Baston, No.1 Quarry, Lincolnshire North Extension

An Archaeological Excavation

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Baston Quarry No.1, Lincolnshire
An Archaeological Investigation

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NON-TECHNICAL SUMMARY

Four phases of archaeological investigations conducted by the Cambridge Archaeological Unit at Baston No.1 Quarry in south Lincolnshire during 2014-15 revealed considerable activity dating from the Early Bronze Age to the Early Iron Age. The investigation area covered 148,643sqm (14.8ha).

No pre-Early Bronze Age activity was identified. Associated with Collard Urn pottery, Early Bronze Age pits and postholes were found across a linear swathe of features. Two small post-defined structures were assigned to this phase, with one bearing sherds of Collard Urn pottery. A large oval palisaded enclosure was also assigned to this phase on account of a provisional radiocarbon determination from a charcoal sample dated to the sixteenth century BC. This date may be aligned with the latest use of Collard Urn, and the architecture of the palisade is unparalleled for this period. Its use, whilst not beyond question, may be connected to ceremonial and funerary activities.

The landscape usage was fundamentally realigned during the Middle Bronze Age with Deverel-Rimbury ware being the dominant potting tradition. This comprised extensive coaxial ditched field boundaries superseded by a larger series of interrupted ditches in a curvilinear system. Although perhaps first established with the coaxial field system, the curvilinear ditched system was diverted around an existing ring ditch and cremation cemetery, affording a stand-off in excess of 140m. The south side of this was formed of a droveway. To the east of this, on the landscape's fen-side, were at least twelve post-defined circular and rectangular structures – two with adjoining fencelines – with additional four- and six- post structures. In association with these, though not always in direct proximity, were pits and postholes with a number of large pit wells. The latter of these contained waterlogged deposits that included worked timbers. Three clusters of features were each arranged around what may be regarded as 'working areas', within which material deposits included burnt stone, animal bone and briquetage. Three pairs of linear pits or 'tanks' may have been used in processes of salt production and retting. A single crouched human burial was recorded, with three cow burials, although the dating of these is unconfirmed.

Post-Deverel-Rimbury pottery was recovered from upper fills of only a few earlier features, with just one small pit securely assigned to this *later* Bronze Age phase. The Middle Bronze Age field system may still have existed via hedgerows, but increased saline conditions appear to have attracted less direct activity than in previous phases.

Post-Medieval features represent the only post-Bronze Age activity; these relating to an agricultural landscape.

ACKNOWLEDGEMENTS

The project was commissioned by Phoenix Consultancy on behalf of Hanson Aggregates PLC, for which thanks are respectively directed in particular to Gary Coates and Hilton Law. The project's development control was overseen and monitored by Beryl Lott (Historic Environment Officer for the Planning Department of Lincolnshire County Council), and Alison Dickens was the CAU's Project Manager. The fieldwork commenced in four stages with differing field teams. Area A was overseen by Shannon Hogan with Lizzie Middleton; Area B was overseen by Marcus Brittain and Lizzie Middleton with Robert Barratt and Chris Wakefield; Area C was directed by Marcus Brittain with Paul Bockley, Tim Lewis, Maria Gale, Simon Timberlake and Steve Thompson; and investigation of Area D was conducted by Leanne Robinson Zeki with Ali Doughty, Danielle Hill, Tim Lewis, Sabrina Salmon and Alasdair Wright. The site was surveyed by Donald Horne and Tim Lewis and the report graphics were produced by Bryan Crossan and Jane Matthews with studio photography by Dave Webb. We are grateful to Keith Haylock of the Geography Department, University of Aberystwyth, for facilitating the pXRF analysis reported in the appendices.

INTRODUCTION

Archaeological investigations by the Cambridge Archaeological Unit (CAU) were commissioned by Phoenix Consultancy on behalf of Hanson Aggregates PLC at the Baston No.1 Quarry in south Lincolnshire. Totalling 148,643sqm (14.8ha), the project comprises four areas (A-D) investigated in four separate stages of works to address a condition placed upon planning consent for the quarry's northern extension. Areas A and B were monitored as watching briefs respectively during January to February and June to July 2014; Area C was subject to a strip, map and record exercise between October 23-10 December 2014, taking into account the expected higher densities of archaeological features in the west half of the investigation area; in light of the results retrieved from Area C a second phase of strip, map and recording was conducted in Area D to the south between September 16-18 December 2015.

As outlined in the following, the results from the 2014-15 investigations document a considerable and mainly prehistoric landscape, the core of which is attributed to the Middle Bronze Age preceded by an earlier Bronze Age phase; activity of the Late Bronze–Early Iron Age is also visible, although to a notably minor degree. The archaeological significance of the broader environs around the investigation area has been highlighted in a number of major surveys (e.g. RCHME 1960, Hayes and Lane 1992), and holds potential for an important contribution to current East Midlands research agendas (Cooper 2006, Knight *et al*. 2012). The national and international importance of the CAU's investigations across the Baston/Langtoft landscape has recently been outlined (Brittain 2015a, 2016; Evans 2015, Evans *et al*. 2015), and to which the results presented here are a valuable addition.

Location, Topography, Geology

Baston No.1 Quarry is situated *c*. 4.5km due north of the town of Market Deeping and 1.5km east of the centre of Baston village at NGR TF137154 (Figure 1). The investigation area was bounded to the north by Baston Outgang Road and by Cross Road to the west, and it was bisected from the northwest to the southeast by an active drainage ditch, the earliest depictions of which are in First Edition nineteenth century OS maps. The elevation of the investigation area declined from 1.8m OD in the east to 0.5m OD at the west. Land either side of the drain had been subject to differing agricultural practices in the past few centuries, which may account for the drop in the land profile on the east side of the drain.

More broadly, the investigation area lies some 30km southwest of the shores of the Wash and is set upon the humose skirtland of the fen at the junction between First Terrace sand and gravel deposits and remnant peats that overly Oxford Clay. Furthermore, the investigation area is positioned between the River Welland 7.5km to the south and the River Glen 1.5km to the north. The sediment character of these rivers differs in light of their source, the Glen originating from Lincolnshire clays and limestone with comparatively little sediment wash compared with the Welland that, being traditionally highly sedimented, flows from an area underlain by Northampton sand and sandstone. It was through the outwash of the River Glen and its tributary by which the First Terrace deposits primarily derived (Booth 1983: 8),

and this extends north of Market Deeping as a wide plain, shelving down into Thurlby and Bourne Fens where the pre-Flandrian surface is weathered till (Hayes and Lane 1992). The uppermost metre of the First Terrace deposits is often found to be iron-cemented, forming a solid mass that one nineteenth century description observed that gunpowder was required to break it up (Skertchly 1877: 186-7); this cemented mass was encountered as discontinuous pockets over the whole of the current investigation area, interspersed by softer sands and loose gravel. In 2009 and 2012 a thin and patchy peat band or 'ponding' was registered on the northeast edge of the investigation area's bunded perimeter stand-off (Hutton 2009; Brittain 2012); this did not extend further westward into Areas A or B, but nonetheless represents one stage in a succession of marine transgressions and regressions that have been documented to the north and south of Deeping Fen (Shennan 1986a, 1986b, 1994; Shennan and Alderton 1994), and which will be referred to in more detail in the Discussion below.

Methodology

The work followed specifications previously outlined by the CAU in accordance with a Design Brief for archaeological evaluation issued by the office of Conservation Services at the Lincolnshire County Council. The excavation covered an area of 103,338sqm (10.3ha). Topsoil was removed down to exposed archaeological deposits by a tracked 360° machine using a 2.0m wide toothless bucket. Work was undertaken in accordance with statutory Health and Safety guidelines and a CAU risk assessment detailed under the recommendations of SCAUM (Allen and Holt 2007). All archaeological features and deposits were excavated by hand and recorded using the CAU modified version of the MoLAS recording system (Spence 1994) with all excavated stratigraphic events assigned feature numbers (F.#) and all contexts assigned individual numbers ([context #]). Features/feature groups were hand excavated, with discrete features being half-sectioned (50% excavated), and where possible in some cases being excavated to 100% for the maximum retrieval of material assemblages. Linear features were excavated in at least 1.0m-long slots. All features were digitally photographed with an appropriate scale, and the sections of features were drawn at 1:10. Features were planned at a scale of 1:50 against an arbitrary 10m grid that along with the development area was fixed to the Ordnance Survey (OS) grid with a Global Positioning System (GPS) during which a contour survey was also undertaken. Soil samples of 5-60 litres were collected from selected features for wet-sieve floatation processing back at the offices of the CAU, with kubiena and column samples obtained and archived for laboratory analysis. Progress of the evaluation was monitored by the Historic Environment Officer of the Lincolnshire County Council.

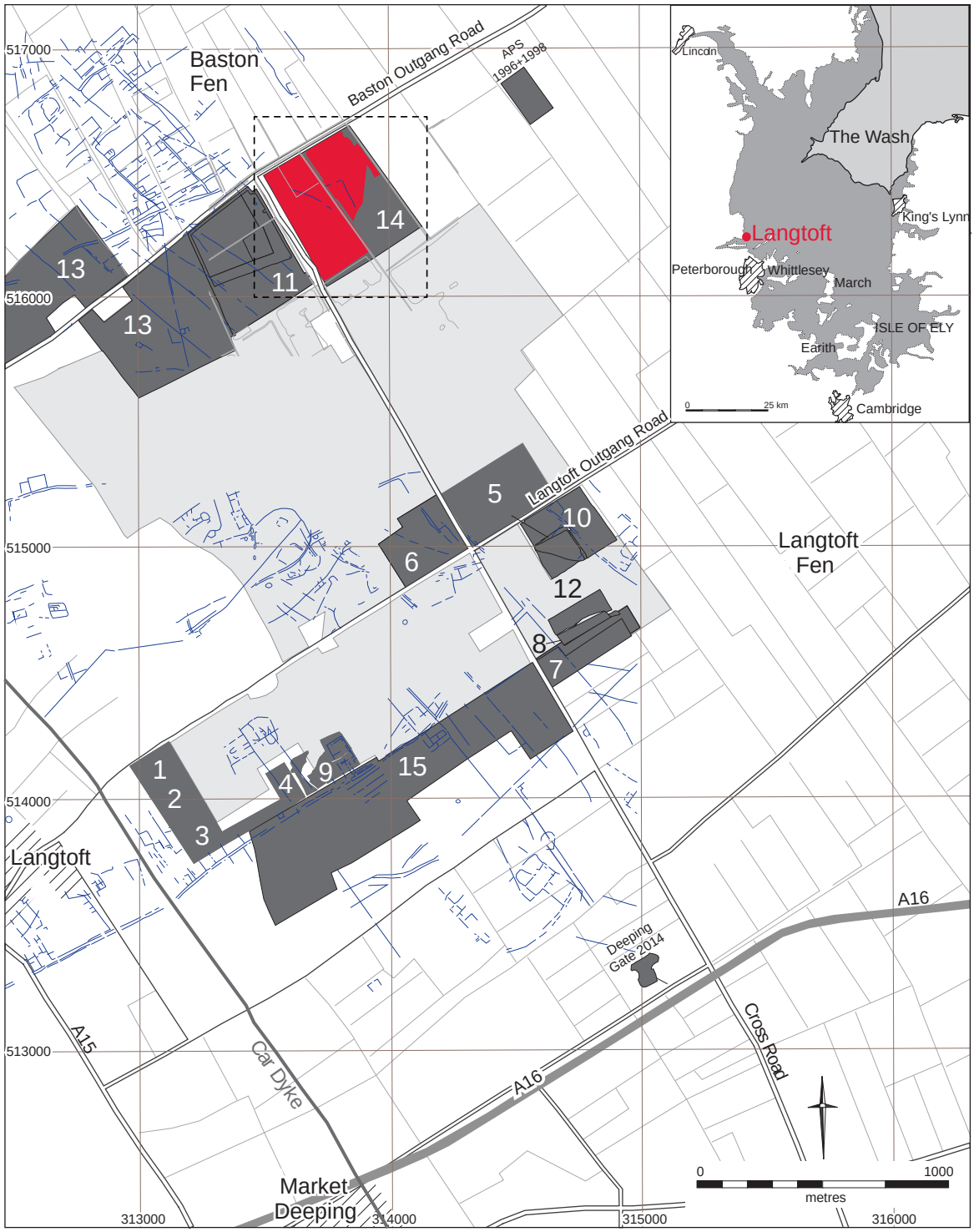
The data sheets, stratigraphic record and the digital photographic record have been catalogued together within an archive following the procedures outlined in MoRPHE (English Heritage 2006) and the Lincolnshire Archaeology Handbook (Lincolnshire County Council 1997, revised 2012). These are being stored with the processed material finds record at the Cambridge Archaeological Unit offices under the site codes BNE14 (Areas A-C) and BNE15 (Area D).

Archaeological Background

The investigation area is situated within a landscape that has been subject to an intensive programme of developer-led archaeology over the past twenty years (Figures 1 and 2). In the immediate vicinity of the site this entails a densely utilised landscape from at least the Early Bronze Age to the Romano-British era (Brittain 2013, 2015b, Burke 2010, Collins 2010, Hall 1998, Hayes and Lane 1992, Herbert 1998, Hogan 2012, Hutton 2007, 2008a, 2008b, 2009, 2011, Hutton and Dickens 2010, Lane and Morris 2001, Moulis 1996, Northamptonshire Archaeology 2009, Mudd 2004, Trimble 2000, Webley 2004, Yates and Field 2010). A full summary of the landscape's archaeology, and in particular that most pertinent to the subject of this report, may be found in Brittain (2013).

The investigation area is situated less than 1.0km to the west of the Neolithic and Bronze Age fen edge from which flowing channels would once have radiated into the higher and drier inland gravels attractive for settlement (Hayes and Lane 1992). The investigation area has been subject to two previous programmes of works. The first, conducted in 2009, comprised a geophysical survey that registered anomalies thought to comprise mainly of post-Medieval agricultural furrow strips and disturbance with a small number of possible linear archaeological features. A number of these anomalies were then evaluated through a small scale programme of archaeological trenching in which several cut ditches and postholes were identified, but each was absent of any datable finds (Hutton 2009). Following from this, in 2012, a bund and *c.* 20m-wide stand-off around the perimeter of the current investigation area was subject to a watching brief (Brittain 2013). This revealed substantial evidence for circular and squared post structures, pit-wells and water holes, with storage and/or refuse pits associated with Early to Middle Bronze Age artefacts, notably Collard Urn and Deverel-Rimbury pottery. Arrangements of posts defined three circular dwellings at the north and west of the stand-off. One of these was dated by its associated pottery to the Early Bronze Age and the other two to the Middle Bronze Age. A series of ditches were also encountered that, whilst absent of any datable finds, were thought to link with an extensive coaxial field system broadly attributed to the Middle Bronze Age. One parallel pair of ditches formed a droveway comprising a large and slightly curving ditch that contained preserved organic deposits sealed at its base, and *c.* 4.0m north of this was a smaller series of short ditch segments interrupted by causeways of between one and three metres. It was suggested that this and a recut ditch of at least 140m further to the north may have served as a wide perimeter that defined the area of the Middle Bronze Age cremation cemetery excavated within the Freeman's site to the southwest. This might indicate that the cemetery, or some aspect of it, already existed before the establishment of the field system.

The later archaeology from the 2012 watching brief comprised of a single sherd of Early Iron Age pottery from a small peat-filled hollow, along with a strip quarry and a number of pits of probable post-Medieval date and mainly situated on the east arm of the stand-off.



Excavation area (BNE14/15)

Quarried Areas

Previous Investigations

1. Baston Quarry Area A (1998)
2. Baston Quarry Area B (2001)
3. Baston Quarry Area C (2002)
4. Baston Quarry Areas D-E (2003)
5. Outgang Road Excavation (Heritage Lincs and APS 2006)
6. Outgang Road Watching Brief (APS 1996)
7. Cross Road Watching Brief (1998-99)
8. Langtoft Common Watching Brief (2001)
9. Areas F-H The Bluebell Land (2006)
10. Glebe Land (2007 and 2008)
11. Freeman Land (2007-2012)
12. Whitfield Land (2007)
13. Northampton Archaeological Unit (2007+)
14. Baston Quarry (2009) Evaluation + excavation (2012 and 2014-15)
15. 2010 Evaluation

Figure 1. Location map with cropmarks and previously investigated areas

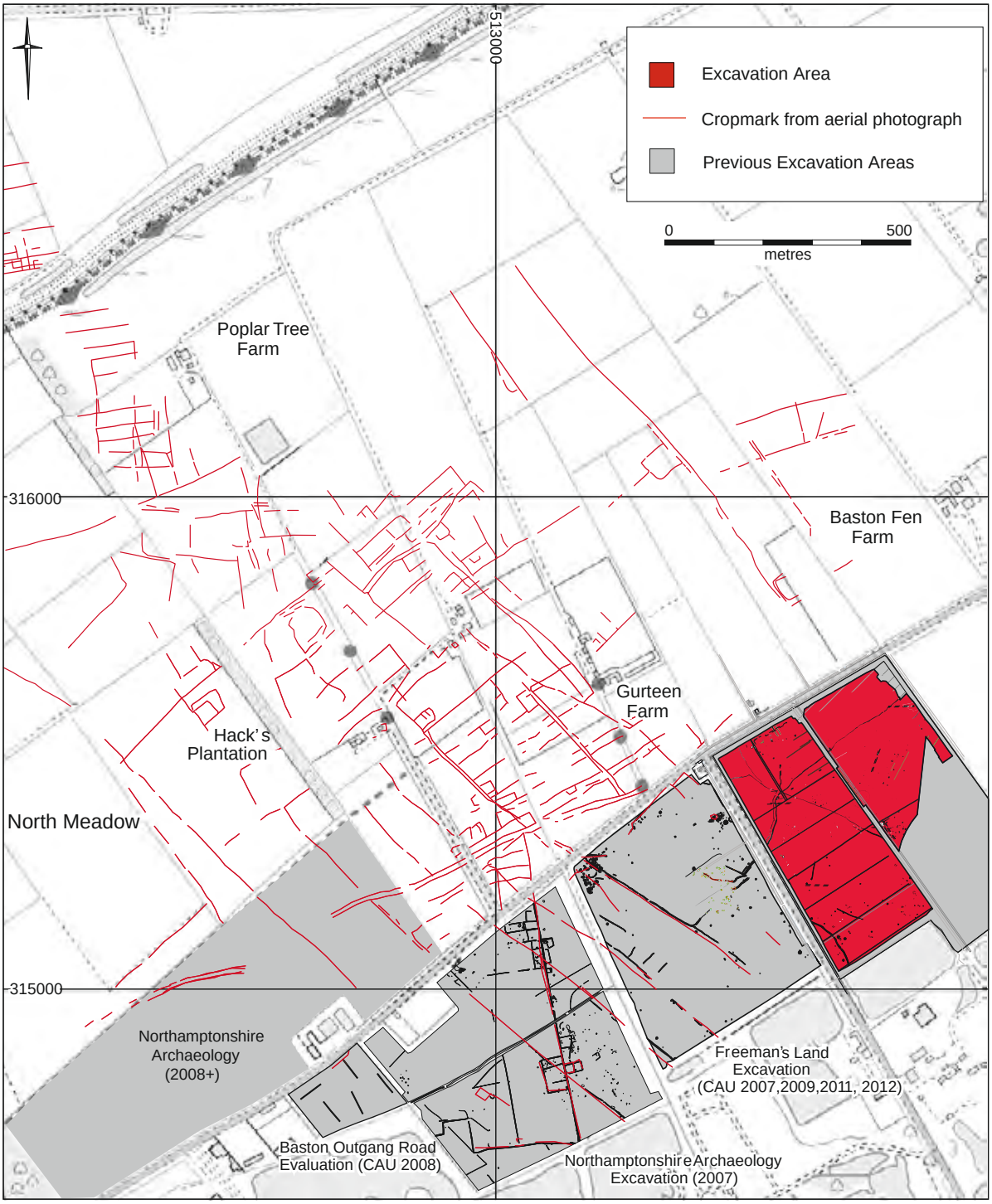


Figure 2. Cropmarks and previous archaeological investigations within the vicinity

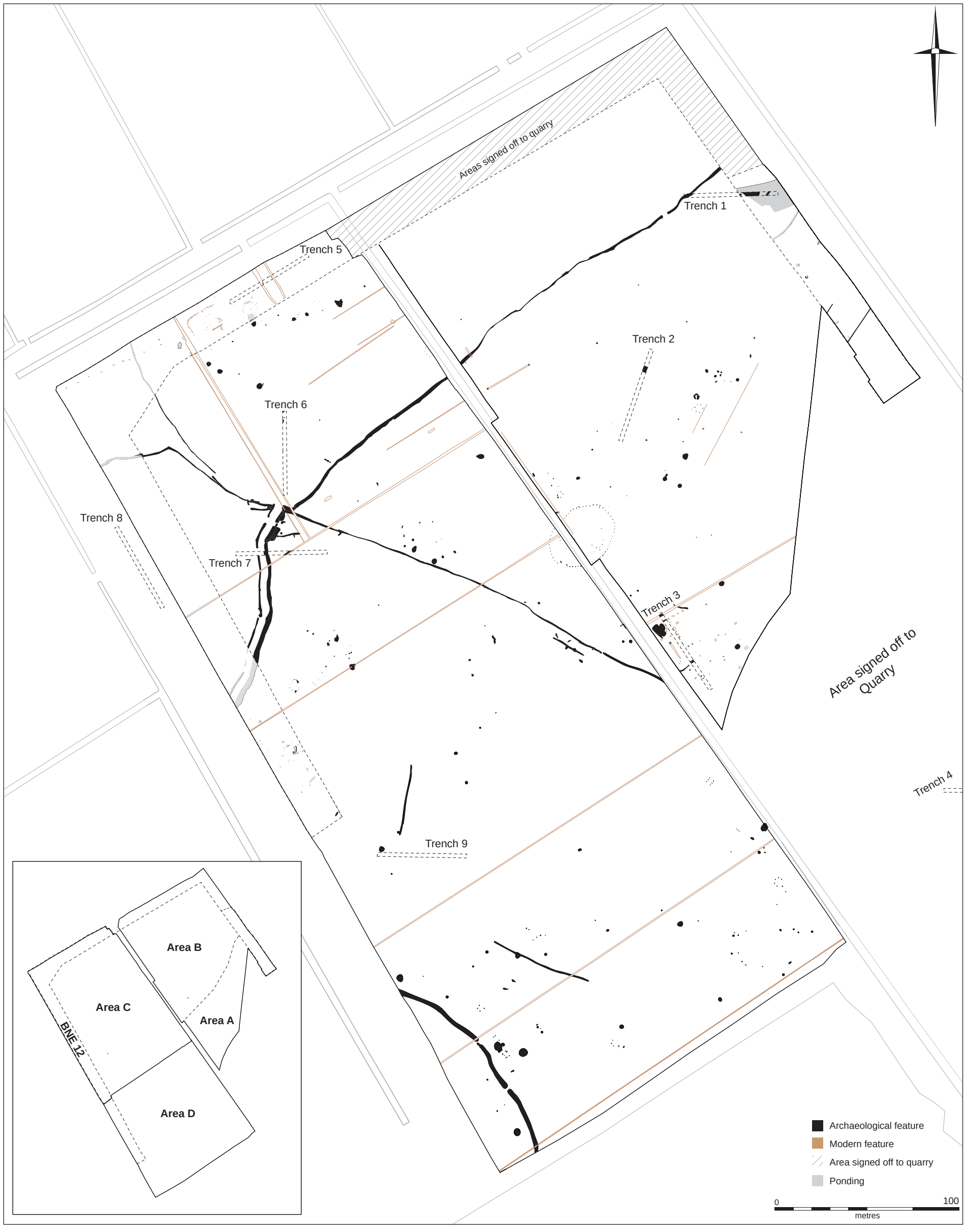


Figure 3. Plan of Site

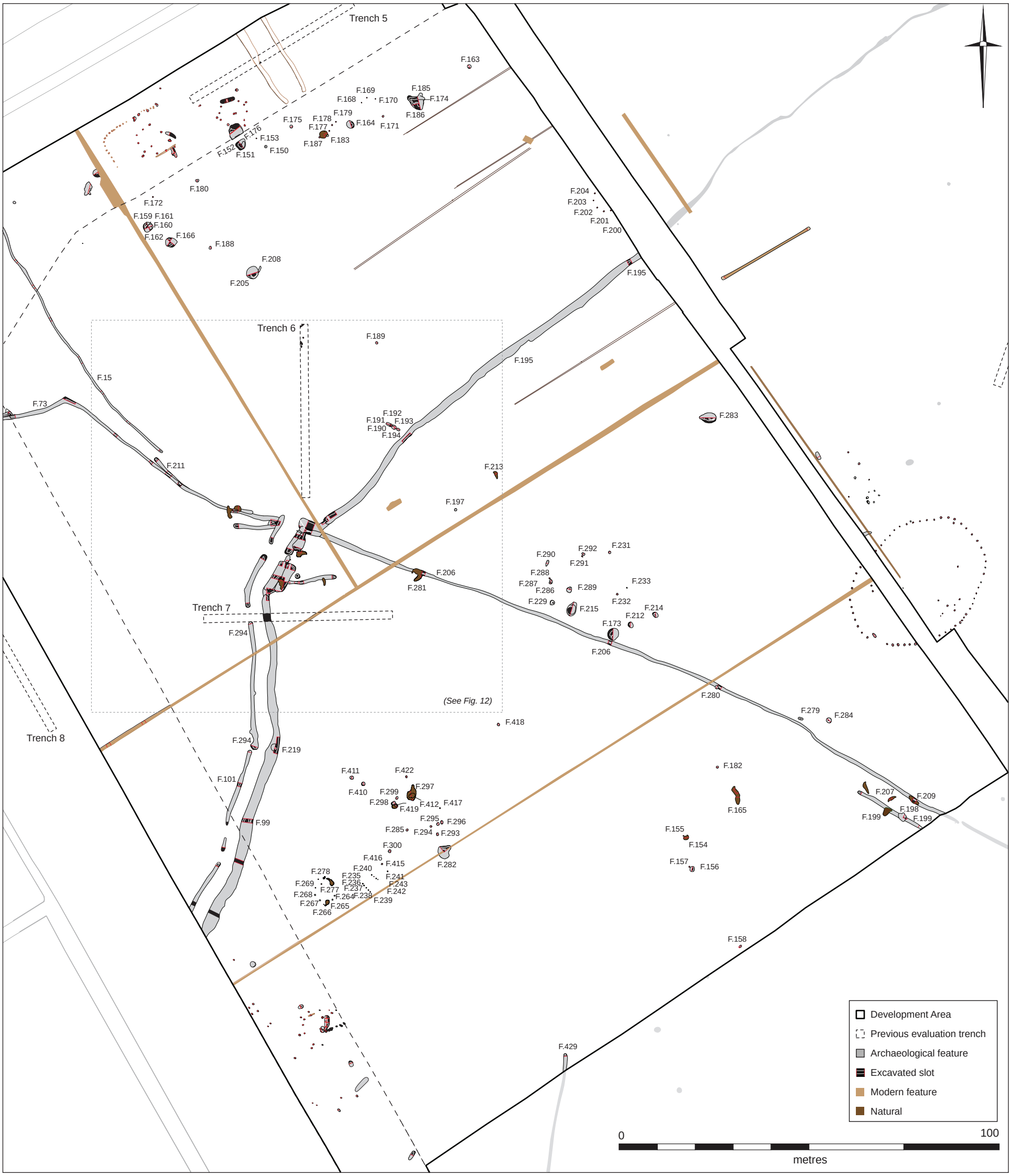


Figure 4a. Plan of site (Area C)

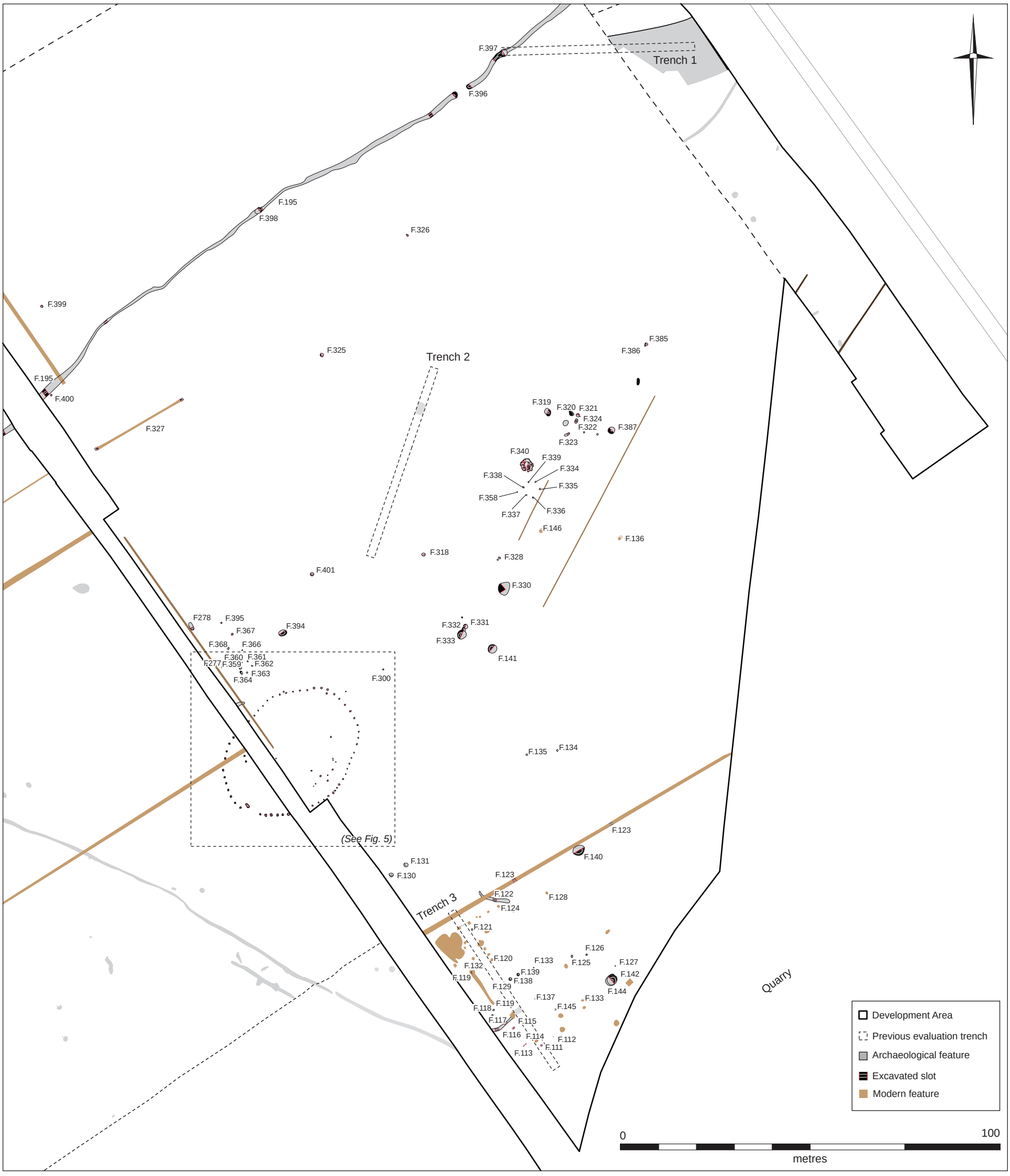


Figure 4b. Plan of site (Areas A+B)

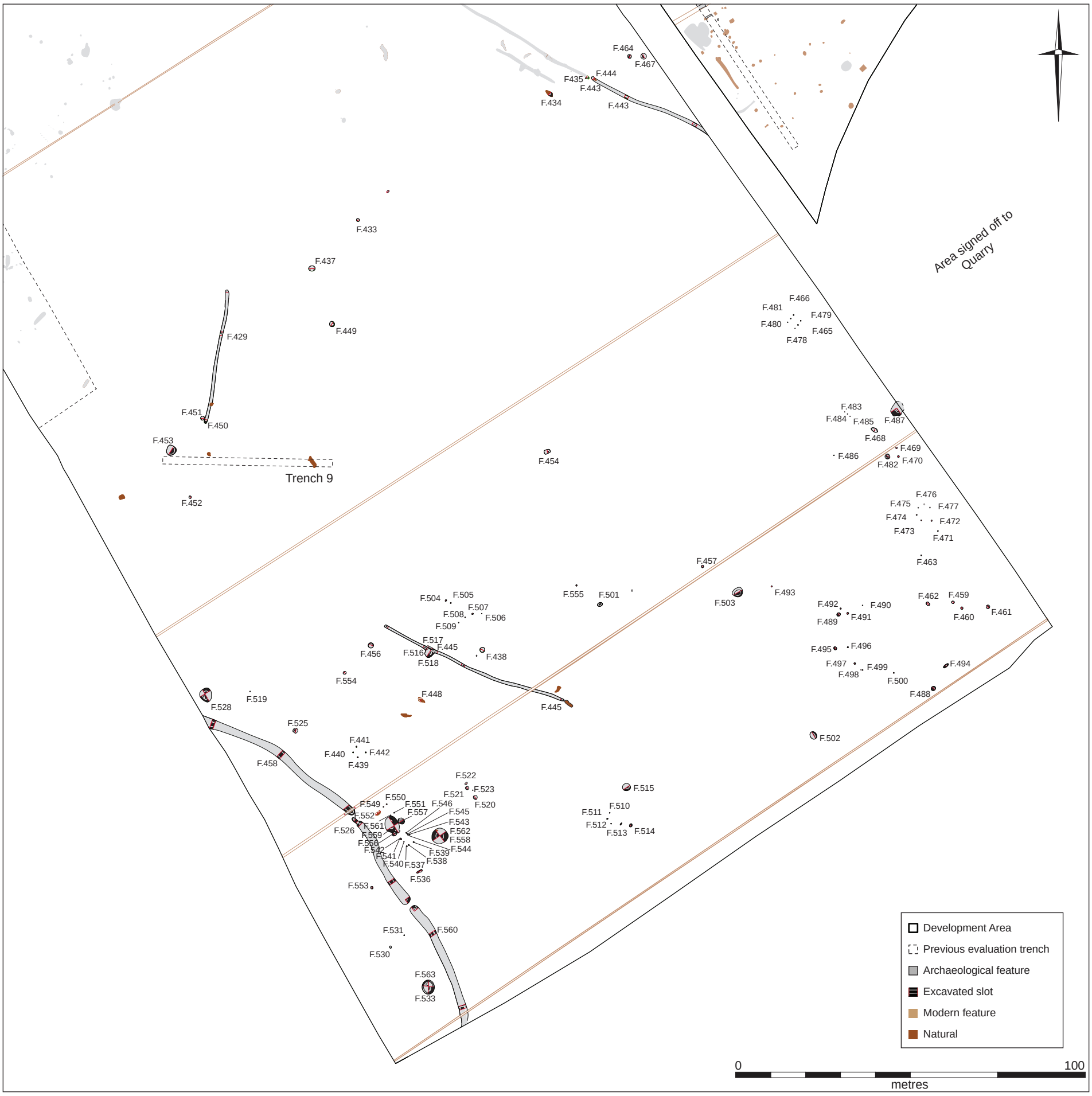


Figure 4c. Plan of Site (Area D)

EXCAVATION RESULTS

A total of 475 features were recorded (Figures 3 and 4; Table 1) and over 122kg of finds recovered (Table 2). Of the features the highest frequency were small pits and post holes at 68.1% from which at least eleven small structures were identified. A number of other potential but incomplete post-defined structures were discerned from the posthole distribution, including a possible structure within a large post-defined enclosure. As identified in previous investigations, an extensive co-axial ditch-defined field system traversed all investigation areas, aspects of which appear to predate two series of larger curvilinear ditches that present a curious feature of the investigations. Interspersed amongst these and standing either in isolation or part of a grouping of other features, were larger pits that may have served a variety of functions, including access to water and salt production. In contrast to the cremation cemetery excavated to the west in the Freeman's land, a crouched inhumation was found within a shallow grave in Area B and three instances of animal burials in shallow graves were also recorded.

Feature Type	**No.**	%
Post hole	200	42.0
Small pit or post hole	125	26.1
Linear	75	16.3
Large pit / Well	47	9.8
Natural / Tree throw	24	5.0
Grave	4	0.8
Total	*475*	*100*

Table 1: Feature breakdown for all periods

Find Type	**No.**	**Weight (g)**
Burnt Stone	3522	75,514
Animal Bone	8252	33,018
Pottery	720	5989
Burnt Clay	635	5250
Human Bone	1291	1000
Briquetage	67	744
Worked Flint	38	494
Burnt Flint	11	82
Metal (Fe)	7	56
Worked Bone	3	46
Worked stone	2	36
Shell	14	30
Brick/Tile	1	13
Worked wood	*c.* 24	n/a

Table 2: Summary of main finds by weight

Middle Bronze Age pottery of the Deverel-Rimbury tradition was dominant in the finds assemblage although the lesser presence of Collard Urn marks an earlier stage of the site's activity with a small assemblage of post-Deverel-Rimbury pottery marking the area's limited visitation and use by the latest Bronze Age or Early Iron Age and its cessation of use until the historic era. The site's activity may therefore be divided into four main phases:

Phase 1 – Early Bronze Age

Phase 2 – Middle Bronze Age

Phase 3 – Late Bronze Age to Early Iron Age

Phase 4 – Post-Medieval

In the following the results from Areas A-D are presented by recourse to either feature type or, where it has been possible to make identification, by structural entity. All numbers continue from the BNE12 investigations.

Phase 1: Early Bronze Age

Features containing pottery datable to the Early Bronze Age amounted to eight (64 sherds, 603g), mainly comprising Collared Urn. Very broadly, and combined with the BNE12 features, these were distributed over a northeast-southwest swathe. In addition to the circular post-defined structure found 2012 (Brittain 2013), a second circular post structure was identified along with a large oval enclosure demarcated by fairly substantive postholes. The dating of these two structures is not without question, and their inclusion in Phase 1 should be read as tentative.

Postholes and Structures

A single posthole (F.334) contained definite Collared Urn pottery. This belonged to a circular group of six postholes: Structure 8. Though undated, a second small post-defined structure (no.7) may be assigned to this phase on account of its similarity with Structure 8 and its proximity to a pit containing Collared Urn pottery. A single sherd of pottery was also recovered from one of 53 postholes that defined a large oval enclosure; this was somewhat ambiguous in form, not easily conforming to either of the Middle or Early Bronze Age assemblages, but a radiocarbon determination suggests that this may belong to the end of the Collard Urn tradition. Each of these structures is described below.

Structure 7: Fs. 359-363 (Figure 10). A small circular structure of five posts with a diameter of 3.12m; this was the smallest of the circular structures from any phase, but may be comparable with Structure 8 in terms of its size and general 'ruggedness' of plan. The postholes varied from sub-circular to oval, but were well preserved to depths of 0.14-0.25m. Each contained a single fill of either mid grey sandy silt or sandy clay, and no finds were recovered from any of the postholes. Possible related features include F.364 which is a shallow pit or scoop (0.97 x 0.6m, depth of 0.23m) southwest of the structure's outer edge; this contained a charcoal-rich black sandy loam, perhaps deriving from a hearth, and 164g of animal bone.

A possible connecting ancillary posthole alignment – Fs. 366-367 and 395 – was projected over 11.5m in a northwest orientation from Structure 7's north side. No finds came from the postholes. Another posthole (F.277) lay 4.4m west of Structure 7. A moderately sized pit (F.368) was found 4.8m north of the structure and west of the post alignment. As described below, this contained two sherds of Collard Urn pottery and a small assemblage of animal bone. Its proximity to Structure 7, and the lack of any other datable finds from the nearby features, may situate the structure within the Early Bronze Age. 10m east of the post alignment was a small well (F.394) 1.15m deep with up to eight fills that included desiccated wood. Together, the group of features hold the character of a small settlement unit.

Structure 8: Fs. 334-339. Structure 8 (was the most easterly of all the structures, 20.0m southwest of pit burial F.320 (although not with any obvious chronological relationship). It comprised of six postholes arranged in a circle with a diameter of 4.15m. The postholes were spaced between 1.5m and 1.87m apart, except for a gap of over 2.5m on its southeast side, between Fs. 335 and 336, which may have been an entrance. A small posthole (F.358) was also situated 1.5m west of the structure. All the postholes within the structure were circular in plan with depths of between 0.15m and 0.23m, and

each contained a single fill of compact mid grey sandy silt with occasional charcoal flecks. A number of finds were recovered from the postholes (Table 3), which included the only pottery from any of the structures in the BNE14/15 investigation area. This was a single sherd of Collard Urn from F.334, and a further seven sherds of Collared Urn were found from within a treethrow (F.340) 2.6m north of Structure 8.

Feature	Finds	No.	Weight (g)
334	Animal Bone	6	1
	Burnt Clay	2	18
	Pottery (EBA)	1	22
335	Animal Bone	4	4
	Burnt Clay	1	4
	Burnt Flint	1	2
	Worked Flint	1	2
336	Animal Bone	1	1
338	Burnt Flint	3	8
	Worked Flint	2	4

Table 3. Summary of finds from Structure 8.

Palisade Enclosure

Circuit – Fs. 244-260, 270-272, 275-276, 302-317 and 369-F.383; interior – Fs. 261-263, 273-274, 384 and 388-393. Traversing Areas A-C – and therefore excavated in three stages – an enclosure was defined by an arrangement of 53 postholes that defined a sub-oval plan oriented northeast to southwest; this is referred to here as a *palisade enclosure* (Figures 5 and 6). The circuit of postholes was broken that are estimated to have removed an additional five postholes; another posthole, already heavily truncated, may have been removed during machining of the area (a total of 60 postholes is therefore postulated). This enclosure defined an area of *c*. 858sqm (38.2m long axis, 28.6m short axis) within which was a single pit and 12 additional postholes arranged with little or no discernible structural plan. An entrance to the enclosure was marked by a *c*. 2.0m gap at the southeast. A sample of bone and charcoal were submitted for radiocarbon analysis. The bone sample failed to return a radiocarbon determination; the charcoal from F.313 [3144] provided a date (at 95% probability) of 1630-1500 Cal. BC (Beta-415580; see also Appendices).

Condition of the postholes varied widely from very good to very poor (i.e. truncated). This may in part be due to the differences of land usage either side of the main post-Medieval drain, with greater cut depths and overall condition found with the postholes to the west of the drain (Area C) compared with those on the east (Areas A-B; Graph 1). Nevertheless, even taking into account this differential preservation, it may also be significant that the postholes that define the palisade's long sides (mostly located on the east of the drain) were shallower than those along the palisade's short sides (either side of the drain). None of the postholes displayed clear signs of *in situ* post pipes or post rotting, which may suggest the posts had undergone removal as a part of the palisade's decommission. Between one and four deposits filled the postholes; at present there does not appear to be any specific pattern of deposition, although further analysis of the archived samples may be revealing. Postholes with multiple deposits generally contained a basal fill of either redeposited sandy gravel or moderately firm mid grey silt, with varying degrees of charcoal inclusions confined to specific overlying layers. Finds consisted of at least 98g of animal bone, two worked flints (20g), 3g of burnt clay and a single sherd (4g) of Early to Middle Bronze Age pottery (Table 4). With the exception of two bone fragments that came from Fs. 303 and 369 at the rear of the palisade circuit, the remaining assemblage was focused along the palisade's frontage, either side of the entrance. Six soil samples from the postholes were processed (samples from *all* of the palisade's postholes are archived at the CAU), from which a wheat grain and hazelnut shell was identified in F.245, again near to the entrance.

