



## Early to Late Bronze Age funerary activity and later Bronze Age domestic material at Turners Yard, Fordham, Cambridgeshire

### Excavation Report



March 2015

**Client: Turners (Soham) Ltd**

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**Early to Late Bronze Age funerary activity and later Bronze Age domestic material at Turners Yard, Fordham, Cambridgeshire**

*Archaeological Excavation*

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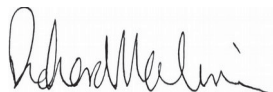
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## Table of Contents

<b>Summary.....</b>	<b>7</b>
<b>1 Introduction.....</b>	<b>9</b>
1.1 Location and scope of work.....	9
1.2 Geology and topography.....	9
1.3 Archaeological and historical background.....	9
1.4 Acknowledgements.....	13
<b>2 Aims and Methodology.....</b>	<b>14</b>
2.1 Aims.....	14
2.2 Methodology.....	14
<b>3 Results.....</b>	<b>15</b>
3.1 Introduction.....	15
3.2 Periods 1.1 and 1.2.....	15
3.3 Period 1.3 Late Neolithic – Early Bronze Age.....	15
3.4 Period 2.1 Early Bronze Age.....	16
3.5 Period 2.2 Middle Bronze Age.....	19
3.6 Period 2.3 Late Bronze Age.....	19
3.7 Period 3.2 Middle Iron Age to Romano-British.....	22
3.8 Undated and Natural Features.....	23
3.9 Finds Summary.....	25
3.10 Environmental Summary.....	26
<b>4 Discussion and Conclusions.....</b>	<b>28</b>
4.1 Beaker Pit 101.....	28
4.2 Barrow 1.....	28
4.3 Barrow 2.....	30
4.4 The Late Bronze Age Cremation Cemetery.....	31
4.5 The Chalk-land Fen Edge Landscape.....	33
4.6 Significance.....	34
<b>Appendix A. Context Inventory.....</b>	<b>35</b>
<b>Appendix B. Finds Quantification.....</b>	<b>42</b>
<b>Appendix C. Finds Reports.....</b>	<b>55</b>
C.1 Small Finds from Burials.....	55
C.2 Later Bronze Age Small Finds.....	57
C.3 The Struck flint and Unworked Burnt Flint.....	61

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C.4 Earlier Prehistoric Pottery.....	107
C.5 Collared Urn.....	111
C.6 Late Bronze Age Pottery.....	112
<b>Appendix D. Environmental Reports.....</b>	<b>119</b>
D.1 Human Skeletal Remains.....	119
D.2 Faunal Remains.....	138
D.3 Environmental samples.....	142
<b>Appendix E. Bibliography.....</b>	<b>146</b>
<b>Appendix F. Radiocarbon Dating Certificates.....</b>	<b>155</b>
<b>Appendix G. OASIS Report Form.....</b>	<b>177</b>

## List of Figures

- Fig. 1: Site location showing development area (red)
- Fig. 2: Site plan showing excavated features
- Fig. 3: Site phase plan showing prehistoric features
- Fig. 4: Skeleton 410, Skeleton 416 and burial location
- Fig. 5: Late Bronze Age cremation cemetery
- Fig. 6a: Barrow 1 showing distribution of small finds
- Fig. 6b: Barrow 1 showing distribution of struck flint
- Fig. 6c: Barrow 1 showing distribution of Early Bronze Age pottery
- Fig. 6d: Barrow 1 showing distribution of Middle Bronze Age pottery
- Fig. 6e: Barrow 1 showing distribution of Late Bronze Age pottery
- Fig. 6f: Barrow 1 showing distribution of animal bone
- Fig. 7: Selected Sections
- Fig. 8: Site plan showing Fordham bypass excavations 2004
- Fig. 9: Phased site plan and detail of Fordham bypass excavations 2004

## List of Graphs

- Graph 1 Relative frequency (by sherd weight) of pottery from the barrow ditch contexts.
- Graph 2 Late Bronze Age cattle body part distribution
- Graph 3 Late Bronze Age epiphyseal fusion rates
- Graph 4 Late Bronze Age sheep body part distribution
- Graph 5 MWS for Late Bronze Age sheep

## List of Plates

- Plate 1: Barrow 1
- Plate 2: Barrow 2
- Plate 3: Central burial **416** from the south-east
- Plate 4: Burial **410** during excavation
- Plate 5: Collared Urn cremation **103**
- Plate 6: Stone object SF21
- Plate 7: Late Bronze Age pottery deposit in Pit **227**
- Plate 8: Knife-dagger SF36

## List of Tables

- Table 1: Radiocarbon dates obtained from Collared Urn cremation **103**
- Table 2: Summary of Late Bronze Age cremations

Table 3:	Radiocarbon dates from Late Bronze Age cremations
Table 4:	Summary of deposits filling the ditch of Barrow 1, with quantification of finds.
Table 5:	Small finds from deposits in barrow 1 ditch
Table 6:	Quantification of burnt stone from pits <b>128</b> , <b>263</b> , <b>278</b> and <b>280</b>
Table 7:	Quantification of Lithic Material from Turner's Yard
Table 8:	Quantification of Lithic Material from Pit <b>101</b> and Tree-throw hollow <b>115</b>
Table 9:	Retouched Flakes from Pit <b>101</b> and Tree-throw hollow <b>115</b>
Table 10:	Details of Unworked Burnt Stone from Pits <b>128</b> , <b>263</b> , <b>278</b> , <b>280</b> , with that from Pit <b>101</b> shown for comparison.
Table 11:	Struck Flint from the fills of Ring-ditch 1
Table 12:	Secondary Worked Flakes and Core Tools from Ring-ditch 1
Table 13:	Cores from Ring-ditch 1
Table 14:	Details of Unworked Burnt Stone from Ring-ditch 1
Table 15:	Lithic Material from the fills of Ring-ditch 2
Table 16:	Struck flint and Unworked Burnt Stone from the Cremation Cemetery
Table 17:	Earlier prehistoric pottery assemblage composition
Table 18:	Pottery from Beaker Contexts (key assemblage in red).
Table 19:	East Anglian domestic Beaker Assemblages
Table 20:	Quantification of later prehistoric pottery by feature
Table 21:	Quantified Late Bronze Age pottery. MNV = minimum number of vessels, calculated as the total number of different rims and bases (23 rims, 20 bases and one complete vessel profile).
Table 22:	Quantification of vessel forms
Table 23:	Summary of contexts relating to Cremation burial <b>103</b>
Table 24:	Summary of cremation pit fills
Table 25:	Age categories employed
Table 26:	Skeleton 410 – osteological summary
Table 27:	Skeleton 416 – osteological summary
Table 28:	Urned cremation burial <b>103</b> - distribution of bone weight by skeletal region and context
Table 29:	Unurned cremation deposits - summary of osteological data
Table 30:	Unurned cremation deposits – distribution of bone weight by skeletal region
Table 31:	Species distribution for the faunal assemblage (NISP)
Table 32:	Species distribution for the assemblage (MNI)
Table 33:	Quantification of plant macrofossils

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## Summary

*Between 10th October and 21st November 2012, Oxford Archaeology East carried out an excavation at Turner's, Fordham, Cambridgeshire (TL 6298 6892). This was in advance of the construction of a new lorry park. Two Early Bronze Age barrows were excavated. One had an internal diameter of 18.3m and close to the centre was a single Collared Urn, containing the cremated remains of an adult individual, possibly a male, accompanied by a copper alloy knife-dagger and a pierced bone point. Finds from the ditch of this barrow were limited, including a few struck flints and several sherds of Bronze Age pottery. A single pit was excavated adjacent to this barrow; it contained a significant quantity of Beaker pottery, struck flint, animal bone and a fragment of a polished greenstone axe.*

*The second barrow was larger, with an internal diameter of c. 27m. At the centre of this feature was a crouched burial, which had been heavily disturbed by burrowing, however several sherds of Beaker pottery and part of a jet or jet-like bracelet were recovered from it. Bone from this individual returned a radiocarbon date of 1903-1744 cal BC. In the base of the barrow ditch a second inhumation was found, which was radiocarbon dated to 1666-1509 cal BC. Tightly fitted into a small grave, the individual was placed on their back, with their knees pointing upwards. Within the fills of the barrow ditch significant deposits of later Bronze Age material were recorded. These included pottery, struck flints, animal bone, disarticulated human remains, chalk spindle whorls, bone pins, bone needles and a possible stone gaming counter. A total of 4760 struck flints were found within the barrow ditch.*

*Between the two barrows a cemetery of 21 cremation burials or cremation related features were excavated. These have been radiocarbon dated to the Late Bronze Age, with dates of 1006-844 cal BC, 1043-903 cal BC and 1119-931 cal BC. Cemeteries of this date are currently extremely unusual in Britain, although radiocarbon dating of future discoveries and known prehistoric cremation cemeteries is likely to change this situation. No urns or other grave goods were recovered and the deposits were widely spread out. A single pit towards the edge of this group contained 1.79kg of Late Bronze Age pottery.*





## 1 INTRODUCTION

### 1.1 Location and scope of work

- 1.1.1 An archaeological excavation was conducted at Turner's Yard, Fordham, Cambridgeshire (TL 6298 6892; Fig. 1). The site is situated to the south of Fordham bypass, adjacent to Newmarket Road.
- 1.1.2 This archaeological excavation was undertaken in accordance with a Brief issued by Kasia Gdaniec of Cambridgeshire County Council (CCC; Planning Application 11/00681/FUL & 10/00607/FUM), supplemented by a Specification prepared by OA East.
- 1.1.3 The work was designed to assist in defining the character and extent of any archaeological remains within the proposed development area, in accordance with the guidelines set out in *National Planning Policy Framework* (Department for Communities and Local Government March 2012). The results will enable decisions to be made by CCC, on behalf of the Local Planning Authority, with regard to the treatment of any archaeological remains found.
- 1.1.4 The site archive is currently held by OA East and will be deposited with the appropriate county stores in due course.

### 1.2 Geology and topography

- 1.2.1 The low ridge at the southern end of the Fordham bypass and immediately adjacent to Turners Yard separates the present Snail valley from West Fen and is shown on the British Geological Survey geology map as being underlain by Middle Chalk bedrock. The excavations along the bypass, however, revealed that the ridge was partly capped by a mantle of sand and gravel overlying the Chalk. In addition, much of the archaeology was preferentially located on silt and sand filled hollows in the chalk and gravel surface. Excavation of these features showed that they included steep-sided naturally formed pits – solution hollows – which showed clear evidence of collapse or slumping in their marginal sediments.

