incomplete jaws of this young man. The mandibular third molars are not present in the jaw, and it is not possible to assess the upper third molars because none of the bony maxilla survives. These teeth could remain in the jaw *unerupted*, perhaps because they were impacted or because there was not enough space for them to erupt – although there was no sign of dental crowding. On the other hand these mandibular wisdom teeth may never have been formed at all (*agenesis*). *Agenesis* is most common in the third molars and up to one third of a population can display this phenomena (Hillson 1996).

All but 2 of the 16 teeth that are recovered have slight *dental calculus*, and in 3 cases this has led to slight *periodontal disease*. No carious lesions, abscesses or enamel hypoplasia defects were recorded in the teeth of this young man. Overall his dental health is relatively good, especially when compared to the jaws of BBAD 616 who was younger than this man. The lack of observation of enamel hypoplasia lines might suggest that this young man did not suffer an episode of great stress in his child hood sufficient to lead a period of arrested growth. The types of episodes of stress that leave these arrested growth lines in the enamel of teeth are usually a serious period of illness, a period of malnutrition or starvation, and even great emotional upset (Hillson 1996).

Skeletal pathology: One of the methods used to age archaeological skeletons is the observation of the state of fusion of the ectocranial sutures (Meindl and Lovejoy 1985). Sutures are the joints between the cranial bones that show as the lines familiar to anyone who has seen a human skull. These joins between the bones gradually fuse with age, so generally the younger the person the more 'open' the sutures.

The saggital suture (the line that runs from the forehead to the occipital on top of the skull) of this young man is fully fused and the join between the two parietal bones that it separates is totally obliterated. This does not usually happen until the fifth or sixth decade of life. Given that this man is only in his twenties and all other observable sutures in his skull are open, this premature fusion is called *craniostenosis*. This condition can alter the shape of the skull significantly dependent on which suture is involved and age of onset (Ortner and Putschar 1984). If this fusion of the saggital suture occurred in early childhood then the skull takes on an elongated shape with a very prominent forehead. Unfortunately this skull is both fragmentary and incomplete and it is not possible to assess if such a change in shape occurred, and so it is not possible to determine when in the lifetime of BBAD BBAD 637 this premature fusion occurred. In terms of pathological category, this is a skeletal malformation and is placed into the congenital/developmental category.

Summary: There is no clue in the skeleton of this young man to tell us why he died, and so this must remain a mystery. He had managed to survive the hazardous period of childhood, and his teeth suggest that his childhood was probably free at least from very serious episodes of illness and malnutrition. The prematurely fused cranial suture in this young man's head might have made his head a rather odd shape. The dental health of this young man was rather good given the level of disease seen in other jaws in this collection. Perhaps he was more pernickety about his dental hygiene than some of the other people under study.

4.12. BBAD 640

Context: BBAD 640 lay in an ovoid grave cut that cuts into the earlier burial BBAD 637. Like BBAD 637, BBAD 640's grave cut has a north-south orientation and the head lies at the southern end of the grave. This was a supine burial. Unfortunately the legs and lower arms of this skeleton do not survive and so it is not possible to discuss their attitude in the grave. There were no grave goods recovered in the fill of this burial.

Condition: BBAD 640 is largely incomplete consisting mainly of the upper arms and skull. On-site records show that at the excavation stage this burial was poorly preserved, and indeed cortical integrity is poor and this is a fragmentary skeleton. From the on-site photographic record it appears that BBAD 640 was looking skywards and the face of this skeleton is entirely missing meaning that no dentition survives.

Age-at-Death: prime to older adult (30-65 years): This age-at-death determination is based on the fused state of the sternal end of the clavicle (>25-3 years), and the state of fusion of ectocranial sutures (composite vault score 13; 31-65 years).

Skeletal pathology: Despite the poorly preserved and incomplete nature of this burial, skeletal pathology was observed. *Osteoarthritis* affected the right shoulder at the glenoid cavity of the scapula. The entire anterior joint margin, and the mid-third of the posterior joint margin presented with osteophytic growth, changing the joint contour, and a small patch of slight porosity covered the anterior-distal ¼ of the joint surface. Unfortunately the corresponding part of the joint, the humeral head, was not preserved sufficiently well to allow observation.

Summary: BBAD 640 was a prime to older adult, certainly beyond their twenties. It was not possible to assess either biological sex or stature. This person suffered mild osteoarthritis of the right shoulder. Archaeological skeletons tend to have more osteoarthritis in the upper limb than modern populations, perhaps reflecting a life style with more emphasis on upper body activities (Roberts 1996).

4.13. BBAD 645

Context: BBAD 645 lies in a rectangular grave cut not far from BBAD 640 and 637. The orientation of this burial is north-south and the head again lies at the southern end of the grave. This burial, has like many others, suffered a degree of truncation. The feet of BBAD 645 were very disturbed and on-site records show that this southern end of the cut was unclear. This was another supine burial with both arms laid out straight beside the body so that the hands came to rest beside the pelvis.

16 nails, interpreted as coffin nails were recovered surrounding the body of BBAD 645. Their rectangular layout close around the body does indeed suggest the presence of a coffin.

Condition: BBAD 645 is largely complete, including some hand and feet bones, although the ends of most bones are degraded and no ribs survive. Cortical integrity was poor but an almost complete dentition survives.

Age-at-death: juvenile (15-17 years): A combination of methods was used to reach this narrow age range. Dental attrition suggested an age of 14-18 years, the state of development of the root of the third molar gave an age of 16, although a

broader range of 15-17 years also includes the developmental stages of other teeth. State of epiphyseal fusion of the pelvis suggests a range 13-18 (tripartite fusion has occurred but retains a youthful billowed appearance), and the proximal femur gives a similar range of ≥15 - <20 years (fusion under way in greater and lesser trochanter). Estimated long bone lengths gave similar estimates: humerus (14-16 years), femur (15-17 years), and radius (15-17 years).

Sex estimation: unknown: The pelvis and cranium of this young individual survived, and osteological observation reveals that they are gracile which might suggest that they were female. However, this is *not* a fully adult skeleton, rather that of a teenager. This could be the remains of a small 15 year old boy awaiting his teenage 'growth spurt', although it is more likely that these are the remains of a teenage girl. It is not osteologically sound to estimate sex for a juvenile so this question must remain unanswered.

Dentition and dental pathology:

	Right									Left								Total
caries				1														1
calculus		m	m	s	s							s	s	m	m			8
				H	H							H	H					4
maxilla	-	L	L	L	L	-	L	L	|	L	L	-	L	L	L	L	-		**12**
mandible	E	7	6	5	4	3	2	/	|	1	2	3	4	5	6	7	E		**15**
					H								H	H					3
calculus		m	s	s	s		s			m	s	m	s		s				10

Key

#	tooth and socket present (i.e. 8 or 7 or 6 etc.)
-	jaw absent
/	tooth lost post mortem (after death)
E	erupting
calculus	graded as slight (s), moderate (m) and severe (g)
caries	1 = small pit, 2 = <50% crown destroyed, 3 = >50% crown destroyed, 4 = crown destroyed
H	enamel hypoplasia line(s)

In total 27 teeth were available for inspection. From a full adult set of 32 teeth, 5 are missing through post-mortem loss leaving 27. Only the mandibular (15) teeth are present within the jaw, the maxillary teeth (12) are all loose and there are no bony remains of the maxilla. *Dental calculus* affects 18 of the teeth of this teenager (7 moderately and 11 slightly affected), a level not out of place among the other skeletons in this collection. There has been post-mortem damage to the alveolar bone of the mandible, and the bony maxilla is not present, and so it is not clear whether *calculus* has led to periodontal disease yet in the jaws of this teenager.

Of most interest in the dental remains of BBAD 645 are the 7 (out of 8) premolars affected by *enamel hypoplasia* lines in roughly similar locations on each tooth. It is not clear why the second right mandibular premolar is not affected when all other premolars are. Perhaps this is quirk of human development, or developmental patterns and timings were slightly different for this tooth than its premolar companions. *Hypoplasia* lines are the result of a period of arrested and then resumed growth during the time when the enamel of the tooth crown is being laid down (Hillson 1996). An episode of stress (illness, malnutrition or even extreme emotional stress) causes the period of growth arrest. For example if the child was

suffering with a serious infection, bodily resources would be diverted into fighting this infection and growth might arrest. If an extended period of malnutrition or starvation occurred, growth again could arrest. It is important to emphasise that in order for these lines to be preserved, growth must resume, and therefore the child must have recovered successfully from whatever the stressor was. The level in the crown of the *hypoplasia* line can be roughly correlated to the stage of development, or age, at which the stressing event occurred. The *enamel hypoplasia* lines on the premolars of BBAD 645 are at a level in the crown that indicates the stressor occurred when this teenager was 4 or 5 years old. These lines do not appear in the other permanent teeth because these crowns were already formed at this stage of the child's development.

A small *carious pit* is present on the maxillary right second premolar along the line of the *enamel hypoplasia* line in this tooth. The *hypoplasia* line is, in effect, a line of weakness in the enamel and the presence of a *carious lesion* at this site is not surprising.