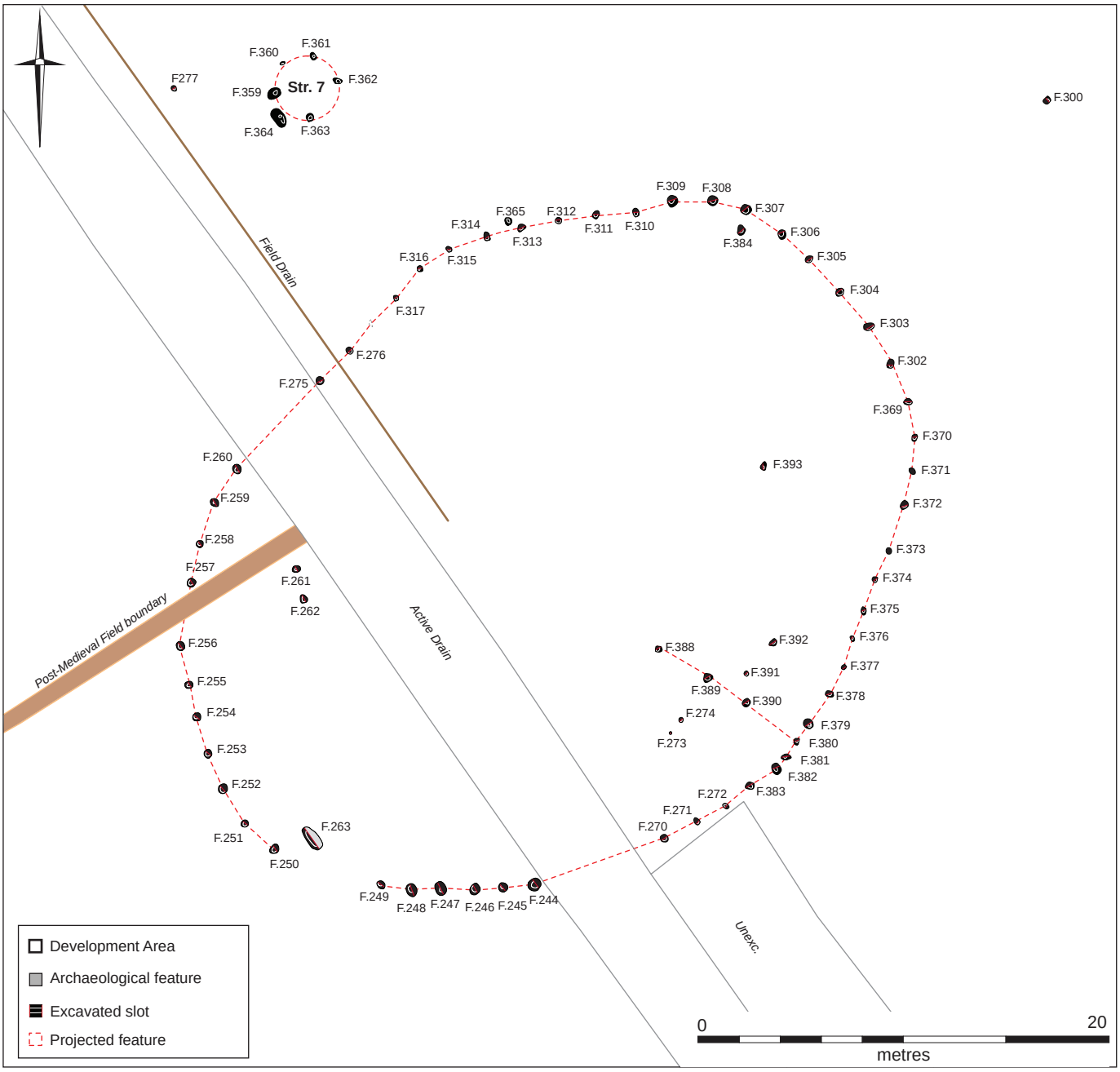


Figure 5. Plan of palisade enclosure

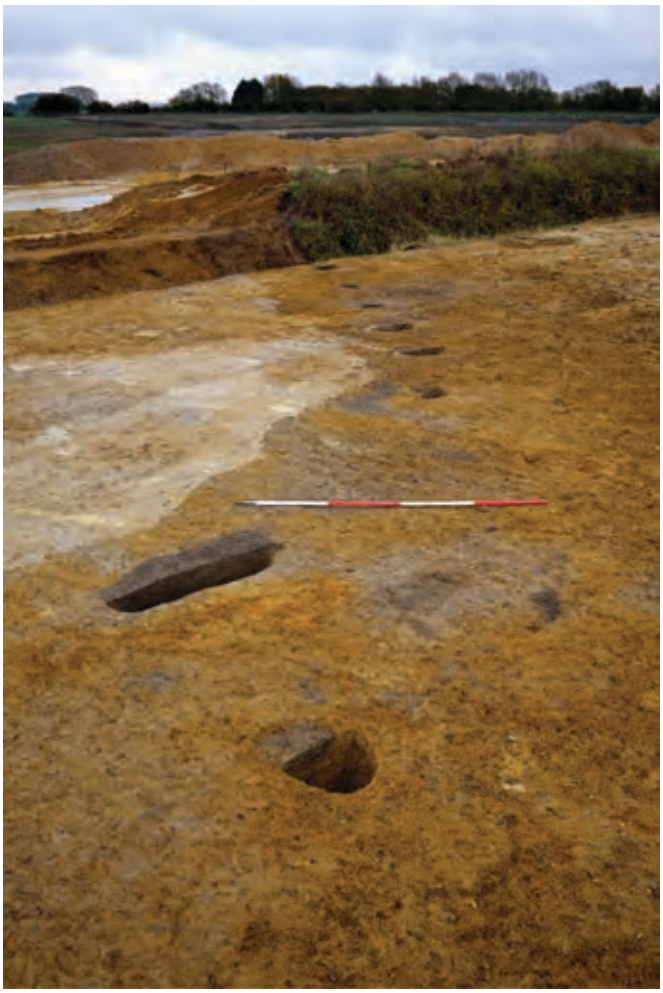
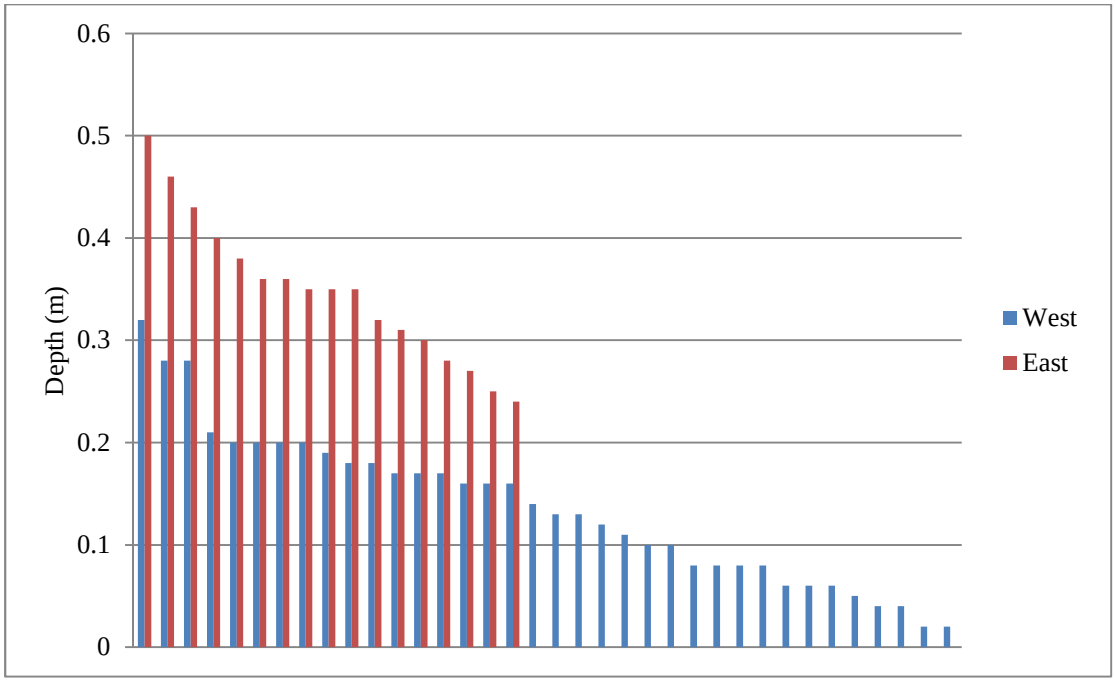


Figure 6. Photographs of palisade enclosure entrance

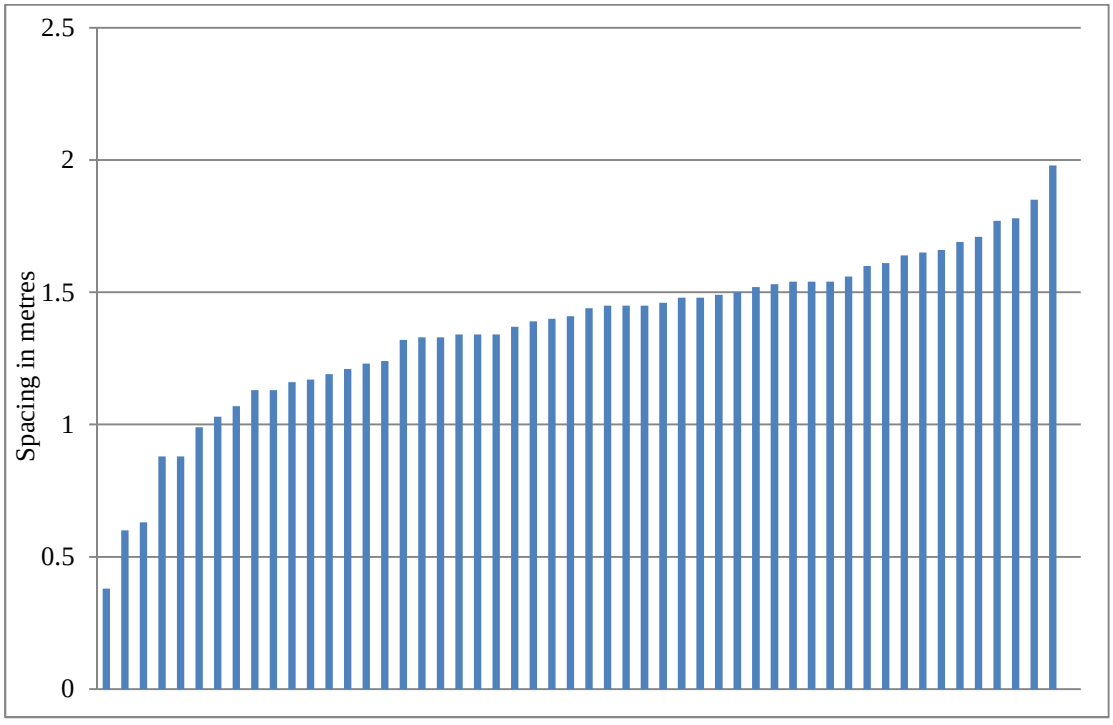
Feature	Find type	No.	Weight (g)
245	Pottery	1	4
245	Animal Bone	1	10
246	Animal Bone	1	8
246	Burnt Clay	3	4
251	Worked Flint	1	6
252	Worked Flint	1	14
252	Animal Bone	1	2
257	Animal Bone	17	68
303	Animal Bone	2	2
369	Animal Bone	1	8

Table 4. Summary of finds from the palisade enclosure

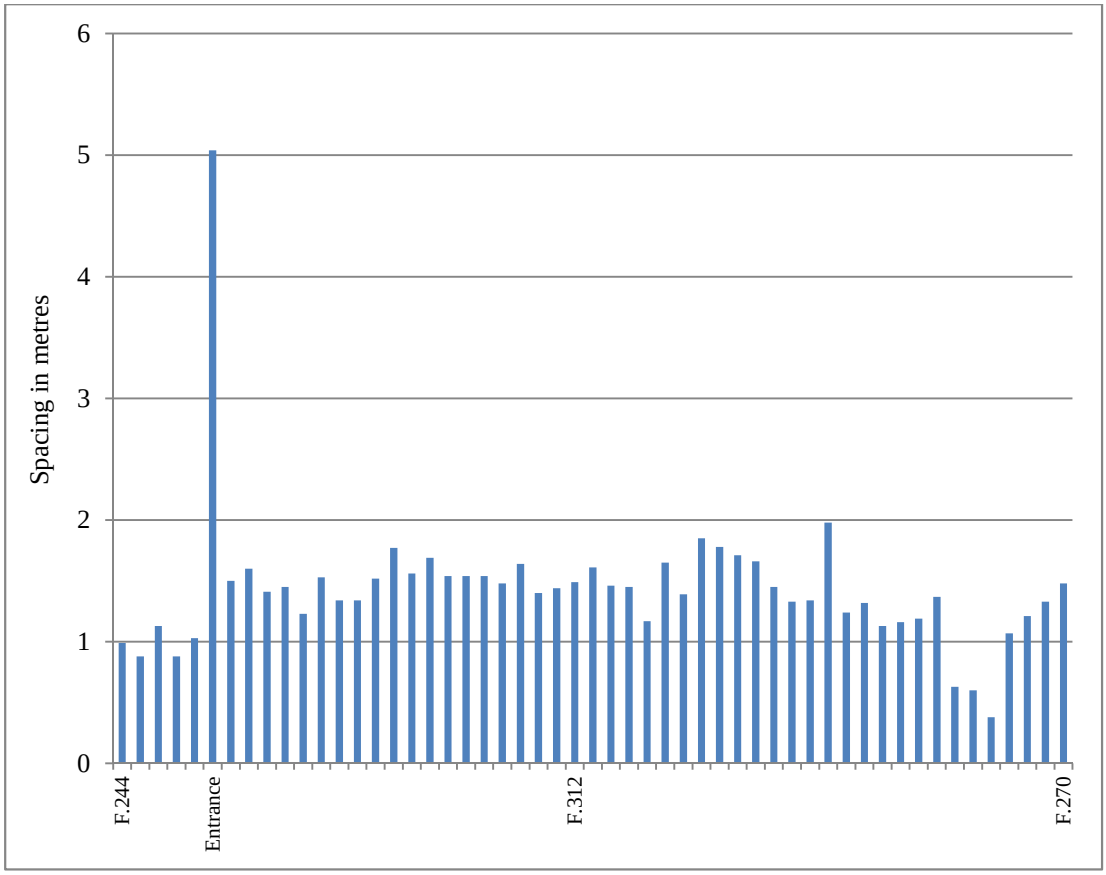
The entrance to the palisade – between postholes F.249 and F.250 – was 5.0m width and slightly east of symmetry with the palisade's ovoid layout. An elongated oval pit F.263 (1.2m by 0.6m) with a single dark grey fill of clayey silt was positioned 1.3m inside and to the west of the entrance. Small flecks of charcoal were occasioned throughout the fill of the pit which was cut with straight, slightly inverted sides to a rounded base at a depth of 0.3m. It may be possible that this also held one or perhaps two posts and acted as a means of directing passage into the enclosure's interior. If this was the case then the entrance would have been 3.0m wide. Spacing between the circuit's postholes was fairly regular with an average of 1.36m, although ranging from to 0.38m to 1.98m (Graph 2). The shorter of these, between Fs. 381 and 382, occurred near to a cluster of postholes inside of the enclosure where it is possible that at least one of the circuit's postholes here – F.380 – is an outlier of this cluster. It is possible that there is a subtle pattern of increasing and decreasing widths between the posts along the course of the perimeter's circuit (as suggested by the 'waves' in Graph 3), but further work would be required to consider this in detail. The palisade's interior features, in addition to pit F.263 in the entrance, may have been impacted by the course of the drain cutting, immediately either side of which were two postholes – F.261, F. 262 – that could be discerned from an area that was pock-marked with vegetation rooting and animal burrowing. Away from the drain to the east half of the enclosure was a cluster of seven postholes – F.273-274 and F.388-392 – with surviving depths up to 0.19m. All of the interior postholes contained only a single fill of mid to dark grey silt, but all were circular in plan with straight or sharply concave sides. No clear structural plan was defined by the posts, although a possible structure may be inferred in two ways by the post cluster: either an arc of posts with its open side to the north (F.388-389 and F.391-392) or a 7.7m partitioning fenceline (F.380 and F.388-390). A sample from F.388 yielded only terrestrial snails and a small amount of charcoal.



Graph 1. Showing the depths of the palisade's circuit postholes either side of the bisecting drainage ditch



Graph 2. Showing width of spacing between posts (not including truncated areas or entrance)



Graph 3. Showing the distribution of spacing between posts clockwise from F.244

Pits and Wells

Pits: Fs. 135, 210, 368 and 482. Four pits could be assigned with confidence to the Early Bronze Age on account of Collared Urn pottery. All were 100% excavated, except for F.210; this being 50% excavated. As noted above, a possible well (F.394) may also belong to this phase and in association with Structure 7. F.210 was an elongated or sub-oval pit with two fills of compact mid-grey [761] and pale grey [762] silty clay, both containing moderate degrees of charcoal flecks. Only a single sherd of Collard Urn was recovered, but the character of the pit is consistent with a number of other features in the vicinity from which Collard Urn has been documented (e.g. Fs. 42 and 91 of BNE12 to the north). F.468 may also fall within this category of pit, located some 5.0m north of Collared Urn pit F.482, but itself containing no datable finds. Fs. 135 and 368 were circular in plan, the former – isolated and located 45m east of the palisade enclosure – being only 0.14m deep with a fill [389] of mid-grey silt and charcoal flecks. F.368 was larger, with a diameter of *c.* 0.55m to a depth of 0.39m, and contained two main fills ([3110] and [3112]) of brownish grey sandy silt separated by a thin charcoal lens [3111] from which the two sherds (6g) of Collared Urn and 170g of animal bone was recovered. This was located 16.5m northwest of the palisade enclosure and adjacent to undated post-defined Structure 7.

F.482: With a diameter of 1.2m at a depth of 1.1m this was by far the largest of the pits from the investigations of BNE12 and BNE14-15 that has been assigned to the Early Bronze Age (Figure 16). It was located in Area D and some way south of the broader northeast-southwest swathe of Early Bronze Age features. The pit had been cut with straight, near vertical (slightly inclined) sides rounding towards a shallow concave base. The potential for organic preservation within the pit's lowest deposits had clearly been affected by dewatering. The base was sealed by soft yellowish brown clayey silt [3470], 7cm-thick, contained within which was a large thin strip of bark. Mike Bamforth's analysis of this suggests that this may have been deliberately removed from a tree, and it is possible that this was part of a container; unfortunately its condition was too poor for further comment. A thin layer of peat [3471] had formed above this, again to illustrate its saturated context, and although this had survived only in a desiccated state it suggests that the pit was a source for water. Two silting deposits ([3467]

and [3468]) had accumulated above the peat, indicating a change in the pit's use that was confirmed by two dumps of charcoal-rich [3466] and ashy [3465] deposits capped by further silting [3462] and charcoal-rich silt [3461]. Rooting had taken hold of the upper capping layers and had partially penetrated into the underlying ashy deposits. Finds were recovered from throughout the filling sequence, with the greatest density coming from [3465] and [3466]. The total assemblage included 152g of animal bone, 44 sherds (334g) of pottery, 252g of burnt stone, 127g of burnt clay, and five worked flints, one of which may be classified as a knife.

Natural Features

A utilised tree throw (F.340) in Area B was assigned to Phase 1. This was located 2.5m north of Structure 8 and consisted of an irregular gulley in a horseshoe plan. This was excavated by four main slots in the possibility that discrete features or purposeful modification of the treethrow – which was evident as a circle of mixed 'dirty' gravel with a halo of dark grey silt prior to excavation – may be evident. A possible linear pit – much like F.210 described above – was thought to be present on the east side of the treethrow, with a U-shaped profile observable in section; however, the overall character of the deposits was too mixed to determine this with confidence. Nonetheless, each slot produced an array of finds, which included three worked flints – one having been struck by a hard hammer (often indicative of Early Bronze Age technology) – with 100g of burnt stone, 10g of fired clay, a small amount of animal bone and seven sherds (60g) of Collared Urn, a number of which were decorated with incised chevrons. It is unlikely to be coincidental that the treethrow was located within the broader swathe of Early Bronze Age features.

Phase 2: Middle Bronze Age

The vast majority of the features could be assigned to the Middle Bronze Age. Deverel-Rimbury pottery is the prime indicator of features that belong to this phase, amounting to 532 sherds (4516g) from thirty-one features in Areas A-D. A number of features that did not produce pottery or other finds of this date have also been included within this phase and the outline below, largely on account of their spatial relationship to known Middle Bronze Age features. Where there is ambiguity or doubt, these have been included within the section entitle 'Undated'.

Linear Ditches

Features: Fs. 15, 73, 74, 99, 101, 195, 196, 199, 206, 211, 216, 221, 224, 294, 396, 429, 443, 445, 458, 516, 517, 526, 535 and 560

Of the 24 linear ditches attributed to the Bronze Age in the current investigation phase (Table 3), five (Fs. 15, 73, 74, 99 and 101) were extensions of features identified in 2012. The majority of these may be attributed to the northwest-southeast coaxial field system that has been traced over a number of the Langtoft/Baston investigation areas. Area C provided a rare instance of the coaxial system's sequencing with respect to other ditches or discrete features; in Area C this distinguishes a slight remodelling of the field system, but not necessarily two distinct phases of the field system *per se*. Given the regularity of the field system's northwest-southeast axis it is reasonable to consider ditches that do not conform to this pattern as belonging to a separate – second, though probably overlapping – phase of landscape management. In this respect, two separate characters of ditching are more easily identifiable, and are described as such below. These do not necessarily denote sequence, with Deverel-Rimbury pottery having been recovered from each ditch type, though in

limited retrieval densities. This distinguishes between the smaller ditches of the regular linear coaxial system and a series of generally larger and curvilinear ditches, the northernmost of which bypassed the cremation cemetery to the west to form a 'stand-off' in excess of 140m diameter.

Co-Axial Field System

A total of 78 slots were excavated, highlighting considerable variation in the ditches' individual character (Table 5). With rounded profiles and between one and four fills (Figure 16), Fs. 15, 196, 199, 206, 211, 221, 443, 445 and 516 formed continuous ditch lengths within the 'conventional' field system plan, i.e. upon an axis northwest-southeast axis. Their fills were predominantly homogenous sandy silt, occasioned with gravel patches or darker, more charcoal and sometimes snail-rich deposits. A single sherd of Deverel-Rimbury pottery was recovered from F.445 (2g), and a single bone from the base of the terminus of F.15; other than this, finds were particularly scarce. The earlier position of this system of ditches within the Middle Bronze Age sequence is indicated by the cutting of F.211 by F.73 of the curvilinear ditched system in Area C; however, with F.73 positioned on a parallel course with F.15 of the earlier system, and thereby forming a distinct 29m-long passage, it seems likely that the two phases of ditching overlapped. The duration of this overlapping of the ditching phases is not certain, although it is notable that the larger of the second phase curvilinear ditches were capped with a deposit of dark peaty (silt) clay, although this may simply have formed on account of the larger size of these ditches – as with a number of the larger pits and wells the peaty upper profile may just be a tertiary deposit within a hollowed void.

As has been previously identified at Baston/Langtoft, the main branch of the field system was aligned northwest-southeast, with broadly continuous ditches traversing the site in Areas C and D. Division of field plots has previously only partially survived by shallow northeast-southwest oriented ditches. These were not evident in the current investigations; F.429 (Areas C-D) may represent one of these divisions, although its near north-south alignment would suggest this to belong to a separate (but undefined) phase of land management. Breaks along the main ditch branch provided access across the east and west of the system. Opposing and slightly overlapping termini provided a *c.* 1.6m-wide throughway between Fs. 15 and 211, with a shorter (*c.* 0.5m) gap between Fs. 206 and 443; the convergence of the primary and secondary phase ditches also masked a break of *c.* 6.0m width. On the southeast edge of Area C a passage 5.0m wide stretched for 20.0m between linears F.199 and F.206, but no trace of its continuation was observed.

It is possible that F.74 (along with F.72 from the 2012 investigations) also belong to the primary field system, thereby establishing it's this early phase its detour around the cremation cemetery. The cropmarks plotted in Figure 2 confirm that this returns to the field system's northeast-southwest axis to the north of the site, which provides added weight to this suggestion. As with F.211, these were cut by the second phase curvilinear ditch F.73. Should this be the case then it is reasonable to suggest that F.211 was purposefully backfilled, at least partially, prior to the establishment of F.73.

Three short ditches (Fs. 196, 221 and 429) were not strictly on par with the alignment of either of the two main ditching phases, and were instead aligned closer to a north-south and east-west axis. No finds were recovered from any of these features. Fs.196 and 221 were located at the point of convergence of the two phases of ditching in Area C, and were cut by the second phase and the paired groups of pits. These were each *c.* 12.0-12.5m in length with a single fill of light yellowish brown sandy silt and a notable absence of stone inclusions. The lack of stone may imply that the fills comprised of water-washed sediment, which may associate their function with the range of possible activities that are postulated below to have been carried out there, perhaps serving as drainage channels to larger features. By contrast, at *c.* 40m in length, F.429 was positioned somewhat isolated from any main grouping of features within Areas C-D. With a single fill of light grey clayey silt with occasional charcoal flecks it may simply have acted as another sub-division within a broader field plot, but it nevertheless remains comparatively anomalous.

Figure 7. Photograph of droveway ditches looking North

F. No.	No. slots	No. fills	Length (m)	Width (m)	Depth (m)	Cuts	Cut by
15	5	2	-	0.37-0.62	0.19-0.31	-	-
73	8	1-4	-	1.7-0.57	0.2-0.35	F.74, F.211, F.216	F.421
74	1	1	-	>0.5	0.21	-	F.73
99	3	4-6	-	1.8-3	0.26-0.7	F.222, F.425	F.219
101	2	2-3	-	1.05-0.8	0.4-0.5	-	-
116	2	2	-	0.5-0.7	0.09-0.12	-	Modern pit
195	9	1-15	-	1.95-0.45	0.18-0.6	F.426	F.398
196	4	2	*c.* 13	0.5-1.15	0.4-0.26	-	F.223
199	3	1	19.5	0.8	0.27-0.34	-	F.198
206	5	1-3	*c.* 190	0.59-1.2	0.24-0.7	-	F.209, F.280, F.281
211	4	1-4	-	0.5-1.05	0.11-0.6	-	F.73
216	2	3-5	-	0.95	0.35-0.18	-	F.221, F.73
221	2	3-4	*c.*11.5	1.3	0.25-0.35	F.216	-
224	2	2-8	-	1.04-1.55	0.38	-	-
294	2	3	-	1.22	0.38-0.45	-	-
396	3	4-6	-	1.07-1.85	0.38-0.55	-	F.397
429	3	1-2	*c.* 40	0.71-0.92	0.11-0.34	-	-
443	3	1	*>36.5*	0.55-0.88	0.28-0.33	-	F.444
445	3	1	*c.39.5*	0.67-0.92	0.13-0.25	-	F.518
458	3	3-11	*>50*	1.05-2.6	0.5-0.86	-	-
516	2	1	*c.13.5*	0.77-0.97	0.28-0.29	-	-
517	2	1	*1.32*	0.23-0.41	0.08-0.09	-	-
526	3	4-6	*c. 26*	1.82-2.6	0.78-0.92	F.535	-
535	2	3	*c.2*	0.88-0.91	0.51-0.54	-	F.526
560	3	3-11	*c.32.1*	2.15-3.20	0.7-0.84	-	F.547

Table 5. Summary of prehistoric linears

Curvilinear Ditch System

As previously noted (Brittain 2012), the cremation cemetery was enclosed or at least demarcated by three shallow intercutting ditches along its north aspect and a pair of parallel segmented ditches to its south that together contained an area of *c.* 140sqm. Between the parallel run of ditches was a consistent passage of *c.* 3.5m width (Figure 7). The inner boundary of this passage was marked by four discontinuous ditches: Fs. 101, 294, 216 and 224, including another three recorded in 2012 (*ibid.*). These were spaced so as to enable a causeway between each segment of *c.* 3.7m (an exception was the 0.6m between F.294 and F.101 – this having been disrupted by a later tree bowl). Each segment was formed of sharp concave sides and a flat base, cut on average to a depth of between 0.3m and 0.4m. The outer of the paired ditches, F.99, is likely to have been cut in sections (e.g. Figure 13), as is suggested by its undulating depth, particularly at the turn of [830] where the base was recorded at a depth of 0.26m, compared with the depth of 0.75m registered at other points along its course. Its width ranged between 1.8 and 3.0m, and in 2012 the organic preservation registered within its basal deposits was encouraging for future environmental analysis. This degree of quality was not replicated in the slots excavated in Areas B and C, which may be a reflection of dewatering induced by the nearby quarry works as well as the undulating depth of the ditch itself. Nonetheless, saturated basal deposits were encountered, although only a remnant of its organic component survived in two slots as a deposit of dark brown clayey silt: [819] and [873]. This was overlain with up to four layers of

slumped sandy gravel and mid-grey clayey silt, with each slot capped by peaty, dark grey silty clay containing snail casings of aquatic species. The northward course of F.99 terminated with six elongated pits (these are described below) covering an area of *c.* 24.0m at the far (northeast) end of which was the southwest terminus of linear F.195. The profile and varied depth of F.195 was similar to that of F.99, and it may be considered as a north-eastern projection of F.99. Ranging from 0.18 to 0.6m, the undulating depth of F.195 may again signify some degree of segmentation conjoined by shallowing profiles rather than distinct causeways. A gap of 2.9m provided access between F.195 and F.396 in the northeast of Area B. The fill patterns of both ditches suggest that a bank lay on their north edge. As found with F.99, both Fs. 195 and 396 were capped by a thick deposit of dark grey peaty clay-silt containing desiccated wood and snail casings of aquatic species. This tended to fill a bowl-shaped void in the upper profile of the ditches which even in their partially infilled state may have been charged with water as its level rose towards the end of the Bronze Age.

Feature	**Deverel-Rimbury Pottery** (no.)	**Bone** (g)	**Fired Clay** (g)	**Burnt Stone** (g)
458	22	936g	543	154
526	8	1106	446	164
560	42	766	208	0

Table 6. Summary of finds from Area D curvilinear ditches

In Area D a series of three ditch segments – Fs. 458, 526 and 560 – separated by short causeways formed a curvilinear arrangement from the northwest to the southeast, although this was only partially revealed in the south corner of the excavation area. All three ditches had wide (1.05-3.2m), flat-bottomed profiles at a depth of 0.5-0.92m and slightly convex sides (Figure 16), and the shortest ditch length was c. 26m (F.526) compared with 50m+ for the longest (F.458). Gaps of 1.0-1.5m separated the ditch termini. Nine slots were excavated in which a maximum of eleven fills were identified. The base of F.458 was covered by *c.* 0.2m of dark orange gravel mixed with clayey sand, and thinner lenses of fine sediment and slumped gravel masked the bases of Fs. 526 and 560. A consistent fil sequence was subsequently laid within each ditch, which attests to their contemporaneous use. This comprised a stiff mottled mid yellowish orange/brown silty clay of varying thickness between slots, overlain by additional gravel slumps, but of a silvery grey colour. Above these deposits a series of soft to moderately firm silts accumulated within the remaining *c.* 0.4m-thick concave void. These varied in colour from moderately pale grey mottled with dark orange clay to dark grey, and each contained diffuse lumps and flecks of charred material. In each slot a layer of dark humic clayey silt filled the uppermost void with an irregular concave profile. Three sherds of post-Deverel-Rimbury pottery were recovered from this deposit in the terminus of F.558 [3634]. Other than this, each of the ditches produced Deverel-Rimbury pottery alongside an array of other finds (Table 6).

Postholes and Structures

A total of 108 postholes have been assigned to the Middle Bronze Age, 56 of which make up at least ten post-defined structures (nos. 4-6, 9-14; Figure 8). The remaining fifty-two postholes have been assigned to this phase on account of their proximity to known Middle Bronze Age features, but it is conceivable that a small number of these may relate to alternative phases of activity. Nevertheless, with only four non-structural postholes containing any material culture (Table 7) their limited finds retrieval renders their exact assignation as limited in overall value. The dimensions of the non-structural postholes varied (e.g. 0.05-0.65m depth) and whilst most

contained only a single fill, up to three were occasionally registered and in one instance six were identified (F.321). There was no particular distribution to these features, except that they were only rarely found more than 10m from larger groups of features.

Finds retrieval from the structural postholes was also limited with only small amounts of fired clay (54g), worked flint (34g), pottery (28g), burnt flint (10g) and animal bone (6g). Although the majority of these were circular in plan, three were rectangular and two were square or sub-square.

Posthole	Pottery no. (g)	Bone no. (g)	Burnt Stone no. (g)	Worked Stone	Waterlogged Wood
F.303	-	2 (2)	-	-	-
F.365	5 (56)	-	1 (38)	1 (17)	-
F.411	-	-	-	-	1 (post stump)
F.504	-	5 (262)	-	-	-

Table 7. Summary of finds from non-structural postholes

Structures 1-3: see Brittain (2013)

Structure 4: Fs. 200-204. Bisected by an active drainage channel, Structure 4 was defined by five postholes with depths of 0.08-0.23m in a near semi-circular arc with an estimated diameter of *c.* 6.2-7.0m. These all contained a single fill of fairly compact pale grey-brown silty clay with frequent sub-angular stones and no finds. Structure 4 has been assigned a Middle Bronze Age date on account of its relative proximity to structures 1 and 2, both containing Deverel-Rimbury pottery.

Structure 5: Fs. 264, 265, 266?, 267, 268, 269, 277 and 278? (Figure 9). A circular plan of six postholes with an internal diameter of 5.1m (external = 5.7m), its circuit broken by tree bowl truncation. Two exterior postholes – F.266 and F.278 – may also form part of the structure. The postholes were all circular in plan with depths cut to between 0.06m and 0.24m. Five contained only a single fill, one with two fills, and three fills were identified in F.267 and F.268. These latter were the deepest of the postholes (0.22-0.24m) with a basal deposit of friable mid orangey grey sandy silt, most likely derived from open weathering, sealed by a middle layer of soft mid-grey sandy silt with frequent charcoal flecks that was capped by soft mid brown sandy silt. Three worked flints were recovered from this middle layer in F.268 [1005]; two of these were refitting pieces of a sub-circular scraper, broken prior to deposition at a weakness in the stone during retouching.

Structure 6: Fs. 235-243 (Figure 9). This was formed of a sub-rectangular arrangement of nine postholes on a northwest-southeast orientation about 7.5m east of Structure 5. Both long sides of the structure were defined by four or five postholes in a straight alignment of 2.2m and 3.1m respectively. The long sides were not exactly parallel to one another, with an error of 0.5m occurring in the width between them from northwest (3.0m) to southeast (3.5m). In spite of this, the opposing sides consisted of corresponding postholes, and on this basis their combination within a single structure is likely. A small amount of fired clay (32g) was found within the bulk samples collected from F.237 and F.238.

Structures 7 and 8: see Phase 1.

Structure 9: Fs. 111-114, 137 and 145 (Figure 10). This was situated within an area noted for its concentration of post-Medieval activity that had undoubtedly impacted upon visibility of the prehistoric horizons. Nonetheless, features containing both Early and Middle Bronze Age pottery were identified, and although postholes were lacking in material finds their proximity to dated features, specifically of those containing relatively pale fills (compared with the dark humic silt that filled the features of definite post-Medieval date), raises the likelihood of a *later* Bronze Age date for these also. Indeed, a circular arrangement of six postholes with these pale fills could be determined as

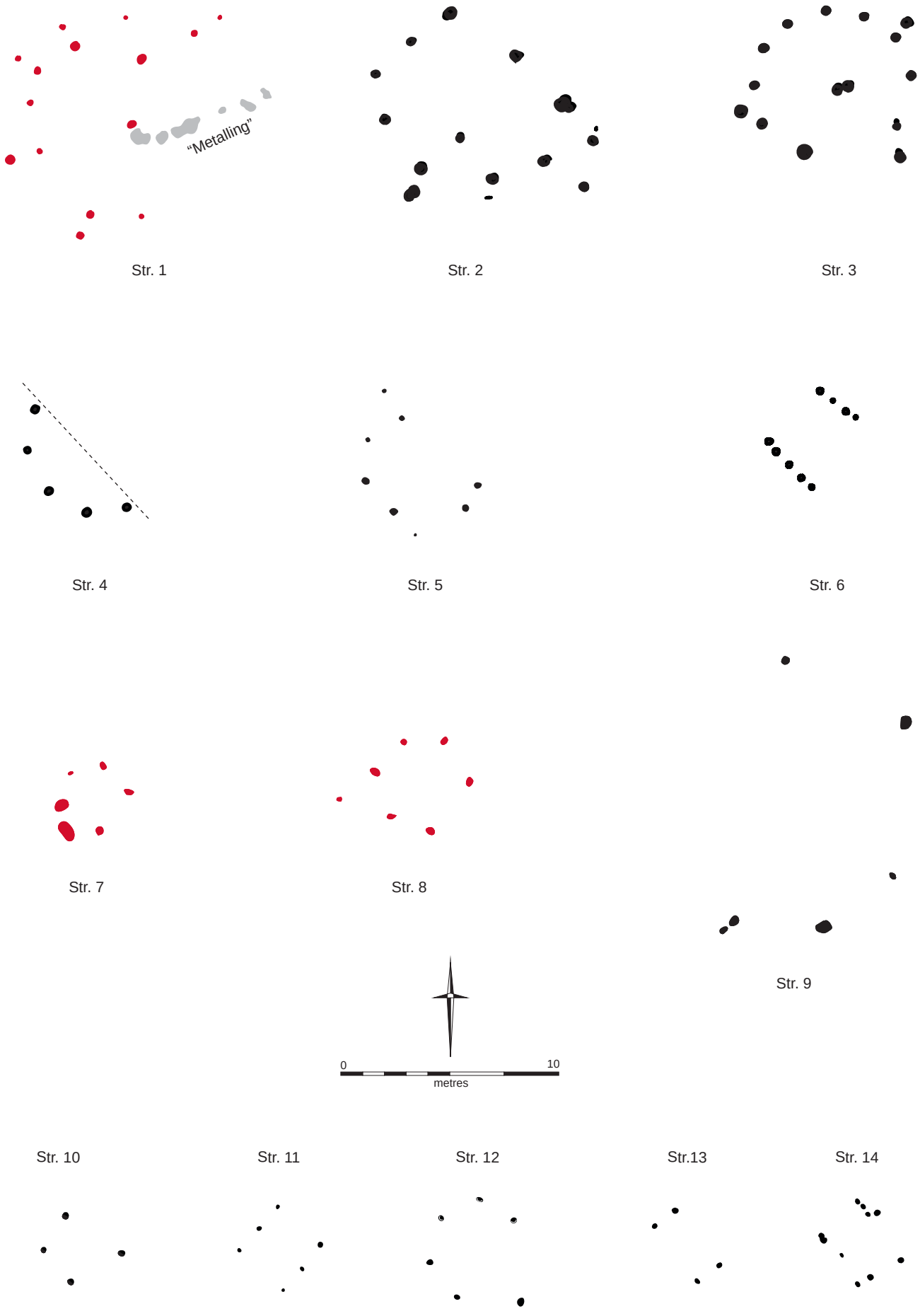
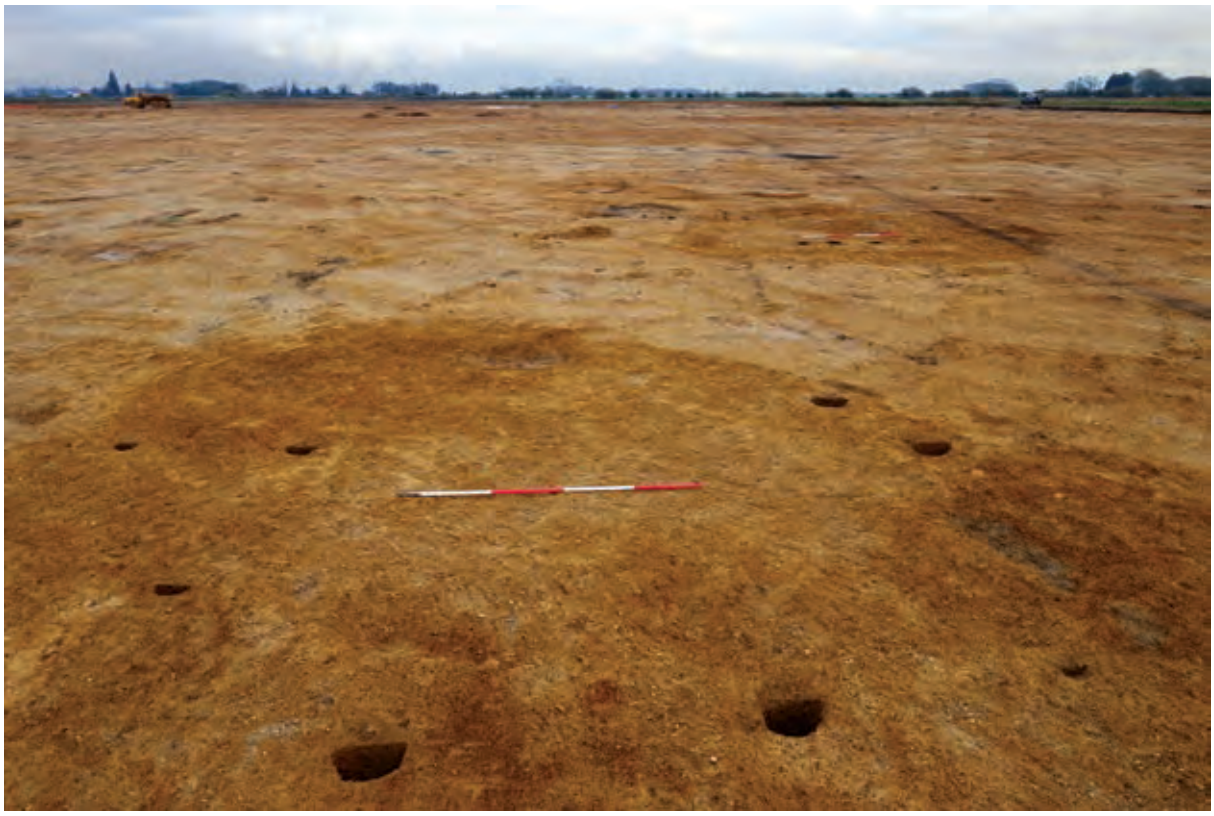


Figure 8. Detail of post structures (Early Bronze Age in red)



Structure 5 (foreground) and Structure 6 (background)

Structure 6 (detail)

Figure 9. Photographs of post structures

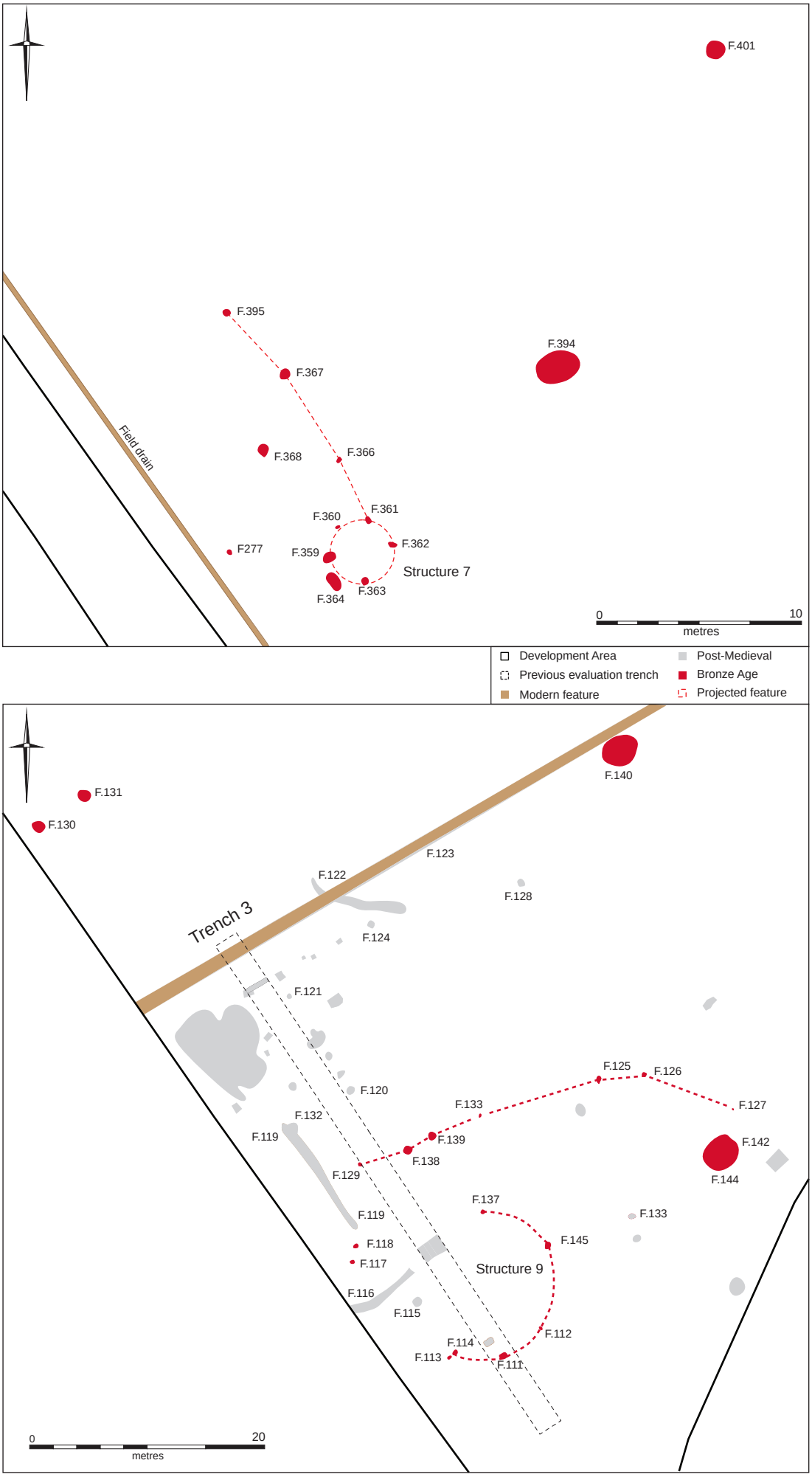
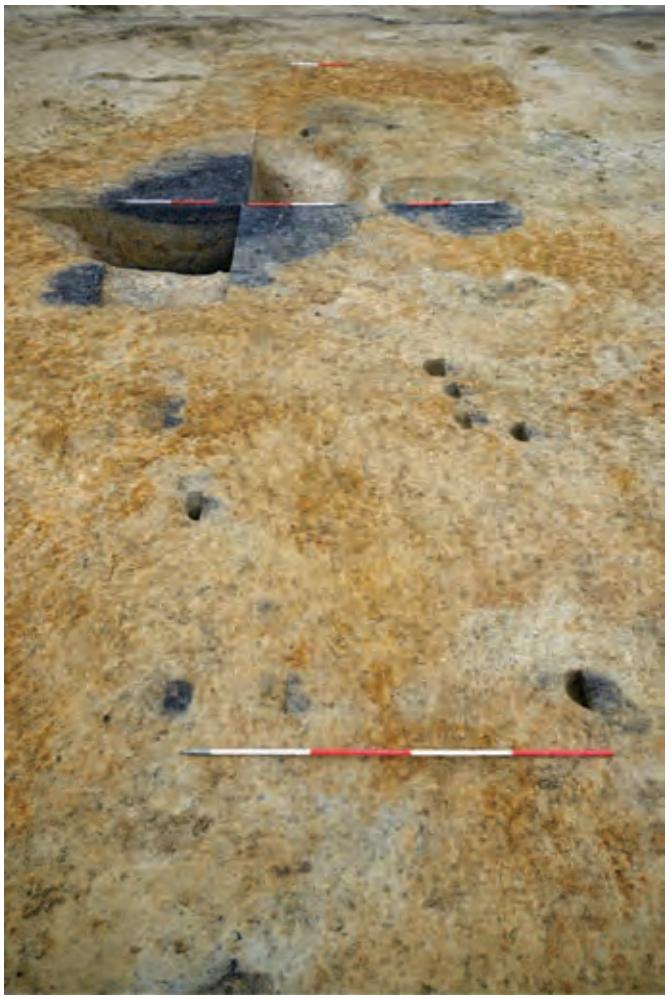
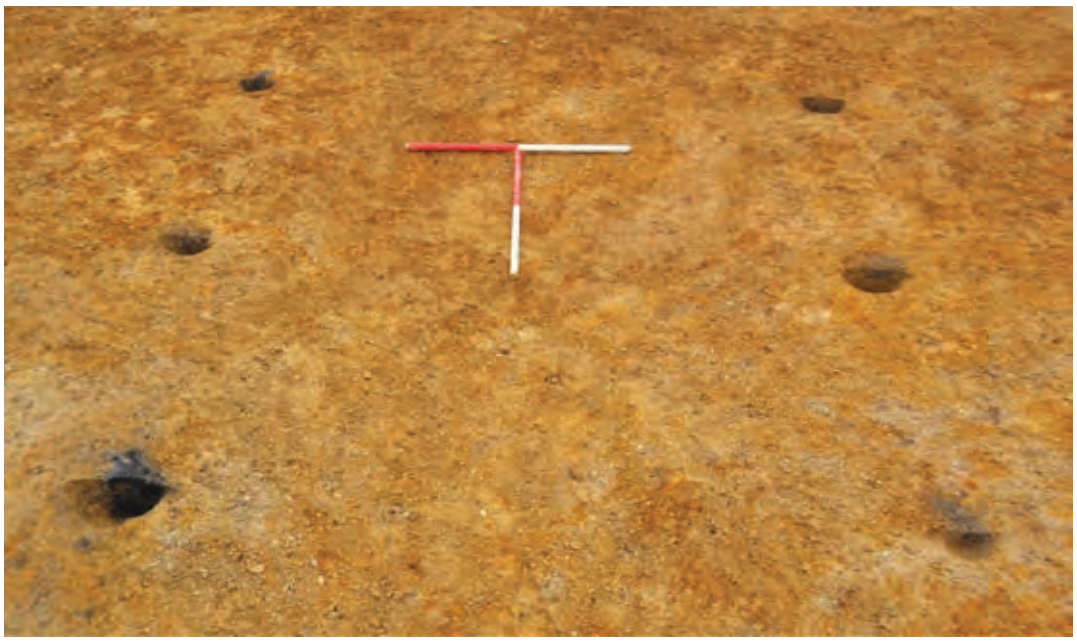


Figure 10. Detail of post structures with fencelines



Structures 13 (background) and 14 (foreground)
pit wells F.559 and F.561



Structure 11

Figure 11. Photographs of post structures

of relating to a possible structure. This defined an area of 11.8m in diameter inside of which no additional features were identified.