### 1.3 Archaeological and historical background

- 1.3.1 The content of this section is largely taken from a report on the Fordham bypass excavations (Mortimer 2005). It has been amended and updated to include more recent archaeological work carried out in the Fordham and Soham area.

#### ***Mesolithic/Neolithic***

- 1.3.2 Evidence of Mesolithic occupation is present in the form of flint blades discovered across the Fordham landscape. Mesolithic flint debitage (Cambridgeshire Historic Environment Record, hereafter CHER 07433a) has been found in the area around Fordham Abbey. Many of the known finds dating to the Neolithic period are located along the route of the bypass and include polished axes and flint scatters (CHER01228, CHER08165, CHER7530 and CHER7737). In addition, Neolithic artefacts (polished stone and flint axes, quern stones and maces) have been uncovered near the proposed road corridor during agricultural activities between Station Road and Cockpen Road (Terry Martins, pers. comm.). In Soham Mesolithic and Neolithic remains have been recorded to the north-west of Broad Hill (Hall 1996, 72, ff.). The HER also records Mesolithic stray finds to the north-east of the village.

### **Bronze Age**

- 1.3.3 Ring ditches, possibly representing the ploughed out remains of Bronze Age burial mounds, were visible as cropmarks on the Turner's Yard site (CHER 07433 and CHER 09025). A spearhead was found nearby on the lower slopes of the plateau adjacent to the edge of West Fen (CHER 07432). Aerial photographic assessment has revealed part of a possible ring ditch at TL 626 699. From an area on the west side of the River Snail, south of Biggen Stud Farm, Bronze Age artefacts have been recovered. This find has not yet been recorded on the Historic Environment Record. An unprovenanced Beaker burial was found near or at Fordham in about 1905, it was an inhumation accompanied by a handled vessel (Fox 1923). In Soham, a Bronze Age settlement was located at Eye Hill Farm during field-walking (Edmonds *et al* 1999). Further evidence for Bronze Age activity was uncovered during an archaeological investigation at St Andrew's House, off Soham High Street (Casa Hatton 2000). Bronze Age stray finds and cropmarks have been recorded in the south of the parish (e.g. CHER 07805a: a bronze spearhead tip), and to the north-east of the village.
- 1.3.4 Further afield, 2km to the south-west at Snailwell Stud, a burial was found in 1880 (CHER 07437). The exact location of this find is uncertain, but two Bronze Age pots given to the Cambridge University Museum in 1898 are thought to be related. In addition a group of ten barrows was excavated 3.2km to the south-east, prior to the construction of Snailwell airfield in the 1940s (CHER 07473; Lethbridge 1950). There are numerous other ring-ditches and barrows recorded locally, largely as cropmarks.

### **Iron Age and Roman**

- 1.3.5 Iron Age sites and finds are numerous in the parishes of Snailwell and Chippenham. Snailwell has a number of Iron Age sites located along the Snail river. By contrast only three Iron Age sites have thus far been located in the parish of Fordham; two settlement sites, both on the upland areas in the east of the parish and three Early Iron Age burials (CHER 7548) were discovered to the south-east of Fordham village in 1937. Further evidence of Iron Age activity in the Fordham area is represented by metal finds. A fibula was found near the Soham roundabout (CHER 11707). In Soham an Iron Age site is known on the hilltop at Henney, on the periphery of Stuntney and Ely in the north of the Parish (Hall 1996, 76). Excavations At St Andrew's House (Atkins 2004) located a small concentration of Early/Middle Iron Age features.
- 1.3.6 The Roman period is particularly well represented around Fordham. Find spots of metalwork and Roman coins (CHER 10142 and CHER 07581) lie to the north of Fordham village. Two villa buildings are known nearby, one at Block Farm (CHER 02087), c. 3km to the north-west and the other at Biggen Farm (CHER 07483/ SAM 80), c. 1km to the south-east. At Block Farm the site was identified through a scatter of flint blocks with attached mortar, tiles and mosaic tesserae (CHER 02087). At Biggen Farm fragments of painted plaster, hypocaust tiles and a quantity of Late Roman pottery were discovered in 1971 (CHER 07483). Low earthworks were reported when this site was first discovered. In Soham a probable Roman villa estate (Hall 1996, site 2), is located in an area of dense Roman cropmarks in the south-east of the parish and in the south there are finds scatters including coins, pottery, brooches and building materials that may indicate the presence of another substantial building nearby.

### **Saxon and Medieval**

- 1.3.7 Place name evidence records a reference to Fordham in the *Anglo-Saxon Chronicle*. The name means 'settlement by the ford' (Reaney 1943, 191) and attests to an early origin for the village. Saxon remains are represented by two cemeteries located at

either end of the A142, Fordham bypass. The cemetery near the Soham roundabout at the northern end (CHER 07506) was excavated in the 1930s (Lethbridge 1933). The cemetery near Biggen Stud is known from metal-detected finds from the area. In addition, an Anglo-Saxon settlement is located at Landwade about 600m south of the site and a further settlement (CHER 07742) is listed at Snailwell.

- 1.3.8 Evidence for the Early Saxon origin of the village has been found at Hillside Meadow (TL 6320 7070) where three phases of Saxon occupation have been identified. Excavations revealed sunken buildings with loom weights, a human burial, both earth-fast post and timber base-plate structures and a series of boundary ditches (Mould 1999). Further evidence for domestic occupation at Hillside Meadow (TL 6321 7057) dating to the Early to Middle Saxon period has been retrieved during a recent evaluation. This evaluation revealed a post-built structure and property enclosures (Casa Hatton 2001). Further to the north, evidence for Middle to Late Saxon activity emerged during excavations at Fordham Primary School (Connor 2002). Here a post-built structure was found along with ditched property boundaries.
- 1.3.9 Early Saxon occupation at Soham is attested to by funerary remains from three cemeteries. Of particular relevance to the site are Anglo-Saxon burials (CHER 07027) found in the modern cemetery on Fordham Road, just to the north of the Soham roundabout. Inhumations with grave goods were found in the late 19th century and are attributed to the Early Saxon period. Other evidence for Anglo-Saxon activity along Fordham Road is represented by stray finds and scatters, including a number of metal objects. In the 7th century a monastery may have been founded by St Felix, first bishop of the East Angles, who was thought to have been buried in Soham. Along with many other religious foundations in the area the monastery was destroyed during the late 9th century, and was not re-established (Wareham and Wright 2002, 533). The exact location of the monastery is unknown, although it is possible that the parish church of St Andrew's (late 12th century) was founded on the site of its Saxon predecessor.
- 1.3.10 The medieval history of Fordham is well documented. The parish Church of St Peter and Mary Magdalene (CHER 07574) is largely 13th century in date. It retains some Norman elements and is likely to have had a Saxon predecessor. Further medieval activity is known from the extension of the settlement around the church (Hatton 2001). Medieval sites include Fordham Abbey (CHER 07449), Fordham village and a shrunken medieval village at Landwade (CHER 07419). Fordham Abbey, the Gilbertine priory, is located approximately 700m to the north of the Turner's Yard site. It was founded by the canons of the Order of Sempringham immediately before 1227 and dedicated to St Peter and Mary Magdalene. The order was dissolved in 1538. None of the priory buildings survive and the present house on the site dates from 1710. Slight traces of the levelled pond associated with the Abbey survive (Haigh 1988). The remains of the settlement at Landwade comprise the 15th century church of St Nicholas (CHER 07431), a moated site (CHER1192/ SAM249) and other earthworks (CHER 07419). Landwade is first mentioned in 1060 although it is not recorded in the Domesday Survey.
- 1.3.11 Evidence for medieval agricultural activity is still visible as furlong boundaries in the area around the site (CHER 10309). Remains of medieval agricultural practices can also be seen on aerial photographs that show traces of medieval open fields. These are recorded mostly as headlands (now ploughed virtually level) with one small area of probable ridge and furrow at TL 622 692.
- 1.3.12 In Soham evidence for occupation during the Late Saxon and Early Norman period has emerged through a number of recent excavations and evaluations including St

Andrew's House, off High Street (Casa Hatton 2000, Atkins 2004), 9-13 Pratt Street (Hatton and Last 1997), 38 Station Road (Heawood 1997) and Soham County Infant School (Bray 1991).

### ***Previous Archaeological Work***

- 1.3.13 There have been several relevant large-scale archaeological interventions in the vicinity within recent years; the Fordham Bypass evaluation and excavations (Casa Hatton and Kemp 2002, Mortimer 2005), excavations at Landwade Road, Fordham (Connor 1996), excavations along the route of the Isleham to Ely Anglian Water pipeline (Gdaniec *et al* 2007) and excavations at Fordham Road, Newmarket (Rees 2014).

### ***The Fordham bypass Excavations***

- 1.3.14 Prior to the construction of the Fordham Bypass an archaeological excavation and watching brief was carried out by CAM ARC (now OA East). Although heavily truncated the archaeological features found spanned four millennia from the Neolithic farming transition to the Early Saxon occupation.
- 1.3.15 Much of the archaeology was encountered in the various natural hollows and channels within the underlying chalk and sandy gravels. An extensive Early Neolithic buried soil lay within one such solution hollow, which also contained a well preserved midden area. Close by was a double (consecutive) burial of two young men, carbon-dated to the middle of the 4th millennium BC. Also found were the remains of a Late Neolithic occupation or production site and an Early to Middle Bronze Age burnt flint mound, with an associated stepped well.
- 1.3.16 The Middle Bronze Age was characterized by ditches and alignments that represent the first clear evidence on this eastern Fen edge for the 'field systems' that cover large parts of the Bronze Age Fen; a small contemporary cremation cemetery lay against one of these boundaries. Two large, discrete Middle Bronze Age pits were found, also a complex post-built structure was sited in alignment with a Middle Bronze Age ditch. Clearly definable Late Bronze features were confined to a discreet alignment of small pits containing placed pottery deposits; a small group of larger pits lay to the south.
- 1.3.17 The principal Early Iron Age features were a 'copse' of tree throws, backfilled with occupation debris. Also found was a small post-built roundhouse of Early Iron Age form, aligned with the tree throws on their northern side. To the east of these were a number of small pits and postholes and a burial within a small solution hollow. Both the burial and the fills of the tree throws have been carbon-dated to the middle of the 1st millennium BC. Evidence for middle and later Iron Age occupation was sparse, but limited Romano-British activity was recorded. Two Roman roads or tracks converged from the south, the smaller of which had been metalled in the post-Roman period. A burial c. 40m to the east of the track has been carbon-dated to the late 5th or early 6th centuries AD.