Skeletal pathology: On the medial side (condyle) of the right tibia a small pathological lesion was recorded. This took the form of a small ovoid 'pit' in the centre of this joint surface. The margins of this pit were smooth and its interior was porous. This type of lesion is characteristic of a condition called *osteochonditis dissecans*. It probably has a *traumatic* origin, although some degree of hereditary predisposition is recognised. This condition usually occurs in the adolescent or young adult years, and males are more commonly affected than females. A fragment of bone and its attached cartilage become detached from the knee joint surface because of a shearing force (Kumar & Clark 2001). The detached fragment of bone can then be totally resorbed, reattach itself to another area of the joint surface, or remain loose within the joint capsule. This results in aching pain in the knee after activity, and if the bone fragment remains loose, as might have been the case for BBAD 645, the knee can lock or give way unexpectedly. This can be a very painful and limiting condition severely affecting physical activity. Modern medicine offers treatment usually through keyhole surgery, but little or nothing could have been done in the past.

Summary: BBAD 645 was a teenager when they died. There are no signs in the skeleton of the cause of death so it remains a mystery as to why this adolescent died on the brink of adulthood. The right knee of this teenager would have caused them considerable pain, and their ability to engage in physical activity could have been limited. It is possible that this condition would resolve itself, but only after a period of disability and pain. Simple walking could even have been excruciating.

The dental health of this teenager was relatively normal in terms of this skeletal collection. The teeth of BBAD 645 also tell us that he/she suffered a serious stress episode, likely to be either illness or malnutrition, when they were 4 or 5 years old, and that this stressor was successfully recovered from.

BBAD 645 was buried close to and in a similar bodily attitude and orientation to BBAD 637 and 640. Perhaps this was a group related in some way? BBAD 645 appears to be the only definitely coffined burial among the group, though others were recovered with isolated iron nails. This could be an accident of preservation, perhaps the coffin nails belonging to the other graves have decomposed entirely, or it could indicate that for some reason BBAD 645 was given a coffin while others in this collection were not.

4.14. BBAD 646

Context: BBAD 646 was buried in a rectangular grave cut undisturbed by later features. The burial had a north-south orientation and the head of BBAD 646 lay at the southern end of the cut. Truncation had removed part of the face of this individual who was looking skywards. The arms of BBAD 646 lay straight at its sides so that the hands rested beside the pelvis. The lower legs of this skeleton were crossed at ankle level.

Condition: BBAD 646 is fairly complete in that all limb bones are represented and hand and feet bones survive. The skull of this individual is fragmentary and the face, including most of the jaws, is missing post-mortem. Cortical integrity was fair.

Age-at-death: prime to older adult (40-50 years): Part of the auricular surface of this individual survived (Phase 5-6) giving the most reliable age estimate of 40-50 years. What cranial suture sites were present largely agreed with this range (28.1-58.8 years), as did the state of epiphyseal fusion (>25 years).

Sex estimation: M?: This estimation of biological sex is based on the morphology of the cranium (2 male and 1 probably male).

Stature: 5'5": Based an a agreement of estimates from the left ulna, radius, femur, tibia and fibula.

Dentition and dental pathology:

	Right								Left								Total
maxilla	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0**
mandible	x	x	x	5	-	-	-	-	-	-	-	-	-	-	-	-	**1**
periodontal				g													1

Key

#	tooth and socket present (i.e. 8 or 7 or 6 etc.)
-	jaw absent
x	tooth lost ante mortem (i.e. during life)
periodontal disease	graded as slight (s), moderate (m) and severe (g)

Due to post-mortem loss, only 4 socket sites are available for analysis. 3 teeth have been lost *antemortem*. The sockets for these lost teeth are completely resorbed and the body of the mandible in this area has atrophied considerably implying that these teeth have been gone for a long time before BBAD 646 died. The lone surviving tooth, the second right mandibular premolar, shows extensive attrition and secondary dentine has been exposed. The considerable wear evident in this tooth, because it was used in compensation for the lost molars, had in turn led to severe *periodontal disease*. This tooth would probably not have lasted a great deal longer.

Skeletal pathology: 4 cervical vertebrae survive, C2, C4, C5 and C6. The axis, C2 is present only as a fragment and this is the only one that shows no sign of pathology probably as a result of its incomplete nature. The remaining 3 vertebrae all present with *spinal joint disease*, an expected pathology in the spine of a 40 to 50 year old.

On the left radius, the joint margin of the radial tuberosity is surrounded by severe osteophytic growth altering the joint contour, and mild porosity covers the entire joint surface giving a diagnosis of *osteoarthritis*. This is one of the sites of articulation between the radius and ulna in the forearm. The corresponding parts of the ulna are

too degraded for inspection. It has already been noted that upper limb *osteoarthritis* is more common in archaeological populations than modern ones, and this may reflect a lifestyle where repeated physical activity using the arms was more prevalent than today.

The right hip of BBAD 646 is also affected by osteoarthritis, and in this case both of the articulating parts of the hip joint are available for inspection. The right femur head is entirely surrounded by moderate to severe osteophytic new bone. Additionally, the proximal (upper) half of the joint surface is covered by severe porosity, a sign of bone loss. The stress of weight bearing on this weakened part of the hip has caused some flattening of this usually round joint. The right acetabulum, the 'socket' half of this ball and socket joint on the pelvis, is likewise *osteoarthritic*. Severe osteophytes are present on all of the joint margin that has survived post-mortem damage, and the posterior half of the joint surface is affected by moderate porosity. The articular cartilage must also have been damaged and eroded because there is a small area of eburnation (polished areas where bone has rubbed against bone) on this half of the hip joint.

The hip and knee are the commonest sites for *osteoarthritis*, both in archaeological and modern populations (Roberts & Manchester 1996). The degree of pathological change at this joint is quite severe and this would probably have been a source of pain for this middle-aged man.

Summary: BBAD 646 is a prime to older adult, probably male individual. Once again there is no obvious sign of the cause of death. If the rest of his jaws were in a similar state to what survives, he had few teeth and those that remained were probably heavily worn. The molars of his right mandible had been lost a long time ago and this might have affected the kinds of foods that he was able to chew. The skeleton of BBAD 646 reveals osteoarthritis and the right hip and in the left forearm. His hip would probably have been painful and his range of movement might have been somewhat limited, perhaps giving him a limp. As well as having the benefit of five or six generations worth of wisdom, this man clearly had been, and perhaps still was, a physically strong and active man.

5. Results and Discussion

5.1. Demography and Stature of the Sample

It was only possible to reliably estimate stature in the case of 5 of the 14 individuals that form the total sample from Barnetby-le-Wold and therefore these results are grouped with demography simply for ease of presentation.

Table 8: Demography and stature of the sample

Context	Age Category	Chronological Age Estimate	Sex*	Stature
090	PA-OA	27-49	F	4'11"
093	AA	18+	?	-
116	PA-OA	36-50	F	-
219	C1	3-5	-	-
242	C1	1-3	-	-
559	OA	60+	F?	4'10"
607	C2	6-<13	-	-
616	PA	35-44	M?	5'10"
626	JU-YA	16-24	M	-
634	JU/AA	13+	?	-
637	YA-PA	22-30	M	5'9"
640	PA-OA	30-65	?	-
645	JU	15-17	-	-
646	PA-OA	40-50	M?	5'5"

* ? denotes unknown sex; - is used for subadult burials where sex cannot be estimated

No attempt as been made to carry out demographic analyses of 'population structure' as such, or to calculate demographic variables such as life expectancy, survivorship or mortality. These methods are borrowed from demographers studying living populations and their application to a 'dead' sample of people can only be justified where a large skeletal sample exists that can be archaeologically assumed to come from a reasonably contemporary and complete population. This small sample did not originate from a distinct cemetery and were buried centuries apart. It is not representative of a living 'population'. These 14 people cover all demographic categories, both men and women of all ages were buried at Barnetby-le-Wold. The only group noticeably absent are the youngest newborns. The generally poor state of preservation of the bodies from Barnetby-le-Wold could explain this lack, perhaps the individual originally contained in BBAD 575 that did not survive the excavation process was just such an infant.

5.2. Pathology in the Sample

When dealing with a large skeletal sample the most appropriate and accurate way of presenting pathological analyses and results is to calculate prevalence rates for each type, or classification, of pathology. This is done through calculations that express as a percentage the number of each individual instance of a condition against the total number of instances in which this condition could have been observed (Waldron 1994; Roberts & Manchester 1995).

However this is such a small and fragmentary sample the calculation of such prevalence rates for skeletal pathology would be meaningless. Instead, Table 9 overleaf presents a summary of the various types of pathology found in the sample. If any future researchers are interested in pathology in this sample they are referred to the Biographies Section of this report and Appendix 1.