Three nearby postholes (Fs. 117, 118 and 133) may be contemporary with Structure 9, and approximately 14.0m to the northeast was a large pit-well (F.142) that had been recut (F.144) at least once and from which 40 sherds (353g) of Deverel-Rimbury pottery were found with two sherds (110g) of residual Collard Urn. The well, Structure 9 and related postholes were all enclosed by a 30m curving line of postholes that may have formed a north-side boundary: Fs. 125-126, 129, 133 and 138-139. This was situated 65m southeast of the palisade enclosure, and was very different in character and preservation, the postholes having survived to depths of 0.09-0.23m. Geophysical survey prior to evaluation trenching (Hutton 2009) shows the post-Medieval truncation to be highly concentrated on the east side of the active drainage ditch. This was confirmed on the east side of the drain in Area D where a pit (F.464) and a well (F.467) were most likely a westerly extension of the activities connected with Structure 9; in addition to 50g of animal bone, F.467 contained a sherd of Deverel-Rimbury pottery and 16g of fired clay. A length (F.443) of the coaxial field system was also traced in Area D as passing just south of the direction of Structure 9. The course was not identified as continuing through the south corner of Area A, although it would appear to extend beyond this into the area to the east; this area was not included in the programme of archaeological monitoring prior to quarrying, but it is likely that features relating to Structure 9 extended into that broader area.

Structure 10: Fs. 439-442. Located within a group of structures (with nos. 13 and 14), Structure 10 consisted of four postholes (0.1-0.11m depth, 0.29-0.34m diam.) in a sub-rectangular plan. Each posthole contained pale grey/blue silty clay occasioned by inclusions of natural orange sand, small sub-angular stones and charcoal flecks; no finds were recovered.

Structure 11: Fs. 465, 466 and 478-481 (Figure 11). A six-post rectangular structure (*c*. 5.7m x 5.9m) with circular postholes (0.08-0.19m depth, *c*. 0.2-0.3m diam.) that contained two or three fills. Post-pipes (mid-dark grey silt with charcoal inclusions) were evident in four of the postholes (Fs. 465, 466, 478 and 479); no finds were recovered.

Structure 12: Fs. 472-477. With six postholes this approximately circular structure enclosed an internal area of *c*. 4.9m diameter; to the southwest a seventh posthole (F.471) may also have defined a doorway porch or screen. The postholes were roughly circular (0.13-0.25m depth, 0.22-0.35m diam.) and filled with grey sandy silt with flecks of charcoal, burnt clay and patches of natural sand and gravel. No datable finds were recovered from the structure.

Structure 13: Fs. 549-552 (Figure 11). Either two pairs of postholes or a small rectangular four-post structure (*c*. 2.7m x *c*. 1.4m) oriented northwest-southeast. All postholes were sub-circular. Fs. 549 and 550 were 0.03-0.06m in depth (0.26-0.3m diam.) and filled with charcoal-infused mottled mid-greyish orange silt, and may be classed as a pair; of a similar diameter, Fs. 551 and 552 were slightly more substantial at a depth of 0.13-0.14m, and these were filled with mid grey clayey silt containing greater degrees of charcoal. F.551 also produced fired clay (4g) and animal bone (2g), but wet sieving of the sample was absent of plant macrofossils.

Structure 14: Fs. 537-546 (Figure 11). Nine postholes formed a rectangular arrangement (3.5 x 2.55m) oriented northwest-southeast. Features 546, 545 and 546 were closely set on the structure's north long side, as were Fs. 541 and 542 on its north long side, and these perhaps represent iterations of a structural element. The structure utilised circular and sub-oval postholes (0.04-0.19m depth, 0.22-0.36m diam.) that were filled with orange/brown or grey sandy clay. Finds were minimal, but sample 332 from F.540 produced fired clay (45g) and a burnt stone (49g), and sample 331 from F.539 also included fired clay (5.5g). Structure 14 was situated directly southeast of relatively dense archaeology that included two intercutting pit-wells (Fs. 559 and 561), two shallow spreads of material (Fs. 556 and 557) and Structure 13. The uppermost fills of the pit-wells contained charred hearth material, fired clay and other settlement refuse.

There was the possibility that four additional structures were partially defined by post arrangements. On the north edge of Area C and between structures 2, 3 and 4 was an arc of three postholes (Fs. 168-170) surviving to a maximum depth of 0.15m, and a second arc consisting of four postholes (Fs. 177-179 and 183) cut to a depth of 0.06-0.09m and 0.25m (F.183). These contained no finds. In Area D a third arc of four postholes (Fs. 506-509) lay north of the coaxial field system (Fs. 445 and 516) with depths of 0.06-0.12m, and on the southeast edge of the same area three postholes (Fs. 510-F.512) cut to a similar depth were grouped nearby two small pits (Fs. 513 and 514) and a well (F.515) containing Deverel-Rimbury pottery. No finds were recovered from any of these postholes.

Pits, Wells and Watering Holes

Twenty-four features were designated as either pit-wells or watering holes (Table 8).

Feature	Weight (g)				Other
	Animal Bone	Pottery	Burnt Stone	Burnt Clay	
140	2523	-	-	-	-
141	161	3	-	-	-
142	67	5	-	-	-
144	4	555	-	85	x1 loomweight
147	-	-	-	-	-
164	64	-	-	-	Worked wood
173	-	-	-	-	Worked wood: log ladder
174	-	-	-	-	-
205	108	-	-	-	Worked wood: log ladder
215	531	44	5784	197	Worked wood & x2 loomweights
282	18	-	-	-	-
283	134	-	334	-	-
284	-	-	-	-	-
330	1338	12	106	-	-
333	88	-	-	-	-
394	-	-	-	-	-
453	2	-	-	-	Possible wood lining
467	50	20	150	16	-
487	168	68	1844	48	-
502	482	-	-	-	Worked wood (inc. stake)
503	1184	-	306	-	Worked wood: poss. log ladder
515	58	1004	-	102	x2 Loomweights
528	216	-	-	-	Worked wood (inc. post and stake)
533	280	32	-	-	-
558	5894	8	34	362	Worked wood: timber planks & worked stone
559	812	1006	368	518	Worked flint + shell
561	-	-	-	-	-
Total	*14182*	*2757*	*8926*	*1328*	-

Table 8. Summary of finds from wells and watering holes

Identification of these types has been determined by their form (Figures 13 and 14), although their use may be indistinguishable. Watering holes displayed an oval plan with a shallow platform breaking to a sharp drop, generally rounded in profile, and cut to a moderate depth of generally less than 1.0m. Five features were allocated to

this category: Fs. 174, 282, 283, 333 and 559. Wells (or pit-wells) are distinguished by an absence of any shallow platform, though may have been accessible via a slight step, and the depth of these was generally in excess of 1.0m with a wide circular plan. Features allocated to this category totalled 19: Fs. 141, 144, 147, 164, 173, 205, 215, 284, 330, 394, 453, 467, 487, 502, 503, 528, 533, 558 and 561. By further contrast to watering holes, a number of pit-wells also displayed two or more episodes of re-cutting or 'mucking out'.

It is not intended here to overview the character and context of each well and waterhole. Instead, two cases may be outlined in which multiple pit-wells were in one instance found together in close proximity, and in the other instance were found to be intercutting as opposed to a re-cutting or mucking-out of an existing feature.

Fs. 173 & 215: Lying a little under 10m apart, these were located within a clustering of pits of varying scale and immediately north of the coaxial field system in Area C; just 0.25m separated F.173 from the field system (F.206 [745]), whereas this gap was 2.3m with F.215. Some of the pits contained burnt stone and small amounts of briquetage, and a dump of animal bone was also found in one of these (F.229). Although their contemporaneity should not be automatically assumed, the relative proximity of all of these features as a concentrated cluster suggests that their use was broadly connected. The basal deposits of Fs. 173 and 215 both consisted of *c.* 0.2m of silty fibrous and saturated peat with good degrees of preservation. In F.173 this peaty deposit [610] contained numerous fragments of worked wood, which included a log ladder (Figure 13); similarly, in F.215 (Figure 12), finds retrieved from the peat [855] and an overlying silt deposit [845] included worked wood and woodchips, with a sherd of Deverel-Rimbury pottery, three animal bones, burnt stone (868g) and a fired clay spindle whorl. A sample of [855] produced macrofossils of wetland/aquatic plants and de-watered seeds of grassland herbs, which is suggestive of the well's wetland microenvironment within an open grassland context. The fill sequences above these peaty deposits varied between the two wells. F.173, following a re-cutting or mucking-out, was filled with fairly even horizontal layers of sandy gravel and silty clay, all devoid of any finds, which might indicate that the well was purposefully sealed following its disuse. By contrast, F.215 was partially filled by relatively thin lenses of grey silt and gravelly sand slumping from all sides of the well, and containing occasional finds of animal bone (408g, including red deer antler and a worked bone), burnt stone (2397g), fired clay (30g) and vitrified hearth debris. The remaining 0.6m concave void contained a more gradual accumulation of organic silt [833] containing charcoal flecks, burnt stone (2397g) and animal bone (270g) which appears to represent the final use of the silted well as a refuse repository. Above this was a 0.25m-thick fibrous silty peat [832]; a sample from the peat produced very little plant macrofossils, except for nettle and *Atriplex* sp., the latter of which is a dryland herb conducive to moist environments and particularly able to grow in areas affected by salination. These were both absent from the sample of the basal peat [855], and [832] was further differentiated by its abundance of freshwater mollusca, none of which was present in [855]. This was finally capped by another peaty layer [831], the uppermost horizon of which contained finds of a post-Medieval date. The sequence for F.215 was therefore one of a primary use as a water source that eventually passed into a refuse dump that was finally abandoned upon increasingly damp conditions.

Fs. 558, 559 and 561: The three wells were located in two areas within 8.0m of one another, between which was Structures 13 and 14. Positioned immediately southeast of the gap between curvilinear ditches F.458 and F.526, the cluster of features also included a number of small pits that contained numerous finds (Table 9). Set between Structures 13 and 14, pit-well F.561 was cut by pit-well F.559 following its total infilling (Figure 11). Both wells were of comparable dimensions (*c.* 4.0 x 5.4m, to a depth of 1.0-1.25m) but with slightly contrasting fill patterns. At the base of F.559 were layers of very dark brownish grey peaty silt overlain by pale grey silts separated by moderately thin layers of clayey gravelly sand, inwardly slumped predominantly from the well's west side. This sequence may relate to a gradual accumulation of deposits within an open well. This is in contrast to the gravelly deposits that filled much of F.561 as horizontal layers, and which are likely to represent a more rapid

accumulation and perhaps even a deliberate backfilling of a defunct feature. Neither of the wells was especially laden with finds, although the bone from F.561 [3803] was recovered as a concentrated dump perhaps marking an episode of the well's backfilling. Given the sequence of cutting and backfilling, this raises a question as to the relationship of either of the two pit-wells to Structures 13 and 14. Their position on either side of the pit-wells may be more specifically focused upon the hollow of the backfilled wells rather than any function that the wells may have served during their primary use. The hollow was at least 0.25m deep and was filled with three layers. At the base of the hollow was a layer [3799] of firm dark grey sandy clay, slightly friable in composition and containing frequent flecks of charcoal with pottery (24 sherds; 352g), animal bone (206g) and a single worked flint. Above this was a layer [3798] of sandy clay, *c.* 5cm thick, concentrated at the centre of the hollow. This was irregular in plan and may simply have been a dump of slightly charred clay, it being of a mixed reddish-orange and yellowish-brown colour, indurated in patches, and containing no finds. The uppermost and capping deposit [3797] was similar to [3799] but with occasional patches of ash. This also contained a range of finds that included 112 sherds (654g) of Deverel-Rimbury pottery, fired clay (518g, with fragments of cylindrical loomweight), animal bone (208g), burnt stone (n=20; 304g) and ten worked flints, and a sample of this deposit produced more than one hundred fragments of wood charcoal greater than 2mm in size and from which it should be possible to identify the woody taxa utilised as fuel.

Feature	**Type**	**Pottery no.** (g)	**Animal Bone** (g)	**Fired Clay** (g)	**Burnt Stone no.** (g)	**Worked flint no.**	**Other**
559 [3797-99]	Capping hollow	136 (1006)	414	518	20 (304)	11	-
559 [3801-10]	Well	-	194	-	1 (64)	-	-
556	Pit	5 (42)	2	20	14 (104)	-	-
557	Pit	-	128	36	5 (74)	1	-
558	Well	1 (8)	5894	362	1 (34)	-	Worked wood
561	Well	-	204	-	-	-	-
Total	-	*142 (1056)*	*6836*	*936*	*41 (580)*	*12*	-

Table 9. Summary of finds from features near to Structures 13 and 14

If pit-wells F.559 and F.561 were unrelated to Structures 13 and 14, at least in terms of their primary usage as water sources, a different account may be considered for pit-well F.558. This displayed at least one (and possibly two) recuts and a subsequent shallow layer of silted material that was again overlain by dark peaty silt [3769]. As with F.559, the core of the well's fill sequence was suggestive of gradual accumulation, but with F.558 these layers regularly contained finds mainly of bone and fired clay, generally in moderate amounts (Table 9); a sherd of Deverel-Rimbury pottery was collected from high in the filling profile [3762]. However, of particular interest is an assemblage of timber recovered from the lower deposit of peaty silt [3769] (Figure 16). These included tangentially split planks surviving to a maximum length of 1.6m, with tooled working including possible wing and mortice joints noted on at least two items. Although further specialist assessment is required for the site's waterlogged wood, given that there is little evidence for timber revetment in any of the pre-Iron Age wells at Baston/Langtoft it may be that the well's proximity to the structures indicates that the timbers may have formed a part of the structures' framework.

Multiple bag and tin samples were collected from the pit-wells and waterholes, and these are archived at the offices of the CAU. A sample from pit-well F.502 was processed from a dark peaty silt layer [3524] in which a selection of worked wood – including a possible ladder – was found. No cereals were present within the sample, which contained taxa commonly associated with nitrogen enriched soils as well as scrub vegetation and damp conditions. It is possible that the well is connected to activities pertaining to Structure 12 and related features.

Pits

Pits were distinguished by two categories: conventional and unconventional. The former are those features that might 'normally' be classed as a pit or scoop of regular oval, circular or sub-circular plan. Pits referred to as 'unconventional' comprise of long rectilinear pits or 'tanks' that might have been classed as segments of a linear ditched system if not for their spatial composition and a strong argument for the pairing of two 'types' of this category.

Feature	Weight (g)					Other
	Animal Bone	Pottery	Burnt stone	Fired Clay	Briquetage	
118	18	-	-	-	-	-
130	2	-	-	-	-	-
150	298	536	609	141	-	-
160	24	-	116	-	-	-
188	5	-	38	-	-	-
197	95	64	698	38	-	-
213	8	14	396	10	30	-
229	7301	583	57414	226	-	Worked antler
230	-	-	-	-	542	Worked wood
285	1	88	2	-	-	-
287	-	-	82	-	-	-
289	6	-	488	-	2	-
290	18	22	254	1	12	-
291	-	-	22	-	-	-
292	-	-	68	-	2	-
319	-	-	8	-	-	-
325	18	-	-	-	-	Worked wood
332	-	-	-	-	8	-
364	164	-	-	-	-	-
365	-	56	38	-	-	Modified fossil
368	170	-	-	-	-	-
433	48	-	42	-	-	-
454	-	-	3168	894	-	-
456	96	-	-	-	-	-
457	-	-	-	-	-	-
459	1	-	-	122	-	-
460	28	-	-	-	-	-
461	48	-	44	40	-	Worked wood
462	-	1	-	-	-	-
464	-	-	94	28	-	-
468	-	-	48	-	-	Worked flint
489	8	42	356	-	-	Worked flint
495	-	-	896	-	-	-
520	38	10		48	-	Burnt flint
556	2	42	104	20	-	-
557	128	-	74	36	-	Worked and burnt flint
Total	*8583*	*1458*	*65059*	*1712*	*596*	-
Total Excluding 229-30	*1282*	*861*	*7645*	*1486*	*54*	-

Table 10. Summary of finds from 'conventional' pits

Conventional pits: There was considerable variation in the dimensions of the conventional pits, with depths of 0.04-0.85m (ave. 0.30m), and number of fills from 1 to ten. Totalling to 104, only 37 produced finds, and this being of generally low density (Table 10).

Eleven conventional pits contained Deverel-Rimbury pottery, only two of which amounted to just over 500g with the remaining nine averaging just 95.6g. This is largely reflective of the broader distribution across the Baston/Langtoft landscape where singular dumps of pottery account for the overall high quantities of Deverel-Rimbury pottery that have been found there. Although a part of larger feature groups, two pits (Fs. 150 and 229) from Area C stand out in particular for their overall finds densities. F.150 was situated near to Structures 2 and 3 and related features, and F.229 beside pit-well F.215 and at least 14 other pits and postholes. The pits are considered further in the Discussion as part of coherent groups of features and their relation to zones of activity areas. One other pit deserving of particular mention is F.454 in Area D. Excavated in its entirety, the uppermost fill of this oval pit (1.1 x 1.64m, 0.27m depth) produced 3168g of burnt stone and 894g of fired clay with no evidence for *in situ* burning or scorching. What is perhaps more unusual about this pit is that it was isolated from other features within the centre of Area D with no apparent relation to particular activity areas.

Unconventional pits: Six features (Fs. 223, 225, 301, 413, 423 and 424) have been catalogued as linear pits. For ease of discussion – though risking interpretative assumption – the term 'tank' will be adopted here (Table 11). All six tanks were grouped together at the point of the main linears' convergence, thereby commanding an axial position within the investigation area and general Middle Bronze Age landscape (Figure 12). Of these, only a small amount of animal bone (14g) was recovered from F.223, and no direct dating evidence was forthcoming from any of these features. Nonetheless, a Middle Bronze Age date may be postulated on account of their spatial relationship to the field system in general.

	Width (m)	Length (m)	Depth (m)
Shallow Tanks	2.0-2.3	5.3-5.8	0.29-0.38
Deep Tanks	1.3-2.2	5.8-9.0	0.65-0.74

Table 11. Summary of tanks' dimensions

The tanks display two clear types (Figure 13). One is deep (Fs. 225, 301 and 413) and the other is shallow (Fs. 223, 423 and 424). The shallow tanks were wider but shorter in length than the deep tanks and reached depths of 0.29-0.38m. The deep tanks were cut to depths of 0.65-0.74m and contained between three and six fills. Consistent to all three of the deep tanks were two basal deposits of firm to stiff light grey silty clay with occasional patches of mid-orange sandy gravel that overlay semi-saturated and very dark grey organic clayey silt with fair preservation of wood and other organic materials. These two deposits were capped by slumping gravel and/or mid-orangey brown sandy clays with slight traces of fine silt lamination and occasional patches of gravel. By contrast, the shallow tanks contained no organic component, and were filled with three deposits at the base of which was soft light grey sandy (clay) silt varying across the tanks from fine grained to sandier or gritty and friable. Above this lay moderately firm mid-orangey brown sandy silt mottled with mid-grey silty clay that was capped by a thin (*c.* 0.07m) lens of moderately firm mid orange brown gravelly sandy silt. This consistency of tank morphology and depositional sequence suggests that they served particular functions as paired features. The stratigraphic evidence further illustrates that no two pairs were in use at one time, and a sequence of this use is provided in Table 12. Within this sequence was a 'spread' of indurated gravel [1264] or hard standing within a shallow hollow (F.425). Perhaps a working surface, this overlay one of the upper fills of F.225 from Pair 2; a flint scraper was recovered from near to the surface of the spread which also appeared to overly a small oval pit F.222. The spread was subsequently cut by F.223 from Pair 3, which suggests the likelihood that the use of the spread and the tanks was connected. Another small oval pit was cut by the north short side of F.225 of Pair 2, next to which was a posthole (F.227). The nature of this activity is not clear, although one possible suggestion is provided by pit F.230 adjacent to F.223 of Pair 3. Along with an assemblage of waterlogged and worked wood, finds from F.230 included large fragments of briquetage of a form

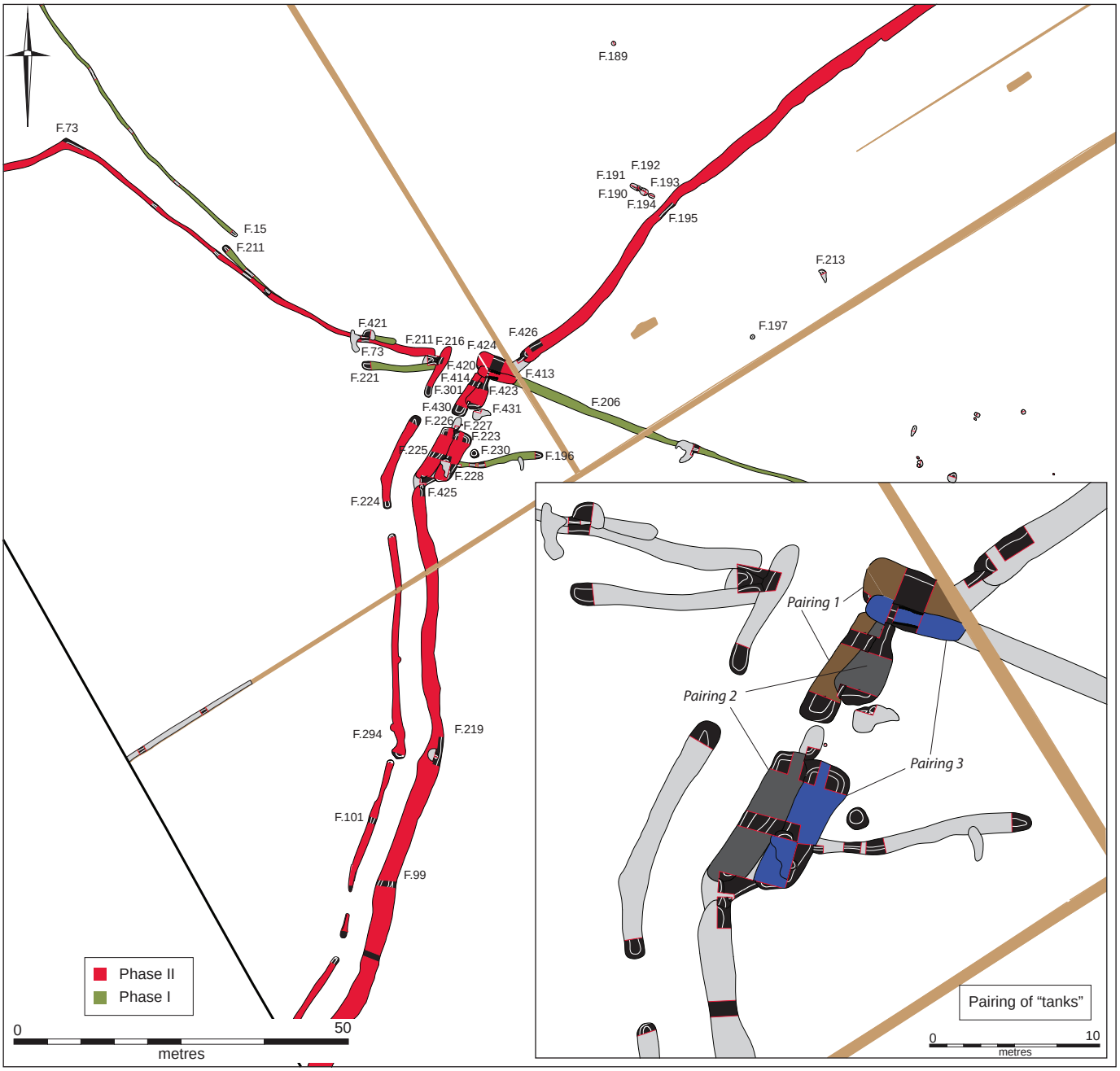


Figure 12. Detail of linears and “tanks”

consistent with Middle Bronze Age salt production. The environmental evidence from three samples taken from the tanks gives little indication of their direct use, returning spectra not dissimilar to the waterlogged pit-wells, including dryland herbs and molusca as well as wetland/aquatic plant species and molusca. Nonetheless, it was from one of the lower deposits in F.225 that plant macrofossils of a hop fruit (*Humulus lupulus* L.) and nettle (*Urtica dioica* L., see also F.413) was recovered and which may instead point to the tanks' use in processes of retting. In reality, both functions may have been carried out, and these possibilities are explored further in the Discussion below.

	→	Order of sequence	→
	Pair 1	**Pair 2**	**Pair 3**
Shallow Tanks	F.424	F.423	F.223
Deep Tanks	F.301	F.225	F.413

Table 12. Pairs of tanks and their order of sequence

Burials

A single ovoid grave (F.320; 1.4 x 0.88m, 0.1m depth) was encountered in Area B inside of which a poorly preserved crouched inhumation of a male adult [3012] lay on its left side (Figure 17). This was situated amongst a cluster of shallow sub-circular pits (Fs. 319, 321-323) and a posthole (F.324) *c.* 20.0m north of Structure 8. Although the structure has provisionally been assigned to Phase 1, at the base of the grave and situated between the skeleton's right hand and right knee was a thick sherd of shell-tempered pottery identified by Knight as of either Early or Middle Bronze Age attribution (unfortunately this sherd was extremely friable and disintegrated prior to conservation; an *in situ* photographic record survives). A fragment of cylindrical clay loom weight <39> was also found lying upon the lateral side of the skeleton's left lower arm; Timberlake's analysis suggests this to also be of either Early or Middle Bronze Age type. Filling the grave was a soft very dark grey clayey silt [3043] with frequent inclusions of charcoal flecks. Plant macrofossil identified within the fill included tubers of onion-couch (*Arrhenatherum* sp.) which were also noted in pit F.364 that lay outside the southern edge of Structure 7. This too has provisionally been attributed to the earlier Bronze Age, but onion-couch was also present within a Middle Bronze Age urned cremation in the Freeman's site cemetery (F.619; Fryer in Hutton 2011: 23) and is no indicator of phasing. Nevertheless, the ambiguities of the burial's material assemblage further highlight the necessity for scientific dating analysis for clearer elucidation of the site's sequence.

Phase 3: Late Bronze Age to Early Iron Age

Three features produced pottery broadly belonging to the post-Deverel-Rimbury ceramic tradition: Fs. 207, 328 and 458 (Figure 18). Totalling 126 sherds 876g, the majority of this (854g) derived from one small pit (F.328; 0.5 x 0.8m, 0.11m depth). Also containing 8g of fired clay, this lay isolated from obviously contemporary features in Area B within a swathe of Early and Middle Bronze Age features. This was the only cut feature attributable to this phase on account of its material assemblage. Three sherds of post-Deverel-Rimbury pottery were collected from the uppermost capping fill [3634] curvilinear ditch F.458 in Area D, this otherwise

containing Deverel-Rimbury pottery within its primary filling. At the very least this serves to foreground the limited activity registered for this period, but it is also possible that further evidence has been lost to more recent agricultural and other erosive processes. This may be suggested by reference to a treethrow (F.207) in Area C which yielded eight sherds (18g) of post-Deverel-Rimbury pottery with 6g of undiagnostic fired clay. Importantly, a second segment of a treethrow – one probably related to F.207 – lay adjacent to this and was found to have truncated part of the infilled coaxial field system of F.206 [760]. Recorded as F.209, the treethrow appeared to have concealed a remnant A and B/C soil horizon contained within which was 150g of undiagnostic fired clay, a fragment of clay loomweight, and 150g of briquetage. Aspects of the briquetage compare both with Middle Bronze Age and Iron Age technological styles and a later date would seem likely on account of the treethrow's relationship to the field system. However, the eradication of buried soils across the investigation area has removed much of the cultural material that would be expected to have been contained therein, and the likelihood of this being a mixed-date assemblage remains a possibility (briquetage of a more secure Middle Bronze Age date being found only 100m west of this). Another treethrow (F.281) cutting the same length of field system produced no finds, implying that those from F.209 were a fortuitous encounter. Either way, this offers a rare insight to the nature of soil depletion and data loss in the area, and taking into account the shallowness of pit F.328 it is conceivable that additional isolated features of Phase 3 – albeit estimated to have been small in number – lay within this now absent horizon.

Phase 4: Post-Medieval

Eight features were identified as post-Medieval, although a number of unexcavated features that were clearly of post-Medieval origin are included on the site's overall plan. The majority of this phase of activity was observed in Areas A and B. This included three strip quarries (Fs. 119, 327 and a third to the north of F.327, unexcavated), a drain or field boundary (F.123) and six pits or postholes (Fs. 120, 124, 356, 358, 368 and 466). The southeast corner of the excavation area around structure Structure 9 had evidently been the site of structures defined by squared postholes, most likely for small-scale agricultural purposes. Registered also as a concentrated geophysical anomaly (Hutton 2011), this area was also marked by strip and pit quarries, all of which appeared to have been bounded to the north by ditch F.123. A second area of similar geophysical response was situated to the southeast in an area of the quarry for which archaeological mitigation was not conducted.

Undated Features

Whilst an attempt has been made here to assign features to specific periods of activity, based in large part upon association to known chronological markers, there were a small number of features with a clear physical relationship to Middle Bronze Age features that illustrated their later date. Of particular note here are pits Fs. 198, 219, 280, and 398 that were found to cut the coaxial field system (Fs. 199 and 206) and the curvilinear ditches (Fs. 99 and 195) around the cremation cemetery. These

produced no finds, but F.198 was a sizeable pit cutting a stretch of the coaxial field system to a depth of 1.0m and a diameter in excess of 1.6m. In proximity to treethrow F.207 – from which post-Deverel-Rimbury pottery was recovered – this was filled with five deposits, the lowest of which was dark grey sandy clay with charcoal flecks [681] overlying a basal deposit [682] of loose pale grey sand with desiccated organic material. This may have served as a pit-well, and all of the features here could relate to the Later Bronze Age and Iron Age activities.

Three undated circular pits (Fs. 437, 438 and 449) have not been assigned to any particular phase since these stand apart from other features on account of each containing a stub of roundwood post (90-160mm diam.) trimmed to a tapered point and driven into the pits' base. The pits were 'arranged' in a north-northwest series, disconnected from any of the major phase alignment, with Fs. 437 and 449 located near to one another at the north edge of Area D, but otherwise somewhat isolated from other features. Feature 438, also in Area D, lay to the south of a small cluster of postholes and north of the Middle Bronze Age coaxial field system (F.445). Although their dimensions were by no means small (1.43-2.1m diam., depth 0.75-1.15m), finds in addition to the wooden posts were limited to 22g of animal bone in F.449. Set within a straight-sided circular cut within the base of the pits' otherwise concave profile, their basal deposits were fairly saturated grey sandy gravel overlain by thick (*c.* 0.25m) dark greyish brown peaty silt. A consistent pattern for each pit subsequently followed, with a thin layer of pale grey silt forming against the pits' concave profile, with the remaining void – upwards of 0.6m thickness – being then filled by mixed orangey brown sandy silt and clay with frequent stones. It is unclear if the posts tips snapped from the post shaft during removal or if the surviving tips simply represent the remains of *in situ* rot. Hints towards a function of these 'post-setting' pits may be forthcoming via the archived samples; however, possibilities of the posts' use may include supports for cover lids, or masts upon which animal hides may have hung whilst soaking.

Finally, at least two animal burials were interred within shallow grave cuts in Areas C and D, with a possible third also noted in the former. The first of these (F.279) was recorded some 26m southwest of the palisade enclosure, adjacent to and parallel with a length (F.206) of the coaxial field system. Filled with a single deposit [1065] of soft and friable mid yellowish orange silty sand, the oval grave (0.66 x 1.15m, 0.15m depth) contained a slightly truncated adult cow [1063] with calf [1064] *in utero*, suggesting a breeched birth to be the cause of death for both animals (Figure 17). Another possible animal burial was registered another 25m southwest of F.279. This consisted of a disturbed juvenile cow skeleton, compressed but semi-articulated, in an irregular feature (F.165), the diffuse nature of which is most likely a result of heavy truncation. In Area D a similarly irregular and truncated sub-oval grave (F.501; 1.02 x 1.55m, 0.1m depth) contained the disturbed remains of an articulated adult cow set tightly against the grave's edges, and concealed by a mixed deposit [3519] of mid-grey sandy silt with patches of yellowish grey clay and gravel. The nature of the shallow oval graves and the tight setting of the cattle within these leads to the suggestion that these are contemporary features, the most likely dating of which is either Phases 1 or 2.

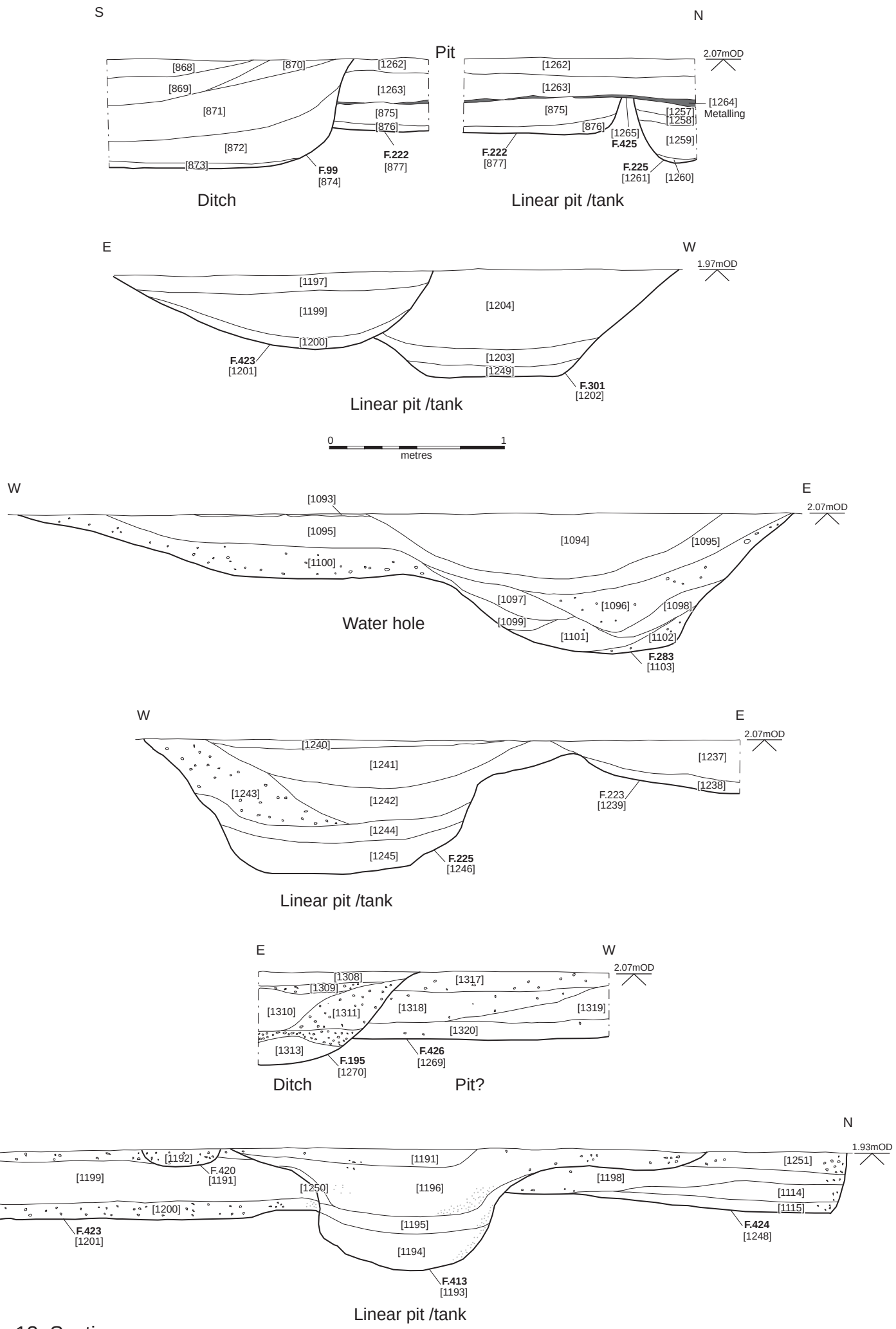


Figure 13. Sections

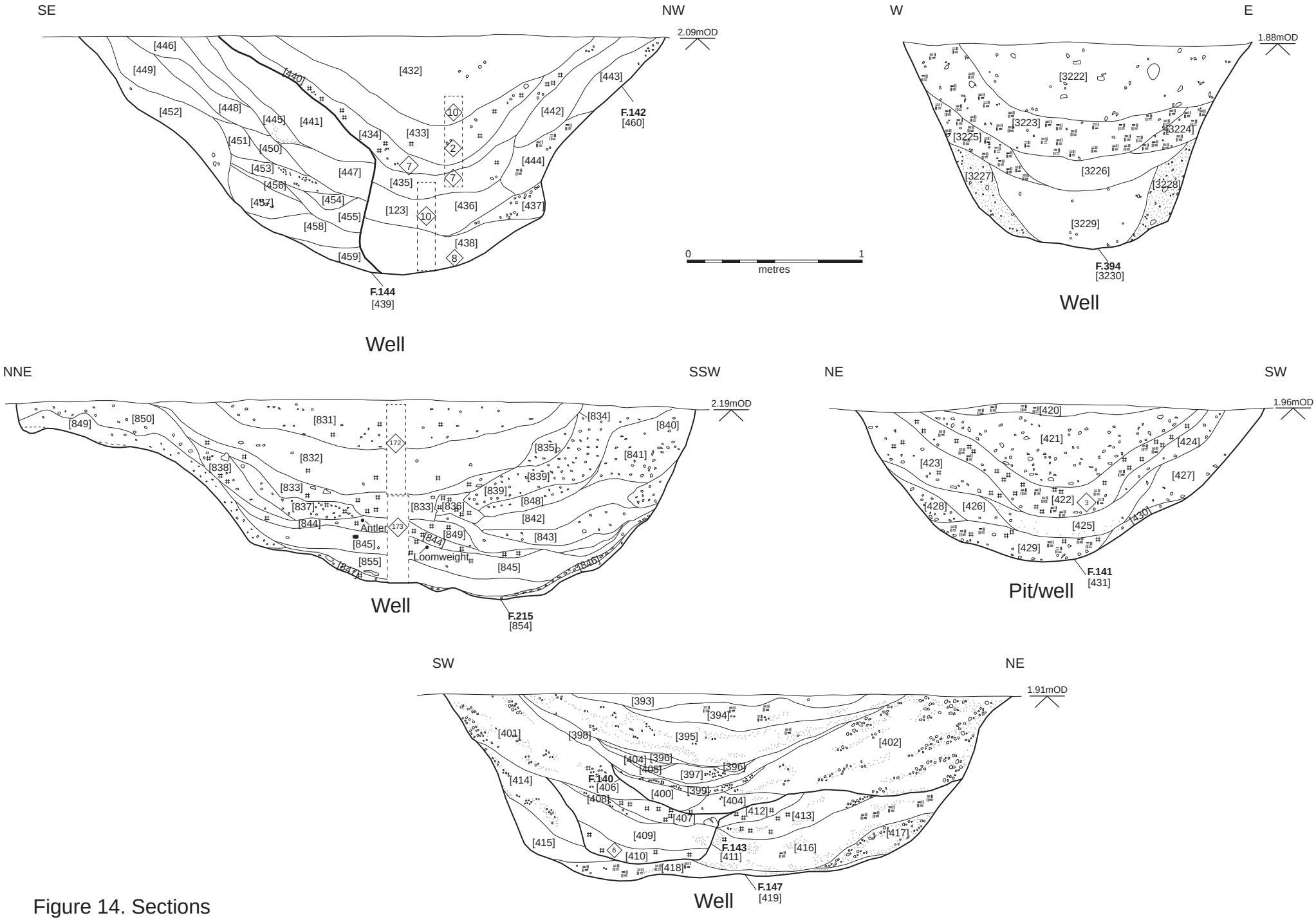
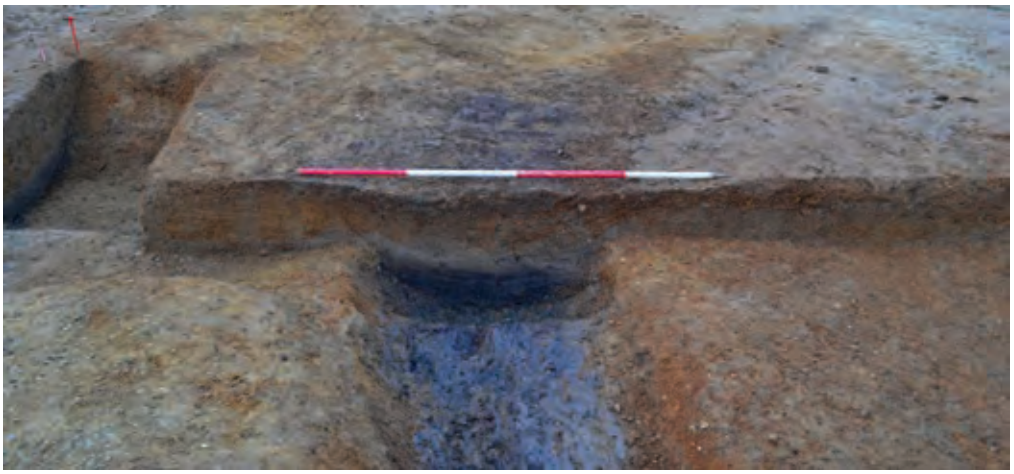