### ***The Landwade Road Excavations***

- 1.3.18 The archaeological excavations undertaken to the south-west of the new Biggen Stud roundabout at Landwade Road (Connor 1996) revealed Neolithic, Bronze Age and Early Iron Age activity and provide a large pottery assemblage (122 kg) dating to the Early Iron Age.
- 1.3.19 Neolithic activity was represented by a fragment of Peterborough Ware and a few flints preserved in early deposits at the base of the south-facing slope. Evidence for activity in the Middle to Late Bronze Age included enclosures, a post-built structure, cremation burials, and shallow ditches possibly representing early land division. Subsequently a



larger 'D-shaped' banked enclosure was constructed and was maintained and reinstated on more than one occasion.

- 1.3.20 Identified Iron Age sites appear generally to lie above the 10m contour and the Landwade Road site is no exception. Extensive evidence for Early Iron Age occupation was located towards the top of the south-facing slope of a chalk promontory; remains included pits associated with timber-built, four-post structures. Three broad categories of pit types were identified which included evidence for structured deposition. A series of large parallel ditches at the base of the hill to the south may be evidence for a major 'territorial' boundary and track-way between the New River to the west and the River Snail to the east.

#### ***The Isleham to Ely Pipeline***

- 1.3.21 A series of sites, mostly identified by surface flint scatters, were sampled by fieldwalking and test-pitting to the north-west of Isleham village, along the pipeline route (Gdaniec *et al* 2007). Two main sites were subjected to further, more intensive excavation: Site 1, an Early/Middle Bronze Age settlement comprising structures, pits and pit clusters within an area of largely Neolithic flintwork; Site 6, surrounding a palaeochannel of the River Snail and comprising a flint scatter of Early Neolithic and Late Neolithic/Early Bronze Age date and a group of small burnt flint and charcoal-filled pits, dating to the Early Bronze Age.

#### ***Fordham Road, Newmarket excavations***

- 1.3.22 An evaluation, immediately followed by excavation, was carried out in January and February 2013, 1.8km to the south of Turner's Yard and just into Suffolk. This produced small quantities of Early Neolithic and Early Bronze Age pottery and flints. In the Middle Bronze Age enclosures and several buildings were constructed (Rees 2014).

#### ***Other Relevant Excavations***

- 1.3.23 A trench evaluation by CCC AFU to the north of the Soham roundabout at the former allotments on Fordham Road (TL 6025 7250) in 2001, revealed extensive prehistoric and Romano-British remains. The evaluation uncovered evidence of possible Bronze Age field systems and Late Bronze Age/Early Iron Age settlement. The southern part of the site showed extensive evidence for Romano-British settlement with rectangular ditched enclosures on two distinct alignments. The settlement may have been bounded to the north by a metalled surface, possibly a track or hollow way. To the south of the track, feature density increased dramatically with ditches and pits of both prehistoric and Roman date. Recent excavation of the site has resulted in the recovery of large amounts of Roman material, along with several burials (Andrew Peachey pers. comm.).
- 1.3.24 An excavation at Newmarket Road, Burwell has uncovered a small group of pits and postholes with a large pottery assemblage (23kg) dating to the Late Bronze Age (Bailey 2006). Recent evaluation adjacent to this site has shown that this settlement extended over c.6ha (Fletcher 2014).

## **1.4 Acknowledgements**

- 1.4.1 The author would like to thank Michael Roberts who commissioned the work, on behalf of Turners (Soham) Ltd. The project was managed by Richard Mortimer and directed by the author. Excavation was carried out by Pete Boardman, Dave Brown, James Coles, Nick Cox, Andy Greef, Julian Newman and Robin Webb. The survey was carried out by Taleyna Fletcher and Dave Brown. The mechanical excavator and dumper were supplied by LOC plant hire. Thanks also go to John Zant, who attempted to identify the Roman coin.

## 2 AIMS AND METHODOLOGY

### 2.1 Aims

- 2.1.1 The primary objective was to preserve the archaeological evidence contained within the site by record and to attempt a reconstruction of the history and use of the site. Issues raised in *Research and Archaeology Revisited: a revised framework for the East of England* (EAA Occ. Paper No 24, 2011) will be addressed.
- 2.1.2 All aspects of the investigation were conducted in accordance with the Institute for Archaeologists' Code of Conduct, the Standard and Guidance for Archaeological Excavation (2008), and Standards for Field Archaeology in the East of England (EAA Occ. Paper No 14, 2003)

### 2.2 Methodology

- 2.2.1 The Brief required that an area of 0.6ha be stripped of topsoil and subsoil, and any archaeological features identified be excavated (Fig. 2).
- 2.2.2 Machine excavation was carried out under constant archaeological supervision with a tracked 360° excavator using a toothless ditching bucket.
- 2.2.3 Spoil, exposed surfaces and features were scanned with a metal detector. All metal-detected and hand-collected finds were retained for inspection, other than those which were obviously modern.
- 2.2.4 All archaeological features and deposits were recorded using OA East's *pro-forma* sheets. Plans and sections were recorded at appropriate scales and colour and monochrome photographs were taken of all relevant features and deposits.
- 2.2.5 Bulk soil samples, for the recovery of environmental remains were taken from features containing charcoal and others for comparison. All cremations, along with the beaker pit were 100% sampled for the recovery of artefacts and ecofacts.
- 2.2.6 Site conditions were generally good, although rain did occasionally cause problems.

### 3 RESULTS

#### 3.1 Introduction

- 3.1.1 The results are presented below by phase. Due to the close proximity of this excavation to the Fordham bypass project (Mortimer 2005), it is felt appropriate to use the same phasing structure for this report, with slight amendments, which is shown below.

##### **Period 1: Neolithic**

- 1.1 Earlier Neolithic - (4000 – 3000 BC)
- 1.2 Later Neolithic - (3000 – 2500 BC)
- 1.3 Late Neolithic – Early Bronze Age (2500 – 1800)

##### **Period 2: Bronze Age**

- 2.1 Early Bronze Age – (1800 - 1500 BC)
- 2.2 Middle Bronze Age – (1500 - 1100 BC)
- 2.3 Late Bronze Age – (1100 - 800 BC)

##### **Period 3: Iron Age and later**

- 3.1 Early Iron Age - (800 – 400 BC)
- 3.2 Middle Iron Age – Romano-British - (400 BC – AD 400)
- 3.3 Early Anglo-Saxon - (AD 400-700)

#### 3.2 Periods 1.1 and 1.2

- 3.2.1 No features dating to these periods were identified, although a number of Mesolithic and Neolithic flints, including over 100 blades, were recovered from later features and the topsoil. These indicate at least sporadic activity on the site during this period.

#### 3.3 Period 1.3 Late Neolithic – Early Bronze Age

- 3.3.1 During the Late Neolithic to Early Bronze Age period significant activity occurred across the site (Fig. 3). A crouched burial was interred, which was later to be surrounded by Barrow 1. A large amount of Beaker pottery, along with 490 struck flints and part of a polished greenstone axe ground stone axe were deposited in a small pit.

##### ***Barrow 1 – Central Burial 416***

- 3.3.2 In the centre of Barrow 1 an irregular pit (**406**) measuring 2.08m long, 1.86m wide and 0.37m deep was recorded. This had clearly been heavily disturbed by burrowing (419-424) and had been half sectioned during the evaluation (**73**). The remaining half of the feature was excavated in 5cm spits, with the location of all finds planned. Each of these spits (404, 407, 408, 409, 413-415, 417) consisted of the same mid greyish brown, silty sand deposit.
- 3.3.3 Fill (417) was located on the base of the grave cut, it was only 0.02m thick and contained two small sherds (2g) of Early Bronze Age pottery. Skeleton (416) was positioned on top of this, it was disturbed and in generally poor condition (Fig. 4). However, it appeared to have been deposited in a crouched position, with the head to



the south-west and facing north-west. Bone from this individual returned a radiocarbon date of 1903 – 1744 cal. BC (SUERC-44497;3501 ± 29BP).

- 3.3.4 Skeleton (416) was overlain by a single deposit, which was excavated in six 0.05m thick spits, with (415) directly overlying it, then (414), (413), (409), (408) and finally (407). In total these deposits contained three sherds (9g) of pottery, including a small decorated Beaker sherd (5g). In addition 19 struck flints and 123g of animal bone were recovered. These finds were spread throughout the layers with no distinct concentrations.
- 3.3.5 On top of these deposits was the partial, articulated remains of a dog or fox (405). This was overlain by the final spit (404) which contained only a tiny quantity (less than 1g) of animal bone.
- 3.3.6 In addition to these finds, three sherds of beaker pottery were recovered from the half section excavated during evaluation (fill 74). A small fragment of a jet or jet-like object (SF 39) was also found within this section.
- 3.3.7 It is probable that some of these finds represent grave goods, including the jet-like object (SF 39) and possibly the sherds of Beaker pottery. However, the flint is most likely residual and the animal bone originates from disturbance of the grave.

#### ***Beaker pit 101***

- 3.3.8 A single pit (**101**) was located just to the east of Barrow 2 (Fig. 3). It was circular in plan, with a diameter of 0.69m and a depth of 0.22m. It had gently sloping sides and a concave base. A single deposit (100) filled this feature, which was a dark greyish brown, silty loam. A significant assemblage of finds was recovered from this feature, distributed throughout the fill. This consisted of 176 sherds (586g) of Beaker pottery, 490 struck flints (including several thumbnail scrapers) a fragment of a polished greenstone axe (SF 2) and 434g animal bone.
- 3.3.9 Pit **101** had been disturbed by tree throw **115**, which was irregular in plan and profile, measuring 1.54m long, 1.48m wide and 0.24m deep. It was filled by a single deposit (114), which was a mid reddish brown, silty sand. The finds recovered from this feature almost certainly originate from Pit **101** and comprised 15 sherds (65g) of Beaker pottery, 100 struck flints and 3g of animal bone.

### **3.4 Period 2.1 Early Bronze Age**

- 3.4.1 During the Early Bronze Age two barrows were constructed on the site (Fig. 3). In Barrow 1 a tightly crouched burial was placed in the base of the newly excavated ditch. A cremated individual was placed within a Collard Urn at the centre of Barrow 2.

#### ***Barrow 1***

- 3.4.2 Barrow 1 was formed by a substantial ditch, with an internal diameter of 26.60m, which appeared to surround a natural rise. The ditch was between 3.38m and 5.87m wide and between 0.88m and 1.54m deep, with steeply sloping sides and a flat base (sections 91 and 94, Fig. 7). In total 14m of the ditch were excavated to the base (c. 17%). The basal fills (246; Table 4) were silty-sands, with no tip lines to suggest either an internal or external bank or mound. These fills contained relatively few finds, comprising 53g of pottery, 132 struck flints and 1710g of animal bone.
- 3.4.3 Overlaying these primary fills were a series of deposits containing significant quantities of later Bronze Age material. These are discussed in period 2.3 below, as they

represent deliberate backfilling during this period and not natural silting as with the deposits filling Barrow 2.