TABLE 9: SUMMARY OF SKELETAL PATHOLOGY IN THE SAMPLE

CONTEXT	TB	TS	NI	SI	SJD	OJD	CD	D	M	E	NP	AI	O
090								X					
093					X								
116					X	X							
219													
242								X					
559					X	X		X					
607													
616	X					X							
626								X					
634													
637							X	X					
640						X							
645	X							X					
646					X	X		X					

(please see Table 6 for an explanation of pathological category codes)

The most common pathology with the sample was dental disease, and this is discussed in Section 5.3.1 below. After dental disease, the most common pathological findings were of *osteoarthritis* and *spinal joint disease*. The diagnosis of *osteoarthritis* and *spinal joint disease* rests on the observation of two or more of the following joint changes:

1. *eburnation:* a dense polished appearance to the joint surface that occurs when bone rubs against bone after joint cartilage has been destroyed
2. *osteophytes*: bony outgrowths from a joint surface representing the bodies attempts to heal a damaged joint (graded I – IV after
3. *porosity*: a porous appearance to a joint surface caused by degeneration of the joint
4. *joint contour change:* osteophytic growths or eburnation can alter the normal shape of a joint surface and this in turn can lead to more degeneration
5. *Schmorl's nodes*: observed only in inter-vertebral joints in the spine, these depressions on the joint surface are the result of rupture of the inter-vertebral disc, itself caused by a variety of factors including trauma and normal degenerative changes

(after Rogers *et. al.* 1987)

Spinal joint disease is a mechanically induced condition that is an unfortunate result of our quadrupedal ancestors deciding to walk upright on two feet. Human spines are subjected to stresses that they were not originally designed to bear, and spinal joint disease is merely part of the ageing process. This condition is almost universal in archaeological adult skeletal remains (Roberts & Manchester 1995), those adults in this sample that don't show signs of it are those with few or no spinal bony remains.

5.2.1. DENTAL PATHOLOGY

The situation for the calculation of prevalence rates is a little brighter for dental pathology. In total 88 teeth and 103 tooth socket sites were recorded. Crude prevalence rates for each type of dental pathology are presented below in Table 10.

TABLE 10: PREVALENCE OF DENTAL DISEASE (PERMANENT DENTITION)

BBAD	SITES	TEETH	AMTL*	CALCULUS	PERIODONTAL DISEASE	CARIES	ENAMEL HYPOPLASIA	ABSCESS
116	30	18	6	16	14	5	0	0
559	7	0	7	0	0	0	0	0
626	32	28	0	26	26	2	0	1
637	14	14	0	14	3	1	0	0
645	16	27	0	18	0	1	7	0
646	4	1	3	0	1	0	0	0
	103	**88**	**16**	**74**	**44**	**9**	**7**	**1**
			15.5%	**84.1%**	**50%**	**10.2%**	**8%**	**1%**

*AMTL = antemortem tooth loss

Dental *calculus* represents mineralised dental plaque, which is itself a dense accumulation of micro-organisms on the tooth surface, making it an indicator of dental hygiene. The presence of calculus on a tooth can predispose the bony jaw around it it to *periodontal disease*, which is the loss of the gums and then bone around the base of the crown of a tooth. Dental plaque also acts as a perfect growth medium for bacteria. These bacteria in turn produce acid leading to the destruction of enamel, dentine and cement – the component elements of teeth – leaving *carious lesions* in the teeth. Both *carious lesions* and *periodontal disease* can cause an *abscess* to form, and if left unchecked this in turn leads to *antemortem tooth loss (AMTL)*. Dental health is considered to have been poor in Roman Britain (Harman *et. al.* 1981), and clearly the people buried at Barnetby-le-Wold were no exception to this pattern.

Deciduous dentition has been excluded from this analysis because no dental pathology was recorded for these teeth. In total, 32 socket sites and 24 deciduous teeth were present.

5.3. CREMATION ISSUES: BBAD 093

The biography for BBAD 093 was somewhat limited. All that could be said was that this person was adult, and that they suffered spinal joint disease in at least one of the vertebra of their spine. However, the analysis of a cremation burial offers information beyond biological parameters ino the realms of technology and ritual. These findings are presented here.

5.3.1. DEGREE OF FRAGMENTATION

Table 11: Degree of fragmentation in the cremation burial BBAD 093

TOTAL WEIGHT/g	WEIGHT/g [>2mm-<10mm]	% [>2mm-<10mm]	WEIGHT/g [>10mm]	% [>10mm]	DEGREE OF FRAGMENTATION
198.43	93.75	47.2%	104.68	52.8%	moderate

This individual was moderately fragmented with 47.2% of the bone recovered passing through a 10mm sieve. The possible reasons for this level of fragmentation are multiple. It is possible bone was moved during cremation by tending of the pyre, pyre collapse would also cause fragmentation, as would deliberate cooling of hot bone, and collections of brittle bone following cremation. It has been suggested in the past that deliberate fragmentation of bone formed part of the cremation/ burial ritual (Gejvall, 1963), but McKinley has convincingly argued that degree of fragmentation is more a reflection of post-excavation fragment size than a reliable

indicator of bone fragment size at the time of deposition (1994). The moderate, rather than high as is often the case, degree of fragmentation could then be taken as testament of the care exercised by PCA Lincs during excavation and post-excavation.

5.3.2. Body Part Representation

These results are usually used to determine whether one area of the body is more or less likely to be included in the burial. This is done through comparison to modern cremation weights and percentages where a complete skeleton is available. Since in all cases the largest fraction by far is NID (unidentified), to present results as percentages of *all* bone recovered would render the results meaningless. Therefore, percentages of bone to each body area are also calculated excluding the NID fraction. These calculations use the total weight of bone *minus* the NID weight of bone. To aid interpretation, the expected percentages from a complete modern cremation are also presented (after McKinley, 1989).

Table 12: Body Part Representation for Cremation Burial BBAD 093

Body Area	Weight/g	% NID included	% NID excluded *	% expected
Cranial	0.93	0.5%	**1.5%**	18.2%
Axial Skeleton	2.08	1.1%	**3.4%**	23.1%
Upper Limb	26.03	13.1%	**41.9%**	20.6%
Lower Limb	32.99	16.6%	**53.2%**	38.1%
NID	136.4	68.7%		
Total	198.43	100.00%		

- denominator is 198.43g (total weight) – 136.4g (NID weight) = **62.03g**

The cremated bone from BBAD 093 weighed a total of 198.43g. A modern adult cremation normally weighs somewhere in the range 1600 - 3600g (McKinley, 1989). Given that the on-site records mention truncation of this context, and the fact that archaeological cremations rarely weigh what they 'ought' to compared to a modern one, we are clearly not dealing with a complete cremation burial. Of the bone that was present, 68.7% was in the NID (not identified) fraction. It is not sound osteological practise to attempt an analysis of body part representation on such incomplete evidence.

5.3.3. Extraneous Material

The most notable things recovered from BBAD 093 that were not cremated human bone were a corroded iron object larger at one end than the other with a maximum length of 33.3mm, and a small fragment of black coarse pot (15.6 x 12.3mm). Several bone and stone fragments were stained with ferrous material presumably from the iron object. The author is not an expert on archaeological pot and unfortunately cannot postulate whether this had been fired as a usual part of its construction, or whether its black colour is the result of inclusion in a pyre. The crux of the matter is whether this piece of pot was a pyre good, or something placed in the ground with the burial after cremation, the most obvious explanation being an urn of some sort.

Pea grit, or tiny (>2mm) rounded pieces of stone, and a few charcoal flecks were recovered among the cremated bone that made up BBAD 093. No traces of cremation slag were recovered. The 'pea grit' and larger stone are normal fill inclusions. The charcoal flecks are a very normal finding among archaeological cremations, and is regarded as pyre debris. Their presence in fill BBAD 093 might

imply that each fragment of bone was not collected individually from the pyre site, but rather collected in such a way as to deliberately include material other than bone. Perhaps the bone was collected while the pyre was still hot, and then cooled and separated (McKinley, 1989). It may have been important to the funeral ritual that a representation of the pyre itself be included. Further interpretation is not possible given the small quantities of both cremated bone and charcoal, and the truncation suffered by this context.

5.3.4. Colour and Surface Changes

A range of colours was observed on the cremated bones from BBAD 093. The majority of bone fell in the colour categories IV or V (after Shipman *et. al.* 1985) where a neutral white predominates with areas of light greys and reddy-yellows. A few fragments of bone from areas of deep anatomy, such as the interior iliac blade of the pelvis, and joint surfaces, such as inter-vertebral and inter-phalangeal joints, were predominantly neutral black (category III).

These observations suggest two things. Firstly, that the body was probably still fleshed when burnt because areas most protected by soft tissue were less well calcinated. This conclusion is supported by the observation of curved and 'checked' (deep cracks running parallel and perpendicular to the bone axis) cracks on several bone fragments and marked warpage of some of the larger elements, changes that are typical of green fleshed bone (Buikstra & Ubelaker 1994).

Secondly, comment is possible regarding pyre technology. To achieve the level of calcination observed in BBAD 093, several factors are required of the pyre. Firstly, very high temperatures (645 + - >940°C) were achieved, and these had to have been sustained for at least 7 - 8 hours (McKinley 1989). Also, the eveness of the calcination suggests that additional fuel was probably added to the pyre, and the pyre tended to allow sufficient oxygenation. The eveness of colour also suggests that the body was placed either on top of or in the middle of the pyre. If the body had been placed in the base of the pyre this would have lead to insufficient oxygenation, and subsequent uneven calcination, of parts of the body.