Figure 14. Sections

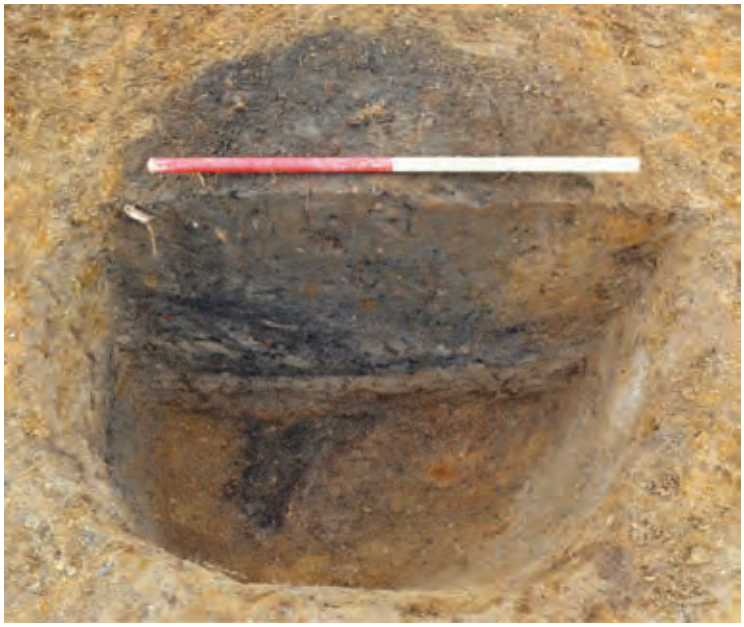
Well F.205 and log ladder

Log ladder from Well F.173

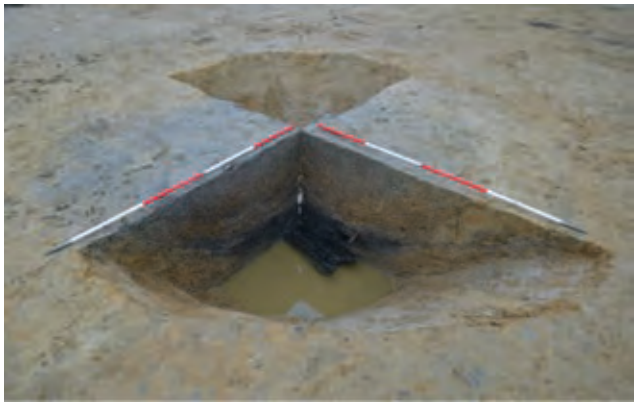


Linear pit / tanks F.413 (centre), F.423 (left), F.424 (right) and F.301 (top left)

Figure 15. Selected photographs

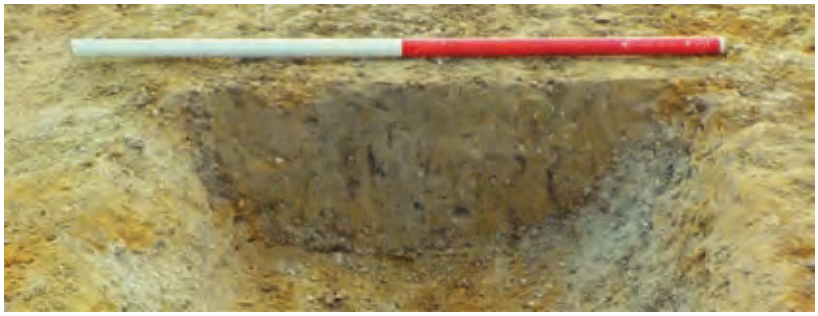


Collared urn pit F.482 with bark on base

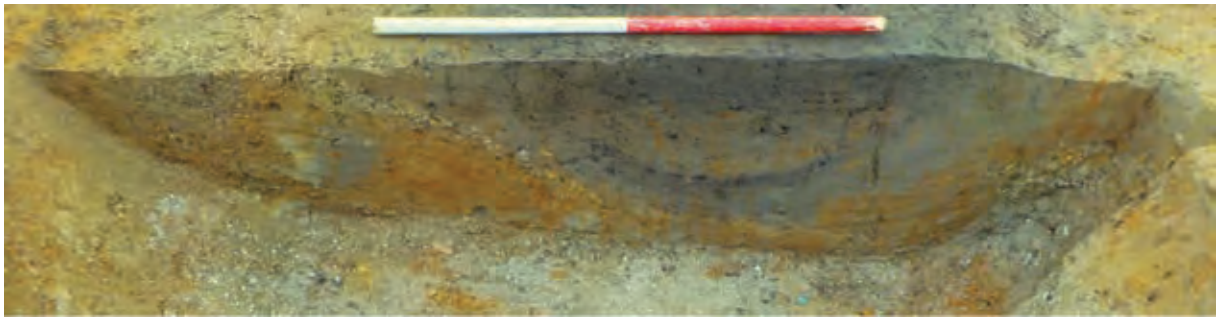


Well F.558 with timber plank

Timber plank detail in F.558



F.576 [3364] co-axial field system ditch



Well F.560 [3757] curvilinear ditch system

Figure 16. Selected photographs

Human F.320 [3012] crouched inhumation

F.279 cow and *in utero* calf

Figure 17. Selected burial photographs

MATERIAL CULTURE

***Worked Flint* –** Lawrence Billington

The excavations recovered a small assemblage of 38 worked flints together with five pieces (47g) of unworked burnt flint. The flintwork was recovered exclusively from the fills of cut features. The flint was recovered from 19 individual cut features and is quantified by type in Table 13.

Feature	**Type**	**Irregular Waste**	**Flake**	**Blade like flake**	**End scraper**	**Side scraper**	**Sub circular scraper**	**Knife**	**Side scraper or knife**	**Irregular core**	**Single platform flake core**	***Total worked***	**Unworked burnt no.**	**Unworked burnt weight** (g)
458	Linear	-	1	-	-	-	-	-	-	-	-	***1***	**-**	-
516	Linear	-	-	-	-	-	-	-	1	-	-	***1***	**-**	-
251	Palisade enclosure	-	1	-	-	-	-	-	-	-	-	***1***	**-**	-
252	Palisade enclosure	-	1	-	-	-	-	-	-	-	-	***1***	**-**	-
131	Pit	-	-	-	-	-	-	-	-	1	-	***1***	**-**	-
150	Pit	-	-	-	-	-	-	-	-	-	-	-	1	0.5
158	Pit	-	1	-	-	-	-	-	-	-	-	***1***	**-**	-
229	Pit	2	-	-	-	-	-	-	-	-	-	***2***	1	31
425	Pit	-	-	-	1	-	-	-	-	-	-	***1***	**-**	-
482	Pit	-	4	-	-	-	-	1	-	-	-	***5***	**-**	-
330	Pit/Well	-	2	-	-	-	-	-	-	-	-	***2***	**-**	-
559	Watering hole	1	6	1	-	-	3	-	-	-	-	***11***	**-**	-
268	Posthole	1	-	-	-	-	1*	-	-	-	-	***2***	**-**	-
335	Posthole	-	1	-	-	-	-	-	-	-	-	***1***	**-**	-
338	Posthole	-	2	-	-	-	-	-	-	-	-	***2***	**-**	-
557	Spread	-	-	-	-	1	-	-	-	-	1	***2***	**-**	-
228	Tree Bowl	-	-	-	-	-	-	-	-	-	-		3	15
340	Tree Throw	1	2	-	-	-	-	-	-	-	-	***3***	**-**	-
518	Tree Throw	-	1	-	-	-	-	-	-	-	-	***1***	**-**	-
	TOTAL	*5*	*22*	*1*	*1*	*1*	*4*	*1*	*1*	*1*	*1*	***38***	*5*	*47*

Table 13. Basic quantification of the flint assemblage by feature and type. (* made up of two refitting pieces)

Raw materials and condition

The assemblage is made up entirely of flint. The raw material is of variable quality but is generally fine grained with some pieces having incipient flaws or coarse fossil inclusions. The colour of the flint varies from a dark grey through to oranges and light greys. Surviving cortical surfaces are all relatively thin, hard and abraded/worn and include some recorticated thermal surfaces. Incipient thermal flaws are common and have resulted in a relatively large number of pieces of irregular, non-bulbar, waste resulting from the unpredictable fracture of nodules/cobbles along these pre-existing flaws. All of this material is likely to have been sourced from fluvial gravels and there is no evidence for flint from a primary source on the chalk or related deposits. The condition of the assemblage is

generally good, with little edge damage or abrasion. Eleven of the worked flints are partly recorticated ('patinated'), this does not appear to have any clear chronological significance and probably relates to localised differences in soil chemistry.

Palisade Enclosure
Two worked flints were recovered from features associated with the palisade enclosure (F.251 and F.252). Both are simple hard hammer struck flakes, one of which retains cortex over the entirety of its dorsal surface. Neither are chronologically diagnostic but both are consistent with a broad late Neolithic to Late Bronze Age date.

Pits
A total of ten worked flints were recovered from pit features. Features 131, 150, 158, 229 and 425 contained small amounts of relatively undiagnostic flake based material. Two pieces, a piece of irregular waste from F.229 and a flake from F.158, show edge damage resulting from utilisation, probably as cutting or scraping tools. The only formally retouched piece is a scraper from F.425. This piece is a short end scraper with a regular convex scraper edge made on the distal portion of a somewhat irregular flake blank.

A slightly more substantial assemblage of five worked flints was recovered from F.482, associated with Collared Urn pottery. This small assemblage consists of four unretouched flakes, including one example with possible utilisation on its distal end, and a narrow flake with bifacial retouch and use along one lateral edge which can be classified as a knife.

Postholes
Five worked flints were recovered from posthole features, all of which appear to be components of possible post built structures. Features 335 and 338 produced undiagnostic flake fragments. Feature 268 contained two worked flints. One of these is a badly flawed piece of irregular waste. The second flint is made up of two refitting pieces which join to form a fine sub circular scraper, an oval shaped tool with steep retouch extending around its entire perimeter. The scraper has broken in half at a point of weakness where there is a fossil inclusion/void in the flint. The break appears to have been initiated by the removal of a flake from the dorsal surface, perhaps during an attempt at retouching the scraper edge. This flake is not present in the assemblage despite the two broken halves of the tool being deposited together.

Linears
Linear features making up component parts of the Middle Bronze Age field system yielded just two worked flints. A single secondary flake was recovered from F.458 whilst a flake knife or side scraper, with semi invasive dorsal retouch along one lateral edge, was recovered from F.516. This latter piece has a carefully facetted platform and appears to derive from a levallois-like core, a technology associated with the Later Neolithic (see Ballin 2011) and, as such, is likely to be residual in this context.

Wells/Watering Holes
Two flakes were recovered from pit-well Feature F.330. A more significant assemblage of 11 worked flints was recovered from watering hole F.559 and was found in association with significant quantities of Deverel-Rimbury pottery. The assemblage includes some small waste flakes but is distinguished by a very high proportion of retouched and utilised pieces. The retouched forms comprise three sub circular scrapers. All display fairly regular retouch but have been manufactured on a variety of blank types, one on a flake, one on a split cobble and by inverse retouch on a 'janus' flake (a removal struck from the ventral surface of a flake). The remainder of the assemblage is made up of simple flakes, generally small and squat hard hammer struck pieces, three of which display macroscopically visible use wear.

Natural Features

Tree throw feature F.340 contained three worked flints. Two of these are burnt and fragmentary whilst the third is a complete hard hammer struck secondary flake. A single partly cortical flake was also recovered from tree throw F.518. Tree bowl F.228 contained a small quantity (15g) of burnt flint.

The worked flint assemblage derived from the excavations is made up exclusively of unsystematically/expediently produced flake based material which, whilst not strongly chronologically diagnostic, is typical of post-Neolithic lithic assemblages. This material consists of removals of varied morphology, generally somewhat squat and broad, with unprepared, often cortical, striking platforms and with a lack of control evidenced by incipient cones of percussion and hinged distal terminations. The only exception to this is the side scraper/knife of possible Late Neolithic date recovered from linear 516. The most significant aspect of the assemblage is the two small collections directly associated with both Early Bronze Age (Collared Urn) and Middle Bronze Age (Deverel–Rimbury) pottery; from pit F.482 and watering hole F.559 respectively. Both assemblage include small amounts of waste alongside a relatively high proportion of retouched and utilised pieces and are best interpreted as representing material deriving from settlement type activities.

The Collared Urn associated material is entirely typical of broadly contemporary assemblages from other sites along the western fen edge such as Edgerley Drain Road, Peterborough (Beadsmoore and Evans 2009) and King's Dyke West (Conneller 2002). Substantial assemblages of flintwork associated with Middle Bronze Age activity remains somewhat rarer in this region, with many sites with extensive Middle Bronze Age field systems and associated features yielding very little contemporary worked flint, as at Pode Hole quarry (Daniels 2009), Towers Fen and Brigg's Farm, Thorney (Mudd and Pears 2008; Pickstone and Mortimer 2009), West Deeping, Lincolnshire (Murrell 2010) as well as in previously investigated areas of the Langtoft landscape itself. In this context the small assemblage from F.559 is of some interest in providing a small sample of material, securely associated with Middle Bronze Age activity, which is broadly comparable to much larger assemblages of flintwork associated with Middle Bronze Age settlement from more southerly and eastern parts of the wider region such as at Clay Farm, Cambridgeshire (Phillips and Mortimer 2012) or Stansted, Essex (McLaren 2010).

The assemblage has been fully catalogued, with recording of selected technological attributes. No further substantial analysis is recommended and further work should focus on putting the assemblage in the context of the flint recovered from other stages of work at Langtoft. Any publication of the site should include a description of the assemblage, especially those found in association with contemporary pottery, and provision should be made for illustration of several of the retouched pieces.

Prehistoric Pottery

Areas A-C were the subject of analysis separate to the assemblage in Area D, and the reports are presented individually below. Combined, the assemblage comprised of 64 sherds (602g) of Collared Urn from eight features, 532 sherds (4516g) of Deverel-Rimbury from thirty-one features, and 126 sherds (876g) of post-Deverel-Rimbury

pottery from three features, one of which is the uppermost fill of an earlier ditch (Figure 18).

Areas A-C – Mark Knight

The prehistoric pottery assemblage comprised 324 sherds (3017g; MSW 9.3g). The collection contained large, comparatively fresh pieces, together with smaller abraded fragments, and overall the condition of the assemblage was good. Eight different fabric types were recognised. The principal opening materials or inclusions were fossil shell (whole and crushed), grog and sand. Feature sherds made up a small percentage of the group (14.8%) and included 30 rim, 10 base and 8 decorated pieces. The key characteristics of the assemblage were thick-walled heavy sherds belonging to large diameter urn/bucket shaped vessels. Exceptions comprised a thin walled, large diameter bowl. In keeping with previous phases of investigation at Langtoft, the majority of the sherds belonged to the Deverel-Rimbury tradition (55.9% by number and 62.2% by weight), with the remainder being made up of post-Deverel-Rimbury (Late Bronze Age-Early Iron Age; 37.9% and 28.9%) or Collared Urn (Early Bronze Age; 6.2% and 8.9%; Table 14) pottery.

Type	No. of contexts	No. of sherds	Weight	MSW	Fabrics
Collared Urn	8	20	269g	13.4g	3, 4
Deverel-Rimbury	22	181	1876g	10.4g	1, 2, 5, 7
EIA (PDR)	3	123	872g	7.1g	6, 8
TOTAL	*33*	*324*	*3017g*	*9.3g*	*8*

Table 14: Areas A-C pottery assemblage composition

Fabric Series:

Fabric 1 Medium hard with abundant whole fossil shell
Fabric 2 Medium hard with abundant crushed fossil shell
Fabric 3 Very hard with common large grog and occasional sand
Fabric 4 Hard with common medium grog (no sand - soapy texture)
Fabric 5 Medium with frequent small rounded voids and common small grog
Fabric 6 Medium hard with frequent crushed shell (thin-walled)
Fabric 7 Medium hard with abundant small crushed shell and occasional large grog
Fabric 8 Hard with frequent sand (compact)

Collared Urn

Feature	Context	Sherds	Weight	Fabric	Details	Feature type
135	389	6	53g	4	Impressed twisted-cord	Pit
144	432	2	110g	3	Large base frag.	Well
210	761	1	6g	3		Pit
330	3047	1	12g	3		Well
334	3072	1	22g	4		Post Hole
340	3085	7	60g	3	Collar, incised chevron	Treethrow
368	3111	2	6g	4	Internally bevelled rim	Pit
Totals:		*20*	*269g*	*2*		

Table 15: Areas A-C Collared Urn pottery by feature

The Collared Urn component was characterised typically by large diameter, thick-walled sherds made of hard, grog-rich fabrics with (Fabric 3) or without (Fabric 4) a sand admixture (Table 15). Attributes such as pale buff colouring, impressed twisted cord decoration, incised chevrons on a collar fragment and internally bevelled rims corroborated an Early Bronze Age provenance.

Deverel-Rimbury

The Deverel-Rimbury component was also typified by large diameter, thick walled pieces only this time made of hard shell-rich fabrics with (Fabric 7) or without (Fabric 1 and Fabric 2) grog (Table 16). Key diagnostic attributes included horizontal applied cordons with impressed fingertip decoration, incised cable decoration around rims and large flattened rims. A single sherd from F.245 – a posthole within the palisaded enclosure – is included here on account of its fabric (Fabric 5), but this stands out amongst the assemblage and could also reasonably suit an earlier Bronze Age date.

Feature	Contexts	Sherds	Weight	Fabric	Details	Feature type
141	422	1	3g	2		Pit
142	447	1	5g	2		Well
144	433, 434, 435, 438	39	445g	2	Flattened rim	Well
150	516, 517, 518	33	536g	2, 7	Flattened rim, applied cordon, fingertip dec.	Pit
197	664	3	64g	7		Pit
213	776	2	14g	2		Pit
215	837, 845	2	56g	7	Applied cordon	Well
229	916, 917, 931, 933, 934, 935, 1158	62	583g	2, 7	Flattened rim, incised cable	Pit
245	974	1	4g	5	Possibly Early Bronze Age	Palisade
285	1274	29	88g	2	Flattened rim, incised cable	Pit
290	1134	3	22g	2		Pit
365	3155	5	56g	1		Pit
Totals:		*181*	*1876g*	*4*		

Table 16: Areas A-C Deverel-Rimbury pottery by feature

Post-Deverel-Rimbury

In contrast to the earlier forms the post-Deverel-Rimbury element of the prehistoric pottery assemblage was characterised by thin-walled vessels with simple rounded rims (Table 17). Similarly, the assemblage comprised bowl forms instead of urns.

Feature	Contexts	Sherds	Weight	Fabric	Details	Feature type
207	746	8	18g	6	Thin-walled internally bevelled rim	Treethrow
328	3041, 3080	115	854g	6, 8	Simple-rounded rim	Pit
Totals:		*123*	*872g*	*2*		

Table 17: Areas A-C post-Deverel-Rimbury pottery by feature

Area D – Alasdair Wright

Type	No. of contexts	No. of sherds	Weight	MSW	Fabrics
Collared Urn	3	44	334g	7.8g	a, b
Deverel-Rimbury	33	351	2640g	7.2g	c, d, e
LBA/EIA (PDR)	1	3	4	1.3g	f
TOTAL	*37*	*396*	*2972g*	*5.4g*	*6*

Table 18: Area D pottery assemblage composition

The assemblage comprises 396 sherds (2972g; MSW 7.81g). Like previous phases of excavation at Langtoft, the pottery was overwhelmingly composed of Deverel-Rimbury with a small component of Collared Urn and post-Deverel-Rimbury ware (Table 18).

Fabric Series:

Fabric a Buff/pink with grey internal surface. Medium-soft. Very frequent grog.
Fabric b Grey/pink with dark grey interior. Medium-hard. Infrequent fine grog, infrequent shell.
Fabric c Buff/pink/grey. Medium hard. Very frequent shell inclusions. Smoothed exterior.
Fabric d Buff/pink. Medium hard. Very frequent shell inclusions. Coarse.
Fabric e Buff/pink with grey interior. Moderate shell inclusion. Infrequent grog.
Fabric f Orange/pink. Hard. Sand and fine flint temper.

Collared Urn

The Collared Urn sherds were recovered from a single feature (F.482; Table 19). The majority were plain body sherds. Only seven feature sherds were present, all of which were derived from the collar and neck. Consequently, a full vessel profile could not be reconstructed. A minimum of two vessels were present in the assemblage. However, this is based solely on the identification of two rim types. The first was thin walled with comb impressed chevrons beneath the collar and further comb impressions on the collar itself. The second was undecorated with an internally bevelled rim.

Feature	Context	Sherds	Weight (g)	Feature type
482	3464	4	14	Pit
	3465	33	266	
	3466	7	54	
TOTAL		44	334	

Table 19. Area D Collared Urn pottery by feature and context

Deverel-Rimbury

The Deverel-Rimbury pottery comprises 351 sherds (2640g; MSW 7.5g; Table 20). The shell-rich hard fabric was largely consistent throughout the assemblage. However, there was a clear distinction between vessels which were smoothed or lightly burnished and those which were left coarse. The assemblage was dominated by small abraded sherds (199 weighed less than 5g), which meant estimation of vessel forms was challenging. Wall thickness ranged from 6mm-15mm, suggesting a range of vessel sizes. The larger, diagnostic sherds were derived from bucket and barrel type vessels. Slightly shouldered vessels with in-turned necks (barrel urn) could be identified, as could a single vessel with a slightly flared neck. Of the 14 rims identified, the majority were flattened and expanded

internally. Three rounded rims and a single T-shaped variant were also present. A single decorated sherd was recovered, exhibiting a horizontal groove beneath the rim. Otherwise the assemblage was distinctly plain. Twenty-seven of the sherds were burnt post-breakage, which alongside the small sherd size and heavy abrasion suggests some process of degradation (accidental/intentional) in the intervening period between breakage and deposition.

Post-Deverel-Rimbury

Three small sherds (4g; MSW 1.33g) from the upper fill [3634] of F.458 account for all the post-Deverel-Rimbury pottery. The hard, evenly fired sand tempered fabric is consistent with Late Bronze Age or Early Iron Age wares.

Feature	Context	Sherds	Weight (g)	Feature type
434	3292	1	36	Treethrow
445	3331	1	2	Linear
458	3634	13	70	Linear
	3635	6	11	
	3640	3	7	
461	3395	3	10	Pit
462	3404	1	2	Pit
467	3419	1	20	Pit
487	3474	6	70	Well
489	3491	7	41	Pit
515	3587	51	635	Well
	3588	16	136	
	3590	4	10	
	3592	28	211	
518	3576	1	9	Pit
520	3600	1	7	Pit
	3601	1	3	
	3602	2	31	
	3735	1	4	
526	3673	1	2	Linear
	3674	1	5	
	3680	2	5	
528	3625	4	4	Well
533	3700	2	12	Well
536	3701	7	14	Pit/scoop
	3709	6	36	
553	3739	1	35	Pit/scoop
557	3747	5	42	Pit
559	3797	108	640	Pit
	3799	25	330	
560	3629	1	2	Linear
	3630	2	28	
	3793	39	170	
TOTAL		*351*	*2640*	

Table 20. Area D Deverel-Rimbury pottery by feature and context

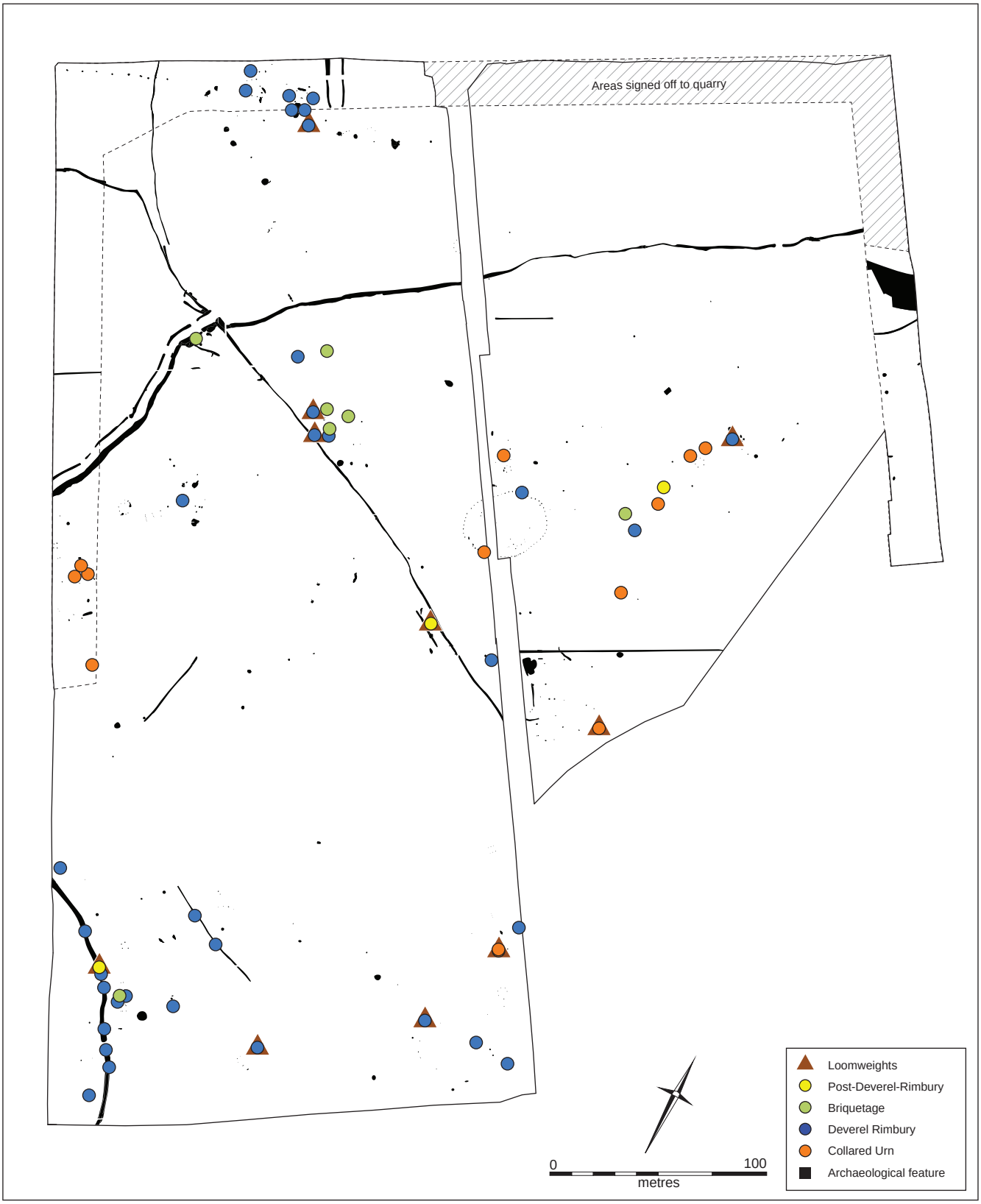


Figure 18. Distribution of pottery types, briquetage and loomweights

Burnt and Worked Stone **–** Simon Timberlake

Burnt Stone

Burnt stone weighing a total of 75.514 kg was recovered from 38 different features on this site (Table 21); most of this stone came from Fs. 229 (57.8 kg), 215 (5.414 kg), 454 (3.21 kg) and 487 (1.87 kg).

The size fraction of the cracked fragments of burnt cobble and rough stone found here was comparatively uniform and on the small side (with a mean of about 40mm diameter) compared to other prehistoric sites; the make-up of this also being different, with up to 90-95% of it consisting of limestone/ calcareous sandstone and quartzite pebbles; an unusual choice of stone for burning given the calcination effect and its poorer heat-retention properties. This could have been collected from the local river terrace gravels. Burnt and calcined flint was rare. More interesting still was the fact that much of this 'rough stone' (as opposed to the far-travelled waterworn sandstone/quartzite cobbles typically sourced from the gravels) appeared to be of just one or two lithofacies (Kellaways Beds and Cornbrash); in some cases this dominated the burnt stone content of certain features (e.g. Fs. 487, 489 and 495). By far the greater part of this consisted of the Upper Cornbrash (Callovian – Middle Jurassic), a rock identified on the presence of its zonal fossil ammonite *Macrocephalites microcephalus* and other typical mollusca such as the bivalves *Entolium* sp., *Pholadomya lirata* and *Pleuromya* sp., extensive burrowing trails, serpulid and oyster shell remains which were present throughout the sandy grey limestone (Gallois 1988: 21). Within the South Lincolnshire area the Upper Cornbrash outcrops beneath the Kellaways Beds, whilst a short distance above this is the base of the Oxford Clay. The probability is that the harder upstanding Cornbrash outcropped nearby, the rocks then being removed glacially, and re-deposited with relatively little erosion in between, within the gravels.

For the most part the firing temperature of this rock appeared to be low, although small areas of white powdery calcination could be seen upon some of the rocks, and it seems possible therefore that the burnt rock (most likely used for heating water for boiling (cooking) with in pits) may have been used twice before discarding this in some of the larger pits. Thus whilst we do not know the exact function of the 'burnt stone pit' F.229, it seems likely that it was connected in some way with this process. Such large burnt stone (as opposed to burnt flint or mixed burnt flint and burnt stone) assemblages are very typical of Middle Bronze Age domestic settings. The fact that this burnt stone contained very small amounts of weathered and abraded burnt clay could be explained by the use of these pits as general rubbish depositories, or more likely the use of hardened fired clay waste as 'burnt stone' material, the suggestion in this case being that it wasn't necessarily a clean process for cooking, but could have been for something else.

Worked Stone

Two worked stones were recovered from Middle Bronze Age features.

Whetstone: Area D: F.558 [3769] broken fragment from the end of whetstone (40 x 35 x 8mm thick; weight 36g). Made of fine grain-sized Millstone Grit (Upper Carboniferous). Normally associated with re-working of Roman querns, but within a secure Middle Bronze Age context.

Carved fossil: Area B. Found within a pit or posthole F.365 [3155] of Middle Bronze Age date (Figure 19). Dimensions: 43 x 19 x 18mm; weight 18g. Truncated cylindrical – cone shaped; this is the broken end fragment of a belemnite guard (internal skeleton of a fossil cephalopod) most likely *Cylindroteuthis* sp from the Jurassic (Oxford Clay). Most likely this would have been found locally as a glacio-fluvial erratic within the gravels. There is abundant evidence throughout these gravels of these waterworn fossils. The belemnite is composed of a honey brown coloured calcite ($CaCO_3$) formed with a concentric and radial crystalline structure typical in the preservation of this type of fossil. The hardness is about 2.5-3 (Mohs scale); and thus is composed of material which could easily be carved by flint or metal.

The belemnite fragment has four deep longitudinal grooves cut into it, each of these at 90° to the adjacent ones, the lines meeting at the narrowest point, whilst at the other end they meet in the centre of the radial structure exposed in the break, appearing therefore as an inscribed cross, with the lines likewise meeting at 90°. The width of the 'V' shaped incisions of the grooves varies between *c.* 3.0 and 1.5mm, generally deeper at the broad top end of the fossil fragment (the end from which they were scored), and shallower at the apex end or point. Typically these grooves were between 1.0-1.5mm deep. Across the slightly harder radial x-section (fracture) the cuts were between 1.5-2.5mm wide and 1.0-1.2mm deep. The presence of sharp knife cuts can be seen in the base of some of these grooves which could have been cut by copper/bronze (or by flint given the narrowness of some individual incisions). However, what is also clear is that the 'V' shaped grooves were then further shaped by partly abrasive action, perhaps using a 'blunt' knife or awl, mostly likely one made of metal, but still possible using bone or another organic material. At the base of some of the grooves incipient and deep cracks have appeared in the radial calcite structure of the fossil, perhaps resulting from the pressure exerted during the cutting of the fossil.

It is possible that some of the abrasion seen within the grooves could have been caused by the repetitive wear of thread. In this respect it is useful to speculate on function. Of course one possibility is that this was not an object with a practical function, and despite a search for similar objects (for instance on the Portable Antiquities site www.finds.org.uk) no exact parallels, nor even examples of differently carved belemnites were encountered. The possibility of this being a casual (therefore not necessarily 'meaningful') carving remains a possibility, as does an atropaic function for this as a charm or protective item. In popular folk interpretation belemnites were sometimes equated with 'thunderbolts', but equally these had phallic interpretations (Oakley 1965; van der Geer & Dermitzakis 2007). There are also records of them being placed alongside other fossils in prehistoric burials, as Kevin McNamara has shown in the case of fossil echinoids (sea urchins) placed with Early Bronze Age inhumations (2007). More specifically, Oakley (1978) describes a belemnite found with a female skeleton at a Bronze Age burial site in Yorkshire (www.nhm.ac.uk/nature-online).

More practical uses for such a carefully carved grooved object might include use as a spacer to hold apart weighted (thus tightened) threads during the weaving of a belt or cord (or when spinning), or if worn as an adornment as a weight (held by thread) or tassel. Function as a gaming counter is also a possibility, yet this seems unlikely. Quite simply the absence of any parallels makes this object difficult to interpret.

However, there is another just as interesting aspect to this fossil. Belemnite fossils typically have (up to) four naturally occurring sulcii extending from the belemnite tip for a short distance (usually less than 50mm) along the surface of the guard. In the case of *Cylindroteuthis* sp., one of them is typically longer and deeper, extending along the whole surface of either the ventral or dorsal of the organism almost as far as the phragmocone. Thus the natural appearance of this fossil may well have inspired the modified embellishment of the item at Baston.

Fired Clay and Briquetage – Simon Timberlake

A total of 6.03kg of burnt and worked clay was recovered from 43 features (Table 22), the majority of this coming from F.454 (982g), F.229 (608g), F.458 (554g), F.230 (530g), F.559 (514g), F.558 (376g), F.215 (202g), F.209 (162g), F.320 (158g) and F.150 (144g). Of this amount at least 3.01kg consisted of fragmentary worked clay; 2.23kg of which was loomweight, and 780g of which was briquetage.

Eight main fabric types were recorded, with Fabric 1 separated into four sub-types and a ninth fabric identified as briquetage. Fabrics 1a-c, and 7-8 were primarily located within Area D, the others having derived from Areas A-C.

Catalogue of Burnt Clay Fabric Types

Fabric 1 ochre yellow/pale grey to pink coloured soft silty clay with some darker brick-red spots and streaks, and rarely small flint grit (<1mm) but more commonly small voids (<1mm) from organic, sometimes with a whitish patina on the exterior

Fabric 1a ochre yellow to brick-red and variegated coloured soft sandy-silty clay with some darker brick-red spots and streaks, sometimes with a whitish patina on the exterior. Has inclusions of small flint grit (<5mm), calcined shell (<5mm), and also rare small voids (<1mm) from burnt-out organic

Fabric 1b similar but lighter buff-brown in colour, more clay-rich silt, and vesicular (with burnt-out organic <2mm) and few other inclusions

Fabric 1c similar but generally a lighter coloured sandy mix with occasional increased amounts of burnt-out organic, but in general more burnt and un-burnt flint (<10mm), small amounts of grog, no shell

Fabric 2 sandy-silty light grey-dark brown - buff - brick red coloured fabric with rare inclusions of pale grey grog, but more commonly of small angular flint (<10mm)

Fabric 3 similar to Fabric 1 but slightly coarser and more calcareous with very fine broken-up shelly material and pronounced red clayey streaks and grog plus small charcoal inclusions (<5mm)

Fabric 4 pinkish-grey –white coarse shelly fabric

Fabric 5 slightly lumpy brown -brick-red coloured heterogeneous and void-filled clay fabric with a whitish patina on external surfaces

Fabric 6 sandy light grey silty clay fabric with whitish powdery patina

Fabric 7 hard sandy biscuit-like texture with earthy matrix containing inclusions of part-bunt crushed flint and gravel and blebs of chalky marl grog. Has thin oxidised pink exterior and sometimes reduced grey interior

Fabric 8 lightweight umber/ grey-pink coloured vesicular fabric with streaky lenses incl. carbonaceous and grog inclusions, but no flint grit

Briquetage

Fabric 9 a reddish-brown hard-fired and sub-ceramic vesicular (i.e. porous) to gritted textured silt-clay fabric. The 'grit' is in fact abundant crushed shell (oyster shell) inclusions (<5% volume), all of this well mixed-in, and all <1mm in diameter. There may be some, but little in the way of (burnt-out) organic, the near-surface porous texture of this fabric being the result of weathering and dissolution of the shell inclusions

Loomweights: Based on the fragmentary evidence encountered a minimum of 22 loomweights were recovered from 16 different features: Fs. 144, 150, 209, 215, 229, 320, 458, 459, 482, 515, 526, 558, 559 and 560 (Figure 18). Most of these features were pit-wells, or else deep pits associated with burnt stone etc. At least two types of loomweight were recovered: cylindrical and rectangular or square pyramidal forms. However, fragments of an incomplete bun-shaped object which might have been a loomweight were found in Fs. 454 and 558. Several of these different loomweight elements were found together, suggesting that these had both been deposited together, and may have originally come from the same looms. These may have formed interchangeable loomweight 'sets' associated with similar looms; however, only fragments of the 'square form' were noted from pit F.229. Nevertheless, the probable date of both forms, based on their feature association, is Middle Bronze Age.

The well round-edged *cylindrical* form dominated the assemblage. In Areas A-C this was typically between 80-100mm in diameter and up to 80mm thick (although no complete sections survive) - with several smaller but similarly shaped examples of just 60mm+ in diameter and *c*. 50mm thick; all of them with traces of rounded and 'worn' central perforations of *c*. 10mm (the smaller type) and 20mm diameter (larger type). The dominant fired clay fabrics making up these weights were the brick red sandy–silty and flint-tempered Fabrics 1 and 2. Both of these fabrics are likely to be locally sourced and made up from a mixture of flint, sand and silt obtained from the underlying gravels and alluvium. Loom weights in Area D were found to differ very slightly by comparison with those from Areas A-C. Most recognisable amongst the fragmented burnt clay assemblage in Area D – where at

least twelve loomeweights (1.5kg) were recovered from ten features – was pieces belonging to the round-edged barrel-shaped *cylindrical* forms. The shape of these was similar, but a little different to those recovered from Areas A-C. No complete examples were found, the whole assemblage being much more partial, fragmented and weathered compared with Areas A-C. Equally no weight (estimates) could realistically be provided for these, but partial sections did suggest a minimum length of *c*. 80mm, and a diameter of 70-90mm. The estimated diameter(s) of the central perforations of the loomweights was in the region of 6-8mm. All such measurements suggest that these loomweights were probably smaller than the equivalent loomweights recorded from Areas A-C. The clay fabrics on the other hand were all fairly similar (Fabrics 1(1a), 2 and 3), and likewise to have been locally sourced and made from a mixture of flint, sand and silt obtained from the underlying gravels and alluvium.

Much less survived of the *square to pyramidal* weights; nonetheless, these were potentially of a similar size but with smaller diameter warp thread perforations (*c*. 10mm). Just a few fragments of the *rectangular-pyramidal* (or triangular) loomweight type was recovered from F.558 in Area D, representing a minimum of just one loomweight, about which little more can be said. More significant perhaps is the evidence for what could be a bun-shaped loomweight, although only the edges of these (as re-fitted and pieced together fragments) survive, with no trace of the warp thread grooves or perforations which would be diagnostic of function. However, the occurrence of these with the perforated and un-perforated cylindrical loomweights, and the similar fabric association, suggests a possibly similar function. It is possible to find parallels for the whole assemblage within other Middle Bronze Age sites; one example being Pode Hole Quarry, Cambridgeshire (Daniel *et. al.* 2009, 73-74).

A large collection of generally better preserved Middle-Late Bronze Age clay loomweights has been recovered from the north Cambridgeshire fen edge site of Pode Hole Quarry (Daniel *et. al.* 2009: 73-74). This was likewise dominated by the well round-edged cylindrical form that possessed similar dimensions (90-100mm diameter; 90mm height; 15-25mm central perforation) and fabric to the 'large type' reported here for the 2014-15 investigations at Bastone No.1 Quarry. Interestingly, at both sites the 'cylindrical', 'square' and 'pyramidal' types are found together within the same features. The range of different loomweight types found at Pode Hole was remarked upon as being indicative of a 'subsistence domestic assemblage' which, as for the assemblage reported here, was found in pits closely associated with briquetage. The potential importance of subsistence weaving to these Middle Bronze Age communities is also suggested by the current assemblage by the finding (and presumably intentional deposition) of a single cylindrical loomweight with a crouched inhumation in F.320. The form and fabric of this 'deposited' loomweight is very typical of the cylindrical loomweight fragments recovered from elsewhere across the investigation area, thereby placing this rather unusual burial into settlement-wide context, and most likely a Middle Bronze Age date.

Bun-shaped (rounded) cylindrical-type loomweights possessing a central to slightly a-centric perforation, and weighing up to 0.5kg, are characteristic forms of the Middle-Late Bronze Age, and these are sometimes referred to as being the generic 'Bronze Age' type. The classic example of a cylindrical clay loomweight is that from Winnal Down, Hampshire (illustrated in Wild 1988: 32). Similar examples were recovered from the excavation of the Middle Bronze Age 'Prehistoric Settlement 1' at North West Cambridge (see Timberlake in Cessford and Evans 2014).

Whilst clearly produced as loomweights, the one query that remains as regards the condition of some of these fragments, is whether these objects ever had a secondary

use, such as in salt production? The possibility of this is suggested by their degraded condition and also the presence of white patina or 'bleaching' upon the clay surface. This is a phenomenon which is often seen on briquetage pedestal supports and containers, where it is indicative of the level of use or the intensity of salt-making activity (see Morris in Daniel *et al.* 2009: 80).

Owing to the degraded quality of most of the fragmented worked clay, just one of the cylindrical loomweight fragments (<1938>) may justify illustration for inclusion within a published account of the worked clay assemblage.

Briquetage

Briquetage was recovered from seven different features in Areas B and C: Fs. 209, 213, 230, 289, 290, 292 and 332 (Figures 18 and 19). Most of this came from just two features: F.209 (154g) – a tree throw with a preserved buried soil – and F.230 (530g) – a deep pit associated with worked wood. From both these contexts loomweight was rare, as was pottery, yet the most likely date for these (in terms of their archaeological context) is Middle Bronze Age. A single sherd of abraded briquetage was recovered from F.559 in Area D, from which a number of loomweight pieces were also obtained; the condition of the briqutage in this instance suggests that it must have been re-deposited from another area of the site.