- 3.4.4 Within the interior of the barrow, on the western side, two deposits were recorded. Deposit (258) was only 0.08m thick, with a diameter of 0.40m. It consisted of a dark brownish grey, silty sand, with frequent charcoal inclusions. It may have been the remains of a very severely truncated cremation, but no bone was present. Nearby was (261), consisting of the lower half of a cow skull, sitting on the machined surface of the natural. Part of a cow scapula was also recorded c. 2m to the south-east of the skull.

#### ***Burial 410***

- 3.4.5 In the base of the ditch of Barrow 1, close to the southern limit of excavation, was Burial 410 (Fig. 4). This cut through the primary 0.10m of natural in-fill of the ditch, suggesting that it was cut shortly after the ditch was dug, especially as the natural geology at this location was soft sand. The grave cut (**412**) was oval in plan, with vertical sides and a flat base. It measured 1.10m long, 0.60m wide and 0.45m deep. The remains of a young adult female had been tightly placed in an unusual position in the pit. The individual was lying on their back, with their arms folded across their stomach. The head was pushed against the north-western end of the grave cut, so that the individual was facing south-east. The legs were also cramped in the grave, pushed against the south-eastern end of the cut, with the feet flat on the base of the grave.
- 3.4.6 Bone from this individual returned a radiocarbon date of 1666 – 1509 cal. BC (SUERC-44496; 3306 ± 27BP). Overlaying the skeleton was a single fill (411), which was a pale greyish-brown, silty sand, from which no finds were recovered.

#### ***Barrow 2***

- 3.4.7 Barrow 2 was located c. 60m to the east-north-east of Barrow 1. It was formed by an almost circular ditch, with an internal diameter of 18.3m. The ditch (cuts **106, 126, 132, 133, 140, 168, 187, 200**) had moderately sloping sides and a flat or concave base. It measured between 2.85m and 4.34m wide and between 0.60m and 0.96m deep (section 51, Fig. 7). The ditch was filled by a series of silty sand deposits. The lower fills were generally pale orangey-brown and were derived from erosion of the ditch edge. There was no slumping to indicate the presence of a bank or mound inside or outside the ditch.
- 3.4.8 Overlaying this in three of the excavated slots (**106, 126, 187**) was a dark grey deposit (185, 237, 239), between 0.10m and 0.28m thick, which probably represents a stabilisation horizon within the fill sequence. The final fill in each slot was mid greyish brown and was similar to the subsoil.
- 3.4.9 Finds from the primary fills were scarce, consisting of 98g of animal bone and 3 struck flints. No finds were recovered from the grey stabilisation layer, although finds in the final fill were more frequent, including six sherds (29g) of pottery, 119 struck flints and 631g of animal bone. Five sherds (21g) of the pottery is Late Bronze Age in date, with the remaining sherd being Early Bronze Age. These finds all appear to have been incidentally included within the fills of the ditch and probably originated from the surrounding ground surface. It is noteworthy how much less material was included within the fills of Barrow 2, compared with Barrow 1 and this supports the idea that material was being deliberately deposited within the ditch of Barrow 1.

#### ***Collared Urn cremation 103***

- 3.4.10 Close to the centre of Barrow 2 was a small circular pit (**103**), which had near vertical sides and a flat base. It was 0.19m deep, with a diameter of 0.58m and all of the fills

within it were 100% sampled. A collared urn (SF 1, see Appendix C.5) had been placed, inverted, into this pit. The pot had collapsed in on itself and the base was lost to ploughing (Plate 5). The urn was block lifted with its contents, and excavated in the OA East office. Within the urn three deposits were identified; the primary deposit containing bone (454) was a mid orangey brown, silty sand, with rare gravel inclusions but consisting mainly of cremated bone. The deposit was excavated in four spits, each of which was 0.03m thick, apart from spit 4, which was 0.06m thick. Spit 1 was located at the top of the deposit as excavated and therefore closest to the base of the pot.

- 3.4.11 Deposit (454) was surrounded by deposit (104), which probably entered the pot after deposition and was also a mid orangey brown, silty sand. Overlaying deposits (454) and (104) was (455). This was a similar deposit to (104), which again appeared to have filled the upturned base of the urn after deposition. It would seem most likely that the urn was placed inverted over deposit (454) (containing the cremated bone). This urn then largely collapsed under the weight of soil overlaying it (possibly including a barrow mound), and the remaining spaces were filled by deposits (104) and (455). The remainder of pit **103**, not occupied by the urn, was filled by (102), a mid greyish brown, silty sand. A small quantity of cremated bone (11.3g) was recovered from this deposit.
- 3.4.12 The urn contained a total of 1748.9g of cremated bone, from a single individual, probably a young adult and possibly a male (Appendix D.1). The vast majority (1634.6g, 92.9%) of the total bone weight recovered came from context (454), identified as the main cremation deposit, inside the urn. A total of 114.3 g, 6.5% of the total bone weight, was recovered from contexts (104) and (455). A copper alloy knife-dagger (SF 36, Appendix C.1) was found against the inside edge of the pot, half way down its surviving height, within context (454). A cremated bone needle (SF 37, Appendix C.1) was recovered from spit 3 (6-9 cm from the base).
- 3.4.13 Attempts were made to obtain a radiocarbon date from this burial; the first date obtained was surprisingly late for a Collared Urn cremation (1504-1414 cal. BC; SUERC-44499;  $3187 \pm 27$ BP) and so further dates were commissioned. Unfortunately the results from all of these samples are different (Table 1) and do not provide an accurate date for the internment. The charred grain is clearly intrusive, although the reason why the cremated bone should produce three different dates is not clear. There has been recent discussion about the potential for transfer of carbon from the fuel used in a pyre to the cremated bone (e.g. Olsen *et al.* 2013). However, this should make the dates older than expected and in this case two of the dates are too late for a Collared Urn rather than too early.

Calibrated date at 95%	Calibrated date at 68%	Radiocarbon Age BP	Laboratory Reference	Material dated
1504-1414 calBC	1494-1433calBC	3187±27	SUERC-44499	Cremated bone
1748-1541 calBC	1730-1630 calBC	3376±29	SUERC-46082	Cremated bone
1907-1776 calBC	1937-1757 calBC	3526±29	SUERC-46081	Cremated bone
1454-1635 calAD	1473-1629 calAD	354±32	SUERC-49867	Charred grain

Table 1: Radiocarbon dates obtained from Collared Urn cremation **103**

### 3.5 Period 2.2 Middle Bronze Age

- 3.5.1 Middle Bronze Age activity on the site was confined to material deposited within the fills of the Barrow 1 ditch. This material was mixed with Late Bronze Age finds and all of this is described together in Period 2.3, below.

### 3.6 Period 2.3 Late Bronze Age

- 3.6.1 During the Late Bronze Age a significant quantity of material was deposited in the ditch of Barrow 1, comprising pottery, animal bone, struck flint, burnt flint and other domestic material. In addition, a cremation cemetery was established comprising 21 features (Fig. 3 and 5).

#### *Cremation cemetery*

- 3.6.2 The cemetery at Fordham included 21 cremation burials, spread out roughly in a line on a north-east to south-west alignment, with two outlying deposits (**230** and **260**) to the north of the main group. This line extended from close to the north-eastern side of Barrow 1 along the line of a silty depression, which may have appeared as a linear hollow. Table 2 below provides a summary of each feature and the quantity of bone it contained.

Cut	Context	Sample Number	Bone weight per context (g)	context depth	context description	bone weight per feature (g)	feature dimensions (m)	Finds
<b>118</b>	116	13	18	0.08	dark deposit		0.55 x 0.21	-
	117	-	0	0.21	mixed natural	18		
<b>120</b>	119	14	1	0.07	dark deposit	1	0.60 x 0.07	-
<b>122</b>	121	15	6	0.17	mid greyish brown deposit	6	1.28 x 1.09 x 0.17	-
<b>148</b>	147	17	1	0.03	dark deposit		0.62 x 0.48 x 0.12	-
	164	18	1	0.1	mixed natural	2		
<b>149</b>	150	24	66	0.08	dark charcoal rich		1.02 x 0.60 x 0.30	-
					mid brown yellow ashy deposit	86		
<b>167</b>	165	23	20	0.3	dark deposit		0.42 x 0.38 x 0.08	-
	166	19	31	0.03	mixed natural	50		
<b>175</b>	174	25	41	0.06	dark deposit		0.98 x 0.88 x 0.21	Small animal bones (burnt)
					mid brown grey deposit			-
	180	26	60	0.07	mixed natural	147		-
<b>176</b>	181	27	46	0.23	dark charcoal rich		0.96 x 0.75 x 0.40	-
					mid brown grey deposit			-
	183	29	44	0.22	mid reddish grey	314		-
<b>178</b>	182	28	82	0.13	dark deposit		1.15 x 0.25	Pot (intrusive sherd)
					mid brown grey deposit			
	188	33	38	0.12	dark deposit			
	189	34	11	0.07	mixed natural	79		unburnt bone
<b>192</b>	190	35	30	0.15	dark deposit		0.42 x 0.38 x 0.16	-
	191	36	12	0.08	mixed natural	16		
<b>196</b>	193	37	4	0.08	dark deposit		0.50 x 0.08	-
	197	38	1	0.02	mixed natural	5		
<b>203</b>	201	39	4	0.06	dark deposit		0.45 x 0.08	-
	204	42	1	0.07	mixed natural	1		
<b>206</b>	210	43	0	0.08	dark deposit		0.55 x 0.38 x 0.14	-
	205	40	93	0.08	mixed natural			

Cut	Context	Sample Number	Bone weight per context (g)	context depth	context description	bone weight per feature (g)	feature dimensions (m)	Findings
	207	41	55	0.06	mixed natural	148		
<b>209</b>	208	44	0	0.05	dark deposit	0	0.27 x 0.18 x 0.05	-
<b>212</b>	211	45	13	0.03	dark deposit	13	0.17 x 0.15 x 0.03	-
<b>215</b>	214	46	20	0.06	dark deposit		0.98 x 0.76 x 0.18	Pottery (intrusive sherd)
	220	47	28	0.17	mixed natural	48		
<b>221</b>	222	48	27	0.02	dark charcoal rich		0.96 x 0.26	small bones (mainly amphibian)
	225	50	402	0.26	mixed natural	429		
<b>224</b>	223	49	8	0.36	dark reddish brown	8	0.49 x 0.48 x 0.36	
<b>230</b>	229	51	51	0.12	dark deposit		0.53 x 0.27	burnt flint
	235	54	33	0.2	mixed natural	84		modern glass
<b>231</b>	232	52	6	0.7	mixed natural	6	0.39 x 0.07	-
<b>260</b>	259	56	16	0.13	dark deposit	16	0.47 x 0.40 x 0.13	-

Table 2: Summary of Late Bronze Age cremations

3.6.3 None of the cremations were deposited in a vessel and there were no concentrations of bone to suggest deposition in an organic container. It is probable that some deposits were completely lost to truncation, given that the shallowest feature survived to a depth of only 0.03m. The surviving cremations covered an area measuring c.31m long and up to 14m wide. They were generally placed quite widely, with the closest together being 0.35m apart, there were no inter-cutting examples. On average the deposits were separated by 2.48m (excluding the outliers **230** and **260**). This distance is quite large compared to a Middle Bronze Age cemetery in this region, where deposits are usually tightly packed together and often inter-cutting.