5.4. Unusual Burial Circumstances

The first skeleton in this collection to be excavated and recorded osteologically was also one of the most unusual. BBAD 090 was the headless prone burial of a prime to older adult (27-49 years) woman that also appeared to have a foot in the wrong place within its grave cut. The preliminary archaeological understanding of this context and the relevant osteological information are combined and discussed here.

Firstly, the on-site photographic records and contextual recording show that this was a prone burial. The head and upper 5 cervical vertebrae of BBAD 090 are missing. The eastern end of the grave cut has unclear relationships to linear features running north-south across this part of the site. It was not possible at excavation to determine whether this grave had been cut into by one of these linear features, hence removing the skull through later disturbance, or whether instead this headless burial abutted the linear feature, implying that this body was headless at the time of burial. Unfortunately the skeletal remains of BBAD 090 shed no light on this matter. The uppermost vertebra present (C6) is broken through the body into two parts, and the left side of its lamina is missing. These breaks appear to be ordinary post-mortem breaks that are an inevitable part of the excavation and lifting process.

There is no sign of cut marks that might have been left if this head was removed at or near the time of death or burial, but the absence of such cut marks does not mean that this did not happen. There are documented instances of decapitation burials that have no cut mark evidence on the skeletal remains (Harman *et.el.* 1981:160-1), so negative evidence does not mean that decapitation did not occur.

Ultimately the answer to this question lies with the archaeological evidence, but unfortunately this was not clear at the time of excavation. BBAD 090 was 'slumped' in the side of a large ditch feature. The chest area lay higher up the slope than the legs. The 'grave cut' for this individual was very poorly defined, and perhaps BBAD 090 was 'chucked' into the ditch and roughly covered up rather than being placed in a nice deliberately made grave cut.

Another conundrum exists in the burial of BBAD 090. Her knees were almost fully flexed (bent), the lower legs and ankles rested in the right pelvic area. The feet, however, are again unusual in their position. It appears that one rests where it should at the end of the legs, but the other foot is not attached to the leg at all, instead resting southwest of the lower legs. The excavator on-site believed the detached foot to be the right one.

Needless to say this is a very odd scenario. The ankle and foot are held together by some of the strongest ligaments in the body, this means that they would be among the last to decompose. If the observed displacement was simply the result of decomposition and the foot 'fell off' before the body was buried, why are less strong articulations preserved? On the other hand, if this body was indeed 'dumped' into a ditch and roughly covered, a scenario whereby the foot decomposed and its bones then slipped down the slope might be feasible.

Unfortunately it is not possible to tell from the on-site photographs whether this was an articulated foot or a collection of feet bones. It appears that these bones were articulated, but this is a complicated anatomical relationship to deduce from photographic evidence. These bones could have come to rest in their recovered position through later disturbance of a fully decomposed skeletalised burial. The feet bones themselves do not have any cut marks on them. In a modern dissection it takes physical strength to cut through the ligaments and tendons that cross the ankle. However, with a good knowledge of anatomy it is possible to do this without damaging bone in any way. People in the Iron Age would certainly have had a good understanding of animal anatomy through butchery; it is not incredible to suggest that they would have had the skills and knowledge to cut up a human body in a skilful way.

The position of the legs of BBAD 090 is also interesting, aside from the mystery of the 'disembodied' foot. The knees and ankle area of both legs are very close together, and the angle at which they are lying are suggestive of them being tied together. Without the lower limbs being bound in some way it would have been difficult to get the legs of a corpse into this position, and probably harder still to make them stay that way. The right hand was also recovered in the same area as the feet bones articulated to the lower legs, was this hand bound too?

On the basis of the current state of knowledge, the questions about whether BBAD 090 was a headless burial, perhaps bound at knees and ankles, and possibly with a foot removed cannot be resolved definitely.

The second unusual burial was BBAD 116, which consisted of the skull, mandible and first cervical vertebrae of another prime to older adult (36-50 years) woman. These remains were contained in a small oval discreet pit that appeared to have been dug solely for the purpose of burying this head. The pit cut into a north-south (active) linear ditch (BBAD 239). Photographic records clearly reveal that the mandible was still in correct anatomical articulation. This means that it was probably 'fresh' when buried, meaning that sufficient soft tissues survived to keep the jaw firmly anchored to the skull. It was not possible to deduce the exact location of the atlas from photographs supplied to the author, but it might be possible to do this from the original slide film.

An alternative scenario to explain the articulated nature of the mandible with the skull of BBAD 116 is that this was a skeletal head was buried with the mandible deliberately placed in its correct anatomical place.

It seems then that BBAD 116 had her head removed at or near the time of her death and that this head was then buried within a pit that was cut into an active (ie contemporary) ditch. Obviously, the question is how and at what point did her head become removed from her body? In common with BBAD 090, there was no osteological evidence of cut marks on any of the bones of BBAD 116. The atlas is not complete having lost its lamina, but this loss is consistent with poor preservation or postmortem damage. The atlas sits right underneath the skull and in documented decapitation burials the site of separation of the head from the body usually occurs lower down than this, at the C2-C5 level, and the upper one or two vertebrae are often found with the head (Harman *et.el.* 1981:160-1).

Apart from unusual burial circumstances, these two contexts have something else in common; their demographic assessment. Both BBAD 090 and 116 were prime to older adult women. The slight discrepancy in their age-at-death estimates, 27-49 years for BBAD 090 and 36-50 years for BBAD 116, can be explained as an artefact of the different ageing techniques used rather than a real difference in age. If this head and body were presented to an osteologist as a complete individual, there would be no reason to suspect that they did not came from the same person. This striking 'coincidence' did not go unnoticed by either the osteologist or archaeologist, could BBAD 116 be the head belonging to BBAD 090? From an osteological point of view, the match is very good on demographic grounds. However, the only way to be absolutely sure would be to match up two articulating bones from the two contexts. The only vertebra present in BBAD 116 is the atlas (C1), and the highest vertebra present in the spine of BBAD 090 is C6, between these two are 4 'missing' vertebrae and so it is not possible to securely match these two contexts up by osteological means.

Preliminary archaeological dating of these features puts BBAD 090 firmly in the Iron Age, and BBAD 116 possibly so. If the final dating of BBAD 116 remains in the Iron Age, the possibility that these two contexts originate from the same woman is strengthened.

The Iron Age in Britain, excepting the square barrows of East Yorkshire (Parker Pearson (1999:133), is rather short of the remains of dead people. Those that are identified tend to have unusual, and often suspicious, burial circumstances. For example the 'bog bodies' of Lindow and Worsley, or the grain silo burials at Danebury with bound wrists interpreted as part of cult-activity (Aldhouse Green 2001: 122 &132). The grain silo burials of Danebury offer another parallel in the form of

eight burials of complete or partial skulls (Aldhouse Green 2001:104). Iron Age Lincolnshire offers one other recovery of human material; the skull of an adult man with a sword cut was recovered from a votive deposit of Là Tene weapons from Fiskerton (*ibid.*). On the other hand if BBAD 116 proves to be Romano-British rather than Iron Age in date, she fits neatly into a tradition of decapitation burials focused in the midlands and south of England (Harman *et.el.* 1981).

Turning to the other contexts under study in this report, a variety of grave orientations, body attitudes and even method of disposal were recorded. 13 of these people were buried, and 1 was cremated (BBAD 093). Of the inhumations, the two youngest children, BBAD 219 (3-5 years) and BBAD 242 (1-3 years), were both crouch burials facing north in graves with an east-west orientation (head at the eastern end of the grave). A slightly older child, BBAD 607 (6-<13 years) appeared to have been a supine burial in a grave with an northwest-southeast orientation. Was this a distinction made through burial rites of their different ages? Among the older individuals, from teenage to older adult years, a variety of grave orientations and body attitudes was found. The teenager BBAD 645 (15-17 years) was probably buried in a coffin as evidenced by 16 coffin nails. Was this the only person to receive a coffin or has the burial environment robbed us of the evidence in other cases?

This variety in burial pattern and method, and the unusual nature of some of these burials has made this a very interesting skeletal collection to work on. There is great potential for further research once the archaeological evidence has been collated and interpreted. This report forms just part of the information needed to properly gain an insight into the people who used this space at Barnetby-le-Wold in Iron Age and Romano-British times.