The briquetage was quite recognizable and easy to differentiate from pottery (even as weathered sherds) on account of its fabric type (see Fabric 9 above). All of the pieces examined were brick-red to brown in colour, hard-fired and heavily shell-tempered, but weathering on surface to a vesicular void-filled texture; a type comparable (at least in terms of its written description) to the finer shell-gritted fabric S1 of the briquetage containers described by Elaine Morris in 2009 from the radiocarbon dated Middle-Late Bronze Age pond and pit clusters at Pode Hall Quarry (see Morris in Daniel *et al*. 2009: 74-82). In fact almost all of the briquetage looked at from BNE 14 consisted of rather similar vessel elements, by far the best preserved being the 11 adjoining pieces making up a cut-rim shallow concave - flattened elongate pan container recovered from F.230 of around 500mm + long (but with no surviving ends), 100mm+ wide, an internal depth of 25mm, and a wall thickness of between 5-12mm. This form closely resembles the description of a *flattened rim container (Type BriqR8)* from Pode Hole Quarry with its rim fold to the interior (Morris in Daniel *et al*. 2009: 76, Figure 4.5) and dated to the Middle Bronze Age. The similarities between these 'dated' pan types is also suggested by another sherd of a similar fabric found within F.209 (BNE14) which closely resembles the vessel form referred to as *BriqB1 flat base with sharp base angle* (*ibid*. Fig.4.5(8)) from the same site.

Our understanding of the way these evaporating pans were arranged on the saltern hearths, and how they were used, can be gained by comparison with Iron Age examples, the best preserved of these (hearths plus containers) to be found on the Lincolnshire coast at Ingoldmells Beach (Crosby in Lane & Morris 2001). Closer to hand was the 1992 study of briquetage and saltmaking sites within the SW Lincolnshire Fens, and in particular the briquetage remains from the Iron Age salterns at Morton and Cowbit, south of Spalding and north of Bourne (see Lane in Hayes & Lane 1992: 218-229). These are well illustrated and described examples which in many ways are quite similar, both in terms of their shell-gritted fabrics (including the evidence for shell dissolution on the surface of the vessel sherds) and form, the main difference being the characteristically much deeper (U-shaped)

profiles of these Iron Age briquetage containers, and the in general far more complete assemblage, with a range of kiln furniture fragments represented. However the similarities in recognisable elements are sufficient enough between the two to compare individual broken-up and weathered briquetage vessel sherds from F.209 (Area C) with these Iron Age examples (see Table 22). Particularly useful here was the recognition of the 'clay dab' clips adhering to the cut rim edge of the mostly-complete briquetage container vessel recovered from F.230, alongside another example of a clip clay join on a small weathered sherd from F.209. Associated with this mostly-complete container from F.230 were two small sherds of a possible 'lid' for this or for another vessel, whilst from F.209 there were weathered sherds which might represent the bases of circular vessels (or perhaps the rounded corner(s) of elongate vessels). Undoubtedly there are a range of different vessels represented here, the further study of which should address the function of shell-tempering vessels, but not apparently the briquetage supports and other kiln furniture, something which may have its origins in a Middle Bronze Age Deverel-Rimbury pottery tradition.

No certain fragments of the pedestal supports or any other hearth structural elements associated with the use of these briquetage pans have been recognized within the present assemblage, although a single pedestal support has previously been recovered from a Middle Bronze Age pit-well in the Freeman's site to the west (Timberlake in Hutton 2011: 26). Briquetage dated to the Late Bronze Age from Baston No.2 Quarry was also absent of supports or structural elements (Hall 1998), although it is notable that supports were found there within the briquetage dated to the Early–Late Iron Age (Webley 2004). For the Middle Bronze Age assemblage at Pode Hole Quarry the best surviving of these elements appear to be the pedestals, although none of these are associated with hearths, settling tanks or feeder leats such as might be expected of an *in situ* salt-winning site (Morris in Daniel *et a*l. 2009: 80). Both Pode Hall Quarry and Langtoft lie some kilometres short of the tidal reach and salt marsh limits expected during the later Bronze Age; this, together with the limited range of furniture associated with Middle Bronze Age briquetage in the current investigation area, raises the question as to whether its users were briquetage and salt producers, traders and/or simply consumers? Whichever the case, the importance of this particular site to our understanding of salt making in the later Bronze Age is clear. As a study of the available literature seems to indicate, the remains of the briquetage container <183> from F.230 is likely to be the most complete example of such a vessel – of Middle Bronze Age(?) date – from the east-coast fenland. Given that the reconstructions of these earlier forms have been made on the basis of finds of non-adjoining small sherds, this mostly-complete section is undoubtedly an important find.

It is recommended that prior to full publication the briquetage (<183>) should be assembled for drawing and for a drawn reconstruction of how it was used. A specialist review of the entire Langtoft briquetage and its dating potential is also advised.

Brick and Tile – Marcus Brittain

A single fragment (10g) of post-Medieval hand-made reddish-orange and yellow brick was recovered from the upper fill of Bronze Age pit-well F.215 [831]. The fabric was fine coarse sand with occasional medium inclusions of sandstone.

Metalwork – Marcus Brittain

Two contexts produced a small assemblage of handmade iron nails, probably of a post-Medieval date.

<27> F.115 [321], upper fill of square pit (Area A): Fe. Two nails: (1) square profile with flat head, length 53mm, thickness 7mm, weight 9g; (2) rectangular profile with flat head, length 74mm, thickness 6-13mm, weight 37.5g.

<237> F.215 [831], upper fill of pit-well (Area C): Fe. One nail, heavily corroded; rectangular profile with flat head, length 25mm, max. thickness 7mm, weight 2g.

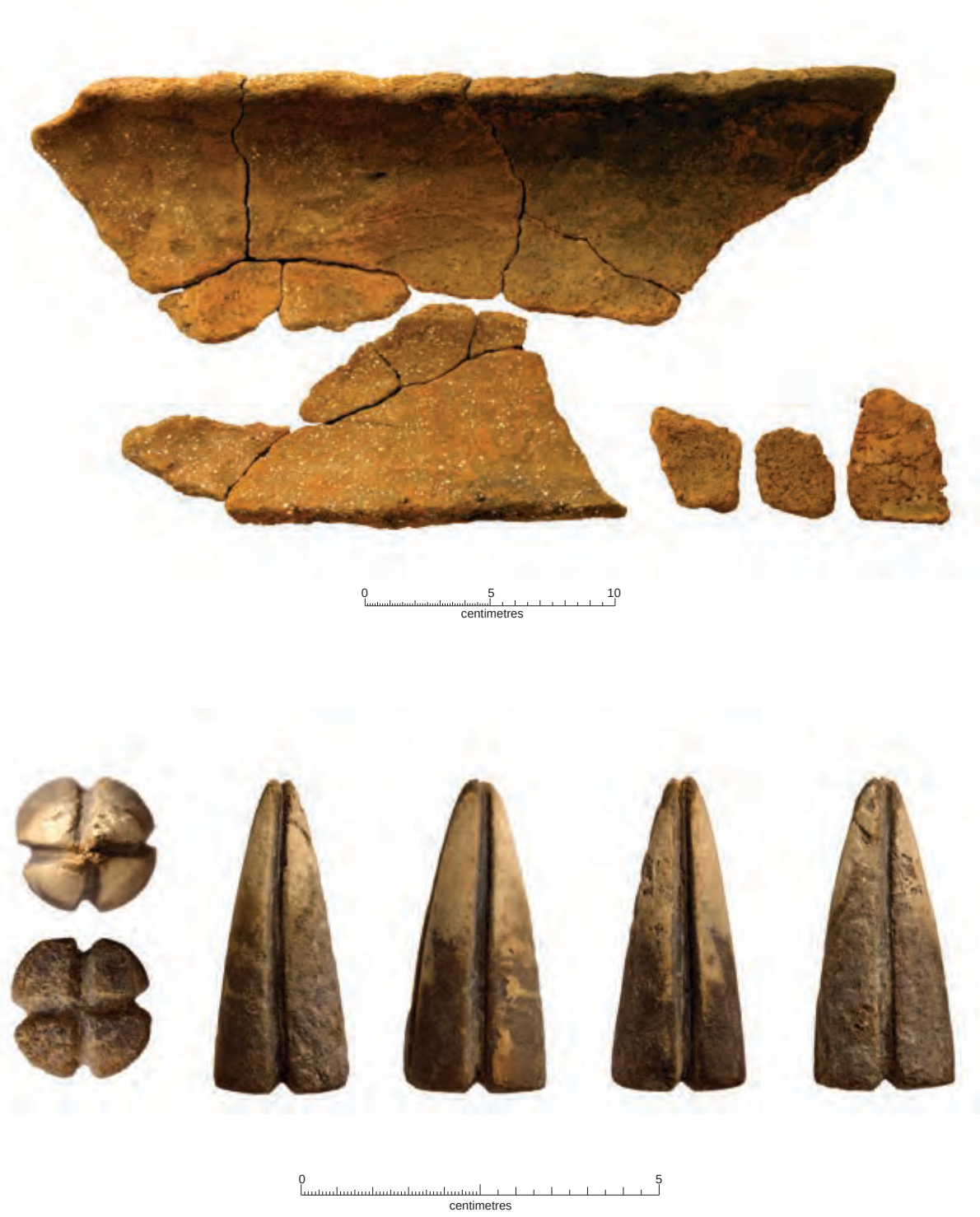


Figure 19. Photographs of briquetage from F.230 and carved fossil from F.365

Table 21. Catalogue of burnt stone

Site Code	Cat. No.	F.	Context	Nos. frags	Size (mm)	Weight (kg)	Geology
BNE14	80	73	887	2	10-30	0.014	soft pink sstn
BNE14	81	99	829		20-55 (ave. 35)	0.208	Mid Jurassic sandy lmstn (4) + sstn (2) + quartzitic sstn
BNE14	90	150	517	1	45	0.042	Lincolnshire oolite
BNE14	85		516	4	10-45	0.072	Mid Jurass sandy lmstn(1) + sstn + granite
BNE14	88		517	8	23-100 (ave. 60)	0.546	Mid Jurassic sandy lmst (6) + pale sstn(2) + sstn
BNE14	94	160	546	2	55-60	0.118	Mid Jurassic sandy lmstn
BNE14	101	188	653	1	40	0.04	quartzitic sstn
BNE14	112	197	664	21	20-70 (ave. 40)	0.702	Mid Jurassic sandy lmstn (14) + micac quartzite(2) + qtz sstn + pale sstn (2)+ oolite
BNE14	121	213	776	20	10-55 (ave. 40)	0.404	Mid Jurassic lmstn + quartzite + micac sstn
BNE14	127	215	831	2	38-60	0.11	Mid Jurassic sandy lmstn
BNE14	136		842	7	25-50	0.186	Mid Jurassic sandy lmstn (4) + sstn-siltstn + ironstone
BNE14	144		849	10	10-70 (ave. 40)	0.206	Mid Jurassic sandy lmstn
BNE14	146		855	8	20-60 (ave. 40)	0.18	Mid Jurassic sstn + sandy lmstn
BNE14	129		833	155	20-80 (ave. 35)	2.52	90% Mid Jurassic sandy limestone + micac sstn + fine qtz sstn+ quartz vein; x2>BC
BNE14	132		837	36	22-70 (ave. 40)	1.202	85% Mid Jurassic sandy limestone + metaquartzite (Bunter Trias?) x1 + quartzite + qtz sstn + sstn
BNE14	143		845	13	20-110 (ave.55)	0.7	90% Mid Jurassic sandy limestone and other calcareous sstn + sstn; x1>BC
BNE14	135		841	18	15-60 (ave. 30)	0.31	Mid Jurassic sandy lmstn (17) + sstn
BNE14	149	223	1228	1	50	0.026	Lincs oolite
BNE14	151	228	1232	24	10-55 (ave. 35)	0.35	Mid Jurassic sandy lmstn (3) + metaquartzite Bunter(2) + quartzite + quartz sstn + sstn + micac sstn
BNE14	182	229	935	1	45	0.036	Mid Jurassic sandy limestone
BNE14	179		934	13	25-55 (ave. 40)	0.36	60% Mid Jurassic sandy lmstn + sstn + quartzitic sstn + granite
BNE14	175 (1)		933	175	30-90 (ave. 40)	4.702	95% Mid Jurassic Callovian or Bathonian limestone + rare Lincolnshire oolite + sandstone + BF; high % limestone
BNE14	175 (2)		933	282	20-75 (ave. 30)	5.514	95% Mid Jurassic Callovian or Bathon limestone + sandstone + micac qtz sstn + grit + metaquartzite (Bunter) x1 + siltstone + BC; high % limestone; x3 > BC
BNE14	175 (3)		933	213	20-100 (ave. 40)	4.790	90% Mid Jurassic (Callovian or Bath) limestone + sandstone + qtz sstn + micac sstn + metaquartzite (Bunter) x1) + siltstone + Lincolnshire oolite; high % limestone; x1> BC
BNE14	175 (4)		933	98	20-110 (ave.45)	4.226	95% Mid Jurassic (Callov – Bathon) limestone + sstn; x4 > BC
BNE14	169		932	1	65	0.074	Mid Jurassic sandy lmstn
BNE14	168		932	3	20-60	0.082	Mid Jurassic sandy lmstn + siltstone
BNE14	165 (1)		931	134	20-110 (ave. 30)	3.36	95% Mid Jurassic (Callov-Bathon) limestone + sstn; x2 > BC
BNE14	165 (2)		931	91	20-90 (ave. 45)	4.034	95% Mid Jurassic (Callov – Bathon) limestone + sst; x1 > BC
BNE14	161		917	56	25-80 (ave. 40)	2.85	85% Mid Jurassic (Callov-Bathon) limestone + sstn + qtz sstn + crystal tuff; x1 > BC
BNE14	158 (1)		916	164	20-70 (ave. 45)	6.112	90% Mid Jurassic limestone +sstn; x13>BC
BNE14	158 (2)		916	344	10-80 (ave. 35)	6.194	93% Mid Jurassic sandy lmstn + micac ssstn + micac qtz sstn +metaquartzite(x1); x6 >BC
BNE14	158 (3)		916	148	10-85 (ave. 25)	2.368	95% Mid Jurassic sandy limestone +qtz sstn + quartzite + fl
BNE14	158 (4)		916	146	10-90 (ave. 40)	3.276	90% Mid Jurassic sandy limestone + qtz sstn + sstn = qtz micac sstn + quartzite + BF
BNE14	158 (5)		916	183	20-120 (ave. 50)	6.090	95% Mid Jurassic sandy limestone + micaceus siltstone + sstn + grit + qtz sstn +; x1 > BC
BNE14	158 (6)		916	120	20-110 (ave. 45)	3.730	95% Mid Jurassic sandy limestone + sstn +qtz sstn + quartzite; x1 > BC
BNE14	208	283	1100	12	15-60 (ave. 35)	0.344	greensand + pale sstn + ferrug sstn + siltstone

Site Code	Cat. No.	F.	Context	Nos. frags	Size (mm)	Weight (kg)	Geology
BNE14	207		1100	2	40-45	0.068	hard siltstone
BNE14	211	285	1274	6	10-35	0.03	Mid Jurassic sandy lmstn
BNE14	213	287	1120	4	30-40	0.086	Mid Jurassic sandy lmstn + sstn
BNE14	214	288	1127	1	35	0.022	Mid Jurassic sandy lmstn
BNE14	217	289	1129	1	33	0.016	Mid Jurassic shelly limestone
BNE14	219		1129	42	15-55 (ave. 30)	0.496	80% Mid Jurassic sandy limestone + sstn + siltstone
BNE14	225	290	1134	11	16-52 (ave. 35)	0.254	sstn + quartzite sstn
BNE14	226	291	1136	1	40	0.028	Mid Jurassic sandy lmstn
BNE14	228	292	1138	4	10-50	0.07	sstn + quartz sstn
BNE14	29	319	3013	1	40	0.01	quartzitic sstn
BNE14	38	320	3043	1	25	0.012	sstn
BNE14	40		3046	2	10-25	0.006	limestone
BNE14	50	330	3047	1	40	0.016	sstn
BNE14	55		3051	2	30-75	0.094	sstn
BNE14	234	340	3085	5	20-35	0.106	sstn + quartzitic sstn + siltstone
BNE14	74	365	3155	1	50	0.04	Mid Jurassic sandy lmstn
BNE15	100	433	3288	4	20-40 (ave. 32)	0.044	U Jurass Corallian Lmstn(2) + sstn + metaquartzite
BNE15	109	454	3365	70	30-80 (ave. 55)	2.328	U Jurass Corallian? Lmstn(3) + micaceous sstn(4) + sstn(19) + quartzitic sandstone (7) + coarse quartz grit(1) + metaquartz(1)
BNE15	110		3365	14	30-60 (ave. 40)	0.882	U Jurass Corallian Lmstn(4) + soft pale sstn(2) + hard sstn(5) + chert(1) + sandstone/ quartz grit(1)
BNE15		458	3634	5	30-50 (ave. 40)	0.184	sstn
BNE15	116		3633	1	20	0.01	metasandstone
BNE15	133	461	3395	1	50	0.044	limestone
BNE15	137	464	3408	10	15-55 (ave. 30)	0.094	micac sstn(1) + soft pale sstn (5) + calcined flint(4)
BNE15	143	468	3423	5	20-45	0.052	U Jurassic Corallian Lmstn
BNE15	148	482	3464	1	55	0.052	quartzit sstn
BNE15	156		3468	1	95	0.152	basalt/dolerite
BNE15	144		3461	1	40	0.022	quartzit sstn/siltstn
BNE15	157		3465	5	25-35 (ave. 25)	0.048	white sstn + gre-brwn sstn + quartzit sstn/siltsn + metaquartzite + BF
BNE15	162	487	3474	3	10-40	0.022	sstn(2) + lmstn
BNE15	164		3474	20	40-95	1.848	Upper Jurassic (Corallian?) fossilif limestone
BNE15	169	489	3491	28	10-40 (ave. 28)	0.360	Cornbrash Lmstn (Macrocephalites sp ammonite) 1 + Corallian Lmstn(14) + U Jurass septarian(2) + metaquartzite(3) + micac quartz sstn(1) + quartz siltstone(3) + quartzite(2)
BNE15	170	495	3506	33	10-80 (ave. 30)	0.914	Upper Jurassic (Corallian?) fossilif limestone (31) + grey sstn LGS (2)
BNE15	186	503	3530	1	115	0.310	Upper Jurassic Corallian Lmstn
BNE15	233	526	3673	5	25-70	0.084	reddened sstn
BNE15	230		3680	1	60	0.086	quartzitic sstn
BNE15	262	556	3745	12	20-40 (ave. 25)	0.106	soft grey sstn(10) + hard grey sstn(1) + flint(1)
BNE15	265	557	3747	4	20-45 (ave. 40)	0.07	soft pale sstn(3) + qtz siltstone
BNE15	284	559	3797	6	20-40 (ave. 25)	0.046	lithic sstn brecc(1) + soft sstn
BNE15	288		3797	14	15-60	0.26	white quartzite sstn (2) + white sstn(7) + soft brown sstn(2) + pink metaquartzite (Bunter) (1)
BNE15	291		3802	1	60	0.066	sstn

Table 22. Catalogue of fired and worked clay (including briquetage)

Site Code	Cat. no.	F.	Context	Wt. (g)	Nos. pieces	Size (mm)	Fabric type	Inclusions	WC	Notes
BNE14	26	144	438	42	3	10-38	5		*	parts of same small *cylindrical loomweight* (probably c.60-70mm diameter and c.50mm thick) with <10mm diameter central perforation
BNE14	22	144	436	48	2	40	1+2	red iron-rich clay	*	one eighth part of *cylindrical loomweight* c. 90-100mm diameter + weathered piece BC
BNE14	20	144	435	12	2	20	5		*	small fragments assoc with <26>?
BNE14	89	150	517	144	7	10-50	1+2+4		*	Weathered; *square to pyramidal loomweight* (Fabric 2) + *cylindrical loomweight?* (Fabric 1) + lumps
BNE14	111	197	664	42	2	30-41	4			
BNE14	117	207	746	6	1	20	1		?	
BNE14	118	209	753	162	39	20-50	9+1	shell + dissolved shell	*	all except one piece (Fabric 1- *loomweight* frag?) this appears to be briquetage, specifically broken-up thin-walled sides of *briquetage pan*(s); two of these pieces are *c.* 15mm raised lip, one has an attached 'clay clip' (see Lane 1992, 223, Fig.130.9), another a single lightly incised line (see Lane 1992, 224, Fig.131.3), another a miscellaneous piece which is possibly a semi-circular vessel lid (Lane 1992, 226, Fig.132.1), and a further 'miscellaneous' piece which appears to be a flat everted base to a circular vessel or support of around 100mm diameter, and which resembles the Type BriqB1 (see Morris in Daniel *et al*. 2009, 76, Fig 4.5(8)) which is MBA. From a treethrow – briquetage poss from overlying buried soil?
BNE14	125	213	776	12	2	20-35	2			weathered lumps
BNE14	123	213	776	30	6	20-40	9	vesicular (diss shell)		weathered fragments of *briquetage pan*
BNE14	131	215	837	12	2	30-40	2		?	weathered *loomweight* fragment?
BNE14	141	215	845	170	3	25-65	2		*	approx. quarter of a *cylindrical loomweight* (100-110mm diameter + 50-60mm deep) with a central aperture of c.20mm
BNE14	129	215	833 + 845	20	4	20-30	1+2			
BNE14	154	229	916	84	7	15-40	3	BF, grit + ironstone		
BNE14	172	229	933	146	14	8-50	(x6)+2(x9	flint	*	fragments of two *square to pyramidal? loomweights* (Fabric 1 + Fabric 2); one with trace of c <10mm perforation
BNE14	175 + 158	229	933 + 916	374	36	10-40	1(6)+3+6			very abraded pieces assoc. with BS boiling activities?
BNE14	164	229	931	4	1	17	1			

Site Code	Cat. no.	F.	Context	Wt. (g)	Nos. pieces	Size (mm)	Fabric type	Inclusions	WC	Notes
BNE14	183	230	1163	530	14	20-160	9	shell + dissolved shell	*	adjoining pieces of a single shallow *briquetage pan* (vessel) approx.0.5m+ long and about 0.09-0.1m wide, with a wall thickness of 5-12mm. The shallow concave pan shows sign of a hand-moulded and only barely turned-up edge (<5mm) along one side, and a cut and clay-clipped edge along the other (this with 'dabs' of clay attached to it). There are also two small pieces of a possible 'lid' for this or another such vessel. From the fill of a deep pit assoc with worked wood.
BNE14	238	237	959	8	1	30	1			
BNE14	239	238	961	16	3	20-30	2			
BNE14	187	246	975	6	3	10-15	1			
BNE14	240	287	1122	4	2	5-20	4			
BNE14	215	289	1129	4	2	20	9			weathered frags *briquetage pan*
BNE14	221	290	1134	12	5	10-40	9			weathered frags *briquetage pan*
BNE14	223	290	1134	2	2	5-8	1			
BNE14	227	292	1138	6	1	25	9			weathered frags *briquetage pan*
BNE14	39	320	3045	158	2	40-80	2		*	approx. quarter of a rounded cylindrical *loomweight* (2 pieces) associated with an Bronze Age-type (?) crouch burial; suggested MBA (dimensions 80mm diam, poss up to 80mm thick)
BNE14	46	328	3041	8	1	30	1			
BNE14	56	332	3059	8	1	27	1		?	small (<10mm) cylindrical stick-formed hollow in clay, perhaps impression of wattle *wall framework* or even *briquetage?* pedestal support
BNE14	62	334	3072	22	1	33	1			
BNE14	65	335	3074	4	1	20	1			
BNE14	235	340	3085	10	4	15-22	1			
BNE15	105	445	3331	8	5	10-25	7			v. small fragments
BNE15	108	454	3365	982	76	10-90	1a+1b+1c	flint (<5mm) + burnt shell + grog	WC + ?	half or less of bun-shaped object with 4 re-fit pieces weighing (254g + - all Fabric 1a: 80mm wide). A square cornered flat bottom object (60g – Fabric 1b). Both are possible (loomweights?). Additionally 554g of completely un-re-fitted small non-diagnostic fragments (Fabric 1c)
BNE15	115	458	3633	2	1	15	1b			
BNE15	118	458	3634	34	9	15-35	1b			
BNE15	119	458	3634	518	52	10-65	1a+1b		WC? +	all non-diagnostic weathered burnt clay fragments which include larger pieces with some 'edges' –possibly part of loomweight?(SEE <108> Fabric 1b)
BNE15	129	459	3399	124	2	10-60	7		WC	barrel-shaped cylindrical loomweight; stick-bored central perforation *c.*14mm diam (preserved only partially in section and oxidised as exterior when fired (NB grey reduced internal fabric)
BNE15	132	461	3395	40	7	10-40	1b			weathered and rounded pieces
BNE15	138	464	3408	30	10	10-25	8			rounded undiagnostic
BNE15	141	467	3419	8	3	5-20	1b			
BNE15	315	467	3416	10	8	10-20				
BNE15	145	482	3461	16	2	20-35	1a			undiagnostic burnt clay

Site Code	Cat. no.	F.	Context	Wt. (g)	Nos. pieces	Size (mm)	Fabric type	Inclusions	WC	Notes
BNE15	150	482	3465	54	6	10-45	1a		WC?	undiagnostic frags – poss loomweight?
BNE15	158	482	3466	4	3	10-20	7			v small pieces
BNE15	161	487	3474	50	16	10-35	1a			small weathered and rounded pieces
BNE15	196	515	3587	4	1	20	7			rounded undiagnostic piece
BNE15	197	515	3587	8	2	15-30	1a+8			rounded undiagnostic
BNE15	198	515	3588	78	3	30-55	7	grog	WC	waterworn + weathered re-fitting pieces of one side of cylindrical loomweight c. 90-100mm diam.
BNE15	199	515	3590	6	1	25	7			rounded piece
BNE15	200	515	3592	12	6	5-25	1c			rounded undiagnostic
BNE15	1938*	515	3589	186	3	30-80	7	flint, chalk, grog	WC	flat-bottom barrel-shaped cylindrical loomweight, stick-bored central perforation of *c.*8mm diam (preserved only partially in section). Loomweight of unknown height but *c.*90-100mm diam.
BNE15	212	518	3576	14	3	20-25	1c			rounded undiagnostic
BNE15	213	520	3600	18	3	5-35	1b			
BNE15	229	526	3680	8	3	15-20	1b			rounded
BNE15	234	526	3673	52	9	10-50	1a		WC?	weathered clay lumps – two with moulded surfaces, one with 20° angle – possibly loomweight ?
BNE15	237	526	3674	396	45	10-80	1c			non-diagnostic fragments together with one large sub-cylindrical clay object with faceted sides (30mm wide), v weathered possibly a cylindrical loomweight? (80+mm long x 70+mm diameter)? with no perforation evident
BNE15	244	530	3650	8	1	30	7			rounded and undiagnostic
BNE15	249	535	3687	6	8	5-10	7			v small
BNE15	251	536	3709	128	25	10-50	1b		WC	fairly undiagnostic pieces – one piece moulded (hand-squashed) part of disc – not loomweight
BNE15	259	553	3739	4	4	10	1a			
BNE15	261	556	3748	22	6	5-35	7			
BNE15	266	557	3747	52	15	10-25	1a			undiagnostic fragments
BNE15	272	558	3762	58	2	25-40	1c		WC?	undiagnostic
BNE15	274	558	3767	72	3	40-45	8		WC	re-fit fragments of incomplete small bun-shaped object, possibly a loomweight? c. 40mm deep and 70mm+ wide (SEE <108>)
BNE15	319	558	3766	214	5	20-65	1a		WC	fragments of a possible square pyramidal /rounded triangular loomweight? (+ possibly also a cylindrical loomweight?). Flat base but no perforations visible
BNE15	321	558	3769	32	1	50	8		WC	not an exact re-fit – but part of same bun-shaped object as <274>
BNE15	281	559	3797	146	51	10-45	1a		WC?	small weathered pieces – all unidentifiable, but fabric suggests could be from broken-up loomweight? (minimum x1)
BNE15	286a	559	3797	4	1	25	9		WC	weathered and possibly re-deposited fragment of briquetage :base of thin-walled vessel?
BNE15	286b	559	3797	364	40	10-65	1b+1c		WC?	inc. several pieces with square sides and flattish bottom, one with poss. cut-away perforation 5-6 mm diam (loomweight? 128g); remaining pieces are unidentif as this form (236g)
BNE15	307	560	3793	210	20	10-60	1a+1b		WC? +	possible fragment of small cylindrical loomweight ?(i.d. piece of 64g) estim as c.80-90mm diam + non-diagnostic weathered small fragments from same or other>

ENVIRONMENTAL AND BIOLOGICAL EVIDENCE

Soils and Geoarchaeology – Mike Allen

A visit to the excavation of Area C was conducted on 26th November 2014 at which the site and context was described by Marcus Brittain (CAU). The following is a site resume with recommendations for targeted analyses.

A series of six profiles were selected and full geoarchaeological descriptions made. These included:

- Present day soil profile
- Tree throw hollow F.209
- Pit F.185 with shallow 'peat deposit
- Ditch F.15
- Ditch terminal F.211
- F.221 – fine-grained infills
- Pit F.215
  And notes on F.225 'store tank'

Fills and Taphonomy

The features are cut into loose sandy fine gravels; the clast component of the upper weathered facies is small and medium gravel in a loose silty sand matrix. The present soil is typical brown calcareous earths, (Badsey 2 Association) which are deeply ploughed (0.36m), and have dense humic silty clay matrix.

The features' fills are, however, commonly stone-free and highly silty, with few gravel clasts (except thin basal or larger dumped deposits (e.g. pit F.185). The taphomony and origin of many of the fills is therefore not obvious; the present gravel is loose and unconsolidated, and we might expect typical vacuous loose gravel-dominated primary fills to occupy a considerable portion of the basal feature (cf. Evans 1972; Limbrey 1975; Allen 1995). Furthermore, the main secondary and tertiary fills might be expected to be predominantly sandy or silty sands being derived from the soils developing out of the silt sand and sand dominated matrix of the gravels. Instead, fills are sand bereft and predominantly fine-grained (silts or silty clays).

This therefore questions (1) the origins of these ubiquitous fills, (2) the nature of the former soils and, in some cases where they are particularly well-sorted silts, (3) the potential for either *in situ* sorting or the import of fine-grained deposits and processing within some of the features, i.e. activity use and function of the pits.

Broader Landscape character and land-use

1. The potential implication of the differing character of the fill deposits may relate to the presence of different soils, giving rise to different agricultural potential and farming practices. The nature of the former soils might help determine if this was more suitable for, or could better sustain either an agricultural or pastoral system. It is possible that perhaps this is also reflected in the difference of the field system patterns here in South Lincolnshire which run along ridges and parallel to fen edges, rather than those at Whitton, Bradley Fen etc. which run down to the fen edge.
2. The possible presence of briquetage highlights the potential of salt-working on site but also raises the question of the origin of the brine, the activities used in its processing, and the residue traces that this might produce.
3. Finally, defining the landscape character and land-use history here is challenging owing to the area being devoid of large palaeo-channels with long pollen and vegetational histories.

On site sampling recommendations

Kubiena (foil tins) were recommend for the following features for the following given reasons/aims:

- Tree hollow F.209: humic soil – to assist in defining the nature of the former soil cover (and former land-use); this could also be subsampled for pollen analysis (sample nos. 274 and 275).
- Pit F.221: stone-free silt – characterise the stone-free silt and assist in determining its origin, and assess the potential presence of anthropogenic activity or even imported material (sample no. 269).

Monolith (sample nos. 172 and 173) through pit F.215 [854] to facilitate:

a) description of the lower and upper peat (also samples 166 and 167),

b) subsampling of the sequence for pollen (and diatoms).

- Bulk sample (1-5kg) of the surface gravel (sample nos. 271 and 272)

Off-site recommendations

1.1. Logging field records and archive report (it is recommended that is done immediately as a direct follow-on from the site visit to create an archive record).

1.2. A series of research questions are highlighted and a landscape palaeo-environmental and geoarchaeological research design outlined with a series of field and pre-analysis proposals.

1.3. A structured programme of examination of the archive samples (bulk and monolith) is undertaken to review the data and provide (in combination with task 1.2) a more structured sampling strategy allied to an outline project-based research strategy.

It is recommended that a programme of further assessment includes a review of the monolith archive for this and previous phases of investigation at Baston/Langtoft and that some key deposits (humic silts, peats and minerogenic silts) are selected for assessment to determine the presence of pollen which will inform the suitability and necessity of the sampling for pollen in future excavation areas at Baston/Langtoft quarries.

Archaeobotany

Samples for the retrieval of the plant macrofossil assemblages were taken from across the excavated areas, including the palisaded enclosure, pits, wells, other structures and at least one crouched burial. The samples were processed for the recovery of charred plant remains and wood charcoal and assessed in order to determine the concentration, diversity, state of preservation and suitability for use in radiocarbon dating, of any archaeobotanical material present. A further aim of this assessment was to evaluate the potential of this material to provide evidence for the function of the contexts, the economy of the site or for the nature of the local environment. A total of 41 samples were submitted for assessment of the potential of the overall assemblage currently housed at the CAU. Samples from Areas A-C (31

samples) and Area D (10 samples) were analysed by independent specialists, the results of which are presented separately below.

The samples were bulk floated by the CAU for the recovery of charred plant remains and wood charcoal and floating material was collected in a 300 micron mesh sieve, and the remaining heavy residue retained in a 1mm mesh. The flots and heavy residues were air dried. The samples were assessed in accordance with English Heritage guidelines for environmental archaeology assessments (Jones 2011), and plant nomenclature follows Stace (2010). A preliminary assessment of the dried flots was made by scanning using a stereo-binocular microscope (x10 – x65) and recording the abundance of the main classes of material present. Identification of Area D's plant material was carried out by comparison with material in the reference collections at the Department of Archaeology, University of Sheffield and various reference works (e.g. Cappers *et al*, 2006). Both charred and de-watered macrofossils were recorded, with the latter being denoted within the tables by a lower case 'w' suffix. Modern roots, seeds and arthropod remains were also present within most assemblages. The composition of the samples is recorded below in Tables 23-25 (Areas A-C) and Tables 26-27 (Area D).

Areas A-C – Val Fryer

Plant macrofossils were generally scarce; however, occasional charred cereals and seeds were noted, and the sample from pit/well F.215 (sample 169) also contained a moderate density of de-watered seeds. Preservation was variable; the charred remains were quite poorly preserved and were often rounded and abraded. In contrast, the de-watered macrofossils were relatively robust.

Charred cereal grains were recorded within six assemblages; most were too poorly preserved for close identification, but samples 7 (pit/well F.144), 156 (pit F.213) and 233B (post-hole/pit F.285) included specimens of barley (*Hordeum* sp.), post-hole F.245 (sample 187) included a rounded wheat (*Triticum* sp.) grain and the assemblage from pit F.213 contained an elongated wheat grain of possible emmer (*T. dicoccum*) or spelt (*T. spelta*) type. Chaff was all but absent, but sample 179 from burnt stone pit F.229 did include a single barley rachis node.

Charred seeds were recorded within eight samples, with all occurring as single specimens within an assemblage. All were of common segetal weeds including black bindweed (*Fallopia convolvulus*), nipplewort (*Lapsana communis*), small grasses (Poaceae) and dock (*Rumex* sp.). Tubers of onion-couch (*Arrhenatherum* sp.) type were noted within the assemblages from pit F.364 (sample 79) and the fill of crouched inhumation grave F.320 (sample 59) and sample 247 (linear pit F.225) included what appears to be de-watered hop (*Humulus lupulus*) fruits. Individual fragments of charred hazel (*Corylus avellana*) nutshell were also recorded. De-watered seeds of grassland herbs and wetland/aquatic plants were present within the assemblages from well F.215 (samples 169 and 176), ditch F.413 (sample 255) and linear pit/tank F.225 (sample 247). It is currently unclear whether these remains are contemporary with the main phase of site use or whether they are indicative of a post-usage phase, where features were naturally infilling. Taxa noted include musk thistle (*Carduus* sp.), goosegrass (*Galium aparine*), persicaria (*Persicaria maculosa/lapathifolia*), ribwort plantain (*Plantago lanceolata*), knotgrass (*Polygonum aviculare*), silverweed (*Potentilla anserina*), buttercup (*Ranunculus* sp.), nightshade (*Solanum* sp.), sedge (*Carex* sp.), rush (*Juncus* sp.), gipsy wort (*Lycopus europaeus*) and water crowfoot (*Ranunculus* subg. *Batrachium*). De-watered birch (*Betula* sp.) fruits and bramble (*Rubus* sect. *Glandulosus*) 'pips' were also recorded and, in addition, sample 123 (pit F.150) included charred fragments of what appears to be a sloe type (*Prunus* sp.) fruit complete with stone and mesocarp. Charcoal/charred wood fragments were present within all but two assemblages, although rarely at a high density. As stated above, numerous fragments were rounded and abraded, possibly indicating that the material was exposed to the elements for some period prior to inclusion within the

feature fills. Other plant macrofossils included fragments of charred and de-watered root/stem and small pieces of de-watered wood.

Other remains were generally very scarce. The small fragments of black porous and tarry material were mostly thought to be residues of the combustion of organic remains at very high temperatures, although some pieces were distinctly hard and brittle. The latter were most often identified as bi-products of the combustion of coal (small pieces of which were present within three assemblages) but, given the contexts, this explanation is, perhaps, difficult to support with confidence. One possibility is that the material may have derived from small quantities of night soil and/or hearth waste, which was frequently spread on the land during the late Medieval and post-Medieval periods. Other remains included fragments of bone, splinters of burnt stone, small mammal/amphibian bones and de-watered arthropod remains.

Although specific sieving for molluscan remains was not undertaken, shells of terrestrial, marsh/freshwater slum, freshwater obligate and brackish water snails were present within all but two assemblages. Most were moderately bleached and fragmented, possibly suggesting that they may have been contemporary with the features from which the samples were taken. However, some specimens retained both colouration and delicate surface structuring which may signal that these were later contaminants. The brackish water specimens noted within the assemblage from pit/well F.144 (sample 7) were all burnt, possibly indicating that they were imported to the site whilst attached to materials that were either burnt as fuel or used for some other purpose (possibly fodder, bedding, flooring or thatch) and then subsequently burnt. The terrestrial assemblage was dominated by open country species, most notably those associated with a short-turfed grassland habitat. Probably not unsurprisingly, given the fen edge position of the site, marsh/freshwater slum species were common, suggesting that the entire area was frequently damp or wet. Shells of freshwater obligate molluscs occurred less frequently, but those that were noted were generally indicative of small bodies of shallow, muddy water with a low to medium velocity flow.

Although the results from this initial assessment would appear to be inconclusive, they are broadly consistent with patterns seen at other contemporary fen edge sites, for example from Welland Bank Quarry to the east (Fryer 1999) and from Chappell's Field, Deeping St James to the south (Murphy 1997). At Welland Bank, it was concluded that although parts of the site were sufficiently dry for some limited habitation activity, the groundwater level remained high, which probably precluded the possibility of permanent settlement. At both sites the charred plant assemblages were generally sparse with cereals and chaff being particularly scarce. Because of this, it was suggested that the occupants of the sites were largely participating in a pastoral economy, with their cereal requirements being met by batches of prime grain imported from areas beyond the fen which were more favourable to agricultural production.

The preliminary results from the current site were even more limited, despite the range and quantity of feature types recorded, including a particularly fine palisade enclosure. How this latter functioned is unclear; other artefacts/ecofacts from the site may be indicative of other activities, but on the basis of the plant macrofossil assemblages it would appear that the site was not *primarily* domestic in nature.

At this stage, little more can be deduced, but it is strongly recommended that additional plant macrofossil assemblages are assessed to see if any further patterns emerge. In addition, it would be useful to know whether the bone assemblage is suggestive of any particular pastoral activity, or whether the site could have had an entirely different focus, for example a ritual centre for the surrounding settlements.

Area D – Ellen Simmons

High proportions of 80% to 95% intrusive roots were present in Sample 286 from linear feature F.445, Sample 323 from segmented boundary ditch F.526 and Sample 327 from post hole F.551. Any charred material present in these samples therefore has an increased likelihood of being intrusive. The density of charred material in these samples was also however generally low.

Moderate to low proportions of 50% or less intrusive roots were present in Sample 290 from oblong pit F.454, Sample 317 from pit-well F.515, Sample 320 from pit F.530, Sample 344 from segmented boundary ditch F.560, Samples 356 and 357 from well F.559. Any charred material present in these deposits therefore has a reduced likelihood of being intrusive.

No charred cereal grains were present. Wood charcoal was generally well preserved with minimal indications of vitrification or mineralisation.

Charred plant remains: No charred crop material was present in the samples. A small onion couch grass tuber (*Arrhenatherum elatius* ssp. *bulbosum*) was present in Sample 286 from ditch F.445.

*Waterlogged plant remains: S*ample 310 from well F.502 contained an assemblage of wild plant seeds, herbaceous plant roots or stems and wood fragments which are likely to have been preserved by anoxic waterlogging. The sample had been processed by flotation and air dried which may have resulted in some waterlogged material not being recovered or preserved. The assemblage of wild plant seeds includes a range of taxa commonly associated with nitrogen enriched soils such as common nettle (*Urtica dioica*), black nightshade (*Solanum nigrum*), dead nettle (*Lamium* sp.) and elder (*Sambucus nigra*). Also present were taxa commonly associated with damp soils such as alder (*Alnus* sp.) selfheal (*Prunella vulgaris*) and sedges (*Carex* spp.). Scrub type vegetation is indicated by the presence of seeds of bramble (*Rubus fruticosus* agg.) as well as the presence of thorns.

Wood charcoal: Over one hundred wood charcoal fragments greater than 2mm in size were present in Sample 356 from well F.559. The remaining samples contained less than fifty wood charcoal fragments greater than 2mm in size. Preliminary examination of the charcoal fragments in Sample 356, using low power microscopy, indicated that both diffuse porous and ring porous taxa are represented in the assemblage.

The absence of charred remains of crops suggests that activities involving crop processing or food preparation are unlikely to have been carried out in the vicinity of the sampled features to any great extent during the period of deposition. The assemblage of wild plant seeds preserved by anoxic waterlogging present in well F.502 is, however, indicative of nitrogen enriched soils such as those in the vicinity of human habitation or where animals congregate.

Sample 356 from well F.559 contained more than one hundred fragments of wood charcoal greater than 2mm in size and can therefore be viewed as a representative sample of woody taxa utilised as fuel. The presence of both ring porous and diffuse porous taxa in Sample 356 and in sample 357, also from well F.559, suggests the presence of a mix of woody taxa rather than the selection of a single type of wood for use as fuel. The low density of charcoal fragments in the remaining samples precludes any firm conclusions regarding charcoal assemblage composition. However, both diffuse porous and ring porous taxa were present in pit F.530, again suggesting the use of a mix of fuel types.

Environmental evidence from the East Midlands region indicates a general trend of increasing woodland clearance through the Early and Middle Bronze Age, although there is also a need for further evidence regarding the distribution of woodland (Monckton 2006: 267). Analysis of the assemblage of wood charcoal present in

Sample 356 from well F.559 would therefore provide useful evidence for the availability of woodland and other woody taxa in the region during the Middle Bronze Age.

Identification of at least one hundred charcoal fragments greater than 2mm in size in Sample 356 from well F.559, using high power microscopy, would be recommended. This analysis would be expected to provide a representative sample of the woody taxa utilised for fuel as well as potential evidence for the type of wood utilised (small or large diameter) and the condition of the wood prior to burning (decaying, freshly cut or well-seasoned).

Further analysis of the waterlogged plant material present in Sample 310 from well F.502 would also be recommended. Full sorting of the sample would be expected to result in the identification of wild seed plant taxa missed during preliminary scanning, as well as enabling the identification to species of seeds which could only be identified to genera during preliminary assessment. This analysis would be expected to provide additional detail concerning nature of the environment in the vicinity of the well.

No charred or waterlogged material suitable for use in radiocarbon dating was present in the processed samples that were analysed, but charred wood from F.482 (not submitted for analysis) *is* reported to be suitable (M. Brittain *pers. comm.*).