3.6.4 The nature of this cemetery was very different to that normally encountered in Middle Bronze Age (Deverel-Rimbury) cremation cemeteries in this region and so three samples of cremated bone were submitted for radiocarbon dating. The results are given in table 3 and show this to be a Late Bronze Age cemetery.

Cut	Context	Uncalibrated date	Calibrated at 95%	Calibrated at 68%	Laboratory reference
206	205	2856±27 BP	1119 – 931 calBC	1056 – 941 calBC	SUERC-44498
176	177	2814±27 BP	1043 – 903 calBC	1001 – 928 calBC	SUERC-44500
178	188	2783±29 BP	1006 – 844 calBC	979 – 899 calBC	SUERC-44504

Table 3: Radiocarbon dates from Late Bronze Age cremations

### **Pit 227**

3.6.5 To the north of the cremation cemetery was a single sub-circular pit (**227**). This had steeply sloping sides, with a concave base, measuring 1.08m long, 0.88m wide and 0.35m deep. It was filled by a single deposit (228) which was a dark reddish brown, silty sand. A significant deposit of Late Bronze Age pottery, consisting of 122 sherds (1786g), had been placed in this pit, mainly in a single pile of large sherds (plate 7). In addition two struck flints (which appear to be residual) and 99g of animal bone were recovered from the pit.



### ***Deposits in Barrow 1 ditch***

- 3.6.6 The basal deposits from the Barrow 1 ditch are discussed in section 3.4 above, as these originate during the Early Bronze Age. However, within the secondary fills were several deposits which contained large quantities of Middle and Late Bronze Age artefacts. These are summarised in Table 4 below. Initially 1m wide slots were excavated across the ditch, before the uppermost fill (241), which contained relatively few finds, was removed by machine. This enabled the excavation of finds rich layers in 1m sections, each divided in two down the centre line of the ditch. This methodology allowed the collection of a comprehensive assemblage of material, and the analysis of its distribution (Figs. 6a-f).

Master no	Description	Contexts	Pottery weight (g)	Flint number	Bone weight (g)	Number of Small finds
246	Basal fills	50, 51, 246, 247, 248, 269, 272, 275, 283, 284, 291, 292, 297, 372, 401, 427, 430, 432, 435, 436, 437, 438, 442, 443, 444, 448, 449	56	132	1710	0
441	Finds rich layer	441, 447	77	43	999	0
370	Finds rich layer	298, 370, 371, 426, 429, 431, 434	156	222	1342	1
268	Finds rich layer	61, 268, 282, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 397, 398, 399, 400	971	2894	13000	9
245	Finds rich layer	245, 337, 367	202	251	874	1
244	Finds rich layer	244, 331, 333, 335, 339, 341, 343, 345, 347, 349, 350, 351, 353, 355, 357, 358, 359, 361, 363, 366, 369,	1642	374	4214	7
243	Layer over finds rich layer	48, 243, 274, 330, 332, 336, 338, 340, 342, 344, 346, 348, 352, 354, 356, 360, 362, 365, 368	439	310	1728	0
241	Final fill	226, 241, 266, 271, 273, 242, 267, 281, 293, 296, 334, 364, 425, 428, 433, 440, 446	442	534	785	0
<b>Total</b>	-	-	<b>3985</b>	<b>4760</b>	<b>24652</b>	<b>18</b>

Table 4: Summary of deposits filling the ditch of Barrow 1, with quantification of finds.

- 3.6.7 Deposit (370) extended around the south-western part of the barrow ditch. It was a mid to dark greyish brown, silty sand, which was up to 0.64m thick. Deposit (268) spread around the eastern side of the barrow ditch, consisting of a mid brownish grey, silty sand, with a depth of up to 0.40m.
- 3.6.8 Deposit (245) was only identified in a small area on the north-west side of the barrow ditch. It was a mid orangey brown, silty sand, which measured up to 0.24m thick. This was overlain by the much more extensive deposit (244), which was a dark brownish

grey, silty sand. Deposit (244) had a maximum thickness of 0.15m. Deposit 243 overlay deposit 244 and was a mid orangey grey, silty sand, with a thickness of up to 0.55m.

- 3.6.9 The total quantity of finds from these deposits (table 4) is quite large, with the flint assemblage being the largest recovered from any single feature in this region, outside of Grimes Graves. Although the quantity is greater, the characteristics of the flint assemblage are typical of Later Bronze Age assemblages from the region (App. C.3). Over 20kg of animal bone were recovered from the finds rich fills. This material shows that cattle were the most prevalent animal, with sheep/goat, pig and horse also present.
- 3.6.10 The pottery consisted largely of abraded, smaller sherds, suggesting that it may have weathered elsewhere, before being deposited in the ditch. This pottery as a mixture of Middle and Late Bronze Age types (together with some residual Early Bronze Age). It has been suggested that the Late Bronze Age pottery exhibits some Middle Bronze Age characteristics and thus it may represent a transitional assemblage (App. C.6). This would suggest that the material in the barrow ditch dates to the Middle Bronze Age and the earlier part of the Late Bronze Age. Thus, these deposits appear to have formed gradually over a period of time, with the pottery within them reflecting this.
- 3.6.11 There were clearly concentrations of material at points around the circuit of the ditch (Figs. 6a-f). These concentrations correspond across all material types, with an increase in any one artefact type usually being reflected in an increase of all other artefact types. The small find assemblage from these deposits (Table 5) is also large for deposits of this date. It indicates that craft activities were taking place in the local area.

Layer master no	Small finds
246	none
441	none
370	Chalk spindle whorl (SF32)
268	Bone pins (SF9, SF19), Bone awl (SF20), Bone spatula (SF33), Chalk spindle whorls (SF10, SF11), Chalk ?weight (SF17), ?perforated chalk object (SF35), stone ?gaming counter (SF21)
245	Bone pin (SF24)
244	Bone pins (SF5, SF31) Perforated bone pin (SF25), bone awls (SF23, SF27), Chalk spindle whorl (SF28), chalk object (SF8)
243	none
241	none

Table 5: Small finds from deposits in Barrow 1 ditch

### 3.7 Period 3.2 Middle Iron Age to Romano-British

- 3.7.1 No finds of Middle or Late Iron Age date were made. However, three Roman ditches were identified (Fig. 2). These ditches did not contain Roman pottery, but they were on the same alignment as a series of Roman ditches identified during the excavations of the Fordham bypass (Fig. 8).

#### ***Ditch 139***

- 3.7.2 Ditch **139** (Fig. 2) continued from the eastern edge of excavation for 32m, on an east-north-east to west-south-west orientation, before terminating. A single slot was excavated across the terminal of this ditch, which showed that it gradually shallowed, suggesting the current end was not a true terminal, but marks the point beyond which

the ditch was truncated by ploughing. Ditch **139** measured up to 0.74m wide and 0.18m deep, with gently sloping sides and a concave base. It was filled by (138), a mid greyish brown, silty sand. Two sherds (16g) of residual Early and Middle Bronze Age pottery, two residual struck flints (38g) and 31g of animal bone were found within this ditch.

#### ***Ditch 456***

- 3.7.3 Ditch **456** (Fig.2) began close to the eastern edge of excavation and continued for 80m before terminating. It was on the same alignment as ditches **139** and **109** and was not excavated.

#### ***Ditches 109 (cuts 109, 156, 158, 194, 219, 294) 217 and 160***

- 3.7.4 A further ditch (**109**, Fig. 2) on the same east-north-east to west-south-west orientation as ditches **139** and **456**, extended from the eastern edge of excavation for 110m, before continuing beyond the southern limit of the site. It measured between 0.40m and 1.10m wide, with a depth of 0.10m to 0.32m. A single deposit filled this feature, which was a mid greyish brown, silty sand, from which no finds were recovered. This ditch clearly cut the upper fill of Barrow 1, implying that the barrow ditch had filled to that level by the Roman period.
- 3.7.5 Ditch **217** (Fig. 2) extended for 2.2m at right angles to ditch **109**, continuing beyond the limit of excavation. The fills of ditches **217** and **109** were very similar and it seems likely that they were contemporary. Ditch **217** measured 0.65m wide and 0.24m deep, with steeply sloping sides and a concave base. It was filled by a single deposit (216), which was a mid greyish brown, silty sand, from which no finds were recovered.
- 3.7.6 Ditch **160** was directly to the south of ditch **109**, although the relationship between them was not clear. Ditch **160** was heavily truncated and was totally ploughed away in places. It survived to a depth of 0.18m, with a width of 0.70m in the single slot excavated. Ditch **160** was filled by (159), a mid reddish brown silty sand, which contained no finds.

### **3.8 Undated and Natural Features**

- 3.8.1 A series of undated features, including tree throws and animal burrows, were identified across the site. Few finds were retrieved from these features, therefore several similar features were not excavated.

#### ***Burnt Flint Pits 128, 263, 278 and 280***

- 3.8.2 Four small circular or sub-circular pits were identified across the site (Fig. 3), each of which contained a significant quantity of burnt flint. Although no pottery was recovered from any of these pits, it is likely that they are of Bronze Age date on typological grounds. The pits had steeply sloping sides and flat bases, with diameters between 0.37m and 0.72m and depths between 0.05m and 0.24m. Each was filled by a single deposit (127, 262, 277, 279), which was a mid/dark greyish brown, silty sand. In addition a thick primary deposit (265) was recorded in pit **263**, which consisted of a very dark brownish grey, silty sand. Finds from these features were extremely limited, consisting of 26g of animal bone from feature **128**. The quantities of burnt stone and flint from each pit are listed in Table 6 below.