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APPENDIX 8: Context Summary List

Context	Type	Relationship	Phase	Description
001	layer	above (002)	-	Topsoil
002	layer	below (001)	-	Colluvium
003	layer	-	-	Natural
004	layer	below (002)	I - IV	Alluvium
005	cut	contains (006), (012), (018), (308), (441)	VIII	ring gully
006	fill	fill of [005]	VIII	silting
007	cut	contains (008), (042), (055), (079)	II	linear ditch
008	fill	fill of [007]	II	silting
009	cut	contains (010), (011), (013), (014), (015), (019), (020), (130), (131), (364), (688)	VII	linear ditch
010	fill	fill of [009]	VII	silting
011	fill	fill of [009]	VII	silting
012	fill	fill of [005]	VIII	silting
013	fill	fill of [009]	VII	silting
014	fill	fill of [009]	VII	silting
015	fill	fill of [009]	VII	silting
016	cut	contains (017), (021), (024)	IV	ditch
017	fill	fill of [016]	IV	silting
018	fill	fill of [005]	VIII	silting
019	fill	fill of [009]	VII	silting
020	fill	fill of [009]	VII	silting
021	fill	fill of [016]	IV	silting
022	cut	contains (023), (031), (039), (244), (245)	III	ring gully
023	fill	fill of [022]	III	silting
024	fill	fill of [016]	IV	silting
025	cut	contains (026), (027)	?	post hole
026	fill	fill of [025]	?	silting
027	fill	fill of [025]	?	post packing
028	cut	contains (029), (036), (060), (084), (085), (128), (129), (569)	VIII	linear ditch
029	fill	fill of [028]	VIII	silting
030	void	-	-	-
031	fill	fill of [022]	III	silting
032	void	-	-	-
033	void	-	-	-
034	void	-	-	-
035	void	-	-	-
036	fill	fill of [028]	VIII	silting

037	cut	contains (038), (040)	VIII	linear ditch
038	fill	fill of [037]	VIII	silting
039	fill	fill of [022]	III	silting
040	fill	fill of [037]	VIII	silting
041	layer	below (002)	III	hollow
042	fill	fill of [007]	II	silting
043	fill	fill of [044]	IV	silting
044	cut	contains (043), (047)	IV	grain storage pit
045	fill	fill of (046)	I	silting
046	cut	contains (045), (050, (080)	I	linear ditch
047	fill	fill of [044]	IV	silting
048	fill	fill of [044]	IV	silting
049	void	-	-	-
050	fill	fill of [046]	I	silting
051	cut	contains (052), (237)	III	linear ditch
052	fill	fill of [051]	III	silting
053	void	-	-	-
054	fill	fill of [056]	IV	silting
055	fill	fill of [007]	II	silting
056	cut	contains (054), (057), (066), (155), (159)	IV	linear ditch
057	fill	fill of [056]	IV	silting
058	cut	contains (059), (157)	III	linear ditch
059	fill	fill of [058]	III	silting
060	fill	fill of [028]	VIII	silting
061	cut	contains (069), (070); same as [076]	VII	ring gully
062	fill	fill of [067]	VII	silting
063	fill	fill of [064]	VII	silting
064	cut	contains (063), (091), (092), (138)	VII	ditch
065	spread	below (002)	VII-VIII	industrial residue
066	fill	fill of [056]	IV	silting
067	cut	contains (062); same as [064]	VIII	ditch
068	void	-	-	-
069	fill	fill of [061]	V	silting
070	fill	fill of [061]	V	silting
071	void	-	-	-
072	cut	contains (074), (279), (348)	VIa	linear ditch
073	fill	fill of [789]	V	silting

074	fill	fill of [072]	VIa	silting
075	fill	within ditch [104]: discrete burnt deposit in pot	VI	dumped deposit
076	cut	contains (077), (078), (082), (125), (137), (263)	V	ring gully
077	fill	fill of [076]	V	silting
078	fill	fill of [076]	V	silting
079	fill	fill of [007]	II	silting
080	fill	fill of [046]	I	silting
081	void	-	-	-
082	fill	fill of [076]	V	silting
083	void	-	-	-
084	fill	fill of [028]	VIII	silting
085	fill	fill of [028]	VIII	silting
086	cut	contains (087), (236)	II	linear ditch
087	fill	fill of [086]	II	silting
088	cut	contains (089), (090)	I	grave cut
089	fill	fill of [088]	I	backfill
090	skeleton	contained by [088]	I	skeleton
091	fill	fill of [064]	VII	silting
092	fill	fill of [064]	VII	silting
093	cremation	fill of [094]	VIII	cremation
094	cut	contains (093)	VIII	cremation pit
095	cut	contains (096), (097)	VII	corndrier fire pit
096	fill	fill of [095]	VII	demolition deposit
097	fill	fill of [095]	VII	charcoal layer
098	cut	contains (099), (100)	I	linear ditch
099	fill	fill of [098]	I	silting
100	fill	fill of [098]	I	silting
101	fill	fill of [122]	VII	silting
102	fill	fill of [104]	VI	silting
103	fill	fill of [104]	VI	silting
104	cut	contains, (102), (103), (280), (283), (405)	VI	linear ditch
105	fill	fill of [106]	II	silting
106	cut	contains (105)	II	linear ditch
107	fill	fill of [108]	III	silting
108	cut	contains (107), (284)	III	linear ditch
109	fill	fill of [110]	II	silting
110	cut	contains (109)	II	linear ditch

111	fill	fill of [112]	?	silting
112	cut	contains (111)	?	pit
113	fill	fill of [114]	VI	silting
114	cut	contains (113)	VI	post hole
115	cut	contains (116), (117)	I	silting
116	skull	contained by [115]	I	skull
117	fill	fill of [115]	I	backfill
118	fill	fill of (120)	VII	silting
119	fill	fill of (120)	VII	silting
120	cut	contains (118), (119)	VII	stone spread
121	void	-	-	-
122	cut	contains (101)	VII	ditch
123	cut	contains (124)	III	linear ditch
124	fill	fill of [123]	III	silting
125	fill	fill of [076]	V	silting
126	fill	fill of [127]	VII	silting
127	cut	contains (126)	VII	linear ditch
128	fill	fill of [028]	VIII	silting
129	fill	fill of [028]	VIII	silting
130	fill	fill of [009]	VII	silting
131	fill	fill of [009]	VII	silting
132	void	-	-	-
133	cut	contains (134), (160), (265)	LIA	ring gully
134	fill	fill of [133]	LIA	silting
135	fill	fill of [136]	VI	silting
136	cut	contains (135)	VI	storage pit?
137	fill	fill of [137]	V	silting
138	fill	fill of [064]	VII	silting
139	layer	below (002); same as (065)	VII-VIII	industrial residue
140	cut	contains (141), (142), (143), (144), (145), (230 - 233)	IV	linear ditch
141	fill	fill of [140]	IV	silting
142	fill	fill of [140]	IV	silting
143	fill	fill of [140]	IV	silting
144	fill	fill of [140]	IV	silting
145	fill	fill of [140]	IV	silting
146	cut	contains (147), (148), (149), (150), (234), (235)	IV	linear ditch
147	fill	fill of [146]	IV	silting

148	fill	fill of [146]	IV	silting
149	fill	fill of [146]	IV	silting
150	fill	fill of [146]	IV	silting
151	fill	fill of [260]	VII	ash layer
152	fill	fill of [259]	VII	dumped deposit
153	fill	fill of [259]	VII	wall collapse
154	fill	fill of [259]	VII	wall collapse
155	fill	fill of [056]	IV	silting
156	void	-	-	-
157	fill	fill of [058]	III	silting
158	void	-	-	-
159	fill	fill of [056]	IV	silting
160	fill	fill of [133]	LIA	silting
161	structure	contains (162), (227)	VII	T-shaped corndrier
162	fill	fill of (161)	VII	charcoal deposit
163	cut	contains (164), (165); associated with T-shaped corndrier	VII	corndrier flue
164	fill	fill of [163]	VII	rake out
165	fill	fill of [163]	VII	silting
166	spread	cut by [167]	VII	clay pad
167	cut	contains (168); associated with T-shaped corndrier	VII	stake hole
168	fill	fill of [167]	VII	silting
169	spread	cut by [170]	VII	clay pad
170	cut	contains (171)	VII	stake hole
171	fill	fill of [170]	VII	silting
172	layer	below (002); same as (065)	VII-VIII	industrial residue
173	group	post holes [174] - [187]	VI	wooden fence line
174	cut	contains (188) and (189)	VI	post hole
175	cut	contains (190) and (191)	VI	post hole
176	cut	contains (192) and (193)	VI	post hole
177	cut	contains (194) and (195)	VI	post hole
178	cut	contains (196) and (197)	VI	post hole
179	cut	contains (198) and (199)	VI	post hole
180	cut	contains (200) and (201)	VI	post hole
181	cut	contains (202) and (203)	VI	post hole
182	cut	contains (204) and (205)	VI	post hole
183	cut	contains (206) and (207)	VI	post hole
184	cut	contains (208) and (209)	VI	post hole

185	cut	contains (210) and (211)	VI	post hole
186	cut	contains (212) and (213)	VI	post hole
187	cut	contains (214) and (215)	VI	post hole
188	fill	fill of [174]	VI	silting
189	fill	fill of [174]	VI	backfill
190	fill	fill of [175]	VI	silting
191	fill	fill of [175]	VI	backfill
192	fill	fill of [176]	VI	silting
193	fill	fill of [176]	VI	backfill
194	fill	fill of [177]	VI	silting
195	fill	fill of [177]	VI	backfill
196	fill	fill of [178]	VI	silting
197	fill	fill of [178]	VI	backfill
198	fill	fill of [179]	VI	silting
199	fill	fill of [179]	VI	backfill
200	fill	fill of [180]	VI	silting
201	fill	fill of [180]	VI	backfill
202	fill	fill of [181]	VI	silting
203	fill	fill of [181]	VI	backfill
204	fill	fill of [182]	VI	silting
205	fill	fill of [182]	VI	backfill
206	fill	fill of [183]	VI	silting
207	fill	fill of [183]	VI	backfill
208	fill	fill of [184]	VI	silting
209	fill	fill of [184]	VI	backfill
210	fill	fill of [185]	VI	silting
211	fill	fill of [185]	VI	backfill
212	fill	fill of [186]	VI	silting
213	fill	fill of [186]	VI	backfill
214	fill	fill of [187]	VI	silting
215	fill	fill of [187]	VI	backfill
216	cut	contains (217)	VII	ring gully
217	fill	fill of [216]	VII	silting
218	fill	fill of [220]	VII	backfill
219	skeleton	contained by [220]	VII	skeleton
220	cut	contains (218), (219)	VII	grave cut
221	fill	fill of [223]	VII	silting