Key to Tables 23-25: x = 1 – 10 specimens xx = 11 – 50 specimens xxx = 51 – 100 specimens xxxx = 100+ specimens; cf = compare w = de-watered b = burnt; ph = post-hole BSP = burnt stone pit 9PS = nine-post structure CS = circular structure D/L = ditch/linear; CB = crouched burial POP = pit outside palisade

Feature No.	**364**	**197**	**150**	**213**	**287**	**290**	**299**
Context No.	**3104**	**664**	**517**	**776**	**1120**	**1134**	**1158**
Sample No.	**79**	**138**	**123**	**156**	**214**	**215**	**268**
Cereals							
Hordeum sp. (grains)				x			
Triticum sp. (grain)			x	x			
Cereal indet. (grains)				xfg			
Dry land herbs							
Arrhenatherum sp. (tuber)	x						
Lapsana communis L.	x						
Tree/shrub macrofossils							
Corylus avellana L.			xcf				
Prunus sp. (fruit frags.			xcf				
Other plant macrofossils							
Charcoal <2mm	x	xxx	xxxx	xxxx	xxxx	xxxx	xxx
Charcoal >2mm		x	xxxx	xx	xxxx	xxxx	xx
Charcoal >5mm		x	xx	x	xxx	xxx	x
Charcoal >10mm			x	x	x	xx	
Charred root/stem			x	x			
Indet. seeds	x						
Other remains							
Black porous 'cokey' material		x	x	x			
Black tarry material	x	x		x			
Bone			x xb	x	x	xx	
Small coal frags.			x	xx		x	
Small mammal/amphibian bones			xb		x		
Mollusc shells							
Woodland/shade loving species							
Zonitidae indet.				x			
Open country species							
Helicella itala			x	x		x	
Helicidae indet.	x				x		
Vallonia sp.		x					
Catholic species							
Cochlicopa sp.							
Trichia hispida group		x		x			
Marsh/freshwater slum species							
Anisus leucostoma			x	x			
Carychium sp.		x					
Lymnaea sp.	x	x		x	x		
Freshwater obligate species							
Bithynia sp.			x				
Planorbis sp.			x				
V. piscinalis	x		x	x			
Sample volume (litres)	**22**	**12**	**16**	**6**	**12**	**15**	**2**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 23. Plant macrofossils and other remains from the pit fills in Areas A-C

Table 24. Plant macrofossils and other remains from the wells, postholes and other features in Areas A-C

Feature No.	**144**	**205**	**215**	**215**	**229**	**229**	**359**	**285**	**285**	**334**	**267**	**320**	**195**	**424**	**413**	**225**
Context No.	**434**	**737**	**855**	**832**	**916**	**933**	**3094**	**1105**	**1105**	**3073**	**1001**	**3043**	**805**	**1198**	**1194**	**1244**
Sample No.	**7**	**152**	**169**	**176**	**178**	**179**	**74**	**233A**	**233B**	**64**	**207**	**59**	**163**	**246**	**255**	**247**
Feature type	**Pit/well**	**Well**	**Well**	**Well**	**BSP**	**BSP**	**ph/pit**	**ph/pit**	**ph/pit**	**ph**	**phCS**	**CB**	**Ditch**	**Ditch**	**Ditch**	**D/L**
Cereals																
Hordeum sp. (grains)	xcf								x							
(rachis node)						x										
Cereal indet. (grains)	x					x			x							
Dry land herbs																
Arrhenatherum sp. (tuber)												x				
Asteraceae indet.			xw													
Atriplex sp.				xw												
Carduus sp.			xw												xw	
Chenopodiaceae indet.		x														
Fallopia convolvulus (L.)A.Love	x															
Galium aparine L.			xw													
Humulus lupulus L.																xw
Medicago/Trifolium/Lotus sp.										xcf						
Mentha sp.																xw
Persicaria maculosa/lapathifolia			xw													
Plantago lanceolata L.			xw													
Polygonum aviculare L.			xw													
Polygonaceae indet.			xw													
Potentilla anserina L.			xxw												xw	
Ranunculus sp.			xw													xw
R. acris/repens/bulbosus			xw													
Rumex sp.			xw							x		x			xw	
Solanum sp.			xw													
Sonchus oleraceus L.			xw													
Urtica dioica L.				xw											xw	xw
Viola sp.																xw
Wetland/aquatic plants																
Carex sp.			xw													xw
Juncus sp.			xw													

Feature No.	**144**	**205**	**215**	**215**	**229**	**229**	**359**	**285**	**285**	**334**	**267**	**320**	**195**	**424**	**413**	**225**
Context No.	**434**	**737**	**855**	**832**	**916**	**933**	**3094**	**1105**	**1105**	**3073**	**1001**	**3043**	**805**	**1198**	**1194**	**1244**
Sample No.	**7**	**152**	**169**	**176**	**178**	**179**	**74**	**233A**	**233B**	**64**	**207**	**59**	**163**	**246**	**255**	**247**
Feature type	**Pit/well**	**Well**	**Well**	**Well**	**BSP**	**BSP**	**ph/pit**	**ph/pit**	**ph/pit**	**ph**	**phCS**	**CB**	**Ditch**	**Ditch**	**Ditch**	**D/L**
Lycopus europaeus L.			xxw												xw	xw
Ranunculus subg. *Batrachium* (DC)A.Gray															xw	xxw
R. sceleratus L.			xw													
Scrophulariaceae indet.																xw
Tree/shrub macrofossils																
Betula sp. (fruit)			xw													
Corylus avellana L.						x			xcf							
Rubus sect. *Glandulosus* Wimmer & Grab			xw													xw
Other plant macrofossils																
Charcoal <2mm	xxx	x	xx	x	xxxx	xxxx	xx	x	xxxx	xx	xx	xxxx	x			x
Charcoal >2mm	xx	x	x	x	xx	xxx			xxxx	x	x	xxxx				x
Charcoal >5mm			x		x	xxx			xxx		x	xx				
Charcoal >10mm						xx										
Charred root/stem	x			x												
Waterlogged root/stem			xxxx	xx											xxxx	xxxx
Indet. seeds	x	x	xw												xw	
Wood frags. <5mm			xw	xw												
Wood frags. >5mm			xw													
Wood frags.>10mm			xw													
Characeae indet.					xw											
Other remains																
Black porous 'cokey' material	x	x										x		x		
Black tarry material		x					x						x			
Bone					x	x			x			x				
Burnt/fired clay									x							
Burnt stone					x											
Cladoceran ephippia															xw	
Marine mollusc shell										x						
Organic concretions			xx													

Feature No.	**144**	**205**	**215**	**215**	**229**	**229**	**359**	**285**	**285**	**334**	**267**	**320**	**195**	**424**	**413**	**225**
Context No.	**434**	**737**	**855**	**832**	**916**	**933**	**3094**	**1105**	**1105**	**3073**	**1001**	**3043**	**805**	**1198**	**1194**	**1244**
Sample No.	**7**	**152**	**169**	**176**	**178**	**179**	**74**	**233A**	**233B**	**64**	**207**	**59**	**163**	**246**	**255**	**247**
Feature type	**Pit/well**	**Well**	**Well**	**Well**	**BSP**	**BSP**	**ph/pit**	**ph/pit**	**ph/pit**	**ph**	**phCS**	**CB**	**Ditch**	**Ditch**	**Ditch**	**D/L**
Ostracods		x														
Small coal frags.				x												
Small mammal/amphibian bones						x										
Vitreous material	x															
Waterlogged arthropod remains			x	x											xx	x
Mollusc shells																
Woodland/shade loving species																
Zonitidae indet.										x				x		
Open country species																
Helicella itala				x	x									x		
Pupilla muscorum					x											
Vallonia sp.	x	x		x												x
V. costata		x										x				
Vertigo pygmaea		x												x		x
Catholic species																
Cochlicopa sp.		x		x										x		x
Trichia hispida group				x									x	x		x
Marsh/freshwater slum species																
Anisus leucostoma	xb	x		x										x		xx
Carychium sp.	x	x		x			x									x
Lymnaea sp.		x		xx	x	x	x	x		x	x	x		x		xx
Vertigo angustior		x														
Freshwater obligate species																
Aplexa hypnorum																xcf
Armiger crista				x												
Bathyomphalus contortus					x											
Bithynia sp.	xb	x		x	x	x										
(operculi)					x											

Feature No.	**144**	**205**	**215**	**215**	**229**	**229**	**359**	**285**	**285**	**334**	**267**	**320**	**195**	**424**	**413**	**225**
Context No.	**434**	**737**	**855**	**832**	**916**	**933**	**3094**	**1105**	**1105**	**3073**	**1001**	**3043**	**805**	**1198**	**1194**	**1244**
Sample No.	**7**	**152**	**169**	**176**	**178**	**179**	**74**	**233A**	**233B**	**64**	**207**	**59**	**163**	**246**	**255**	**247**
Feature type	**Pit/well**	**Well**	**Well**	**Well**	**BSP**	**BSP**	**ph/pit**	**ph/pit**	**ph/pit**	**ph**	**phCS**	**CB**	**Ditch**	**Ditch**	**Ditch**	**D/L**
Gyraulus albus				x												
Planorbis sp.																
P. planorbis				x	x	x						x				
Valvata cristata				x	x											
V. piscinalis		x		x	x						x					
Brackish water species																
Assiminea grayana																x
Hydrobia sp.	xxxb															
H. ulvae	xxb															
H. ventrosa	xcfb															
Pseudamnicola confusa	xcfb															
Sample volume (litres)	**12**	**24**	**16**	**12**	**12**	**12**	**12**			**16**	**10**	**37**	**14**	**14**	**14**	**25**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**0.2**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**	**50%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Key to Tables 26-27: - = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items.); DP = predominantly diffuse porous, RP = predominantly ring porous

Feature No.	**313**	**365**	**388**	**256**	**244**	**245**	**246**	**249**
Context No.	**3144**	**3155**	**3202**	**957**	**973**	**974**	**975**	**978**
Sample No.	**94**	**99**	**110**	**181**	**186**	**187**	**188**	**191**
Feature type	**ph**	**POP**	**ph**	**ph9PS**	**ph**	**ph**	**ph**	**ph**
Cereals								
Triticum sp. (grain)						x		
Dry land herbs								
Centaurea sp.							xcf	
Small Poaceae indet.	x	x						
Tree/shrub macrofossils								
Corylus avellana L.						x		
Other plant macrofossils								
Charcoal <2mm	xx	xxx	xx	x	xxxx	xxxx	xxx	x
Charcoal >2mm	x	x	x		xxx	xx	xx	
Charcoal >5mm	x	x			xx	x	xx	
Charcoal >10mm		x			x		x	
Indet. fruit stone frag.							xcf	
Indet. Seeds			x					
Other remains								
Black porous 'cokey' material		x	x					
Black tarry material								x
Bone						x xb		
Small coal frags.					x			
Mollusc shells								
Woodland/shade loving species								
Aegopinella sp.					x			
Zonitidae indet.	x							
Open country species								
Vallonia sp.			x		x			
V. costata					x			
Vertigo pygmaea					x			
Catholic species								
Trichia hispida group							x	
Marsh/freshwater slum species								
Anisus leucostoma							x	
Lymnaea sp.		x			x	x		
Freshwater obligate species								
Armiger crista				x				
Bathyomphalus contortus					x			
Planorbis sp.		x		x				
P. planorbis					x	x		
Sample volume (litres)	**10**	**20**	**12**	**7**	**15**	**14**	**14**	**12**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 25. Plant macrofossils and other remains from the palisade enclosure

Table 26. Plant macrofossils and other remains from Area D

CONTEXT NUMBER	**3331**	**3365**	**3589**	**3650**	**3672**	**3735**	**3794**	**3799**	**3797**
FEATURE NUMBER	**445**	**454**	**515**	**530**	**526**	**551**	**560**	**559**	**559**
SAMPLE NUMBER	**286**	**290**	**317**	**320**	**323**	**327**	**344**	**356**	**357**
FEATURE TYPE	Ditch	Pit	Well	Pit	Ditch	Post hole	Ditch	Well	Well
PROVISIONAL DATE	MBA	MBA?	MBA	EBA?	MBA	MBA	MBA	MBA	MBA
SAMPLE VOLUME (ltr)	14	10	2	14	14	6	4	14	14
FLOT VOLUME (ml)	10	10	1	20	5	5	15	40	20
% Intrusive roots	80	50	0	40	95	95	5	25	25
NON SEED PLANT MATERIAL									
Onion couch grass tuber (*Arrhenatherum elatius* ssp. *bulbosum*)	1								
> 4mm wood charcoal fragments	3	4		2				33	6
> 2mm wood charcoal fragments	10	29	8	17	2	2		318	33
Charcoal	RP	RP	RP	RP & DP	DP	DP		RP & DP	RP & DP
Intrusive plant material / non-plant material									
Mollusca			-						+
Sample summary information									
Charred plant material suitable for further analysis?	×	×	×	×	×	×	×	×	×
Wood charcoal suitable for further analysis?	×	×	×	×	×	×	×	×	×
Charred material suitable for C14 dating?	×	×	×	×	×	×	×	×	×

CONTEXT NUMBER	**3524**
FEATURE NUMBER	**502**
FLOTATION SAMPLE NUMBER	**310**
FEATURE TYPE	Well
PROVISIONAL DATE	MBA
SAMPLE VOLUME (litres)	15
FLOT VOLUME (ml)	40
Waterlogged plant material	
Non Seed Plant Material	
Herbaceous plant roots / stems	+++++
Wood fragments	+++++
Thorns	+
> 2mm wood charcoal fragments	-
Wild / Weed Plant Seeds	
Common nettle (Urtica dioica)	++
Bramble (*Rubus fruticosus* agg.)	+++
Alder (*Alnus* sp.)	-
Black nightshade (*Solanum nigrum*)	-
Dead nettle (*Lamium* sp.)	-
Hemp-nettle (*Galeopsis* sp.)	-
Selfheal (*Prunella vulgaris*)	-
Elder (*Sambucus nigra*)	-
Sedges (*Carex* spp.)	++
Intrusive plant material / non-plant material	
Mollusca	-
Invertebrate macrofossils	+++
Sample summary information	
Waterlogged plant material suitable for further analysis?	P
Waterlogged wood or wood charcoal suitable for further analysis?	O
Waterlogged material suitable for C14 dating?	O

Table 27. Plant macrofossils and other remains from Well F.502 (Area D)

Waterlogged Wood – Marcus Brittain and Leanne Robinson Zeki

The wood assemblage comprises tool-worked roundwood and timber, woodchip tool-working debitage, and unworked roundwood samples recovered for species identification (Tables 28-29; Figures 15 and 16). The wood was obtained from 22 features, primarily large pits or pit-wells. Highlights include parts of three log ladders from wells Fs. 173, 205 and 503. Log ladders with two notches were preserved in F.173 [618] and in F.503 [WD3549], with a log ladder containing one notch in F.205 [741]. The assemblage also included a post base in Fs. 437, 411 and 449, trimmed stakes in Fs. 502 and 528 and a number of worked 'planks' in F.558. The preservation of the log ladders, along with much of the remaining assemblage, was fair.

The assemblage requires specialist analysis as well as contextualisation within the overall Baston/Langtoft wood archive. The log ladders, in particular, should be illustrated before their further deterioration.

Cat. No.	Feature	Context	Notes
95	163	552	Wood ID - Desiccated roundwood
1001	164	580	Wood ID - 3 roundwood fragments
1002		581	Wood ID - woodchip
1003		582	Wood ID - lump of wood, slightly charred
1004		583	Wood ID - roundwood fragment
1005		590	Wood ID - 5 roundwood fragments, 1 possibly worked (250mm long, diameter 60mm), slightly charred
1006		591	Roundwood with in situ bark, cut marks at one end. 260mm long, diameter 60mcm
1007		592	Large post, one end shaped to a point, other end broken off and charred. Poor condition. 550mm long, diameter 100mm. Part of one end shaped during laboratory cleaning
1008	173	610	6 small fragments; one is worked - end shaped to a point by a single facet
1011		618	Log ladder - some in situ bark. Poor condition. 680mm Long, diameter 130mm
1012		611	6 small fragments of twigs and bark
1010	205	741	Log ladder - section in 2 fragments. In situ bark. 1.07m long, diameter 130mm
1013		751	Wood ID [751] – from context [738]. 7 fragments of twigs
1014		752	Wood ID [752] – from context [740]. 5 roundwood samples, 1 fragment charred?
1016	211	765	2 roundwood fragments
1017	215	845	1 woodchip (70mm long, 35mm wide, 50mm height) and 10+ small roundwood fragments
1018		855	Possibly worked roundwood fragment (85mm long, 25mm wide, 18mm height). Also 1 small flat pointed piece (30mm by 7mm).
1019			3 fragments of roundwood/roots
1021			Wood ID - 5 roundwood fragments, 1 possible wood chip
1020	230	1163	Possibly worked fragment of roundwood; cut(?) notch with no clear tool marks, 60mm long, 30mm wide, 50mm height.
1022		1176	Wood ID – 10+ roundwood fragments
1023		1177	Wood ID – 10+ roundwood fragments
1024		1178	Wood ID - 3 roundwood fragments
1009	325	3027	Wood ID - 20+ small woodchips - desiccated. Sample 55?
53	330	3050	Wood ID - Desiccated roundwood
1015	411	1190	Large lump of wood with bark still intact. Also 2 small fragments that possibly refit. No signs of working/tool marks. 700mm long, 310mm wide, 110mm (max) height

Table 28. Catalogue of waterlogged wood from Areas A-C

Cat. No.	Feature	Context	Notes
1	437	3389	Post/stake, tapered to a point, work on 4 sides; Bark present, tool marks present; 118 x 90mm (distorted diameter); 215mm top side, 38mm right side, 100mm shortest side, 118mm left side
2	449	3348	Some bark present, possible tool marks; 190 x 130mm, 90mm on shortest side; 45mm thick, 100 x 70mm
3	449	3348	Bark present, some tool marks; 60mm thick, 190mm length, 120mm across, 40mm on smallest side
4	453	3372	Wood ID – Rooting in well (or wicker lining)
131	461	3395	+ crumbs.
31	467	3419	Wood ID – 4 small wood fragments
139			ditto
	482	3469	Very poorly preserved thin bark strip with small amount of sap wood; not oak. Length 550mm, width 280mm, thickness 8mm. Wood either rotted in situ or, more likely, deliberately removed from tree. Analysed by M. Bamforth 30/11/15; discarded except for ID sample.
5	502	3524	Stake, one end tapered, no bark present. 55 x 45mm (distorted diameter). 440 x 95mm
6			Tapered point of a stake. No bark, some tool marks present. 58 x 40mm (distorted diameter) – 157 x 43mm
7			3 pieces of wood, largest piece 120mm; 120 x 120mm, 46mm thick, with impressions
8			No bark, no tool marks. 268 x 150mm, *c.* 70mm thick
9			3 small pieces: a. 65mm by 155mm, bark present, 200mm thick; *c.* 100 x 53mm, 33mm thick, round wood, bark present (distorted diameter); e. 84 x 60mm
10			2 pieces of a post. Larger piece tapered to a point on one side. Pieces refit together; small fragments broke off whilst cleaning. Some bark and tool marks present: b. 339 x 82mm; d.650 x 95mm; 30mm thick
11			3 pieces of round wood (branches/posts) plus numerous smaller pieces & twigs. ID samples: Largest piece 240mm long with a distorted diameter of 80 x 88mm
12			Numerous twigs
13	503	3549	Large piece of tree trunk/post, one end tapered to a point on 3 sides; Bark & toolmarks present with a flattened notch trimmed mid-way into the profile with a possible second notch 40cm up from this; preservation is fair to poor. This may have been used as a log ladder, although this may be a modification of a previous structural element 600 x 190mm, 200mm point; *c.* 100-200mm depth;
14			x4 very fragmentary pieces (with possible refits), some bark present; 155 x 600mm, smaller pieces 300 x 180mm
15			6 small fragments. Largest piece, 36 x 80 x 26mm
16			6 small pieces of flat wood, largest piece 75 x 30 x 12mm
17			5 small fragments of flat wood. Largest piece, 90 x 34 x 7mm thick
18			3 fragments of possible worked wood. 1 round wood piece tapered to a point on one side – 105 x 42mm, diameter 22mm, bark present. 40 x 83mm, 20mm at smallest edge, tool marks present - +1 smaller piece
19	528	3664	Possibly tapered edge, slight depression: 175 x 77mm, 42mm on smallest edge, 30mm thick
21			Large post/tree trunk tapered to a point on 4 sides. 540mm+ in length, total maximum diameter 320mm. Some tool marks present.
20		3658	2 refitting pieces, stake/post: No bark or clear tool marks. Point tampered on two sides. 640 x 60mm, 154mm second piece; 42mm thick
22			Possible woodchip. 65mm long, 43mm wide, 11mm thick
23			3 small fragments, inc. 1 possible woodchip which is 54 x 42 x 10mm
24	558	3769	1 piece of flatwood. No bark or clear tool marks present. 360mm long, 90mm wide, 50mm thick
25			1 piece of flatwood. 530mm long, 135-210mm wide, 40mm thick
26			1 piece of flatwood. No bark present, some possible tool marks. 480mm long, 106mm wide, 43mm thick.
27			1 piece of flatwood, No tool marks or bark present. 150mm long, 66mm wide, 44mm thick.
28			1 large piece of flatwood with a few smaller pieces which might refit. Large piece 110 - 163mm wide, 44mm thick
29			3 = 1 plank. Total length 540mm, maximum width 130mm, 38mm thick.
30			1 piece of flatwood. Some potential tool marks. 390 x 173 x 25mm.

Table 29. Catalogue of waterlogged wood from Area D

Faunal Bone **–** Vida Rajkovača

A sizeable assemblage of 8252 bone fragments with a total weight of 33,018g was recovered from a range of feature types. Some 1029 assessable specimens were

identified with 348 (33.8%) being assigned to species level (Table 30). In addition to the hand-recovered bone, a further 318 specimens were retrieved as heavy residues following the processing of bulk soil environmental samples (Table 31). The overwhelming majority of bone, both by count and weight, came from Middle Bronze Age ditches, pits and pit-wells/watering holes. The second main component of the assemblage was the material recovered from the Early Bronze Age postholes comprising the palisade enclosure and the structures. The aim of the assessment is to get an overall view on how much data is present by phase, both in terms of the physical quantification of faunal data and its interpretative potential.

Methods: Identification, quantification and ageing

The zooarchaeological investigation followed the system implemented by Bournemouth University with all identifiable elements recorded (NISP: Number of Identifiable Specimens) and diagnostic zoning (amended from Dobney & Reilly 1988) used to calculate MNE (Minimum Number of Elements) from which MNI (Minimum Number of Individuals) was derived. Identification of the assemblage was undertaken with the aid of Schmid (1972), and reference material from the Cambridge Archaeological Unit. Most, but not all, caprine bones are difficult to identify to species however, it was possible to identify a selective set of elements as sheep or goat from the assemblage, using the criteria of Boessneck (1969) and Halstead (Halstead *et al*. 2002). Age at death was estimated for the main species using epiphyseal fusion (Silver 1969) and mandibular tooth wear (Grant 1982, Payne 1973). Where possible, the measurements have been taken (Von den Driesch 1976). Sexing was only undertaken for pig canines, based on the bases of their size, shape and root morphology (Schmid 1972: 80). Withers height calculations follow the conversion factors published by Von den Driesch and Boessneck (1974). Taphonomic criteria including indications of butchery, pathology, gnawing activity and surface modifications as a result of weathering were also recorded when evident.

Taxon	**Early Bronze Age**			**Middle Bronze Age**			**Early Iron Age**			**Bronze Age**			**Total NISP**	**% NISP**
	NISP	*%NISP*	*MNI*	*NISP*	*%NISP*	*MNI*	*NISP*	*%NISP*	*MNI*	*NISP*	*%NISP*	*MNI*		
Cow	7	*53.8*	1	147	*49.2*	10	9	*90*	1	20	*77*	1	183	52.6
Sheep/ goat	5	*38.5*	1	58	*19.4*	7	1	*10*	1	5	*19.2*	1	69	*19.8*
Sheep	-	-	-	2	*0.7*	1	-	-	-	-	-	-	2	*0.6*
Pig	1	*7.7*	1	80	*26.7*	6	-	-	-	-	-	-	81	*23.3*
Horse	-	-	-	2	*0.7*	1	-	-	-	-	-	-	2	*0.6*
Dog	-	-	-	1	*0.3*	1	-	-	-	-	-	-	1	*0.3*
Red deer	-	-	-	9	*3*	2	-	-	-	1	*3.8*	-	10	*2.8*
Sub-total to species	**13**	*100*	**-**	**299**	*100*	**-**	**10**	*100*	**-**	**26**	*100*	**-**	**348**	*100*
Cattle-sized	27	-	-	235	-	-	24	-	-	37	-	-	323	-
Sheep-sized	91	-	-	208	-	-	.	-	-	25	-	-	324	-
Mammal n.f.i.	2	-	-	32	-	-	.	-	-	.	-	-	34	-
Total	**133**	-	-	**774**	-	-	**34**	-	-	**88**	-	-	**1029**	-

Table 30. Number of Identified Specimens and the Minimum Number of Individuals for all species from all features – breakdown by phase.

Taxon	NISP	%NISP	MNI
Cow	5	*20*	1
Sheep/ goat	13	*52*	1
Pig	6	*24*	1
Dog	1	*4*	1
Sub-total to species	**25**	*100*	**-**
Cattle-sized	8	-	-
Sheep-sized	65	-	-
Mammal n.f.i.	220	-	-
Total	**318**	-	-

Table 31. Number of Identified Specimens and the Minimum Number of Individuals for all species from heavy residues.

Early Bronze Age

The Early Bronze Age material was poorly preserved allowing only a small percentage of bone to be identified to species level (Table 30). Six cattle specimens were identified, and was mainly recovered from the palisade enclosure, a number of pits (some associated with Structure 8), and a tree throw (F.340).

The earlier material was also characterised by a higher proportion of bones affected by burning. A total of 41 charred or calcined specimens were recorded, or *c.* 30% of the sub-set. This was noted on other similarly dated assemblages from the area (Rajkovača *forthcoming*).

A closer look at the distribution of bone between different features shows that the four pits (Fs. 135, 210, 368 and 482) collectively generated 32 specimens. Pits associated with Structure 8 were not especially bone-rich, although a shallow pit, possibly associated with Structure 7, contained some 67 specimens, or over half of the entire Early Bronze Age sub-set.

Middle Bronze Age

In contrast to the sparse and poorly preserved earlier bone, the Middle Bronze Age component of the assemblage amounted to 774 specimens or 76% of the site assemblage. Cattle were the dominant species, accounting for almost half of the identified species' count (Table 30). This is common to Middle Bronze Age assemblages from the south and western Fenland. Pigs were of secondary importance in the assemblage, closely followed by ovicapra. Red deer was more common than horse or dog, which is also a period trait.

In Area C, pit F.229 was especially rich in animal bone with a total of 227 specimens (*c.* 40% of the site assemblage) dominated by pig remains. A number of wells or watering holes (e.g. Fs. 140-4, 205 and 215) also contained a moderate amount of animal bone. These seven features produced a combined total of 71 specimens. Two wells Fs. 558 and 559 were especially bone-rich generating a combined total of 158 specimens (20% of the sub-set). Ditches contained very little faunal waste overall, with only a small assemblage recovered from Fs. 15, 101, 195 and 560.

Within the skeletal element count for the three 'food species' (cow, sheep/goat and pig), mandibular elements, loose teeth and metapodials are slightly more abundant than elements corresponding to high-value meat joints. This may suggest the export of meat from the site, though it is more likely a result of taphonomic processes. Ageing data was available from six pig mandibles. Almost all age ranges were represented with one or two mandibles each, from seven months through to the over three years of age at death. A few unfused pig scapulae were present too, suggesting pigs were reared on site or nearby. There were no mandibles available to assess tooth wear for other species, though a number of unfused and porous scapulae and long bone elements were recorded. Butchery was noted on 39 specimens or just over 5% of the sub-set, a relatively high prevalence, especially for the period. Fine knife marks consistent with skinning or meat removal (depending on the location of the mark on the body) were more common than deep cuts or chop marks.

Early Iron Age

Pit F.328 was the only feature of this date containing animal bone. Some 34 specimens were identified, of which nine were of cattle and one of sheep/ goat (Table 30).

Post-Medieval

Linear F.327 produced five fragments of unidentified bone.

Undated

In Area C, grave F.279 contained an almost complete adult cow skeleton [1065] found in articulation with an *in utero* calf [1064] (Figure 17). To the south of this a near complete sheep skeleton was also found in grave F.165. The skeleton was aged to between 2 and 3 years at death and measured *c.* 70cm in shoulder height. Similar age and dimensions were registered for a cow skeleton in grave F.501 in Area D. The size and condition (yellow and smooth surface patina) of the skeletons in F.165 and F.501 may be suggestive of a more recent, even modern date, but the condition may also be a factor of taphonomic processes and an earlier date is possible.

Bone from heavy residues

Faunal remains recovered from bulk soil environmental samples reflect the patterns recorded from the hand-recovered material (Table 2??), and did not include any fish bone, avian or microfaunal remains. The majority of the heavy residues were crumbs of unidentifiable mammalian bone.

An increase in the number of sheep has been identified as a cultural and economic marker of the Early Bronze Age and an indicator of a change from a mostly wooded environment to open pastures or grassland (Serjeantson 2011: 96). The faunal record in the 2014-15 assemblage does not reflect this pattern, and the relatively high numbers of pigs and red deer would be more suited to a wooded context with ample pannage. Together with the prevalence of cattle, this suggests that the site's husbandry practices and cultural preferences were likely to be strongly dictated by environmental circumstances. In addition, the faunal signature appears intensely linked to basic economic practices similar to those generally recorded for the Neolithic in the Fenland, with a reliance on domestic sources of meat and wild fauna only occasionally contributing to the diet. Whilst most of the butchery appears to reflect skinning and stripping of flesh, chopping marks recorded on antlers show that this was utilised as a raw material into the Middle Bronze Age.

Though seemingly of quantitative insignificance, the assemblage holds great potential to examine questions that concern animal exploitation and landscape use in the western Fenland during the Bronze Age. Key areas of study that may be possible with the assemblage include kill-off profiles, butchery practices and the nature of deposition. It is recommended that analytical time is invested in the spatial distribution of bone by feature type. Moreover, faunal material provides ideal opportunities for radiocarbon dating of key type features.

Human Bone – Natasha Dodwell

A poorly preserved crouched burial (F.320, skeleton [3044]), believed to date to the Middle Bronze Age, was identified in a shallow ovoid pit (Figure 17). The skeleton

lay on its left side with its head at the south of the grave, the right arm flexed 90-degrees across the body and the left arm flexed (as though cradling something beneath the arm). A loom weight <39> was found upon the lateral side of the lower arm.

The plan of the body was recordable in excavation but, owing to the bones' poor preservation, lifting of the skeletal elements was possible only in fragments. The limbs survived only as shafts with longitudinal cracking and often only as splinters; no joints or articulating surfaces were preserved. Of the cranium only parts survived, but with analysis remaining possible on areas of the temporal and frontal bones and the dentition. Both the torso and pelvis survived only as scraps. The shape of the anterior mandible and the size and robustness of the mastoid process suggests that the skeleton is that of an adult male, whilst the heavy wear on all of the surviving teeth and the irregular wear on the left molars suggest that this was an elderly adult, over 50 years of age. A large caries affecting both the occlusal and buccal aspects of the right 1st maxillary molar was recorded and at least two teeth had been lost prior to death. All surviving dentition had slight to medium deposits of calculus.

Beyond taking and submitting a sample of bone for radiocarbon dating and discussing the grave with reference to contemporary features in the landscape no further work needs to be done on the material.

Worked Bone – Marcus Brittain

The assemblage comprises of two worked bones weighing a total of 55g. These were found in two features located side by side: F.215 (a large pit-well) and F.229 (a moderately large pit adjacent to F.215). Other finds from these features included burnt stone, briquetage, loomweights and the investigation area's largest bone assemblage. The items here in question are a butchered cow tibia trimmed into an awl, and a roe deer antler upon which one of two tines and the shaft had been worn into a rounded spatula shape with polishing on one side of each end. The use of this item is uncertain, although it may have been employed as a smoother.

<140> F.215 [845]. Butchered fragment of cow-sized leg (tibia) shaft. Length 72mm, max width 21mm, weight 19g. Possibly trimmed at one end into an awl; awl end is slightly flattened and polished through use. Stained dark brown as a result of waterlogging in peat.

<241> F.229 [232]. Roe deer antler with two tines; crown missing. Length 150mm, max width 35mm, weight 32g. Lack of pearling on the main shaft (possibly a result of use) indicate that this may be from a male kid of less than two years. Both the proximal end of the shaft and the tip of the main tine have been worn to a flat surface on one side, the whole surface of which is highly polished through use. Both ends are rounded to a spatula shape. A second small tine <243> has broken at the shaft, possibly during excavation.

<243> F.229 [933]. Roe deer antler, snapped antler tine tip refitting with <241>. Length 39mm, max width 11mm, weight 4g. Slight polishing, particularly on anterior surface. Two cut marks on dorsal surface, one mid-way along tine and the other towards the tip.

Both items will require regional and period-specific contextualisation and more detailed specialist description. It is recommended also that the antler tool from F.229 is illustrated prior to publication.

DISCUSSION

The extent of archaeological investigations within the quarry works of the Baston/Langtoft landscape now amounts to in excess of 60ha, and within which is clearly a prehistoric (and Roman) landscape of considerable importance. The 2014-15 excavations have not only reinforced this proposition, but have significantly enhanced it. Individual phases of work each bear their own highlight findings, which is no less the case here. Comprising in the main of Early to Middle Bronze Age activity, a number of 'features' are unique and of national significance. This includes the palisade enclosure, for which no direct contemporary parallel has yet been encountered, along with what is most likely the nearest to a complete briquetage vessel from the Middle Bronze Age fenland. With a character that in many ways stands apart from its contemporary 'neighbours' along the southern fenland, it is, however, the overall picture that now emerges from this and the combined investigations which entails one of the densest examples for occupational evidence and non-funerary pottery deposition for the Middle Bronze Age in Britain. Moreover, the geographic and temporal context of this picture is noteworthy, for this covers a period of recognised environmental and human-behavioural change for which an understanding has rarely been possible to achieve, at least without reliance upon environmental-deterministic causation.

The scale at which changes occur within human-place relationships is a particular challenge to archaeology (Robb and Pauketat 2013) and, against what might normally be assumed, need not act concurrently with climatic and environmental shifts. Nevertheless, blocks of change appear to be evident at Baston/Langtoft in terms of the character of human-place interaction, as evidenced by the distinct chronological range illustrated within the 2014-15 investigation area, as well as other areas within the general landscape. The means by which such changes provided both challenge and opportunity would undoubtedly have differed between communities, but the specificity of such regional response has mostly remained elusive. Against the challenges of marine transgression and land-loss at Baston/Langtoft the role of salt and other marine resources, for example, may reflect such opportunity drawn upon by one community in its broader negotiation of social status (Evans 2015). Serious engagement with themes of land-loss and community responsiveness is of international significance, and is within the potential of the data accrued at Baston/Langtoft.

The following discussion first aims to situate the broader Baston/Langtoft landscape within the current understanding of the western Fenland's environmental sequence. Although none of the study areas through which such information has been recovered derives from either the Baston or Langtoft fen contexts, it provides a reasonable background; however, this cannot account for local variation and the specificities of context within the 2014-15 investigation area, which as Allen suggests above may be further enhanced through geochemical and micromorphological analyses. Drawing upon the guideline environmental background, consideration of the Early and later Bronze Age landscapes is separately advanced below with individual elements more fully contextualised.

Between Two Rivers

The almost exclusive attribution of the Early to Middle Bronze Age to the evidence revealed by the 2014-15 investigations at Baston No.1 Quarry reflects the considerable emphasis of this period's activity in this south Lincolnshire landscape, namely along the 3.0m to 1.0m OD contour at the junction of the First Terrace sand and gravel deposits and to the east of this an area of peat formation. The First Terrace deposits are a fairly localised geological phenomenon bordered to the north by the River Glen and traversed by the River Welland to the south. Taken together, the gap between the rivers files a corridor of some 10km-width across the landscape, set between which are the lines of the Middle Bronze Age field system aligned northwest-southeast and near to perpendicular with the corridor between the two rivers. To understand the benefits of such landscape context requires a detailed local environmental history, such as which is not as yet available, but a fuller insight may reside in the now considerable archive of samples from a suite of waterlogged deposits collected during the CAU's investigations across the Baston/Langtoft environs. Given the broader geological profile of the region we may anticipate that the corridor offered prime access to an array of seasonal resources, perhaps combining woodland and pasture over the Lincolnshire clays and limestone to the northwest, fertile arable soils along the gravels as well as the sandstone and valley sides to the south, with marine resources in the north and east.

Although much of the organic sediment (mainly peat) that may have partially overlain the investigation area, and from which this information could have been determined, has been either greatly reduced or, more generally, almost entirely eradicated following centuries of managed drainage and intensive agriculture (Honnor and Lane 2002), a broad history of regional climatic changes may nonetheless be reconstructed from dated clastic and organic sediments, notably for the Late Devensian (*c*. 26,000 – 12,000 BP) fluvial deposits at Baston (Briant *et al*. 2004) and Flandrian (*c*. 12,000 BP to present) sediments investigated to the north, south and east, at Bourn and Morton Fens, the Cowbit and Welland Washes, and around Spalding (e.g. Shennan 1980, 1986a, 1986b, 1994; Shennan and Alderton 1994; Welin *et al*. 1972, 1973, 1974). A summary mapping of the reconstructed landscape was also prepared as part of the Fenland Project survey (Hayes and Lane 1992). Steps towards an understanding of the human response to these changes in the landscape around Baston/Langtoft may be examined via the archaeological record.

Where it has been examined, the sediment sequence of south Lincolnshire is broadly comparable to that of the north Cambridgeshire fenland that has been far more intensively studied owing largely to its deep-bed deposits; however, the timing of the deposition of clastic deposits may vary across these areas. Whereas the latter, referring to the fenland south of the River Welland, is formed of an indented fen edge and undulating geological floor that accounts for raised 'islands' across the fenland – these often having been attractive to prehistoric inhabitation – south Lincolnshire's fenland is formed in the main by a comparatively gentle and less varied sloping profile. Taking into account the general absence of surface peat through deflation and erosion, from west to east the basic landscape profile covers four basic zones from an upland fen edge or humose 'skirtland' gradually lowering

to an intercalated peat horizon again rising towards a skirtland and plateau of firm silts. Each zone is formed of a sedimentary composition resulting from successive episodes of marine transgression and regression, the fossilisation of which is visible through aerial photography and LiDAR imagery (Figure 17).

Basal peats at Morton, 9km north of the investigation area, have been dated[1] to 3366-2891 Cal. BC (Q2579, 4430±100BP) and represent the earliest Flandrian sediments derived from freshwater flooding (Shennan and Alderton 1994: 277). This corresponds with a general trend of accreting coastal sediments owing to rising sea levels that impeded freshwater discharge via rivers and streams. In transforming the anoxic environment of the land surface, saturation and peat growth led to the demise of the woodland cover and its replacement by freshwater-tolerant alder carr early in the Bronze Age. The limit of recognised Early Bronze Age activity *c.* 1.0km east of the investigation area has been registered as burial mounds over a northwest-southeast distribution along the 2.0m OD contour, where also a number of Neolithic stone axes have been collected. Earlier activity may have extended further eastwards, where small numbers of Mesolithic and Neolithic worked flint have been reported beneath alluvial silts at Spalding (LHER 22367, 22368, 23060, 23797 and 25737), but the depth at which these have been encountered reflects the difficulty of exploring these horizons. A burial mound and ring ditch along the equivalent 2.0m contour at Deeping St. James, 3.0km southeast of the investigation area, was subject to excavation in the late 1980s and early '90s as part of the Fenland Management Project (French 1994). A pre-barrow inhumation of a young child was dated to 2032-1696 Cal. BC (GU-5358, 3540±60 BP), and primary adult inhumations inside of one of the ring ditches dated to 1908-1616 Cal. BC (GU-5342, 3440±60) and 1876-1457 Cal. BC (GU-5344, 3350±70 BP). Non-funerary activities associated with Collared Urn have also been recognised in a small open-area investigation along the same 2.0m OD contour and adjacent to Cross Drain where pits and post holes were also found with worked flint and a small assemblage of animal bone (Moulis 1996; Herbert 1998).

The inhumation burials and the erection of their covering mounds appear to have been established at the cusp of further deterioration of the freshwater conditions. At Bourne Fen the top of the basal peat returned dates of 2017-1625 Cal. BC (Hv8645, 3485±76) and 1903-1566 Cal. BC (Hv9268, 3430±60), over which clastic sediment was deposited through increased marine flooding that fed into active saltmarsh/coastal reed swamp marshland. This pattern of transgression was shown to be fully active by the middle of the second millennium BC, registering an average date return of *c.* 1650-1350 BC (after Shennan 1986a: 129). The full westward extent of this transgression is not yet certain. As Mike Allen suggested above, micromorphological analysis of samples from clastic-like fills obtained during the 2014-15 investigations would resolve the question of their similarity with sediment borne through marine transgression (see also Macphail *et al*. 2010). Whatever the case, the marsh would have been a dynamic environment with its drainage funnelled through a network of creeks. The process of transgression was unidirectional and probably consistent over

[1] All dates calibrated at 95.4% confidence using OxCal 4.2, with an IntCal 13 curve

Figure 20. Site location against fenland inundation (Lidar 2m digital surface model) Light grey denotes low lying peat interspersed by channels / creaks

much of the western Fenland, and its duration appears to be one of paced transition rather than abrupt impact.

It is within this transitional phase from freshwater to marine environment to which the core of the archaeology in the 2014-15 investigations may be assigned, corresponding with Collared Urn and Deverel-Rimbury pottery traditions in which the latter, dating to the Middle Bronze Age, registers the 'peak' of landscape inhabitation. Bronze Age field systems, deemed once to have been of comparative rarity and isolation, have now been traced along most of the valleys of the Glen and Welland, as well as the Nene, Ouse and Cam over 15km to the south (Yates 2007). The extent of the south Lincolnshire fields, conjoined by their long parallel ditched droveways, is well known from aerial mapping, but the remarkable density of settlement architecture and the material assemblages therein is only now becoming evident through excavation. Detailing the individual character of this landscape and the means by which it differs to those contemporary landscapes of the south Fenland would greatly contribute to an understanding of the regionality that belies Bronze Age communities in Britain. Moreover, the rare opportunity that this landscape presents for a determination of long-term social responses to dramatic environmental changes has already been highlighted (Evans 2015).

To answer such questions requires both sequence and duration. The timing of the return to a freshwater environment at Baston/Langtoft is yet to be ascertained, although it is evident that capping fills within a number of its larger ditch and discrete features (pit, pit-well etc.) are peaty deposits that contain mollusca of probable freshwater species. Radiocarbon dates (Shennan 1986a: 129) of peat that formed over the marine sediment at Bourne Fen ranged between 1394-1008 Cal. BC (Hv8644, 2970±65 BP) at its base, 1112-809 Cal. BC (Hv9266, 2780±70 BP) at its centre, and 928-543 Cal. BC (Hv9266, 2625±65 BP) at its surface. Similarly, at Deeping St. James a second ditch encircling one of the gravel funerary mounds contained peat dated at its base to 1194-899 Cal. BC (GU-5346, 2850±50) and 750-258 Cal. BC (GU-5348, 2360±60) at its top (after French 1994). Although these (and other) dates reflect varied rates of this transition towards the return of a freshwater environment, they nonetheless appear to have been of moderate pace (Shennan 1986a: 134). Further to the north and towards Morton are clays and silt of an episode of marine flooding during the Late Bronze-Early Iron Age, but this incursion was not evident at Bourne Fen, and its presence within the Baston and Deeping Fens remains open to question. Briquetage and related evidence for salt production during the Early to Middle Iron Age at Baston/Langtoft (Hutton and Dickens 2010; Lane and Morris 2001; Webley 2004) may indicate that peat formation was interspersed by localised marine-source channels, although their existence is uncertain and they are likely to have succumbed to peat fen encroachment by the *later* Iron Age.

With this brief landscape and environmental history as a backdrop, discussion of the main features of the 2014-15 investigations may be elaborated and brought into context. The aim here is to highlight the key characteristics of the Early to Middle Bronze Age landscape with a view towards assessment of their potential broader contribution to studies of the Bronze Age in Britain.