Cut	Fill	Material	Count	Weight (kg)
128	127	Burnt flint	72	2.10
128	127	Burnt sandstone	4	0.12
263	262	Burnt flint	184	4.60
263	262	Burnt sandstone	102	8.20
278	277	Burnt flint	88	1.20
279	280	Burnt flint	12	0.20
279	280	Burnt stone	12	0.70

Table 6: Quantification of burnt stone from pits **128**, **263**, **278** and **280**

### ***Tree throws 152, 154 and 163***

- 3.8.3 Three tree throws (**152**, **154**, **163**, Fig.2) were located close to each other near to the junction between ditches **109** and **217**. The tree throws were all irregular in plan and profile, with lengths between 1.22m and 1.94m and depths between 0.15m and 0.50m. They were each filled by a dark reddish-brown, silty sand (151, 153, 161). In addition there was a primary fill (162), consisting of a mid reddish brown silty sand, in tree throw **163**. No finds were recovered from any of these features.

### ***Tree throw 108***

- 3.8.4 A single tree throw (**108**, Fig. 2) was excavated within the interior of Barrow 2. This was irregular in plan, with moderately sloping sides and a flat base. It was 1.90m long, 1.12m wide and 0.26m deep. A single deposit (107) filled this feature, a dark greyish brown silty sand, from which a single struck flint (58g) was recovered.

### ***Tree throws 143, 144 and 146***

- 3.8.5 Three tree throws were located in a broad group to the north-east of Barrow 2 (Fig. 2). They were all irregular in plan and profile, with lengths between 1.35m and 2.10m and depths between 0.02 and 0.32m. Each was filled by a single deposit (145, 172, 173), which were mid grey brown silty sands. There were no finds from any of the features in this group.

### ***Tree throw 251***

- 3.8.6 Tree throw **251** was located close to natural hollow **255**. It was irregular in plan and profile, with a length of 2.24m, a width of 0.96m and a depth of 0.33m. It was filled by a single deposit (250), which was a mid yellowish grey, silty sand. No finds were found within this feature.

### ***Burrow 257***

- 3.8.7 Within the ditch of Barrow 1, burrow **257** was excavated, c. 2m to the south-west of the disturbed central burial **416**. Burrow **257** was irregular in plan, with vertical and undercutting sides. It was filled by deposit (256), a mid greyish brown, silty sand. A single piece of poorly preserved lava quern (SF 6) was recovered.

### ***Natural Hollow 255***

- 3.8.8 A large natural solution hollow (**255**) was recorded to the north of, and cut by, the Barrow 1 ditch. This was also excavated during the evaluation (**71**), where it was shown to be 1.80m deep. Hollow **255** measured up to 19m wide and over 35m long, extending

beyond the excavated area to the north. It was filled by a series of silty sand deposits, none of which contained any finds.

#### ***Natural Hollow 289***

- 3.8.9 In the north-west corner of the excavation area was natural hollow **289**. This was irregular in plan and continued out of the excavation area to the north and west. It had a visible length of 8.50m, a width of 6.56m and a maximum excavated depth of 0.61m. The hollow had irregular sides and an uneven base. The primary fill of the hollow (288) was a dark reddish brown silty sand. Overlaying this was deposit (287), which was a mid yellowish orange silty sand. The upper fill (286), which filled the majority of the feature, was a mid greyish orange silty sand. The only finds from this feature were three struck flints (73g) from the upper fill.

#### ***Plough scar 234***

- 3.8.10 A small, presumably modern, plough scar (**234**) was excavated within the interior of Barrow 1. It produced two sherds (4g) of Beaker pottery.

### **3.9 Finds Summary**

- 3.9.1 A quantification of artefacts can be found in Appendix B, while full reports can be found in Appendix C.

#### ***Small finds from graves***

- 3.9.2 A copper alloy knife-dagger (SF 36) and a cremated pierced bone object (SF 37) were recovered from Collared Urn burial **103**. In addition, a small fragment of jet or jet-like material, likely to be part of a bracelet (SF 38) was found within burial **416**.

#### ***Late Bronze Age small finds***

- 3.9.3 Late Bronze Age small finds from Barrow 2 included a total of ten bone objects, comprising complete or partial examples of two needles, four pins, three awls and a spatula. In addition, eight worked stone objects were recovered, including four chalk spindle whorls, three chalk weights or pendants and a decorated possible gaming counter. Two small, un-identifiable fragments of copper alloy were also retrieved, along with a small fragment of iron from an upper fill of the Barrow 1 ditch.

#### ***Roman coin***

- 3.9.4 A single unstratified Roman coin (SF 3) was recovered. The coin could not be identified.

#### ***Quern Stone***

- 3.9.5 A single bag of highly degraded Niedermendig lava (SF 6) was recovered from a burrow (**257**) within the interior of Barrow 1. The assemblage comprised many small rounded pieces with no surviving worked surfaces. It may originally have been a single fragment (total weight 91g) of a quern or millstone, of Roman to medieval date.
- 3.9.6 A single fragment of puddingstone quern (SF 14) was recovered from layer 268 (context 310), within the fill of the Barrow 1 ditch. It is up to 96mm long, 74mm wide and 48mm thick, with a weight of 403g. Part of the grinding surface survives, which is almost flat, along with a small section of the original outside of the quern. It is unclear whether this is part of a rotary or saddle quern. With the small surviving exterior part being curved, this could be a fragment of a circular rotary quern, although the lack of a

drop (as expected for a lower stone) or rise (for an upper stone) in the grinding surface toward this edge makes this less likely.

- 3.9.7 Hertfordshire puddingstone rotary querns are usually Romano-British in date, although there are also Iron Age examples. A saddle quern made from this material is known from a Middle-Late Bronze Age water-hole at Stansted in Essex (Cooke *et al* 2008).

#### ***Flint***

- 3.9.8 The lithic assemblage from Turner's Yard comprises 5,577 pieces of struck flint, one polished greenstone axe, eleven fragments of other worked stone and just under 48kg of unworked burnt stone fragments. Over 85% of the struck flint was recovered from the fills of the Barrow 1 ditch with a further 10% coming from a single pit (**101**), which also contained the ground stone axe fragment. The largest quantities of unworked burnt stone, comprising just under half of the total, were recovered from the Barrow 1 ditch, although substantial amounts, over a third of the total, came from four pits, which contained no struck flint or other dating evidence

#### ***Early and Middle Bronze Age Pottery***

- 3.9.9 A sizeable fragmented assemblage of Beaker, Early Bronze Age/Collared Urn and Deverel-Rimbury wares were recovered from the site. The Beaker component was significant because of its variability of decoration and form as well as its relative magnitude, whilst the ostensibly plain Early and Middle Bronze Age components were less impressive both qualitatively and quantitatively. At the same time, there was a degree of material overlap or ambiguity between the Early and Middle Bronze Age types as both shared similar fabrics as well as comparable plain body forms. The assemblage of Early and Middle Bronze Age pottery comprised 633 sherds weighing 2006g (MSW 3.2g).

#### ***Late Bronze Age***

- 3.9.10 A total of 558 sherds (4446g) of Late Bronze Age pottery were recovered from the excavations, displaying a mean sherd weight (MSW) of 8.0g. The pottery was recovered from 77 contexts relating to a small number of features and deposits, with the largest and most significant assemblages deriving from Barrow 1 and pit **227** (collectively accounting for 98.8% of the pottery by weight). This material has been assigned to the Plainware phase of the Post Deverel-Rimbury (PDR) ceramic tradition, dating to the Late Bronze Age c. 1150-800 BC.

#### ***Fired Clay***

- 3.9.11 Only two contexts contained any fired clay, both from the fills of the Barrow 1 ditch. Deposit (244) contained four fragments (48g) of fired clay with a soft, pale orange fabric with yellow buff surfaces, moderate chalk and sand inclusions. Deposit (322) contained four abraded fragments (4g) of fired clay with a hard red fabric and moderate grog inclusions. None of these fragments has any surviving form or surfaces.

### **3.10 Environmental Summary**

- 3.10.1 Reports on the ecofacts can be found in appendix D and are summarised below.

#### ***Human Skeletal Remains***

- 3.10.2 In total, two inhumations (Skeletons 410 and 416), an urned cremation burial (103), twenty urned cremation deposits (118, 120, 122, 148, 149, 167, 175, 176, 178, 192, 196, 203, 206, 212, 215, 221, 224, 230, 231 and 260) and two fragments of

disarticulated, unburnt human bone, underwent osteological analysis. In addition, another feature was also interpreted as a cremation pit, based on its form, charcoal-rich fill and location (within the cremation cemetery), although no bone was actually recovered. The human remains recovered span from the Late Beaker period to the Late Bronze Age.

#### ***Faunal Remains***

- 3.10.3 A total of 25.2 kg of faunal material was recovered from the excavation. Six hundred and four fragments of animal bone were recovered with 363 identifiable to species (60% of the total sample). Faunal material was recovered from Late Neolithic, Early and Late Bronze Age contexts.

#### ***Environmental Remains (Rachel Fosberry)***

- 3.10.4 The charred plant assemblage from Turner's Road, Fordham consists of a background scatter of charred cereal grains with occasional weed seeds and tubers of onion-couch grass. This would appear to be a common assemblage for Bronze Age burial sites.

## 4 DISCUSSION AND CONCLUSIONS

### 4.1 Beaker Pit 101

- 4.1.1 Pit **101** contained a large assemblage of both Beaker pottery (176 sherds, 586g) and struck flint (490 pieces). Pits containing Beaker pottery are known from across East Anglia (e.g. Garrow 2006), and much of the rest of Britain. These pits are generally considered to represent more than simple rubbish disposal and have been found associated with barrows elsewhere (e.g. Garrow 2006, 119).
- 4.1.2 A further pit, containing 27 Beaker sherds (167g), along with five struck flints, was identified in area A1 (adjacent to the current site) of the Fordham bypass excavations (Mortimer 2005). Also nearby, at Dimmock's Cote Quarry, Wicken, c. 9km to the east of the current site, two pits containing Beaker pottery were identified, both of which only contained small quantities of pottery (Gilmour 2014).
- 4.1.3 The amount of flint within the Turner's yard pit (490 pieces, or 539 pieces when those from the three throw which disturbed it are included), is large for a pit of this date and the presence of a polished greenstone axe fragment is also unusual. In his review of ten Beaker pit sites in East Anglia, Garrow lists only one pit with more than 500 struck flints, at Trowse (Garrow 2006, 128). Here a half sectioned pit contained 7kg of struck flint (almost a third of the 1286 struck flints from the entire excavation area) and only a single sherd of Beaker pottery (Ashwin and Bates 2000, 145-147). The quantity of pottery in the Fordham pit is also large, with 176 sherds (568g) recovered.
- 4.1.4 The larger than normal quantity of material in pit **101** does not necessarily imply that the process which led to the deposition of this material were different to other Beaker pits. By the Beaker period the practice of deliberately depositing material in pits was well established, having begun during the Early Neolithic. Current understanding suggests the mechanism for deposition of material in these pits appears to have remained constant during the Neolithic. It seems to have involved collecting selected material from middens and placing it in pits dug for the purpose of receiving the deposit (Garrow *et al* 2006).
- 4.1.5 There is the potential to further examine the relationship between pit and midden depositional contexts within this area, as a midden of the same date as pit **101** was excavated on the Fordham Bypass project (Mortimer 2005). This midden, located in Area B of the excavations, contained 481 struck flints, together with 205 sherd (624g) of pottery.