222	fill	fill of [223]	VII	backfill
223	cut	contains (221), (222)	VII	post hole
224	fill	fill of [226]	?VI	silting
225	fill	fill of [226]	?VI	backfill
226	cut	contains (224), (225)	?VI	post hole
227	fill	fill of (161)	VII	silting
228	cut	contains (229); associated with T-shaped corndrier	VII	pit
229	fill	fill of [228]	VII	silting
230	fill	fill of [140]	IV	silting
231	fill	fill of [140]	IV	silting
232	fill	fill of [140]	IV	silting
233	fill	fill of [140]	IV	silting
234	fill	fill of [146]	IV	silting
235	fill	fill of [146]	IV	silting
236	fill	fill of [086]	II	silting
237	fill	fill of [051]	III	silting
238	void	-	-	-
239	void	-	-	-
240	void	-	-	-
241	fill	fill of [243]	VII	backfill
242	skeleton	contained by [243]	VII	skeleton
243	cut	contains (241), (242)	VII	grave cut
244	fill	fill of [022]	III	silting
245	fill	fill of [022]	III	silting
246	cut	contains (247), (248)	II	linear ditch
247	fill	fill of [246]	II	silting
248	fill	fill of [246]	II	silting
249	cut	contains (250)	VII	pit
250	fill	fill of [249]	VII	silting
251	fill	fill of [254]	?	silting
252	fill	fill of [254]	?	silting
253	fill	fill of [254]	?	post packing
254	cut	contains (251), (252), (253)	?	post hole
255	fill	fill of [256]	VII	silting
256	cut	contains (255), (301), (432), (577)	VII	linear ditch
257	fill	fill of [258]	pre-VI	silting
258	cut	contains (257)	pre-VI	linear ditch

259	cut	contains (152), (153), (154), (306), (309), (310), (311)	VII	corn drier
260	cut	contains (151), (269), (281), (302), (426-30), (434-9), (442-6), (453-5), (499)	VII	corn drier flue
261	spread	below (002)	VII	burnt deposit
262	spread	below (261)	VII	demolition deposit
263	fill	fill of [076]	V	silting
264	fill	fill of [276]	VII	silting
265	fill	fill of [133]	LIA	silting
266	cut	contains (267), (268)	LIA	pit
267	fill	fill of [266]	LIA	silting
268	fill	fill of [266]	LIA	backfill
269	fill	fill of [260]	VII	silting
270	cut	contains (271), (272)	V	post hole
271	fill	fill of [270]	V	backfill
272	fill	fill of [270]	V	silting
273	cut	contains (275), (282)	V	linear ditch
274	fill	fill of [731]	V	silting
275	fill	fill of [273]	VI	silting
276	cut	contains (264); same as [009]	VII	linear ditch
277	void	-	-	-
278	void	-	-	-
279	fill	fill of [072]	Via	silting
280	fill	fill of [104]	VI	silting
281	fill	fill of [260]	VII	silting
282	fill	fill of [273]	VI	silting
283	fill	fill of [104]	VI	silting
284	fill	fill of [108]	III	silting
285	cut	contains (286)	?	post hole
286	fill	fill of [285]	?	silting
287	cut	contains (288)	?	post hole
288	fill	fill of [287]	?	silting
289	cut	contains (346), (370), (371), (496), (576)	V	ditch
290	cut	contains (291), (300), (431)	III	linear ditch
291	fill	fill of [290]	III	silting
292	cut	contains (293)	?	linear ditch
293	fill	fill of [292]	?	silting
294	cut	contains (295), (347), (398), (418)	V	linear ditch
295	fill	fill of [294]	V	silting

296	cut	contains (297)	?	linear ditch
297	fill	fill of (296)	?	silting
298	cut	contains (299), (328)	post-III	linear ditch
299	fill	fill of [298]	post-III	silting
300	fill	fill of [290]	II	silting
301	fill	fill of [256]	VII	silting
302	fill	fill of [260]	VII	silting
303	cut	contains (304); associated with cordrier [259]	VII	pit
304	fill	fill of [303]	VII	silting
305	spread	below (002); from corndrier flue [260]	VII	rake out
306	fill	fill of [259]	VII	dumped deposit
307	void	-	-	-
308	fill	fill of [005]	VIII	silting
309	fill	fill of [259]	VII	dumped deposit
310	fill	fill of [259]	VII	demolition deposit
311	fill	fill of [259]	VII	bonding material
312	cut	contains (313), (549), (706)	VI	linear ditch
313	fill	fill of [312]	VI	silting
314	cut	contains (315)	-	natural hollow
315	fill	fill of [314]	-	silting
316	cut	contains (317)	-	natural hollow
317	fill	fill of [316]	-	silting
318	cut	contains (319), (320)	-	natural hollow
319	fill	fill of [318]	-	silting
320	fill	fill of [318]	-	silting
321	cut	contains (323), (326)	VI	linear ditch
322	cut	contains (327), (463)	II	linear ditch
323	fill	fill of [321]	VI	silting
324	fill	fill of [325]	post-III	silting
325	cut	contains (324); same as [298]	post-III	linear ditch
326	fill	fill of [321]	VI	silting
327	fill	fill of [322]	II	silting
328	fill	fill of [298]	post-III	silting
329	fill	fill of [330]	IV	silting
330	cut	contains (329), (365), (381), (382)	IV	linear ditch
331	fill	fill of [332]	VIa	silting
332	cut	contains (331)	VIa	linear ditch

333	fill	fill of [334]	VII	silting
334	cut	contains (333)	VII	linear ditch
335	fill	fill of [336]	pre-VII	silting
336	cut	contains (335)	pre-VII	post hole
337	cut	contains (389), (399)	I	linear ditch
338	cut	contains (339), (493)	VII	linear ditch
339	fill	fill of [338]	VII	silting
340	cut	contains (341)	pre-VII	pit
341	fill	fill of [340]	pre-VII	silting
342	fill	fill of [404]	VII	silting
343	cut	contains (344), (345)	IV	linear ditch
344	fill	fill of [343]	IV	silting
345	fill	fill of [343]	IV	silting
346	fill	fill of [289]	VIa	silting
347	fill	fill of [294]	V	silting
348	fill	fill of [072]	VIa	silting
349	cut	contains (350)	V	linear ditch
350	fill	fill of [349]	V	silting
351	cut	contains (352), (353), (355)	pre-VII	gully
352	fill	fill of [351]	pre-VII	silting
353	fill	fill of [351]	pre-VII	silting
354	cut	contains (368)	pre-VI	pit
355	fill	fill of [351]	pre-VII	silting
356	cut	contains (357)	?	post hole
357	fill	fill of [356]	?	silting
358	fill	fill of [359]	III	silting
359	cut	contains (358), (633)	III	linear ditch
360	fill	fill of [361]	pre-II	silting
361	cut	contains (360)	pre-II	natural hollow
362	void	-	-	-
363	void	-	-	-
364	fill	fill of [009]	VII	silting
365	fill	fill of [330]	IV	silting
366	fill	fill of [367]	IV	silting
367	cut	contains (366)	IV	linear ditch
368	fill	fill of [354]	pre-VI	silting
369	layer	below (002); same as (065)	VII	industrial residue

370	fill	fill of [289]	VIa	silting
371	fill	fill of [289]	VIa	silting
372	fill	fill of [374]	?	silting
373	fill	fill of [374]	?	silting
374	cut	contains (372), (373)	?	hollow
375	fill	fill of [377]	pre-VII	silting
376	fill	fill of [377]	pre-VII	silting
377	cut	contains (375), (376)	pre-VII	hollow
378	fill	fill of [379]	?	silting
379	cut	contains (378)	?	natural hollow
380	void	-	-	-
381	fill	fill of [330]	IV	silting
382	fill	fill of [330]	IV	silting
383	void	-	-	-
384	fill	fill of [386]	pre-VI	silting
385	fill	fill of [386]	pre-VI	silting
386	cut	contains (384), (385), (495)	pre-VI	linear ditch
387	cut	contains (388)	pre-I	pit
388	fill	fill of [387]	pre-I	silting
389	fill	fill of [337]	I	silting
390	cut	contains (391); same as [337]	I	gully
391	fill	fill of [390]	I	silting
392	cut	contains (393)	VII	post hole
393	fill	fill of [392]	VII	silting
394	cut	contains (395)	VII	post hole
395	fill	fill of [394]	VII	silting
396	cut	contains (397)	VII	post hole
397	fill	fill of [396]	VII	silting
398	fill	fill of (294)	V	silting
399	fill	fill of [337]	I	silting
400	cut	contains (401)	pre-VII	linear ditch
401	fill	fill of [400]	pre-VII	silting
402	cut	contains (403)	VII	pit
403	fill	fill of [402]	VII	backfill
404	cut	contains (342), (466), (492), (532-4), (566), (567)	VII	enclosure ditch
405	fill	fill of [104]	VI	silting
406	fill	fill of [407]	?	silting