The Early Bronze Age Landscape

Communities of the south Fenland Early Bronze Age show dominance of Beaker pottery use when compared with the relatively low frequency of Collared Urn (Mark Knight *pers. comm.*). At Baston No.1 Quarry this pattern is overturned with exclusive use of Collared Urn reflecting the trend revealed by the CAU's investigations across Baston/Langtoft where upwards of 2000g of Collared Urn has been recovered compared with only *c.* 50g of Beaker wares. The distribution of Collared Urn across the 2014-15 investigation area (Figures 18 and 21) may be grouped into at least two main concentrations or considered as a west to east swathe that includes contemporary features within the Freeman site to the west and the Cross Drain site to the east. This beholds a stretch of activity over 1.5km that may include at least three post-defined circular structures (nos. 1, 7 and 8) and related pits and postholes. Linear distributions of settlement-related activity are documented within preceding Late Neolithic contexts in southeast England, often connected with the use of Grooved Ware, and a nearby example lies 3.0km to the south at Deeping Gate Trees where a west to east swathe of features was broadly aligned with the River Welland's alluvial deposits (see Brittain 2015). Although Billington's flint analyses confirms the absence of Neolithic visitation to the 2014-15 investigation area, the extension of these linear patterns of settlement into the Early Bronze Age there may reflect a local tradition of practice framed upon an alignment in accordance with particular local circumstances.

An undoubtedly remarkable feature of the recent investigations is the ovoid palisaded enclosure, which covered some 858sqm. The ambiguities of both its flintwork and the single pottery sherd limit their attribution only to a broad Early to Middle Bronze Age timeframe. Nonetheless, charcoal from one of the postholes returned an instructive radiocarbon date of 1630-1500 Cal. BC (95% probability). Recent analyses of the radiocarbon distribution for Collard Urn pottery, directly focussing upon calibrated dates obtained from cremated bone, has identified the zenith of Collard Urn production as being 2040-1600 Cal. BC, with the latest one of four overlapping groups of vessel forms restricted to the period of 1880-1500 Cal. BC (Law 2008). The radiocarbon date from the palisaded enclosure locate it within this *later*-Early Bronze Age timeframe – phasing into the *early*-Middle Bronze Age – and its spatial position is comfortably set within the swathe of Collard Urn-associated features. Further dates are nevertheless required to secure this assignation. Concerns regarding the details of sequence are raised in particular by the enclosure's proximity to Deverel–Rimbury-containing pit F.365 located only 0.4m north of the enclosure's perimeter. The unusual nature of this small pit is referenced by one of its finds: the curious modified fossil belemnite. Whilst reshaped belemnites are known from Late Neolithic and Chalcolithic contexts elsewhere in Europe (Boyadziev 2008), this is unique to Britain and is quite possibly the earliest example of a modified fossil to have been found here (Leeming 2015; *pers. comm.*). It may have been used as a decorative amulet, but its use is otherwise uncertain. Whatever the case, the pit may be highlighted for its unusual contents, which problematizes its relationship with the equally unusual palisaded enclosure.

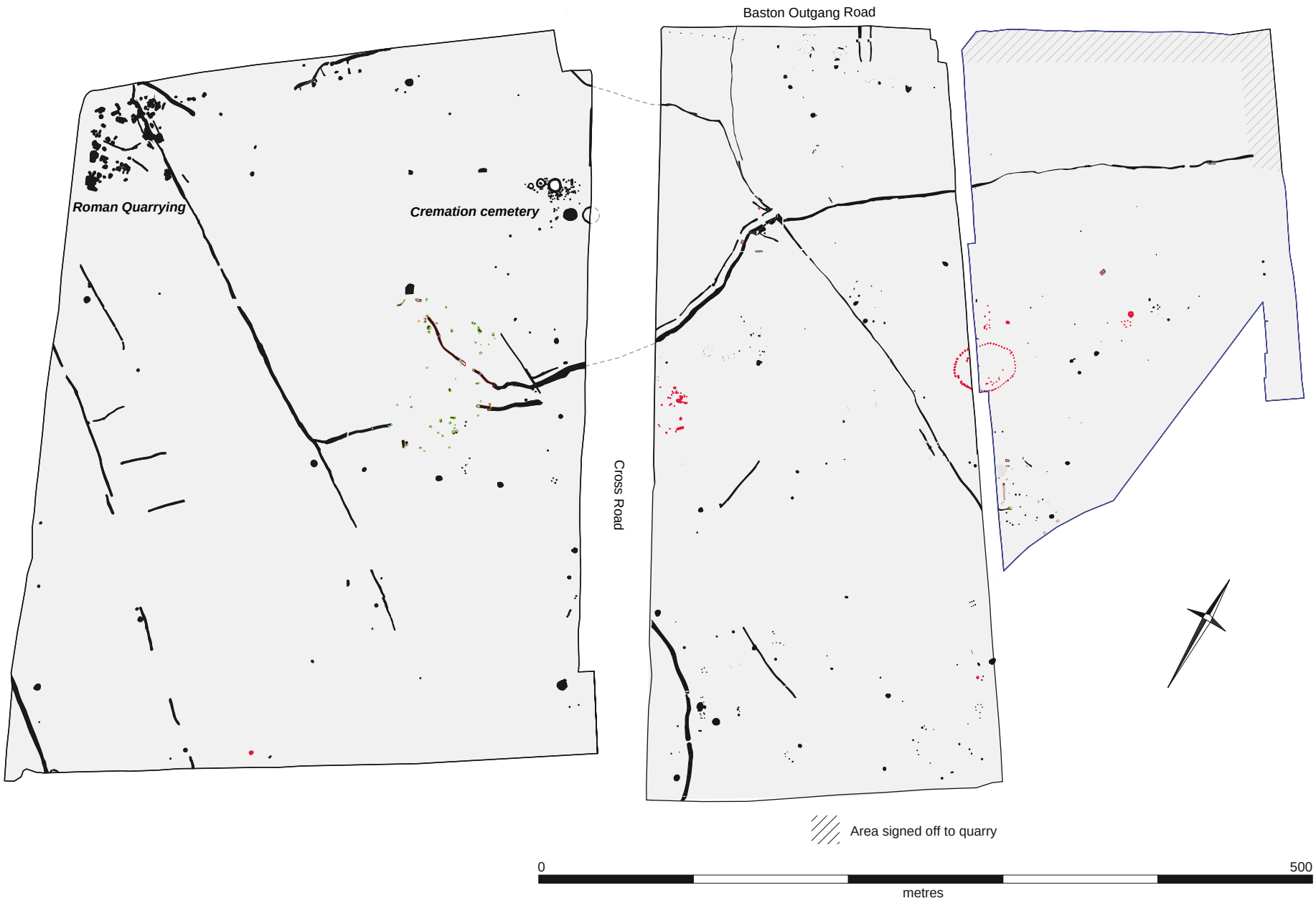


Figure 21. Freeman's site and 2014-15 investigations (red denotes Early Bronze Age)

In the south Fenland at Bradley Fen on the east side of the Flag Fen basin, features that fall within the fifteenth to sixteenth centuries BC have been shown to immediately predate the establishment of a ditched field system (Knight and Brudenell *forthcoming*). The palisade may also fit within this episode of transition, a suggestion of which may be derived from Langtoft's Whitfield site south of the investigation area where a date of *c*. 1450 Cal. BC was obtained from the terminus of the field system ditches found to contain a clutch of Deverel-Rimbury pottery (Hutton 2008: 39). Whilst further dating and analysis is required at Baston/Langtoft, there is likelihood that the palisaded enclosure also predates the earliest phases of the field system and is perhaps partly influential in its later configuration. In addition to this, there are some intriguing characteristics of the palisade and its context that warrant further discussion in relation to both the known Early and Middle Bronze Age landscape.

There is little in Britain with which to compare the enclosure, and certainly it is of a form that is unique to the local region. Potential comparanda for oval enclosures are predominantly from *earlier* Bronze Age contexts. Oval plans are not uncommon to post, stake and ditch arrangements in both ceremonial and dwelling contexts, but in terms of scale there are few examples with which even the slightest comparison may be explored. Possible exceptions are the two 'D-shaped' enclosures at Eye Kettleby, Leicestershire, each accessible by a single entrance, and with dimensions respectively of 39 by 64m and 41 by 55m. As with the 2014-15 palisade, cereals included wheat (as well as barley) and finds were sparse and restricted to part of a polished axe and a small assemblage of flint mainly from the entrance ditch termini (although the excavation of the ditches at Eye Kettleby was very limited). Charcoal from one of the second of two phases at one of the enclosures produced a radiocarbon determination of 1940-1740 Cal. BC, placing this firmly within the Early Bronze Age (Finn 2011). A partial Food vessel was also recovered from the only internal feature to either of the enclosures: a small rectilinear pit. The enclosures were tightly grouped with two ring ditches; one encircled an inhumation and the other a group of cremation pits. All four monuments at Eye Kettleby attracted later foci for cremation internment in the Middle Bronze Age, and with the funerary/ceremonial connotation of the ring ditches, the primary function of the enclosures was argued to be as an arena for ceremonies involving internment and/or commemoration of the dead.

The correlation of oval structures with ceremonial and funerary practices in the Early Bronze Age is similarly found in sites of an appreciably smaller scale. Examples exist in oval arrangements of stakes and occasionally of posts sealed beneath barrows (e.g. Brenig, Buckskin and Amesbury A67). Other ceremonial monuments such as Holme II also fall into this category. Located near to Holme I, or 'Seahenge', Holme II was three times smaller than the 2014-15 palisade, and was comprised of a partially preserved oval post setting rung by a closely set 'wall' of split timbers. Together, these enclosed an ovoid setting of stakes connected with interwoven branches, inside of which were sections of two large trunks lying flat and parallel to one another with their upper surface trimmed to a hollow, presumably for carrying a wooden container of one sort or another. Radiocarbon

and tree-ring dating puts the monument to within 2376-2049 BC (Tyers 2014). It is likely that the Holme II monument served a quite different purpose to the 2014-15 palisade; the former's internal features contrast with the arrangement of posts within the 2014-15 palisade that effects a spatial division. Nonetheless, the proximity of both Holme II and the 2014-15 palisade to the Bronze Age shoreline or 'wet-zone' may signify at least a similar code of practice. Elsewhere, oval settings of posts have been viewed in the context of domestic or dwelling-based activities. At Graigueshoneen, Co. Waterford in Ireland, an arrangement of stake-holes covering *c*. 20 by 30m was found with a hearth set to one side of its interior. Associated with Beaker pottery and dated to 2860-2490 Cal. BC, this clearly predates the 2014-15 palisade and was interpreted as a substantial dwelling structure (Johnston *et al*. 2008), although lacking any larger supporting posts it may equally have been a palisaded enclosure.

Continental parallels for the enclosure are equally scarce. In the Netherlands earlier Bronze Age palisades are rare, but examples of fenced enclosures with comparable dimensions to the 2014-15 palisade enclosure may provide insight to its use. This includes an oval fenceline dated to the Middle Bronze Age from De Bogen (Arnoldussen 2008: 132) and oval or trough shaped fencelines at Elp, Drenthe (Waterbolk 1964) date to the latter half of the Bronze Age. In both of these examples the fenced enclosures covered a span of 30-40m and were found in proximity to multiple longhouses, the relationship to which was not always clear; however, neither fence held a continuous circuit, with one half seemingly left unenclosed. Considerably larger palisades have also been recorded in the Netherlands that stretch over 100m in sync with segments of ditch. These have also been dated to the Middle Bronze Age and appear to have distinct entrances and enclose large areas occupied by dwelling structures. Their function is a source of debate, included in which are their use as cattle corrals, landscape divisions separating people of different communities, and as community meeting places for feasting and exchange (Arnoldussen and De Vries 2013/2014: 89). These explanations may also be considered in view of the 2014-15 palisade enclosure.

The role of palisades as corrals for the housing and management of livestock has raised criticism owing to the degree of spacing between posts that may seem too wide to act as effective barrier to block the passage of even sizeable animals. With a maximum spacing of 1.98m the 2014-15 enclosure would also fit uncomfortably within this explanation, although stake-set fencing between the posts may have been lost with the more recent truncation of the land surface. Nonetheless, it is arguable that without an obvious funnelling system the comparatively narrow entrance would likewise be ineffectual in the herding of livestock. Phosphate analysis may indicate some degree of the palisade's usage for stock keeping, but in a landscape in which the later economy is predominated by cattle it would be unsurprising if phosphate signatures registered some degree of livestock proximity or manure spreading.

It is difficult to envisage the palisade as a domestic space without clearer formality of its internal post arrangement, phasing for which is similarly less than certain. Ditch-enclosed settlement is recorded for the Middle Bronze Age within the Glebe site to

the south of the investigation area (Hutton 2008), but for the *earlier* Bronze Age a palisade-enclosed settlement would be quite unexpected and clearer material and structural signs of domestic activity are evident around Structure 1 and perhaps also within the Cross Drain site. Nonetheless, a small assemblage of finds was collected from the 2014-15 enclosure, which included a wheat grain, a number of bone and flint fragments and a single pot sherd. This unremarkable density is unlikely to mark even short-lived occupation. Also, taking into account the scale of effort required to set out and erect the palisade, it would be reasonable to expect nearby features with matching evidence for storage or refuse if this had served as a domestic space.

The palisade's foci of material deposition was predominantly within its fronting postholes to either side of the entrance, which resonates of similar patterns from ditched enclosures, both domestic and ceremonial, where the threshold between the inside and outside of the enclosure was marked by activities involving different forms of material culture. The absence of definite domestic markers in many ways serves to identify the enclosure with what Arnoldussen and De Vries (2013/2014) have termed spaces for 'community aggregation', perhaps in connection with enactments of bonding, initiation and exchange ceremonies. Relating to this, the palisade's relative proximity to the cremation cemetery and the barrows recorded to the east of the investigation area may be significant. In lieu of more detailed scientific dating, an argument has been presented for the cemetery's *earlier* Bronze Age foundation as a mortuary site (Brittain 2013), and it is conceivable that the palisade may also have entailed some form of connection to protracted mortuary rites. In respect to this it may therefore be significant that the palisade's alignment includes two graves containing cow burials (one with *in utero* calf) within 27m and 51m west of its entrance, and the only crouched inhumation 95m to its east.

The Middle Bronze Age Landscape

Whereas the Early Bronze Age feature distribution lay slightly north of an east-west axis and effectively perpendicular to the edge of the fen, with the progression into the Middle Bronze Age of transformation to a predominantly marine environment a re-calibration of axial 'drift' was inscribed into the landscape via the ditched field system. Oriented northwest-southeast, this more or less followed the natural contours of the landfall and, as mentioned above, lay broadly perpendicular to the landscape's river-run Terrace corridor. Moreover, this fundamentally contrasts with the relative continuity from the Early to Middle Bronze Age in the pattern of land tenure that has been observed at the south Fenland's Bradley Fen landscape (Knight and Brudenell *forthcoming*). There, wooden fencelines dated to *c*. 1600-1400 BC preceded the establishment in *c*. 1500-1300 BC of a ditched field system where, in essence, the latter reified the former. In this instance the preservation conditions were conducive to the retention of these traces, much of which would likely have been lost if those conditions were comparable to that of the Baston/Langtoft landscape. Nevertheless, vestiges of an earlier landscape are suggested by the re-direction of the field system around the area of the Deverel-Rimbury cremation cemetery, and although two main phases of the field system have been identified it

is likely that its 'accommodation' of a pre-existing feature there – marking of a mortuary/ancestral zone – was an early 'feature' of its design. It is noteworthy that the area defined between the cemetery and the field system (in excess of 140m diameter) was absent of features that are otherwise distributed across the landscape. It appears that settlement, evinced by at least fourteen post-defined structures, was restricted to outside of this zone, and predominantly along its east (fen) side. This again illustrates a contrast with the south Fenland's Middle Bronze Age settlement where it was generally located higher upon the gravel terraces overlooking fields and pasture leading towards the fen-side edge. The Baston/Langtoft settlement/landscape pattern is the exact opposite, being consistently located on the fen-side of the main field allotment and thereby implying a quite different relationship between inhabitation and ecology.

Noting also the enclosed settlement at the Glebe site (Hutton and Dickens 2008), the frequency of settlement within the 2014-15 investigation area alone is considerable by the standards represented by most Middle Bronze Age sites in the East of England. As Fryer and Simmons suggest, the local context was predominated by damp open meadow scrub, perhaps difficult for sustained or permanent settlement. Very broadly, there are three main swathes of settlement-related feature distribution, from the north, centre and south of the investigation area, which appear to continue into the areas quarried to the east and south. The post-structures probably represent dwellings, storage units and other ancillary buildings. The fill from each of the structure's postholes was fully sampled, but those that have been processed for macro-flora and finds have produced only very limited results: a posthole from Structure 5 produced two worked flint items, 2g of bone was recovered from a posthole in Structure 13, and small amounts of fired clay was found in association with only four structures (Structures 6 and 12-14). Only Structure 11 – a six-post rectangular structure – displayed evidence for post-pipes, these being heavily charcoal-infused and perhaps indicative of *in situ* torching. The remaining structures displayed no signs either of post pipes or of any re-cutting of postholes, although postholes of another rectangular building (Structure 14) also contained charred material. This suggests that the structures or groups of structures each served a single phase of activity, the close of which may have been marked by their dismantling or torching. The lifecycle of Middle Bronze Age dwellings has been shown elsewhere in Britain to reflect single-phases of activity (Brück 1999), as compared with the re-building of structures in later contexts of the Bronze Age. Structures 2 and 3 were thought to each incorporate a doorway to either the south or the southeast that would be in keeping with other contemporary known examples from elsewhere in Britain (e.g. Sharples 2010: 199), but the structures from 2014-15 appear to lack any obvious doorways or, in the case of circular structures, any defined orientation, and reconsideration of the architecture of Structure's 2 and 3 may be required. In addition to the post-built structures were three instances in which feature clusters enclosed roughly circular or oval spaces that may be considered as primary working areas (Figure 22). Again, the lack of intercutting features within these areas indicates these as relating to single phases of activity, although the mix of finds within episodes of silting within pit-wells in connection

Figure 22. Plan of structures and working areas

with at least one of these areas (see below) may imply that any of these phases were of extended duration.

If we suppose that each of the three swathes of Middle Bronze Age settlement accounts for a single phase of occupation, then we may be observing in the 2014-15 investigation area an instance of long-term settlement drift across the fen-side of the landscape, for which some sense of duration may be inferred from the proximity of the settlement areas to the cremation cemetery in the Freeman's site. Here, 53 pits, mainly truncated, contained a total of *c*. 15.8kg of cremated human bone (Brittain *et al*. 2011). Having only undergone quantitative assessment the demographic representation within this assemblage is not yet known, but even if each deposit was representative of a single individual with, for instance, half of these being adult and the other half being a combination of adolescent and neonate, this could equate to several generations (est. 30 years per generation) of adult occupancy per settlement swathe. Of course only a crude estimation, this would total to *c*. 180 years of overall inhabitation.

The exact relationship of the settlement patterning with the sequence of the field system's ditch boundaries is difficult to pin down with the current evidence, and the role of the multiple pit-wells located within the field system and away from the main settlement swathe also requires greater consideration and analyses. Nevertheless, broad contemporaneity may be inferred on account of the Deverel-Rimbury assemblages that derived from across the CAU's Baston/Langtoft investigations. Now totalling to over 38.9kg, this is one of the largest assemblages in the country from a non-funerary context. It is an important corpus; of which further analysis will clearly prove to be invaluable to Bronze Age studies overall (for example, see trial pXRF analyses reported in the Appendices). The distribution of this entire ceramic assemblage will require collation and synthesis; however, the distribution over the 2014-15 area is probably representative of a more general pattern at Baston/Langtoft, whereby retrieval is limited to a small number of features and the larger dumps of material generally appear within features isolated from areas of settlement. Elsewhere, concentrations of features are connected with deposition of a range of material types. As an example, one concentration surrounding a potential 'working area' at the centre of Area C comprised fifteen features of pits and pit-wells (Fs. 173, 212, 214-215, 229, 286-292 and 231-233) that collectively were finds-rich: 63,858g burnt stone, 7864g animal bone, 639g pottery, 430g burnt clay, 22g briquetage, two clay loomweight fragments and a log ladder. In Area D another group around a central 'working area', and near to Structure 12, included four pits (Fs. 459, 460, 461 and 462) from which 162g burnt clay, 77g animal bone, 44g burnt stone and 1g pottery were recovered (Figure 23). Cross-referencing of feature groups may highlight additional working areas and their particular emphases of use.

Whilst there have been a number of period traits that illustrate changes from community practices from the Early to the Middle Bronze Age, one important characteristic of the latter of these periods is the construction of spaces imbued with particular functions and meanings, often demarcated by enclosing fencelines or by other means. Whereas such spaces in the Early Bronze Age may have been more attuned towards funerary or ceremonial activities, such as the palisade enclosure, in

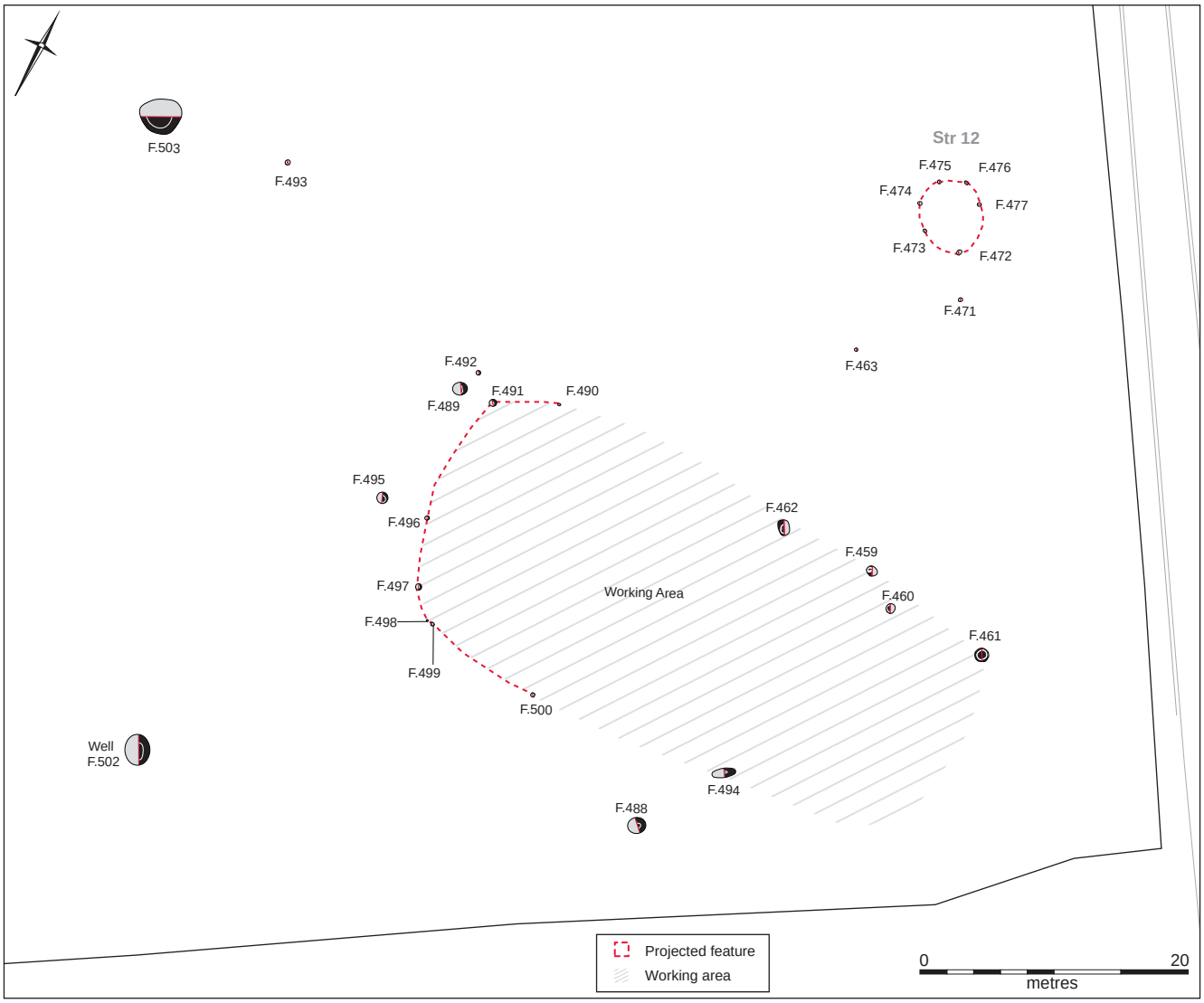


Figure 23. Detail of “working Area” in Area D

the Middle Bronze Age these provided a means by which daily activities could be 'closely categorized, defined and organized' (Brück 2000: 285). At Baston/Langtoft spaces such as 'working areas', structures and other settlement agglomeri may have replaced earlier ceremonial centres as the means to define the cosmological and ordering principles of daily life.

The economy at Baston/Langtoft appears to have been diverse. The plant macrofossils as reported by Fryer and Simmons indicate very little evidence for cereals as displayed by only minor instances of barley. Chaff is similarly absent and this along with the lack of items of food preparation such as quernstones (only one fragment of saddlequern was found during the 2012 investigations: F.33; Timberlake in Brittain 2013: 31) suggests that cereals were imported from areas outside of the fen-side settlement and processed off-site. An economy dominated by pastoral products may be a more likely scenario. If this was shown to be the case then this would have significant implications for the ways in which the 4- and 6-post structures could be interpreted. As noted in Rajkovača's analyses of the faunal assemblage, although weighted in favour of cattle, the mean number of individuals represented within the faunal record illustrates a comparatively high presence of sheep/goat and pig, as well as a moderate number of wild species, particularly red deer. This dependency upon livestock and their secondary products is further depicted by the retrieval of 22 fragments of loomweight in sixteen features and the possibility, as suggested above via post-setting pits, of hide soaking. All found in a fragmentary state, their form, as noted by Timberlake above, is consistent with other Middle Bronze Age examples across the region.

The salting of meat is evinced by fragments of briquetage containers from eight different features. The importance of saline contexts to the communities at Baston/Langtoft is further highlighted by finds of sea-mussel and personal adornment in the form of a cockleshell necklace as previously reported from the CAU's investigations (Evans 2015). Specialist analyses of shell recovered from within bulk samples may provide further illustration of saltwater habitat resources that have been transported 'inland' at Baston/Langtoft. Therefore, and considering the site's fen-side location, might its inhabitants have been involved in salt production and its distribution? The role of salt as a resource such as a trade item or preservative/flavouring and in particular as a means to wealth accumulation prior to the Late Bronze Age has received little attention (Harding 1998: 150-1), but evidence increasingly points to its importance at this time. This may have been of particular importance for communities at Baston/Langtoft where the absence of bronze items may be highlighted. For many coastal contexts briquetage may have been used in the process of the evaporation of brine and the drying of the wet salt, as well as the transport and distribution of salt cakes. Salt-making may have been taking place within the work-walk daily radius of the Baston/Langtoft settlements, the distance of which may be further established through diatom and pollen analysis of the archived samples. Little evidence for briquetage kiln furniture has been recovered from Middle Bronze Age contexts at Baston/Langtoft – only a single pedestal support has been collected from a contemporary pit (Timberlake in Hutton 2011) – as compared with later contexts (Webley 2004). Morris (in Daniel *et al*. 2009:

80) discusses this dichotomy between the production and consumption of salt, looking at the varying ratios between the recovery of pottery and briquetage; the implication being that the recovery of a significant assemblage of Middle Bronze Age pottery compared to a relatively small (and incomplete) briquetage assemblage does not support the idea of *in situ* salt production. This dichotomy may be reinforced by the current evidence for only partial recovery of briquetage within the gradually accumulating fills of wells; however, the degree of freshwater versus salination within these wells, and the presence of nearby salt marsh, remains open to question.

Perhaps integral to an answer for these issues concerning inland salt production or salt ecology are the series of six linear pit 'tanks' at the apex of the coaxial and the curvilinear field system ditches in Area C. The sequential order of these tanks suggests that these were cut as three pairs, each comprising a shallow and a deep tank. Adjacent to these tanks was the most complete assemblage of the site's briquetage as found in pit F.230, and it is this proximity that opens the question of the tanks' relationship to salt production or use. Understanding of the purpose of these tanks will surely benefit from a detailed programme of geochemical and micromorphological analyses. In lieu of this, a number of possibilities may be considered. The tanks may have acted as a source of brine from which salt could be directly procured through evaporation or the burning of plants sourced from an area of salination or soaked within a brine solution (see Harding 2013: 22). It is difficult to reinforce this suggestion, although there is also a distinct resemblance of the form and fill pattern of the tanks to saltern technologies identified in the Lincolnshire Marshes (Fenwick 2001) and the Cambridgeshire fenland (Pollard *et al*. 2001). These were attributed a Medieval date and in both cases they acted as settling tanks connected to tidal recharge via active channels, but it is uncertain if a similar role may be bestowed to tanks of a Bronze Age date.

An alternative possible use for the tanks – which need not have occurred separately to salt production – is the retting of vegetable fibres in the production of spinning cord. Probable retting pits, particularly for the processing of flax fibres, have been identified on a number of Bronze Age sites in southeast England (Moore and Jennings 1992; Murphy 1983). The presence of hop and nettle within the environmental assemblage may support this argument. Belonging to the same family as hemp (*Cannabaceae*), hop has a stem that both inside and outside is of a similar fibrous quality. Soaking and scraping of the stem could facilitate separation of the fibres and the removal of non-cellulostic substances that coat the stem, resulting in cellulose-rich smooth and clean bundles of fibres (Carlet 2012: 54). Hop fibres are long and of a high quality with resistance to mildew, especially the type caused by moisture, and along with nettle, hop fibres have been documented in the production of coarse cloth (Hald 1980). At both the Langtoft Freeman's site and at West Deeping, Middle Bronze Age pits containing a central upright stake have been interpreted as possible retting pits in which a vegetable product was placed over a stretched skin and submerged in water (Hutton 2008: 6, Murrell 2010: 15). The environmental record from these pits did not support such an interpretation, and this method of retting remains unproven. Nevertheless, the store tanks may have

facilitated a process known as 'water retting' where the plant stems are submerged in stagnant water. This is a method deemed faster than retting in running water since the higher temperature of standing water allows the retting process to take as little as three days, although this may also last up to ten days (Anderson and Karg 2011: 518). Ethnographic sources have documented the use of pits (including rectangular pits) or wooden tanks in this process. Following soaking the stems are removed from the water and left to dry before being beaten or scraped. It bears mention in this context that the surface of the metalled gravel spread [1264] in hollow F.425 that lay over the partially infilled tank of F.225 produced a flint scraper. Such an account could provide an explanation for the pairing of the tanks; the deeper tanks could have facilitated the main soaking with the shallow tanks providing a slightly sheltered space for drying of the fibres. One product of retting is the decomposition of the vegetable stems and the subsequent development of bacteria that may pollute the water and produce an unpleasant smell (Anderson and Karg 2011: 518), meaning that the positioning of retting pits away from habitation areas may have been commonly practiced. Indeed, the position of the tanks at the confluence of the coaxial field system and curvilinear ditch system sets them away from the primary areas of dwelling structures.

Irrespective of the exact nature of the tank pairings their positioning is undoubtedly important for this marks the entry to the funnelling drove that bypasses the cremation cemetery. This may have provided a primary means of access between ecological or activity zones, an understanding of which is further complicated by the projection of ditch F.195 from the confluence of the coaxial and curvilinear ditch systems to the far northeast end of the investigation area, terminating at a gap between ditch F.396 which continues upon the same course beyond the edge of excavation. Producing no finds, but with a fill pattern and dimensions equivalent to that of the curvilinear ditch system, this remains an anomaly.

The Late Bronze Age Landscape and Beyond

Later activities pertaining to post-Deverel-Rimbury pottery use appear only as minor traces and predominantly within the upper fill horizons of the curvilinear ditch system or within treethrow bowls. At the very least this is a reminder that the Middle Bronze Age field pattern may have survived in part by means of hedge rows alongside the silted ditch lines. A single pit (F.328) contained much of a small vessel of this period; an indication of the landscape's increasingly minor attraction. Nevertheless, the foci of activity had by this time passed to higher ground to the southwest (Hall 1998; Webley 2004).

Beyond this Late Bronze-Early Iron Age evidence, no further traces of landscape usage are visible until post-Medieval features are found mainly within Areas A and B. These invariably represent agricultural-related practices with perhaps a small post-defined building in Area A and quarry strips to the north of this in Area B, the impact of which upon earlier features has been minimal.

Conclusion

The 2014-15 investigations provide a significant contribution to the developing narrative of an important prehistoric landscape. The story of prehistoric inhabitation of the fenland margins has been dominated by the considerable investment into large-scale and detailed investigations along the south fenland where undoubtedly remarkable discoveries have been registered. However, at Baston/Langtoft a different story may be traced. In one sense this may reflect different landscape logics in the west fenland, unique to the circumstances delivered by the corridor between the rivers Welland and Glen. Moreover, the relationship between community and the changing environmental conditions of the fen margin is expressed here in a contrasting way that may not be understood solely by reference to the south fenland. Rather, a distinct frame of practice was enacted with its own distinct history, particularly from the Early Bronze Age to the end of the Middle Bronze Age. This distinctly regional character of human engagement with the subtle qualities of ecology and context may only be further unfolded through the collation, synthesis and fuller analyses of the excavation archive of the Baston/Langtoft environs.

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APPENDICES

Feature Summaries

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
15	576	2	Linear	1ex	0.37	0.31	Shallow NE-SW linear			MBA
	579	2		2ex	0.46	0.19				
	688	2			0.49	0.26				
	691	2			0.4	0.19				
	694	2			0.62	0.29				
73	663	3	Linear	3.2ex	1	0.25	Linear of cemetery enclosure / field system			MBA
	706	2			0.71	0.23				
	720	3			1.7	0.35				
	728	3			0.68	0.26				
	767	2								
	770	1			0.6	0.2				
	862	3			0.2+	0.25+				
	1220	1			0.57	0.28				
74	722	1	Linear		>0.5	0.21	Linear of cemetery enclosure / field system			MBA
99	821	6	Linear		3	0.7	Linear of cemetery enclosure / field system			MBA
	830	4		3EX	1.9	0.26-0.39				
	874	6	Linear	1.9ex	1.8	0.6				
101	811	3	Linear		1.05	0.4	Linear of cemetery enclosure / field system			MBA
	1116	2			0.8	0.5				
111	314	3	Pit or Posthole	0.75	0.5	0.24	Sub-circular pit with steep sides and concave base	Str9		MBA?
112	316	1	Posthole	0.35	0.25	0.15	Circular posthole; near vertical sides; flattish base	Str9		MBA?
113	318	1	Pit or Posthole	0.4	0.3	0.13	Sub-circular pit with steep sides and near flat base	Str9		MBA?
114	320	1	Pit	0.53	0.4	0.42	Sub-circular pit with steep sides and near flat base	Str9		MBA?
115	323	2	Pit	0.8	0.75	0.51	Circular pit; near vertical sides and concave base	Str9		Post-Med?

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
116	326	2	Linear	1ex	0.7	0.12	Shallow SW-NE linear			
116	329	2	Linear	1ex	0.5	0.09	Shallow SW-NE linear			
117	370	1	Pit	0.4	0.35	0.14	Circular pit; near vertical sides and near flat base			
118	331	1	Pit	0.5	0.45	0.16	Circular pit; near vertical sides and concave base			Prehistoric
119	333	1	Linear	1ex	0.5	0.04	Shallow SE-NW linear			Modern /Post Med
	365	1								
120	339	5	Pit or Posthole	0.75	0.55	0.18+	Rectangular pit; vertical sides, flat base and rounded corners.			Modern
121	374	1	Posthole		0.5	0.35	Circular posthole; steep concave sides and base			
122	341	1	Linear	1ex	0.7	0.1	NW-SE linear			
	343	1		1ex	0.52	0.06				
123	345	1	Linear	1ex	0.7	0.13	SW-NE linear			Modern /Post Med
	347	1		1ex	0.8	0.13				
124	350	2	Posthole or natural		0.62	0.3	Circular feature with stepping			Modern /Post Med
125	352	1	Pit or Posthole	0.42	0.38	0.21	Circular feature; near vertical sides; concave base.	Fenceline - Str9		
126	354	1	Pit	0.57	0.5	0.1	Oval pit with steep concave sides and near flat base	Fenceline - Str9		
127	356	1	Posthole		0.18	0.15	Circular posthole; near vertical sides; concave base	Fenceline - Str9		Modern /Post Med
128	358	1	Posthole or natural	0.62	0.5	0.24	Circular posthole			Modern /Post Med
129	360	1	Pit	0.4	0.38	0.09	Circular pit with concave sides and base	Fenceline - Str9		
130	363	1	Pit	1.15	0.9	0.18	Oval pit with gentle concave sides and base			Prehist

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
131	388	6	Pit		1.3	0.6	Circular pit; slightly convex sides and concave base			Prehist
132	368	2	Pit			0.45	Sub-square pit			Modern /Post Med
133	466	1	Posthole	0.42	0.3	0.17	Oval posthole with moderately steep inverted sides and slight concave base	Fenceline - Str9		Modern /Post Med
134	372	1	Pit	0.5	0.4	0.04	Oval pit with steep concave sides and near flat base			
135	390	1	Pit	0.55	0.5	0.14	Oval pit; gently sloping sides; shallow concave base		EBA	EBA
136	392	1	Pit		0.6	0.43	Circular pit with vertical sides and flat base			
137	377	2	Posthole	0.45	0.4	0.28	Circular posthole; straight inverted sides; concave base	Str9		
138	381	1	Posthole	0.6	0.54	0.23	Circular posthole; gradual concave sides and base	Fenceline - Str9		
139	379	1	Posthole	0.54	0.5	0.14	Circular posthole; gradual concave sides and base	Fenceline - Str9		
140	406	13	Pit/ Well		3.2	0.67	Circular pit; near vertical sides and near flat base			
141	431	11	Pit/ Well		2.3	0.85	Circular pit; steep inverted sides and concave base		MBA	MBA
142	460	20	Pit/ Well		3.5	1.3	Circular pit with moderately steep inverted sides and concave base		MBA	MBA
143	411	4	Pit/ Well		c.1	0.35	Circular pit; near vertical sides and near flat base			
144	439	7	Pit/ Well		2.2	1.3	Circular pit; slight stepped sides; convex lower sides to concave base		MBA (& EBA)	MBA
145	462	1	Pit	0.7	0.56	0.4	Oval pit; vertical sides and slightly concave base	Str9		
146	464	1	Pit	0.8	0.75	0.45	Circular pit; vertical sides and slightly concave base			
147	419	7	Pit/ Well		3.2	1	Circular pit with very steep sides and near flat base			
150	515	3	Pit		0.6	0.37	Circular pit with straight sides and flat base		MBA	MBA
151	523	4	Pit		2.4	0.06	Large sub-oval pit			MBA
152	525	1	Pit		0.76	0.38	Oval pit with vertical sides and rounded base			MBA
153	529	3	Pit		>0.85	0.47	Pit with amorphous plan			MBA
154	531	1	Pit	1.5	1.4	0.26	Scoop or pit			

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
155	533	1	Posthole	0.26	0.25	0.11	Shallow circular pit			
156	535	1	Pit	1.4	1.2	0.1	Scoop or pit			
157	537	1	Posthole	0.36	0.32	0.11	Shallow circular pit			
158	542	4	Pit	0.93	0.51	0.17	Scoop or pit			
159	543	1	Pit	2.8	2.1	0.52	Oval pit			
160	545	1	Pit		0.24	0.14	Circular pit			
161	547	2	Pit	0.85	0.6	0.32	Oval pit			
162	550	1	Pit	0.6	0.5	0.35	Sub-circular pit; gradual concave sides and flat base			
163	557	5	Pit	1.05	1	0.7	Circular pit; vertical sides; slightly rounded base			
164	596	10	Pit/Well		2.2	0.85	Circular pit with slight convex sides and flat base			MBA
165	569	1	Grave?				Possible grave containing cow inhumation			
166	570	1	Pit		2.5	0.4				
167	572	1	Pit				Upper fill of F.166			
168	584	1	Posthole		0.26	0.05	Circular post hole with gradual concave sides and near flat base	Poss str A		MBA
169	586	1	Posthole		0.35	0.14	Circular post hole with gradual concave sides and concave base	Poss str A		MBA
170	588	1	Posthole		0.2	0.15	Post hole with sharp concave profile	Poss str A		MBA
171	597	1	Pit		0.46	0.23	Circular pit with concave profile			MBA
172	599	1	Natural				Natural geological staining			
173	619	13	Pit/Well	3.1	2.9	1.1	Circular pit-well with access step			MBA
	734	2		0.6	>0.3	0.1-0.25				
174	629	7	Pit/water hole	3.7	3.2	0.85	Access ramp to primary water hole			MBA
175	639	2	Pit	0.84	0.77	0.15	Pit with sub-circular plan, regular shallow concave sides and near flat base			MBA
176	641	1	Posthole	0.26	0.24	0.1	Sub-circular pit; straight inverted sides; concave base			MBA
177	643	1	Posthole	0.29	0.25	0.09	Sub-circular posthole with near flat base	Poss Str B		MBA
178	645	1	Posthole	0.32	0.28	0.08	Sub-circular posthole with near flat base	Poss Str B		MBA
179	647	1	Posthole	0.27	0.25	0.06	Sub-circular posthole with near flat base	Poss Str B		MBA

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
180	650	2	Pit		0.67	0.21	Circular pit with straight vertical sides and flat base			MBA
181	601	3	Pit		0.4	0.2	Circular pit with straight vertical sides and flat base			MBA
182	621	1	Pit		0.59	0.17	Circular pit; concave sides; shallow concave base			
183	630	1	Posthole		0.55	0.25	Circular posthole	Poss Str B		MBA
184	633	1	Treethrow	2.21	1.82	0.31-0.45				
185	634	1	Pit		0.7	0.37				MBA
187	651	1	Posthole		0.37	0.17	Circular posthole; straight sides and concave base			MBA
188	654	1	Pit		0.8	0.1	Circular pit; shallow concave sides and flat base			EBA-MBA
189	658	3	Pit		0.7	0.22	Circular pit with shallow concave profile			EBA-MBA
190	668	1	Posthole		0.28	0.1	Circular posthole with sharp concave profile			
191	670	1	Pit	1.14	0.7	0.14	Oval pit with shallow concave sides and base			
192	672	1	Pit		0.61	0.08	Circular pit with sharp concave sides and flat base			
193	675	2	Pit	1.34	0.88	0.22	Oval pit			
194	677	1	Pit	0.9	0.5	0.15	Oval pit with sharp concave sides and flat base			
195	695	4	Linear		1.5	0.6	NE-SW linear possibly cut in segments			MBA
	810	15		2ex	1.1ex	0.54				
	937	6			0.65ex	0.53				
	1270	6				0.52				
	3232	6		1 ex	1.5	0.52				
	3233	5		1 ex	1.35	0.36				
	3262	1			0.75	0.15				
	3267	1		1 ex	0.45	0.18				
	3280	6		1 ex	1.95	0.56				
196	853	2	Linear	851, 852	1.15	0.36	NE-SW linear possibly cut in segments			MBA
	913	2				0.26				
	927	2			0.5	0.26				
	930	2			0.7	0.4				

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
197	666	2	Pit				Circular pit with sharp concave profile		MBA	MBA
198	683	5	Pit		1.6	0.98	Sub-circular pit			
199	685	1	Linear		0.9	0.22	N-S linear of field system			MBA
	697	1			0.8	0.34				
	699	1			0.85	0.27				
200	708	1	Posthole	0.3	0.26	0.12	Circular posthole with sharp concave profile	Str4		
201	710	11	Posthole	0.35	0.3	0.13	Circular post hole with vertical sides and flat base	Str4		
202	712	1	Posthole		0.32	0.23	Circular posthole with vertical sides and slightly concave base	Str4		
203	714	1	Posthole		0.2	0.08	Circular posthole with sharp concave profile	Str4		
204	716	1	Posthole	0.35	0.33	0.23	Circular posthole with sharp concave profile	Str4		
205	735	13	Pit/Well		3.3	0.95	Circular pit/well with ramp.			MBA
206	745	3	Linear		0.9-1.2	0.7	NW-SE linear - field system			MBA
	760	2			1	0.42				
	1072	1			0.9	0.42				
	1092	1			0.9	0.3				
	3299	1		>7.5	0.59	0.24				
207	747	1	Treethrow	2.8	2.2	0.35	Treethrow poss incorporating remnant A/Ab horizon		LBA-EIA	EIA
208	749	1	Natural				Natural hollow			
209	757	4	Treethrow	4.5	>1.3	0.37	Sub-circular treethrow with irregular concave profile			MBA or later
210	763	2	Pit	2.6	0.9	0.3	Small pit		EBA	EBA
211	724	2	Linear		1.05	0.6	Linear of cemetery enclosure / field system			MBA
	764	2			0.55	0.4				
	780	4			1	0.58				
	1218	1			0.5	0.11				
212	775	3	Pit		1.4	0.41	Shallow pit with shallow near straight sides and concave base			
213	779	3	Pit	1	0.85	0.32	Oval pit with gradual concave profile		MBA	MBA
214	788	3	Pit	1.6	1.4	0.37	Slightly oval E-W pit with shallow concave profile			MBA