### 4.2 Barrow 1

- 4.2.1 The construction history and sequence of use and disuse of Barrow 1 is of particular interest, spanning in excess of 1,000 years. The sequence began with a burial (416), which, although heavily disturbed by burrowing, appears to have been a classic Beaker burial. After this the barrow proper was constructed, with the digging of a large circular ditch. Shortly afterwards a second inhumation (410) was dug into the bottom of the ditch. After it went out of use a significant quantity of Later Bronze Age material accumulated within the partially in-filled ditch.

#### ***Primary burial 416***

- 4.2.2 The individual, a middle-aged adult male (Appendix D1), was interred on their left side in a crouched position, possibly accompanied by a beaker and a jet-like bracelet. This burial has been radiocarbon dated to 1903-1744 cal. BC (SUERC-44497; 3501 ± 29BP). It is unfortunate that this burial was heavily disturbed, probably by a subsequent

foxes's den, resulting in poor preservation of human bone and artefacts. The presence of a single sherd of post-medieval pottery in one of the lower spits from the burial suggests the burrowing occurred at or after this date and the fact that foxes chose this location to burrow suggests that there was a surviving mound.

- 4.2.3 Similar burials have been recorded throughout East Cambridgeshire, perhaps most notably c. 5km to the south-east of the present site, at Waterhall Farm, Chippenham. Here at least 11 individuals were interred in five graves in the top of a natural mound (Martin and Denston 1977). Re-use of the same graves led to some of the inhumations being disturbed, but all *in-situ* remains were crouched burials. Radiocarbon analysis of one of the primary burials returned a date of 1950-1750 cal. BC (HAR-3880; 3520 ± 70) (CHER 07448a). This mound is part of the Chippenham barrow cemetery, a group of at least ten barrows spread over c. 1.5km.

#### **Barrow 1 ditch and burial 410**

- 4.2.4 Around two centuries after the primary burial, a large ditch was excavated around the grave. It would seem likely therefore that this burial had been marked in some way, perhaps with a smaller turf mound. A similar chronology was observed at the Snailwell barrows, where a Collared Urn cremation within one of the barrow mounds was sealed by chalk from the later excavation of a ditch around it (Lethbridge 1950, 33).
- 4.2.5 The Barrow 1 ditch had an internal diameter of c.27m and measured up to 5.87m wide and 1.54m deep. It is difficult to be certain about the form of this barrow, which had been ploughed away completely. There were no obvious tip lines observed to suggest whether spoil from the excavation of the ditch was placed internally or externally. It would seem most likely that there was a berm between the ditch and any external or internal bank or mound. The position of the Late Bronze Age cremation cemetery, with the closest deposit being c. 6m from the barrow ditch, could suggest that there was a bank outside the ditch and that the cemetery was located up against this, or that further cremations were cut into it and are now lost.
- 4.2.6 The truncated remains of a cow skull were recorded laying on the surface of the natural geology within the interior of Barrow 1. This may well have been placed in a shallow pit, or potentially on the ground surface, and then covered by any mound or bank. A similar deposit was noted within a barrow at Snailwell, where an 'ox skull' was located just beneath the ground surface (Lethbridge 1950, 34). Three cow skulls were had also been placed into the top of a well in area B of the Fordham Bypass excavations, which were dated to 1460-1310 calBC (Mortimer 2005). The reason why cow skulls appear to have been deposited in this way is not known, however, it has long been argued that cattle had a symbolic as well as economic role in Bronze Age society (e.g. Piggott 1962a, Davis and Payne 1993).
- 4.2.7 Shortly after the excavation of the barrow ditch, a burial (410) was cut into its base. Bone from this individual, a young adult, returned a radiocarbon date of 1666-1509 cal. BC (SUERC-44496; 3306 ± 27BP). Interring an individual in the base of a barrow ditch is not a common occurrence, although there are other examples. At Twyford Down, Hampshire, the remains of 38 individuals were recovered from a single barrow, 19 of which were inhumations, with the rest cremations (Walker and Farwell 2000). Several of the inhumations were located in the base of the barrow ditch, cutting the primary fill and part of the secondary fill (*ibid.* 13).
- 4.2.8 The position of the individual within the grave is also unusual. However, a very similar burial was excavated at Broom, Bedfordshire. Although this was not radiocarbon dated,



the grave was cut by an Iron Age pit, and it is possible this burial is of similar date (N. Dodwell pers. comm.).

### ***Deposits filling the ditch of Barrow 1***

- 4.2.9 The deposits which filled the ditch of Barrow 1 can be divided into three main groups; the primary fills, a group of artefact-rich fills overlaying these and the final sealing deposits. The primary fills (246) contained relatively few finds and represent natural silting deposits which gradually began to fill the ditch. The final sealing deposit (241) was similar and also contained few finds. The upper fill was likely to be the result of natural in-filling, but also the ploughing of the site from the medieval period onwards. The middle fills however (243, 244, 245, 268, 370, 441), are of greater interest, as these contained a significant finds assemblage.
- 4.2.10 The way in which the artefact-rich material was deposited is of particular importance. The mixed assemblage of pottery, flint, animal bone and small finds recovered from these deposits is what would be expected from a domestic midden. A Later Bronze Age settlement site is known from the adjacent Fordham bypass excavations (Mortimer 2005), and it is possible that refuse from here was being deposited in and around the ditch of Barrow 1. This interpretation may be supported by the apparently gradual accumulation of finds within the deposits. The finds were spread fairly evenly throughout the majority of the deposits, which were up to 0.64m thick.
- 4.2.11 However, given the large quantity of finds present, some of which were in a good functional condition, it is also possible that this material represents acts of deliberate deposition. The tradition of deliberate deposition of material within pits was well established across Britain during the Neolithic and Beaker periods (e.g. Garrow 2006) and so it is not difficult to imagine this practice continuing into the Later Bronze Age.
- 4.2.12 It may be that the deposit reflects a combination of these two formation process, with the material being collected from middens elsewhere and then placed in the barrow ditch. This would be a reflection of the processes suggested for many earlier pits. This interpretation could be supported by the fact that there are clear spacial concentrations of artefacts. The abraded nature of the pottery present could also suggest that it had weathered elsewhere, prior to deposition.
- 4.2.13 The quantity of struck flint recovered is extremely large for this period and far above that found on settlement sites in this region. The assemblage is the largest from a single later prehistoric feature in the Eastern region, outside of Grimes Graves. The large proportion of struck flint within the collection of material may also be partly the result of the processes created the deposit. Pottery and bone may well have weathered away on middens, while the flint survived much better.
- 4.2.14 The wider landscape setting of this barrow deposit is of some interest. The Fordham bypass excavations revealed spreads of material of Early Neolithic, Late Neolithic, Early Bronze Age and Early Iron Age date, which have been interpreted as the remains of middens (Mortimer 2005).

## **4.3 Barrow 2**

- 4.3.1 Barrow 2 was constructed to the north-east of Barrow 1. It was smaller with an internal diameter of 18.3m and the ditch had a maximum width of 4.24m and a depth of 0.96m deep. Close to the centre of this barrow was a cremation in a Collared Urn (**103**). This appears to have been the primary burial associated with the barrow, a finding which is relatively unusual in Cambridgeshire (Law 2008, 113). Nevertheless, there are some parallels. At North Fen, Sutton, a similar inverted Collared Urn covered the cremated

remains of an individual (Connor 2009). This burial also contained a plano-convex flint knife-dagger, mirroring the bronze knife found at Fordham.

- 4.3.2 Examples of Primary Collared Urn burials closer to Fordham include one from Snailwell, which was accompanied by three flint knives (Lethbridge 1950) and one from Chippenham (Leaf 1936).
- 4.3.3 The condition of the Collared Urn from Fordham was unfortunately very poor, so it is not clear if the cremated remains inside had been placed in an organic container, or if there had been a cover over the mouth of the urn prior to deposition. Inclusion of a knife-dagger is unusual. Longworth lists 30 examples of Collared Urns from Britain and Ireland deposited with bronze daggers or knives (1984, 57), but none of these fall into Gerolff's (1975) knife-dagger category (see Appendix C.1).

#### 4.4 The Late Bronze Age Cremation Cemetery

- 4.4.1 There is a perceived lack of Late Bronze Age burials of any type within the archaeological record in Britain (Brück 1995, Harding 2000, 75). With an increase in radiocarbon dating this is beginning to change (e.g. Gilmour 2009, 21), but clearly human remains are under-represented during this period. A number of reasons have been suggested for this, with Brück (1995) suggesting that it is related to other social changes occurring at this period.
- 4.4.2 The situation is further complicated by some older excavations referring to Middle Bronze Age cremation cemeteries as Late or Later Bronze Age cemeteries. This is due to the development of pottery chronologies distinguishing the Middle from Late Bronze Age being relatively recent.
- 4.4.3 The fragment of cranium found with Late Bronze Age domestic material within Barrow 1 can be included within a growing corpus of similar finds on domestic sites of this date (e.g. Phillips and Mortimer 2012). Such scattered disarticulated remains, mixed with other domestic material, or seemingly deliberately placed in significant positions, have been interpreted as remains of individuals that had undergone excarnation (Brück 1995).
- 4.4.4 These disarticulated remains contrast with occasional finds of Late Bronze Age inhumation burials, such as that from Dimmock's Cote, Wicken, c. 9km to the north-east of Turner's Yard (Gilmour 2009). Here a very tightly crouched inhumation burial was radiocarbon dated to 1130-900 cal. BC (SUERC-21616; 2845 ± 40 BP).
- 4.4.5 A number of isolated Late Bronze Age cremations have recently been identified across the region. A single cremation was identified at Clay Farm, Trumpington, Cambridgeshire, which returned a radiocarbon date of 1056-833 cal. BC (Phillips and Mortimer 2012). This unurned cremation was isolated from any other contemporary features and contained a total of 160g of bone. Also, at Puddlebrook Playing Fields, Haverhill, Suffolk, two unurned cremations dated 1260-990 cal. BC (SUERC-30006; 2905 ± 35BP) and 930-800 cal. BC (SUERC-30005; 2720±35BP) were recorded (Muldowney 2010). These two features were located close to each other. Although there were no other contemporary features, a probable barrow was located 200m to the north-east. Neither contained a large amount of bone, with one containing 108.5g and the other a similar quantity (*ibid*, 7).
- 4.4.6 A further two unurned cremations have been identified at the Sandpits, Station Road, Lakenheath, Suffolk (Craven 2004). These were found close to a possible mound covering an Early Bronze Age burial and Collared Urn cremation. Nearby was a cremation in a Middle Iron Age pot and five other probably Middle Iron Age cremations.