407	cut	contains (406)	?	gully
408	fill	fill of [409]	pre-VI	silting
409	cut	contains (408)	pre-VI	gully
410	fill	fill of [411]	pre-VI	silting
411	cut	contains (410); same as [258]/[292]	pre-VI	gully
412	fill	fill of [413]	pre-VI	silting
413	cut	contains (412)	pre-VI	gully
414	fill	fill of [415]	VII	silting
415	cut	contains (414); same as [122]	VII	gully
416	cut	contains (417), (462), (467)	VII	linear ditch
417	fill	fill of [416]	VII	silting
418	fill	fill of [294]	V	silting
419	fill	fill of [515]	IV	silting
420	fill	fill of [421]	pre-IV	silting
421	cut	contains (420)	pre-IV	post hole
422	fill	fill of [423]	LIA	silting
423	cut	contains (422)	LIA	gully
424	fill	fill of [425]	VII	silting
425	cut	contains (424)	VII	post hole
426	fill	fill of [260]	VII	ash deposit
427	fill	fill of [260]	VII	redeposited natural
428	fill	fill of [260]	VII	ash deposit
429	fill	fill of [260]	VII	bonding material
430	fill	fill of [260]	VII	burnt deposit
431	fill	fill of [290]	III	silting
432	fill	fill of [256]	VII	silting
433	layer	below (269)	VII	burnt natural
434	fill	fill of [260]	VII	burnt deposit
435	fill	fill of [260]	VII	alluvial deposit?
436	fill	fill of [260]	VII	burnt deposit
437	fill	fill of [260]	VII	burnt deposit
438	fill	fill of [260]	VII	burnt deposit
439	fill	fill of [260]	VII	burnt deposit
440	void	-	-	-
441	fill	fill of [005]	VIII	slumping
442	fill	fill of [260]	VII	bonding material?
443	fill	fill of [260]	VII	silting

444	fill	fill of [260]
445	fill	fill of [260]
446	fill	fill of [260]
447	fill	fill of [448]
448	cut	contains (447)
449	fill	fill of [450]
450	cut	contains (449)
451	fill	fill of [452]
452	cut	contains (451)
453	fill	fill of [260]
454	fill	fill of [260]
455	fill	fill of [260]
456	cut	contains (457)
457	fill	fill of [456]
458	cut	contains (459)
459	fill	fill of [458]
460	cut	contains (461)
461	fill	fill of [460]
462	fill	fill of [416]
463	fill	fill of [322]
464	cut	contains (465)
465	fill	fill of [464]
466	fill	fill of [404]
467	fill	fill of [416]
468	cut	contains (469)
469	fill	fill of [468]
470	fill	fill of [471]
471	cut	contains (470)
472	fill	fill of [473]
473	cut	contains (472)
474	cut	contains (475), (687)
475	fill	fill of [474]
476	cut	contains (477)
477	fill	fill of [476]
478	void	-
479	void	-
480	fill	fill of [481]

VII	slumping
VII	burnt deposit
VII	burnt deposit
?	silting
?	post hole
post-VI	silting
post-VI	linear ditch
post-VI	silting
post-VI	linear ditch
VII	silting
VII	burnt deposit
VII	silting
?	hollow
?	silting
pre-VII	gully
pre-VII	silting
IV	gully
IV	silting
VII	silting
II	silting
?	pit
?	silting
VII	silting
VII	silting
VII	post hole
VII	silting
VII	silting
VII	pit
LIA	silting
LIA	gully
II	linear ditch
II	silting
I	linear ditch
I	silting
-	-
-	-
pre-VI	silting

481	cut	contains (480)	pre-VI	curvilinear gully
482	fill	fill of [483]	pre-VI	silting
483	cut	contains (482)	pre-VI	curvilinear gully
484	cut	contains (487)	VII	pit
485	cut	contains (488)	VII	pit
486	cut	contains (489)	VII	pit
487	fill	fill of [484]	VII	silting
488	fill	fill of [485]	VII	silting
489	fill	fill of [486]	VII	silting
490	cut	contains (491), (494), (535)	VII	gully
491	fill	fill of [490]	VII	silting
492	fill	fill of [404]	VII	silting
493	fill	fill of [338]	VII	silting
494	fill	fill of [490]	VII	silting
495	fill	fill of [386]	pre-VI	silting
496	fill	fill of [289]	VIa	silting
497	cut	contains (498)	VI	linear ditch
498	fill	fill of [497]	VI	silting
499	fill	fill of [260]	VII	silting
500	cut	contains (501)	III	ditch
501	fill	fill of [500]	III	silting
502	cut	contains (503), (504), (505)	pre-V	ditch
503	fill	fill of [502]	pre-V	backfill
504	fill	fill of [502]	pre-V	backfill
505	fill	fill of [502]	pre-V	backfill
506	cut	contains (507), (717)	V	gully
507	fill	fill of [506]	V	silting
508	void	-	-	-
509	void	-	-	-
510	fill	fill of [511]	IV	silting
511	cut	contains (510)	IV	linear ditch
512	fill	fill of (513)	IV	silting
513	cut	contains (512), (675)	IV	gully
514	void	-	-	-
515	cut	contains (419), (516), (517)	IV	linear ditch
516	fill	fill of [515]	IV	silting
517	fill	fill of [515]	IV	silting

518	cut	contains (519)	-	natural feature
519	fill	fill of [518]	-	silting
520	cut	contains (522)	post-VI	linear ditch
521	fill	fill of [594]	cut	silting
522	fill	fill of [520]	post-VI	silting
523	layer	below (002)	VIII	alluvial deposit
524	cut	contains (525), (526), (527)	VII	post hole
525	fill	fill of [524]	VII	backfill
526	fill	fill of [524]	VII	post packing
527	fill	fill of [524]	VII	silting
528	cut	contains (529)	pre-VII	curvilinear ditch
529	fill	fill of [528]	pre-VII	silting
530	cut	contains (531), (568)	VII	gully
531	fill	fill of [530]	VII	silting
532	fill	fill of [404]	VII	silting
533	fill	fill of [404]	VII	slumping/backfill
534	fill	fill of [404]	VII	silting
535	fill	fill of [490]	VII	silting
536	cut	contains (732); same as (009)/(289)	VII	rectilinear ditch
537	void	-	-	-
538	fill	fill of [539]	II	backfill
539	cut	contains (538)	II	pit
540	fill	fill of [541]	II	backfill
541	cut	contains (540)	II	pit
542	fill	fill of [543]	II	backfill
543	cut	contains (542)	II	pit
544	fill	fill of (546)	-	silting
545	fill	fill of (546)	-	silting
546	cut	contains (544), (545)	-	natural feature
547	cut	contains (548)	?	gully
548	fill	fill of [547]	?	silting
549	fill	fill of [312]	VI	silting
550	cut	contains (551), (552), (660)	V	linear ditch
551	fill	fill of [550]	V	silting
552	fill	fill of [788]	pre-V	silting
553	cut	contains (554), (733), (734)	V	linear ditch
554	fill	fill of [553]	V	silting

555	cut	contains (556), (721)	II	linear ditch
556	fill	fill of [555]	II	silting
557	cut	contains (561), (562), (579-81)	VII	fire pit
558	fill	fill of [560]	VII	backfill
559	skeleton	contained by [560]	VII	
560	cut	contains (558), (559)	VII	grave cut
561	fill	fill of [557]	VII	burnt deposit
562	fill	fill of [557]	VII	silting
563	fill	fill of [565]	-	silting
564	fill	fill of [565]	-	silting
565	cut	contains (563), (564)	-	natural feature
566	fill	fill of [404]	VII	silting
567	fill	fill of [404]	VII	silting
568	fill	fill of [530]	VII	silting
569	fill	fill of [028]	VIII	silting
570	fill	fill of [658]	V	silting
571	cut	contains (572), (621), (674)	III	gully
572	fill	fill of [571]	III	silting
573	fill	fill of [575]	VII	silting
574	skeleton	contained by [575]	VII	
575	cut	contains (573), (574)	VII	grave cut
576	fill	fill of [289]	VIa	silting
577	fill	fill of [256]	VII	silting
578	layer	below (002)	V	alluvial deposit
579	fill	fill of [557]	VII	silting
580	fill	fill of [557]	VII	silting
581	fill	fill of [557]	VII	silting
582	void	-	-	-
583	void	-	-	-
584	layer	below (002)	-	natural
585	fill	fill of [605]	V	silting
586	layer	below (002)	VI	colluvium
587	fill	fill of [657]	VII	silting
588	fill	fill of [657]	VII	silting
589	fill	fill of [657]	VII	silting
590	fill	fill of [656]	IV	silting
591	fill	fill of [656]	IV	silting