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
215	834	3	Pit/Well	3.8	2.4	1.2	Large pit-well with possible ramp and two re-cuts		MBA	MBA
	840	6								
	854	11								
216	796	3	Linear		0.95	0.18	Linear of cemetery enclosure / field system			MBA
	878	5	Linear		0.9+	0.35				
219	825	7	Pit		0.55	0.68	Circular pit			
220	859	2	Pit or hollow		0.25	0.25	Oval pit with irregular plan			
221	864	3	Linear		0.4+	0.35	Linear of cemetery enclosure / field system			MBA
	888	4			1.3	0.25				
222	877	2	Linear Pit	1.6+	0.7	0.43	Shallow N-S linear pit			MBA
223	897	2	Linear Pit	1.5ex	3.1	0.3	Shallow NE-SW linear pit			MBA
	907	2								MBA
	923	5				0.43				MBA
	1239	2				0.3				MBA
	1256	4			1.65	0.29				MBA
224	898	8	Linear		1.55	0.37	Linear of cemetery enclosure / field system			MBA
	922	2			1.04	0.38				
225	920	1	Linear Pit				Deep NE-SW linear pit			MBA
	921	4		1.5ex	1.1ex	0.75				
	1246	6			2.5	0.74				
	1261	4								
227	915	1	Posthole		0.2	0.06	Circular posthole			
228	924	6	Treethrow?		2.5	0.36	Sub-circular treethrow			
229	918	4	Pit	1.4	1.3	0.85	Sub-circular pit		MBA	MBA
230	1167	6	Pit	1.3	1.25	0.65	Near circular pit			MBA
231	949	6	Posthole		0.65	0.63	Circular post hole			MBA
232	952	2	Pit		0.48	0.35	Circular post hole			MBA
233	954	1	Posthole		0.21	0.05	Circular post hole			MBA
235	956	1	Posthole		0.24	0.19	Circular post hole	Str6		MBA
236	958	1	Posthole		0.28	0.16	Circular post hole	Str6		MBA
237	960	1	Posthole		0.25	0.13	Circular post hole	Str6		MBA

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
238	962	1	Posthole		0.22	0.1	Circular post hole	Str6		MBA
239	964	1	Posthole		0.19	0.05	Circular post hole	Str6		MBA
240	966	1	Posthole		0.25	0.07	Circular post hole	Str6		MBA
241	968	1	Posthole		0.1	0.04	Circular post hole	Str6		MBA
242	970	1	Posthole		0.24	0.19	Circular post hole	Str6		MBA
243	972	1	Posthole		0.15	0.12	Circular post hole	Str6		MBA
244	973	3	Posthole		0.55	0.28	Circular post hole	Palisade		EBA
245	974	2	Posthole		0.46	0.24	Circular post hole	Palisade	EBA-MBA	EBA/MBA
246	975	3	Posthole		0.55	0.35	Circular post hole	Palisade		EBA
247	976	3	Posthole		0.64	0.46	Circular post hole	Palisade		EBA
248	977	4	Posthole		0.62	0.35	Circular post hole	Palisade		EBA
249	978	2	Posthole		0.41	0.38	Circular post hole	Palisade		EBA
250	979	3	Posthole		0.35	0.36	Circular post hole	Palisade		EBA
251	980	3	Posthole		0.4	0.32	Circular post hole	Palisade		EBA
252	981	3	Posthole		0.45	0.3	Circular post hole	Palisade		EBA
253	982	1	Posthole		0.4	0.31	Circular post hole	Palisade		EBA
254	983	3	Posthole		0.4	0.5	Circular post hole	Palisade		EBA
255	984	3	Posthole		0.35	0.35	Circular post hole	Palisade		EBA
256	985	3	Posthole		0.45	0.36	Circular post hole	Palisade		EBA
257	986	3	Posthole		0.4	0.43	Circular post hole	Palisade		EBA
258	987	1	Posthole		0.35	0.25	Circular post hole	Palisade		EBA
259	988	2	Posthole		0.45	0.27	Circular post hole	Palisade		EBA
260	989	3	Posthole		0.45	0.4	Circular post hole	Palisade		EBA
261	990	1	Posthole	0.35	0.3	0.11	Sub-circular posthole			EBA
262	991	1	Posthole	0.35	0.4	0.07	Sub-circular posthole			EBA
263	992	1	Pit	1.2	0.6	0.3	Oval or sub-rectangular pit with rounded corners.			EBA
264	995	2	Posthole		0.36	0.19	Circular post hole	Str5		MBA
265	997	1	Posthole		0.31	0.13	Circular post hole	Str5		MBA
266	999	1	Posthole		0.16	0.06	Circular post hole			MBA
267	1003	3	Posthole		0.3	0.22	Circular post hole	Str5		MBA

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
268	1007	3	Posthole		0.33	0.24	Circular post hole	Str5		MBA
269	1009	1	Posthole		0.21	0.13	Circular post hole	Str5		MBA
270	505	1	Posthole		0.35	0.2	Circular post hole	Palisade		EBA
271	503	1	Posthole		0.25	0.14	Circular post hole	Palisade		EBA
272	501	1	Posthole		0.23	0.16	Circular post hole	Palisade		EBA
273	507	1	Posthole		0.11	0.05	Circular post hole	Palisade		EBA
274	509	1	Posthole		0.23	0.19	Circular post hole	Palisade		EBA
275	512	2	Posthole		0.4	0.2	Circular post hole	Palisade		EBA
276	514	1	Posthole		0.31	0.17	Circular post hole	Palisade		EBA
277	1011	1	Posthole		0.25	0.2	Circular post hole	Str5		MBA
278	1013	1	Posthole		0.2	0.21	Circular post hole			MBA
279	1066	1	Grave	1.15	0.66	0.15	Oval grave oriented NW-SE with cow and calf burial			
280	1067	3	Pit		0.87	0.66	Circular pit with near straight vertical sides and near flat base			
281	1106	1	Treethrow?		1	0.3	Irregular treethrow			
282	1073	10	Pit/ Well				Sub-oval waterhole with access ramp			MBA
283	1103	10	Pit/ Well	4.5	2.5	0.78	Oval waterhole with access ramp			MBA
284	1082	7	Pit/ Well		1.4	0.95	Circular pit-well			
285	1104	2	Pit or Posthole		0.58	0.23	Circular post hole with concave sides and flat base		MBA	MBA
286	1126	1	Pit		0.4	0.12	Circular pit with shallow concave profile			MBA
287	1124	4	Pit	0.8	0.72+	0.27	Sub-circular pit			MBA
288	1128	1	Pit or Posthole	0.3	0.4	0.22	Rectilinear feature			MBA
289	1133	4	Pit	1.52	1.3	0.32	Sub-circular pit; shallow concave sides; flat base			MBA
290	1135	1	Pit	1.5	0.58	0.21	Oval pit oriented N-S; concave sides; near flat base		MBA	MBA
291	1137	1	Pit or Posthole	0.35	0.3	0.11	Circular feature; concave profile; near flat base			MBA
292	1139	1	Pit		0.5	0.6	Circular pit with concave sides and flat base			MBA
293	1146	1	Pit							
294	1110	3	Linear		2.2	0.45	Rounded terminus of ditch			MBA
294	1140	3	Linear		1.22	0.38	Ditch north terminus			MBA
295	1148	2	Posthole		0.6	0.25	Sub-circular posthole			MBA

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
296	1151	2	Pit		0.96	0.34	Sub-circular pit with concave profile			MBA
297	1173	3	Pit		2	0.4	Circular pit with shallow concave profile			MBA
298	1155	3	Posthole		0.75	0.45	Circular post Hole			MBA
299	1157	3	Posthole		0.67	0.36	Circular post hole			MBA
300	1159	4	Posthole		0.72	0.4	Sub-circular post hole			MBA
	3001	1			0.34	0.13	Circular posthole with concave profile			
301	1202	3	Linear Pit		1.2+	0.65	Deep NW-SE linear pit			MBA
	1305	3				0.58				
302	3115	1	Posthole	0.38	0.35	0.18	Circular posthole with vertical sides and flat base	Palisade		EBA
303	3003	1	Posthole	0.46	0.43	0.14	Circular posthole	Palisade		EBA
	3117	1		0.55	0.45	0.12				
304	1171	3	Posthole		1.93	0.75	Circular posthole	Palisade		EBA
	3120	2		0.58	0.45	0.28				
305	3006	2	Posthole	0.35	0.32	0.2	Circular posthole	Palisade		EBA
	3123	2		0.4	0.35	0.21				
306	3126	2	Posthole	0.5	0.47	0.2	Circular posthole	Palisade		EBA
307	3129	2	Posthole	0.46	0.43	0.17	Circular posthole	Palisade		EBA
308	3132	2	Posthole		0.48	0.16	Circular posthole	Palisade		EBA
309	3134	1	Posthole	0.5	0.4	0.2	Circular posthole	Palisade		EBA
310	3137	2	Posthole	0.46	0.37	0.1	Circular posthole	Palisade		EBA
311	3140	2	Posthole	0.36	0.3	0.19	Circular posthole	Palisade		EBA
312	3143	2	Posthole	0.34	0.32	0.16	Circular posthole	Palisade		EBA
313	3146	2	Posthole	0.45	0.36	0.28	Circular posthole	Palisade		EBA
314	3148	1	Posthole	0.5	0.38	0.32	Circular posthole	Palisade		EBA
315	3150	1	Posthole	0.33	0.24	0.1	Circular posthole	Palisade		EBA
316	3152	1	Posthole	0.29	0.27	0.08	Circular posthole	Palisade		EBA
317	3154	1	Posthole	0.17	0.15	0.06	Circular posthole	Palisade		EBA
318	3011	4	Pit	0.8	0.76	0.67	Circular pit with vertical sides and flat base			
319	3015	2	Pit	1.85	1.35	0.38	Oval NE-SW pit			
320	3044	2	Grave	1.4	0.88	0.1	Oval grave with crouched inhumation			MBA
321	3017	1	Pit		0.78	0.07	Circular pit with concave sides and flat base			

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
322	3019	1	Pit		0.68	0.07	Circular pit with concave sides and flat base			
323	3022	2	Pit	1.3	0.55	0.26	Oval NW-SE pit			
324	3024	1	Posthole		0.1	0.06	Circular posthole with straight vertical sides and tapered base			
325	3031	6	Pit		0.83	0.69	Circular pit			
326	3033	1	Pit	0.61	0.52	0.19	Oval N-S pit			
327	3037	3	Linear	1ex	0.9	0.31	South terminus of linear			
327	3040	2	Linear	1ex	0.8	0.3	North terminus of linear			
328	3042	1	Pit	0.8	0.5	0.11	Oval pit with concave sides and flat base. Truncated		LBA-EIA	EIA
330	3056	9	Pit/ Well	2.96	1.76	1.35	Sub-circular pit-well		EBA	EBA-MBA
331	3058	1	Pit	1.41	0.96	0.26	Sub-circular pit-well			
332	3060	1	Pit		0.87	0.37	Sub-circular pit-well			
333	3071	10	Pit/ Well	2.66	2.49	1.09	Circular pit-well			
334	3073	1	Posthole	0.5	0.35	0.15	Circular posthole; vertical sides and rounded base	Str8	EBA	EBA
335	3075	1	Posthole	0.45	0.4	0.19	Circular posthole; vertical sides and rounded base	Str8		
336	3077	1	Posthole	0.56	0.46	0.23	Circular posthole; vertical sides and rounded base	Str8		
337	3079	1	Posthole	0.43	0.38	0.17	Circular posthole; vertical sides and rounded base	Str8		
338	3081	1	Posthole	0.45	0.4	0.2	Circular posthole; vertical sides and rounded base	Str8		EIA
339	3083	1	Posthole	0.37	0.34	0.18	Circular posthole; vertical sides and rounded base	Str8		
340	3086	1	Treethrow				Treethrow containing pottery		EBA	EBA
358	3093	1	Posthole	0.25	0.23	0.13	Circular posthole; vertical sides; rounded base			
359	3095	1	Posthole	0.65	0.55	0.22	Circular posthole; vertical sides; rounded base	Str7		
360	3097	1	Posthole	0.28	0.23	0.25	Circular posthole; vertical sides; rounded base	Str7		
361	3099	1	Posthole	0.4	0.38	0.15	Circular posthole; vertical sides; rounded base	Str7		
362	3101	1	Posthole	0.44	0.39	0.2	Circular posthole; vertical sides; rounded base	Str7		
363	3103	1	Posthole		0.43	0.14	Circular posthole; vertical sides; rounded base	Str7		
364	3105	1	Pit	0.97	0.6	0.23	Circular pit with concave sides and near flat bae			
365	3156	1	Posthole	0.48	0.4	0.18	Sub-circular posthole; concave sides and flat base	Carved fossil	MBA	MBA
366	3107	1	Posthole	0.33	0.27	0.13	Circular Post hole	Fenceline -		

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
								Str7		
367	3109	1	Posthole	0.63	0.49	0.13	Post hole with concave profile	Fenceline - Str7		
368	3113	3	Pit	0.59	0.55	0.39	Circular pit with vertical sides and rounded base		EBA	EBA
369	3160	1	Posthole	0.4	0.38	0.17	Circular posthole	Palisade		EBA
370	3162	1	Posthole	0.35	0.3	0.08	Circular posthole	Palisade		EBA
371	3164	1	Posthole		0.3	0.02	Circular posthole	Palisade		EBA
372	3166	1	Posthole		0.4	0.13	Circular posthole	Palisade		EBA
373	3168	1	Posthole		0.22	0.02	Circular posthole	Palisade		EBA
374	3170	1	Posthole		0.3	0.06	Circular posthole	Palisade		EBA
375	3172	1	Posthole		0.35	0.04	Circular posthole	Palisade		EBA
376	3174	1	Posthole		0.28	0.05	Circular posthole	Palisade		EBA
377	3176	1	Posthole		0.3	0.06	Circular posthole	Palisade		EBA
378	3179	2	Posthole		0.4	0.18	Circular posthole	Palisade		EBA
379	3181	1	Posthole		0.38	0.13	Circular posthole	Palisade		EBA
380	3185	3	Posthole		0.25	0.11	Circular posthole	Palisade		EBA
381	3188	2	Posthole		0.5	0.08	Circular posthole	Palisade		EBA
382	3191	2	Posthole		0.4	0.08	Circular posthole	Palisade		EBA
383	3193	1	Posthole		0.36	0.04	Circular posthole	Palisade		EBA
384	3284	1	Posthole	0.52	0.46	0.14	Circular posthole	Palisade		EBA
385	3195	1	Pit	0.85	0.7	0.24	Sub-oval pit			
386	3197	1	Posthole	0.27	0.25	0.07	Circular posthole with gentle concave sides			
387	3201	3	Pit	1.8	0.9+	0.64	Pit with shallow concave profile			
388	3203	1	Posthole	0.38	0.35	0.18	Circular posthole	Palisade		EBA
389	3205	1	Posthole	0.45	0.4	0.08	Circular posthole	Palisade		EBA
390	3207	1	Posthole		0.4	0.1	Circular posthole	Palisade		EBA
391	3209	1	Posthole	0.26	0.23	0.14	Circular posthole	Palisade		EBA
392	3211	1	Posthole	0.4	0.35	0.12	Circular posthole	Palisade		EBA
393	3213	1	Posthole	0.4	0.38	0.1	Circular posthole	Palisade		EBA
394	3230	8	Pit/ Well	1.98	1.58	1.15	Moderately sized pit/well near to Str7	Palisade		
395	3215	1	Posthole				Circular posthole	Fenceline -		

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
								Str7		
396	3221	6	Linear	1 ex	1.85	0.55	E-W linear possibly cut in segments			MBA
	3251	4		3.1 ex	1.07	0.38				
	3260	4		1 ex	1.4	0.48				
397	3255	3	Pit				Evaluation trench slot			
398	3265	2	Pit	3.6	1.35	0.45	Linear E-W pit			
399	3269	1	Posthole	0.52	0.46	0.19	Circular posthole; gradual sides and concave base			
400	3271	1	Posthole	0.54	0.53	0.16	Circular posthole with concave profile			
401	3282	1	Pit	0.95	0.88	0.26	Small sub-oval pit; vertical sides and near flat base			
410	1182	2	Posthole				Sub-circular post hole; straight sides and flat base			MBA
411	1185	3	Posthole		0.9	0.5-0.77	Circular post hole			MBA
412	1188	1	Treethrow		0.5+	0.2	Irregular shallow treethrow			
413	1193	5	Linear Pit		1.2-2.7	0.68	NW-SE linear pit			MBA
414	1249	2	Treethrow?		1.05	0.27	Irregular treethrow			
415	1207	1	Posthole		0.25	0.1	Circular post hole			MBA
416	1209	1	Posthole		0.4	0.18	Circular post hole			MBA
417	1211	1	Posthole		0.5	0.12	Circular post hole			MBA
418	1213	3	Posthole		0.65	0.25	Circular post hole			MBA
419	1215	1	Pit		0.7	0.25	Small circular pit; moderate sides and uneven base			MBA
420	1191	1	Treethrow?		0.44	0.1	Sub-circular treethrow			
421	1223	2	Treethrow				Sub-circular treethrow			
422	1224	3	Posthole		0.6	0.28	Sub-circular posthole			MBA
423	1201	3	Linear Pit		1.8	0.38	Shallow NE-SW linear pit			MBA
	1301	4			0.8+	0.12				
424	1248	4	Linear Pit		1.9+	0.34	Shallow NE-SW linear pit			MBA
	1325	2								
425	1265	3	Pit			0.28	Circular pit with rounded profile			MBA
426	1269	4	Linear or Linear Pit		1.4	0.37	Oval NE-SW pit			MBA
427	1296	6	Treethrow		2.2+	0.36	Irregular treethrow			

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
429	1288	1	Linear	40.1	0.92	0.11	N-S linear			
	3299	2		40.1	0.71	0.15				
	3351	1		40.1	0.8	0.34				
430	1306	1	Treethrow?				Irregular treethrow			
	1307	2				0.16				
431	1321	1	Treethrow				Irregular treethrow			
432	1144	2	Posthole		0.49	0.35	Sub-circular posthole			MBA
433	3290	5	Pit	0.91	0.81	0.59	Small sub-circular pit with undercutting sides			
434	3294	3	Treethrow	2.65	1.38	0.52	Irregular treethrow		MBA	
435	3297	2	Posthole	0.25	0.28	0.1	Sub-circular post hole			
436	3301	1	Posthole	0.28	0.29	0.13	Sub-circular post hole			
437	3311	11	Pit	1.6	1.88	1.1	Sub-circular pit, post recovered WD2			
438	3316	4	Pit	1.53	1.43	0.75	Sub-circular pit			
439	3318	1	Posthole	0.29	0.33	0.1	Posthole within 4-post structure	Str10		
440	3320	1	Posthole	0.3	0.29	0.11	Posthole within 4-post structure	Str10		
441	3322	1	Posthole	0.32	0.3	0.1	Posthole within 4-post structure	Str10		
442	3324	1	Posthole	0.33	0.34	0.1	Posthole within 4-post structure	Str10		
443	3326	1	Linear	>36.5	0.82	0.5	E-W Linear			
	3328	1		>36.5	0.55	0.28		cut by F.444		
	3411	1		>36.5	0.88	0.33				
444	3330	1	Treethrow	2.1	0.66	0.24	Sub-oval tree throw	cuts F.443		
445	3332	1	Linear	~39.5	0.67	0.13	NW-SE Linear		MBA	MBA
	3575	1		~39.5	0.92	0.25				
	3581	1		~39.5	0.77	0.28		cut by F.518		
446			n/a				Void number			
447			n/a				Void number			
448	3341	2	Treethrow	2.23	1.17	0.32	Irregular treethrow			
449	3349	7	Pit	1.5	1.46	1.05	Sub-circular pit, post recovered WD1			
451	3354	2	Pit	1.2	1.15	0.44	Sub-oval shallow pit			
452	3356	1	Pit	0.85	0.8	0.25	Sub-circular shallow pit			
453	3384	10	Pit/ Well	2.9	2.7	1.48	Sub-circular pit/well			

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
454	3368	3	Pit	1.64	1.18	0.27	oblong shallow pit			
456	3378	3	Pit	1.4	1.45	0.43	Sub-oval shallow pit			
457	3382	3	Pit	0.58	0.56	0.32	Sub-circular shallow pit			
458	3394	4	Linear	>50	1.05	0.86	NW-SE Linear			
	3636	3		>50	1.9	0.5			MBA	MBA
	3637	11		>50	2.6	0.67			MBA	MBA
459	3400	1	Pit	0.83	0.7	0.13	Sub-circular shallow pit			
460	3403	2	Pit	0.65	0.7	0.15	Sub-circular shallow pit			
461	3398	3	Pit	1.02	0.96	0.62	Sub-circular shallow pit		MBA	MBA
462	3405	1	Pit	1.07	0.8	0.07	Sub-oval shallow pit		MBA	MBA
463	3407	1	Posthole	0.23	0.22	0.35	Sub-circular post hole			
464	3409	1	Pit	0.78	1.17	0.11	Sub-oval shallow pit			
465	3413	2	Posthole	0.21	0.23	0.19	Posthole within 6-post structure	Str11		
466	3415	1	Posthole	0.21	0.2	0.08	Posthole within 6-post structure	Str11		
467	3420	4	Pit/ Well	1.71	1.66	1.16	Sub-circular pit/well		MBA	MBA
468	3425	4	Pit	1.85	1	0.4	Sub-oval shallow pit			
469	3427	1	Pit	0.47	0.47	0.22	Sub-circular shallow pit			
470	3429	1	Pit	0.5	0.5	0.08	Sub-circular shallow pit			
471	3431	1	Posthole	0.27	0.27	0.14	Sub-circular post hole			
472	3433	1	Posthole	0.35	0.35	0.25	Posthole within circular structure	Str12		
473	3435	1	Posthole	0.22	0.22	0.13	Posthole within circular structure	Str12		
474	3437	1	Posthole	0.22	0.22	0.17	Posthole within circular structure	Str12		
475	3481	1	Posthole	0.23	0.23	0.18	Posthole within circular structure	Str12		
476	3483	1	Posthole	0.22	0.22	0.17	Posthole within circular structure	Str12		
477	3485	1	Posthole	0.28	0.28	0.18	Posthole within circular structure	Str12		
478	3442	2	Posthole	0.21	0.21	0.1	Posthole within 6-post structure	Str11		
479	3445	2	Posthole	0.3	0.3	0.12	Posthole within 6-post structure	Str11		
480	3447	1	Posthole	0.21	0.21	0.1	Posthole within 6-post structure	Str11		
481	3450	2	Posthole	0.26	0.26	0.14	Posthole within 6-post structure	Str11		
482	3451	8	Pit	1.2	1.2	1.01	Sub-circular deep pit		EBA	EBA
483	3453	1	Posthole	0.16	0.16	0.08	Sub-circular posthole	post		

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
								alignment?		
484	3455	1	Posthole	0.23	0.23	0.15	Sub-circular posthole	post alignment?		
485	3457	1	Posthole	0.14	0.14	0.07	Sub-circular posthole	post alignment?		
486	3459	1	Posthole	0.2	0.2	0.07	Sub-circular posthole			
487	3460	8	Pit/ Well	4.4	4.4	0.95	Sub-circular pit/well	cut by post-med ditch		
488	3490	4	Pit	1.1	1.1	0.48	Sub-circular shallow pit			
489	3493	2	Pit	0.85	0.85	0.32	Sub-circular shallow pit		MBA	MBA
490	3495	1	Posthole	0.16	0.16	0.07	Sub-circular posthole	posthole cluster		
491	3497	1	Posthole	0.45	0.45	0.15	Sub-circular posthole	posthole cluster		
492	3499	1	Posthole	0.25	0.25	0.13	Sub-circular posthole	posthole cluster		
493	3502	2	Posthole	0.4	0.4	0.09				
494	3505	2	Treethrow	1.75	0.62	0.17	Irregular treethrow			
495	3508	2	Pit	0.75	0.75	0.25	Sub-circular shallow pit	similar to F.489		
496	3510	1	Posthole	0.26	0.26	0.16	Sub-circular posthole	posthole cluster		
497	3512	1	Posthole	0.28	0.28	0.17	Sub-circular posthole	posthole cluster		
498	3514	1	Posthole	0.16	0.16	0.04	Sub-circular posthole	posthole cluster		
499	3516	1	Posthole	0.27	0.27	0.16	Sub-circular posthole	posthole cluster		
500	3518	1	Posthole	0.33	0.33	0.07	Sub-circular posthole	posthole cluster		
501	3520	1	Grave	1.55	1.02	0.1	Irregular/oval grave of cow			
502	3526	6	Pit/ Well	2.65	2.25	1.07	Sub-circular pit/well			

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
503	3559	19	Pit/ Well	2.27	2.75	1.45	Sub-circular pit/well			
504	3535	1	Posthole	0.43	0.35	0.08	Sub-oval post hole	posthole in cluster		
505	3537	1	Posthole	0.34	0.27	0.09	Sub-oval post hole	posthole in cluster		
506	3539	1	Posthole	0.16	0.13	0.06	Sub-oval post hole	posthole in cluster		
507	3541	1	Posthole	0.36	0.33	0.12	Sub-oval post hole	posthole in cluster		
508	3543	1	Posthole	0.26	0.25	0.06	Sub-oval post hole	posthole in cluster		
509	3545	1	Posthole	0.3	0.22	0.11	Sub-oval post hole	posthole in cluster		
510	3561	1	Posthole	0.12	0.13	0.04	Sub-oval post hole			
511	3565	3	Posthole	0.4	0.28	0.15	Sub-oval post hole			
512	3567	1	Posthole	0.19	0.2	0.03	Sub-circular posthole			
513	3569	1	Pit	0.74	0.23	0.08	oval pit			
514	3571	1	Pit	1	0.39	0.18	oval pit			
515	3599	13	Pit	2.1	2.2	1.07	large oval pit		MBA	MBA
516	3364	1	Linear	~13.5	0.77	0.28	NW-SE linear	continuation F.445		
	3573	1		~13.5	0.97	0.29				
517	3583	1	Linear	1.32	0.41	0.09	NW-SE linear			
	3545	1		1.32	0.23	0.08				
518	3579	3	Treethrow	1.54	1.65	0.47	Irregular/oval tree throw	cuts F.445, F.516	MBA	MBA
519	3615	1	Posthole	0.26	0.24	0.08	Sub-oval posthole			
520	3607	7	Pit	1.34	1.31	0.59	Sub-circular shallow pit		MBA	MBA
521	3609	1	Pit	0.98	1.02	0.12	Sub-circular shallow pit			
522	3611	1	Pit	0.61	0.44	0.16	Sub-oval shallow pit			
523	3613	1	Posthole	0.2	0.21	0.1	Sub-circular posthole			
524			n/a				Void number			

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
525	3620	2	Spread	1.35	1.4	0.1	Irregular/oval spread			
526	3678	5	Linear	~26	2.35	0.91	NW-SE linear - interrupted curvilinear		MBA	MBA
	3685	6		~26	1.82	0.78				
	3789	4		~26	1.6	0.92				
527			n/a				Void number			
528	3671	16	Pit/ Well	3.74	3.48	1.01	Sub-circular pit/well		MBA	MBA
529	3649	1	Linear		0.38	0.24	Same as F.458			
	3824	n/a			>0.4	0.24				
530	3652	2	Pit	0.3	0.85	0.07	Oval pit with calcined bone and flint			EBA?
531	3654	1	Posthole	0.23	0.22	0.11	Sub-oval posthole			
532			n/a				Void number			
533	3702	9	Pit/ Well	3.52	4.11	1.24	Sub-circular pit/well		MBA	MBA
534			n/a				Void number			
535	3689	3	Pit	~2	0.91	0.51	NW-SE linear pit			
	3822	3		~2	0.88	0.54				
536	3710	1	Spread	0.45	1.65	0.08	Amorphous spread		MBA	MBA
537	3712	1	Posthole	0.31	0.26	0.05	Posthole within rectangular structure	Str14		
538	3714	1	Posthole	0.31	0.32	0.04	Posthole within rectangular structure	Str14		
539	3716	1	Posthole	0.3	0.3	0.14	Posthole within rectangular structure	Str14		
540	3718	1	Posthole	0.18	0.22	0.19	Posthole within rectangular structure	Str14		
541	3720	1	Posthole	0.23	0.36	0.08	Posthole within rectangular structure	Str14		
542	3722	1	Posthole	0.26	0.3	0.07	Posthole within rectangular structure	Str14		
543	3724	1	Posthole	0.3	0.29	0.18	Posthole within rectangular structure	Str14		
544	3726	1	Posthole	0.28	0.29	0.08	Posthole within rectangular structure	Str14		
545	3728	1	Posthole	0.25	0.22	0.1	Posthole within rectangular structure	Str14		
546	3730	1	Posthole	0.25	0.26	0.17	Posthole within rectangular structure	Str14		
547	3753	3	Linear		1.4	0.54	Same as F.560			
	3825	4			2.63	0.58				
548	3760	2	Linear		2.05	0.6	Same as F.560			
549	3732	1	Posthole	0.26	0.27	0.06	Posthole within 4-post structure	Str13		
550	3734	1	Posthole	0.3	0.26	0.03	Posthole within 4-post structure	Str13		

F. No.	Cut No.	No. of Fills	Feature Type	Length (m)	Width (m)	Depth (m)	Description	Comments	Pottery spot date	Phase
551	3736	1	Posthole	0.29	0.28	0.13	Posthole within 4-post structure	Str13		
552	3738	1	Posthole	0.29	0.3	0.14	Posthole within 4-post structure	Str13		
553	3740	1	Spread	0.24	0.48	0.05	Amorphous spread		MBA	MBA
554	3742	1	Pit	0.89	0.78	0.2	Sub-oval shallow pit			
555	3744	1	Pit	0.43	0.41	0.11	Sub-circular shallow pit			
556	3746	1	Spread	1.4	0.98	0.08	Sub-oval shallow spread	spread assoc F.559		
557	3749	2	Spread	1.65	1.9	0.29	Sub-oval shallow spread	spread assoc F.560	MBA	MBA
558	3784	17	Pit/ Well	4.55	4.15	1.22	Sub-circular pit/well			
559	3813	14	Pit/ Well	4	5.4	1.25	Sub-circular pit/well		MBA	MBA
560	3621	11	Linear	*c*.32	2.35	0.84	NW-SE linear - interrupted curvilinear ditch		MBA	MBA
	3757	3			2.15	0.7				
	3796	5			1.6	0.7			MBA	MBA
561	3814	2	Pit	*c*.1.5		1.01	medium size pit, unknown plan	cut by F.559		
562	3815	1	n/a	*c*.1.05	>0.5	0.39	Poss disturbance of upper fill of F.558			
563	3695	8	Pit/ Well	3.14	3.25	1.37	Sub-circular pit/well	recut of F.533		

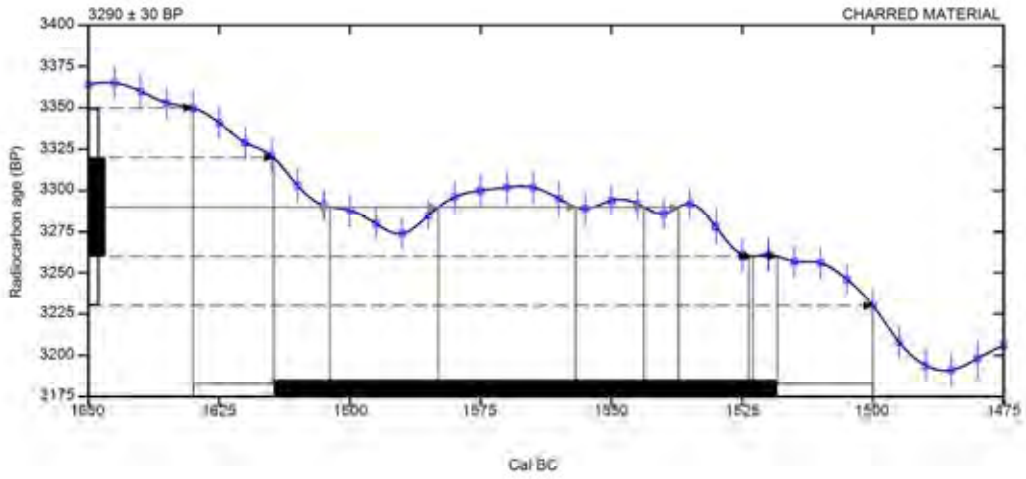
Radiocarbon determinations

Two samples were sent to Beta Analytic for radiocarbon analysis. Both samples were obtained from postholes relating to the palisaded enclosure. A cow tooth (16g) from F.244 [973] failed to provide a radiocarbon determination. Charcoal from sample <94> of F.313 [3144] returned the following results:

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12 = -24.6 o/oo : lab. mult = 1)

Laboratory number	**Beta-415580**
Conventional radiocarbon age	**3290 ± 30 BP**
Calibrated Result (95% Probability)	**Cal BC 1630 to 1500 (Cal BP 3580 to 3450)**
Intercept of radiocarbon age with calibration curve	Cal BC 1605 (Cal BP 3555) Cal BC 1585 (Cal BP 3535) Cal BC 1555 (Cal BP 3505) Cal BC 1545 (Cal BP 3495) Cal BC 1535 (Cal BP 3485)
Calibrated Result (68% Probability)	Cal BC 1615 to 1520 (Cal BP 3565 to 3470)



Database used
INTCAL13

References

Mathematics used for calibration scenario
A Simplified Approach to Calibrating C14 Dates, Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322

References to INTCAL13 database
Reimer PJ et al. IntCal13 and Marine13 radiocarbon age calibration curves 0–50 000 years cal BP. Radiocarbon 55(4):1869–1887, 2013

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X-Ray Fluoresence Ceramic Analysis – Simon Timberlake and Marcus Brittain

The use of X-Ray Fluorescence (XRF) technology in the analysis of ceramics is a methodology currently in development (Hunt and Speakman 2015; Frankel and Webb 2012). It presents a non-destructive means of taking direct readings of the metalliferous elemental framework of the pottery fabric, thereby exacting proxy data ranges and patterning at what is becoming an increasingly cost-effective and statistically-viable scale. During specialists analysis of the pottery and briquetage assemblages from Baston No.1 Quarry (BNE14) an opportunity was presented for XRF scanning of a small and selected sample of the assemblage. The aim here was to determine the viability of the technique for further distinguishing differences between shell-rich pottery fabrics and shell-rich briquetage fabrics, and to test the potential within the assemblage for a broader study into the sourcing and structure of Middle Bronze Age pottery and briquetage fabrics from the Lincolnshire fenland as well as their function. To act as a control, three samples were included of Late Neolithic pottery recovered from an excavation at Deeping Gate Trees nursery (Brittain 2015), 3.0km to the south of the 2014-15 investigation area.

The analysis was conducted by Keith Haylock at the Geography Department, University of Aberystwyth, using a portable 'Niton XLt 700' analyser. The results of this pilot study, as interpreted by Simon Timberlake, are presented below in parts per million (ppm) in Table 32.

Main Observations

Although tin (Sn), silver (Ag), lead (Pb), arsenic (As), zinc (Zn), copper (Cu), nickel (Ni), cobalt (Co), iron (Fe), manganese (Mn), chromium (Cr), palladium (Pd), molybdenum (Mo), niobium (Nb), zirconium (Zr), bismuth (Bi), tungsten (W), vanadium (Va) and titanium (Ti) were measured on the surfaces of the pot and briquetage, just lead, zinc, copper, iron, manganese, zirconium and titanium have been used for comparison, as either being useful elements or present in larger amounts. The colour key below indicates those values which might be significant with respect of being at least x2 the standard deviation (error) or more (x3, x5, x6, x8 x10-15, x20 and x50+) for each of the elements recorded. Other elements (i.e. not shown) in which there were higher and possibility significant values include niobium, which shows similarities to zirconium in a minor way, both being elements associated with heavy detrital minerals, thus a good indication of non-anthropogenic geological input.

Looking at the elements recorded, any pattern or trend seen between the pottery and briquetage, and between the two sites, is small and difficult to see, and therefore in the broader sense in need of a larger sample body. This is particularly the case with lead and copper, both of which are present in low concentrations within clay minerals, shell temper and sea water (Cu has 55ppm crustal average + Pb 12.5ppm crustal average (Taylor 1964) whilst sea water has only 2-3ppt (parts per trillion)). Just as important, the results show no significant pattern above the error value (pXRF measurements are semi-quantitative, thus we are looking at relative rather than exact values), the single exception being the pot <021> from Deeping Gate which perhaps follows the elevations for zinc. Zinc is interesting in that it shows values of between 80-370ppm for the pottery and briquetage (the crustal background is 70ppm), and somewhat more significantly a small enhancement for the Deeping Gate (Late Neolithic/EBA) material of between 240-370ppm (thus a factor of x2 compared to the Baston No.1 Quarry briquetage). The reasons behind this are difficult to determine, the most likely interpretation being the source of the clay or temper used, given that the Baston No.1 Quarry briquetage is lower in zinc than either the Deeping Gate or the Baston No.1 Quarry pottery. Manganese shows no convincing pattern across the assemblage, the values being well below gross crustal background

(950ppm) but not that dissimilar from the granite rock average (of 400ppm), therefore suggesting once again that this is probably governed by the geological source of the clay. However, the pattern for iron is probably the most significant. For all the ceramic this is high (20,700–80,200ppm) which is what we would expect for clay, and particularly for clay that has been fired; and yet we see proportionately greater elevation(s) (at least by a factor of x2) in the briquetage component for Baston No.1 Quarry and the Deeping Gate pottery, with only minor differences between them. This may be to do with repeated firing of the fired clay, providing a surface enhancement of iron (as bidhemite) within the burnt patina on the surface; this may reflect differences of production technology and subsequent use, and is a useful observation that may be look for in more detail in future studies. Both zirconium and titanium show significant values, yet there is little difference across ceramic type (neither in the Neolithic or Bronze Age pottery or the briquetage) or site in this case, and once again this is an indicator of (similar) geological sources for the clays; it may therefore not be significant or different between assemblages of locally made material. However, some differences may appear across regional assemblages in which the clay material has been sourced from differing geologies (i.e. Jurassic Clay/ Chalk/ Gault/ marine silt).

There are few significant patterns of element enhancement to be seen within and amongst this assemblage, although this may simply be an outcome of the small size of the sample set. Clearly a more meaningful set of comparisons could be drawn from a larger study. Moreover, elements which would be useful for comparison, particularly with reference to briquetage, would be those found in saline fluids and which might be considerably concentrated by brine manufacture: light elements such as sodium, magnesium, potassium, bromine, boron, strontium and sulphur. Some of these could be looked for if a very specific search is made for them using variations of the analytical programme packages. The overall similarity between the Middle Bronze Age pottery and the briquetage elements confirms that both are made of similar pottery fabrics, however, the small elevation of iron values within the briquetage material may be significant. The Deeping Gate Trees pottery illustrated enhancement of its zinc values (and in one instance copper which associates with zinc chemically) when compared with the Baston No.1 Quarry data. Being of a probable Late Neolithic date, the likely causes for this are the slight differences in composition, probably relating to the source of the clay temper, and perhaps also reflecting a different firing and production.

Table 32. Summary of pXRF ceramic analysis data

Site	Sample (no.)	Context	Lead (Pb)		Zinc (Zn)		Copper (Cu)		Iron (Fe)		Manganese (Mn)		Zirconium (Zr)		Titanium (Ti)		balance
			%	error	%	error	%	error	%	error	%	error	%	error	%	error	%
Baston No.1 Quarry	P (86)	F.150 [517]	0.007	0.006	0.008	0.003	0.006	0.004	3.897	0.015	0.036	0.021	0.013	0.001	0.505	0.123	95.496
	P (83)	F.150 [516]	0.008	0.007	0.015	0.005	0.002	0.004	2.699	0.093	0.038	0.022	0.015	0.001	0.848	0.161	96.363
	P (159)	F.229 [917]	0.007	0.007	0.015	0.005	0.008	0.005	3.978	0.118	0.058	0.026	0.014	0.001	0.473	0.133	95.373
	P (170)	F.229 [933]	0.005	0.006	0.035	0.006	0.008	0.004	4.665	0.118	0.047	0.024	0.016	0.001	0.617	0.13	94.561
	B (183)	F.230 [1163]	0.005	0.006	0.018	0.005	0.01	0.005	5.693	0.134	0.03	0.023	0.017	0.001	0.815	0.141	93.331
	B (183a)	F.230 [1163]	0.007	0.006	0.019	0.005	0.005	0.004	6.218	0.142	0.08	0.027	0.017	0.001	0.78	0.138	92.833
	B (183b)	F.230 [1163]	0.003	0.006	0.008	0.003	0.004	0.004	6.81	0.142	0.097	0.027	0.014	0.001	0.728	0.127	92.284
	B 183b)	F.230 [1163]	0.002	0.006	0.01	0.004	0.002	0.004	8.204	0.175	0.051	0.027	0.011	0.001	0.738	0.135	90.932
Deeping Gate Trees	P (021)	F.11 [29]	0.008	0.006	0.031	0.006	0.015	0.005	4.283	0.106	0.034	0.02	0.022	0.001	0.698	0.129	94.826
	P (027)	F.11 [43]	0.004	0.007	0.037	0.007	0.008	0.005	7.483	0.165	0.072	0.028	0.018	0.002	0.552	0.125	91.718
	P (017)	F.11 [28]	0.012	0.006	0.024	0.004	0.005	0.003	2.896	0.075	0.02	0.016	0.021	0.001	0.923	0.128	96.026

Key: error % - x2; x3; x5; x6; x8; x10-15; 20+; x50+
B – briquetage, P – pottery

Oasis Form

OASIS ID: cambridg3-255514

Project details

Project name	Baston Quarry No.1, Lincolnshire An Archaeological Investigation
Project dates	Start: 10-01-2014 End: 18-12-2015
Project ref. codes	BNE14 and BNE15 - Sitecodes
Type of project	Recording project
Site status	None
Current Land use	Cultivated Land 2 - Operations to a depth less than 0.25m
Monument types	PALISADE Early Bronze Age, STRUCTURES Early Bronze Age, PITS Early Bronze Age, DITCHES Middle Bronze Age, STRUCTURES Middle Bronze Age, PITS Middle Bronze Age, WELLS Middle Bronze Age, BURIALS Middle Bronze Age, POSTHOLES Middle Bronze Age, POSTHOLES Post Medieval, QUARRY Post Medieval
Significant Finds	POTTERY Early Bronze Age, POTTERY Middle Bronze Age, WORKED FLINT Bronze Age, BONE Bronze Age, BRIQUETAGE Middle Bronze Age, FIRED CLAY Bronze Age
Investigation type	"Open-area excavation"
Prompt	Direction from Local Planning Authority - PPG16

Project location

Country	England
Site location	LINCOLNSHIRE SOUTH KESTEVEN LANGTOFT Baston No.1 Quarry
Postcode	PE6 9QA
Study area	14.8 Hectares
Site coordinates	TF 137 154 52.72393129839 -0.316267403354 52 43 26 N 000 18 58 W Point
Height OD / Depth	Min: 0.5m Max: 1.8m

Project creators

Name of Organisation	Cambridge Archaeological Unit
Project brief originator	City/Nat. Park/District/Borough archaeologist
Project supervisor	Marcus Brittain
Funding body	Hanson Aggregates

Project archives

Archive recipient	Cambridge Archaeological Unit
Archive ID	BNE14 and BNE15
Physical Contents	"Environmental", "Human Bones", "Metal", "Wood", "Animal Bones", "Ceramics", "Worked bone", "Worked stone/lithics", "other"
Digital Contents	"Animal Bones", "Ceramics", "Environmental", "Human Bones", "Metal", "Stratigraphic", "Survey", "Wood", "Worked bone", "Worked stone/lithics", "other"
Digital Media	"Database", "Images raster / digital photography", "Spreadsheets", "Survey", "Text"
Paper Contents	"Stratigraphic"
Paper Media	"Context sheet", "Diary", "Drawing", "Matrices", "Notebook - Excavation", "Research, General Notes", "Photograph", "Plan", "Report", "Section"

Project bibliography

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Issuer or publisher	Cambridge Archaeological Unit
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