592	fill	fill of [656]	IV	silting
593	fill	fill of [656]	IV	silting
594	cut	contains (521)	-	natural feature
595	fill	fill of [596]	-	silting
596	cut	contains (595)	-	natural feature
597	fill	fill of [598]	-	silting
598	cut	contains (597)	-	natural feature
599	fill	fill of [600]	?	silting
600	cut	contains (599)	?	linear ditch
601	fill	fill of [602]	-	silting
602	cut	contains (601)	-	natural feature
603	void	-	-	-
604	void	-	-	-
605	cut	contains (585)	V	linear ditch
606	fill	fill of [608]	VII	backfill
607	skeleton	contained by [608]	VII	
608	cut	contains (606), (607)	VII	grave cut
609	cut	contains (610)	II	pit
610	fill	fill of [609]	II	silting
611	cut	contains (612)	II	pit
612	fill	fill of [611]	II	silting
613	cut	contains (614) - MISSING FROM PLAN	I-IV	pit
614	fill	fill of [613]	I-IV	burnt deposit
615	void	-	-	-
616	skeleton	contained by [617]	VII	skeleton
617	cut	contains (616), (618)	VII	grave cut
618	fill	fill of [617]	VII	backfill
619	cut	contains (620)	IV	linear ditch
620	fill	fill of [619]	IV	silting
621	fill	fill of [571]	III	silting
622	cut	contains (623), (624)	VII	grave cut
623	skeleton	contained by [622]	VII	skeleton
624	fill	fill of [622]	VII	backfill
625	cut	contains (626), (627)	VII	grave cut
626	skeleton	contained by [625]	VII	skeleton
627	fill	fill of [625]	VII	backfill
628	cut	contains (661-3)	?	post hole

629	cut	contains (664-6)	?	post hole
630	cut	contains (672)	-	animal burrow?
631	cut	contains (673)	-	animal burrow?
632	cut	contains (670), (671)	?	post hole
633	fill	fill of [359]	III	silting
634	skeleton	contained by [635]	VII	skeleton
635	cut	contains (634), (636)	VII	grave cut
636	fill	fill of [635]	VII	backfill
637	skeleton	contained by [639]	VII	skeleton
638	fill	fill of (639)	VII	backfill
639	cut	contains (637), (638)	VII	grave cut
640	skeleton	contained by [642]	VII	skeleton
641	fill	fill of (642)	VII	backfill
642	cut	contains (640), (641)	VII	grave cut
643	cut	contains (644)	V-VIII	fire pit
644	fill	fill of [643]	V-VIII	burnt deposit
645	skeleton	contained by [677]	VII	skeleton
646	skeleton	contained by [647]	VII	skeleton
647	cut	contains (646), (648)	VII	grave cut
648	fill	fill of [647]	VII	backfill
649	layer	above (650); same as (001)	-	topsoil
650	layer	below (649); same as (002)	-	subsoil
651	layer	below (650)	pre-VII	alluvial deposit
652	cut	contains (653); same as [216]	VII	gully
653	fill	fill of [652]	VII	silting
654	cut	contains (655); same as [127]	VII	gully
655	fill	fill of [654]	VII	alluvium
656	cut	contains (590-3), (787)	IV	linear ditch
657	cut	contains (587), (588), (589)	VII	linear ditch
658	cut	contains (570), (659), (718-720)	V	ditch recut
659	fill	fill of [658]	V	silting
660	fill	fill of [550]	V	silting
661	fill	fill of [628]	?	silting
662	fill	fill of [628]	?	backfill
663	fill	fill of [628]	?	backfill
664	fill	fill of [629]	?	silting
665	fill	fill of [629]	?	backfill

666	fill	fill of [629]	?	backfill
667	fill	fill of [669]	-	-
668	fill	fill of [669]	-	-
669	cut	contains (667), (668)	-	animal burrowing
670	fill	fill of [632]	?	silting
671	fill	fill of [632]	?	silting
672	fill	fill of [630]	-	-
673	fill	fill of [631]	-	-
674	fill	fill of [571]	III	silting
675	fill	fill of [513]	IV	silting
676	fill	fill of [677]	VII	backfill
677	cut	contains (645), (676)	VII	grave cut
678	fill	fill of [681]	VIII	silting
679	void	-	-	-
680	fill	fill of [681]	VIII	silting
681	cut	contains (678), (680), (689), (767)	VIII	curvilinear gully
682	fill	fill of [683]	?	silting
683	cut	contains (682)	?	gully
684	cut	contains (701)	-	natural hollow
685	cut	contains (686)	?	pit
686	fill	fill of [685]	?	burnt deposit
687	fill	fill of [474]	II	silting
688	fill	fill of [009]	VII	silting
689	fill	fill of [681]	VIII	silting
690	void	-	-	-
691	void	-	-	-
692	fill	fill of [693]	pre-VII	silting
693	cut	contains (692)	pre-VII	gully
694	cut	contains (713), (714)	II	linear ditch
695	cut	contains (710), (711), (712)	II	linear ditch
696	cut	contains (786)	IV	gully
697	cut	contains (785)	IV	linear ditch
698	cut	contains (702)	?	gully
699	cut	contains (700)	IV	grain storage pit
700	fill	fill of [699]	IV	silting
701	fill	fill of [684]	-	alluvium
702	fill	fill of [698]	?	silting

703	cut	contains (707)	V	gully
704	cut	contains (709)	III	linear ditch
705	cut	contains (708)	III	gully
706	fill	fill of [312]	VI	silting
707	fill	fill of [703]	V	silting
708	fill	fill of [705]	III	silting
709	fill	fill of [704]	III	silting
710	fill	fill of [695]	II	silting
711	fill	fill of [695]	II	silting
712	fill	fill of [695]	II	slumping
713	fill	fill of [694]	II	silting
714	fill	fill of [694]	II	slumping
715	fill	fill of [716]	pre-IV	silting
716	cut	contains (715)	pre-IV	pit
717	fill	fill of [506]	V	silting
718	fill	fill of [658]	V	silting
719	fill	fill of [658]	V	silting
720	fill	fill of [658]	V	silting
721	fill	fill of [555]	II	silting
722	cut	contains (723), (724)	II	gully
723	fill	fill of [722]	II	silting
724	fill	fill of [722]	II	silting
725	cut	contains (726)	II	gully
726	fill	fill of [725]	II	silting
727	fill	fill of [728]	III	silting
728	cut	contains (727)	III	linear ditch
729	fill	fill of [730]	III	silting
730	cut	contains (729)	III	linear ditch
731	cut	contains (274)	V	linear ditch
732	fill	fill of [536]	VII	silting
733	fill	fill of [553]	V	silting
734	fill	fill of [553]	V	silting
735	fill	fill of [736]	III	silting
736	cut	contains (735), (737)	III	linear ditch
737	fill	fill of [736]	III	silting
738	void	-	-	-
739	cut	contains (740)	VI	post hole

740	fill	fill of [739]	VI	silting
741	cut	contains (742)	VI	post hole
742	fill	fill of [741]	VI	silting
743	cut	contains (744)	VI	post hole
744	fill	fill of [743]	VI	silting
745	cut	contains (746)	VI	post hole
746	fill	fill of [745]	VI	silting
747	cut	contains (748)	VI	post hole
748	fill	fill of [747]	VI	silting
749	cut	contains (750)	VI	post hole
750	fill	fill of [749]	VI	silting
751	cut	contains (752)	VI	post hole
752	fill	fill of [751]	VI	silting
753	cut	contains (754)	VI	post hole
754	fill	fill of [753]	VI	silting
755	cut	contains (756)	VI	post hole
756	fill	fill of [755]	VI	silting
757	cut	contains (758)	VI	post hole
758	fill	fill of [757]	VI	silting
759	cut	contains (760)	VI	post hole
760	fill	fill of [759]	VI	silting
761	cut	contains (762)	VI	post hole
762	fill	fill of [761]	VI	silting
763	cut	contains (764)	I	gully
764	fill	fill of [763]	I	silting
765	cut	contains (766)	VI	gully
766	fill	fill of [765]	VI	silting
767	fill	fill of [681]	VIII	burnt deposit
768	fill	fill of [769]	?	silting
769	cut	contains (768)	?	post hole
770	fill	fill of [771]	?	silting
771	cut	contains (770)	?	post hole
772	fill	fill of [773]	?	silting
773	cut	contains (772)	?	post hole
774	fill	fill of [775]	-	silting
775	cut	contains (774) - MISSING	-	curvilinear gully
776	void	-	-	-

777	void	-	-	-
778	cut	contains (779), (780)	?	gully
779	fill	fill of [778]	?	silting
780	fill	fill of [778]	?	silting
781	cut	contains (782), (783), (784); part of T-shaped corndrier	VII	construction cut
782	fill	fill of [781]	VII	stone flue
783	fill	fill of [781]	VII	charcoal deposit
784	fill	fill of [781]	VII	clay packing
785	fill	fill of [697]	IV	silting
786	fill	fill of [696]	IV	silting
787	fill	fill of [656]	IV	silting
788	cut	contains (552)	pre-V	posthole/pit
789	cut	contains (073)	V	silting
790	void	-	-	-
791	layer	below (002)	?	stone spread
792	cut	contains (793)	?	?pit
793	fill	fill of [792]	?	silting