Charcoal from the two Late Bronze Age cremations was radiocarbon dated to 1130-890 cal. BC (2845 ± 40 BP) and 1220-970 cal. BC (2895 ± 40BP). Neither Late Bronze Age cremation contained large amounts of bone, with total weights of 2g and 170g.

- 4.4.7 There are some possible urned Late Bronze Age cremations known in the region, including one from Maidscross, Lakenheath, Suffolk (Needham 1995). This cremation, in a Post Deverel-Rimbury bowl, passed to the British Museum in 1979, having been discovered in the 19th century and residing in the Victoria and Albert Museum since 1901, thus it is not entirely certain that the bone was originally deposited in the bowl (*ibid.*). Needham (1995, 168-170) lists a total of 15 cremations containing post Deverel-Rimbury pottery from England, although none of these are radiocarbon dated and most are not secure associations. A more recent discovery, at Newmarket Road, Burwell, of a cremation in a Post-Deverel-Rimbury bowl, has yet to be radiocarbon dated (Fletcher 2014).
- 4.4.8 Larger Late Bronze Age cremation cemeteries are harder to parallel, with Brück (1995, 245) stating that they are absent from the archaeological record. At Eye Kettleby, Leicestershire, four cremations were found in a small group, along with a possible fifth c. 70m away (Finn 2011, 95). This group was located at the edge of the excavated area and could have been part of a larger cemetery. It was associated with both Late Bronze Age settlement activity and Early Bronze Age ring ditches, which had Middle Bronze Age cremations inserted into them. Only one of the burials was radiocarbon dated, returning a date of 980-810 cal. BC (OxA-11324). The potential fifth, more isolated cremation, may have been urned and it was suggested that the bone in another had been deposited in an organic container (*ibid.*, 95). The four cremations contained totals of >1g, 96g, 219g and 375g of bone, while only 1g was recovered from the potential fifth cremation.
- 4.4.9 At Chelmsford Park and Ride, Sandon, Essex, two Late Bronze Age cremation groups were excavated, associated with a contemporary settlement (Holloway and Brooks 2007). A total of 33 cremation related features were recorded, three of which contained no bone, with the rest containing between 1g and 822g, the average being 79.8g (Boghi 2007, 9). None contained any pottery, with the only potential burial goods being cremated animal bone (fish, sheep/goat and cattle), recovered from three of the features.
- 4.4.10 A further recently excavated example at Pinden Quarry, Dartford, Kent, included sixteen pits containing cremated human remains (Hayden *et al.* 2014). Each of these contained only a small amount of cremated bone, with a minimum of six individuals represented. Five of the pits containing cremated bone produced radiocarbon dates in the period 990-930 cal. BC (*ibid.*, 20).
- 4.4.11 A further possible example was excavated at Twyford Down, Hampshire, where ten potential cremation related features were excavated (Walker and Farwell 2000, 17). All of these contained Late Bronze Age pottery, although cremated bone was only recovered from two of the deposits. The features were arranged in a linear pattern, and were close to a barrow, with associated Middle Bronze Age cremations (*ibid.* 17). This example is certainly different to that at Fordham and the other examples listed above, as the features contained pottery.
- 4.4.12 It has been suggested that in Kent there is a general shift from cremations being associated with ring-ditches in the Middle Bronze Age towards burials associated with field boundaries, or being isolated in the Late Bronze Age (Allen *et al.* 2012, 109). However, this is certainly not the case in East Anglia, where Middle Bronze Age

cemeteries associated with both barrows (e.g. Leaf 1940; Evans and Knight 1998) and field systems (e.g. Patten 2004; Cooper and Edmonds 2007; Gilmour *et al* 2010) are known. Similarly, for the Late Bronze Age, although the picture is far less clear, there are cremations associated both with ring-ditches and settlements (as listed above).

- 4.4.13 Ultimately, there are too few Late Bronze Age cremation cemeteries known, to allow detailed discussion regarding their positioning and layout. However, it is clear that a general pattern in their layout is emerging. When compared to a Middle Bronze Age cremation cemetery, Late Bronze Age examples are much more spread out. They have the appearance of a Middle Bronze Age cemetery that has been expanded, as though placed on a balloon and then inflated. Late Bronze Age cemeteries do not contain urned cremations, the deposits contain less cremated bone and there is rarely inter-cutting.
- 4.4.14 The number of known Late Bronze Age burials in Britain (both inhumations and cremations) has dramatically increased in recent years and it is becoming clearer that burial practice does change in the Late Bronze Age, but in a less marked way than previously assumed. Inhumations continue, as do isolated cremations and flat cremation cemeteries. However, the frequency of these appears to diminish. In addition, scattered remains, potentially indicative of excarnation, continue to be found in domestic assemblages. As with the Middle Bronze Age, Late Bronze Age burials can be associated with settlements, or earlier barrows, while some remain isolated.

## 4.5 The Chalk-land Fen Edge Landscape

- 4.5.1 In common with the Waterhall Farm inhumations (Martin and Denston 1977), the initial Beaker burial (416) was positioned on top of a slight natural rise in the underlying chalk. This was later significantly exaggerated by the digging of a large ditch, forming Barrow 1. It seems most likely that Barrow 2 was constructed at a similar time, or slightly later. However, burial (416) was not the first funerary activity in this area; two Early Neolithic burials were situated just to the north of the current site (Fig. 8 and 9). Despite the prolonged time gap (as much as two millennia) between these Neolithic burials and the Beaker inhumation (416), it is entirely possible that this area had maintained some significance, or at least attracted people for similar reasons at different times.
- 4.5.2 Potentially, it was the combination of a natural rise, accentuated by the natural hollow to the north and west, which first encouraged people to use this area for burial. The Early Neolithic burials were located adjacent to a solution hollow and may have been buried in response to this feature suddenly appearing (Mortimer 2005). Burial (416) was then positioned on the rise, and subsequently exaggerated by the construction of Barrow 1. Barrow 2 was constructed alongside this and together these two barrows may have influenced the position of the Middle Bronze Age cremation cemetery on the bypass to the north (Fig. 8 and 9). The Late Bronze Age cremation cemetery was then located in reference to Barrow 1, probably up against an external bank.
- 4.5.3 Both of the barrows at Fordham are on high ground overlooking the fen edge, to the west of the site. Along the route of the bypass to the north-west is evidence for Bronze Age occupation and finally, in Area B, a burnt mound on the fen edge (Fig. 8). This has become a familiar landscape pattern within other parts of Cambridgeshire, such as Bradley Fen, Peterborough (Mark Knight pers. comm.), but has not previously been identified on the chalk-land fen edge of East Cambridgeshire.
- 4.5.4 It also seems likely that much of this activity is focused along boundaries which are no longer visible. A line of Late Bronze Age pits on the Fordham Bypass excavations appear to respect a boundary on a north-west to south-east orientation (Mortimer

2005). If this boundary is continued then the Middle Bronze Age cremation cemetery also respects it (Mortimer 2005). The late Bronze Age cremation cemetery at Turner's Yard appears to respect a boundary on a north-east to south-west alignment, perpendicular to that on the adjoining section of the bypass excavations. It may also be that earlier features are also aligned along these boundaries, with both early neolithic and Beaker burials within close proximity, along with the two barrows.

## **4.6 Significance**

- 4.6.1 This excavation has demonstrated that funerary activity took place on the site at Turners Yard sporadically over a millennium. It has not only added to our knowledge of Earlier Bronze Age burial practice, but has also revealed a very rare Late Bronze Age cremation cemetery. The presence of a large assemblage of Late Bronze Age domestic material is also of significance. These results, combined with those from the adjacent bypass excavations, have the potential to vastly increase our understanding of prehistory relating to the chalk-land fen edge of Cambridgeshire.

## APPENDIX A. CONTEXT INVENTORY

<i>Context</i>	<i>Cut</i>	<i>Master Number</i>	<i>Category</i>	<i>Feature Type</i>	<i>Phase</i>
100	101	101	fill	pit	1.3
101	101	101	cut	pit	1.3
102	103	103	fill	cremation	2.1
103	103	103	cut	cremation	2.1
104	103	103	fill	cremation	2.1
105	0	101	finds unit		1.3
106	106	2	cut	ditch	2.1
107	108	108	fill	tree throw	5
108	108	108	cut	tree throw	5
109	109	109	cut	ditch	3.2
110	106	2	fill	ditch	2.1
111	106	2	fill	ditch	2.1
112	106	2	fill	ditch	2.1
113	109	109	fill	ditch	3.2
114	115	101	fill	tree throw	1.3
115	115	101	cut	tree throw	1.3
116	118	118	fill	cremation	2.3
117	118	118	fill	cremation	2.3
118	118	118	cut	cremation	2.3
119	120	118	fill	cremation	2.3
120	120	118	cut	cremation	2.3
121	122	118	fill	cremation	2.3
122	122	118	cut	cremation	2.3
123	126	2	fill	ditch	2.1
124	126	2	fill	ditch	2.1
125	126	2	fill	ditch	2.1
126	126	2	cut	ditch	2.1
127	128	128	fill	pit	2
128	128	128	cut	pit	2
129	132	2	fill	ditch	2.1
130	132	2	fill	ditch	2.1
131	132	2	fill	ditch	2.1
132	132	2	cut	ditch	2.1
133	133	2	cut	ditch	2.1
134	133	2	fill	ditch	2.1
135	133	2	fill	ditch	2.1
136	0	0	VOID		0
137	0	0	VOID		0
138	139	139	fill	ditch	3.2
139	139	139	cut	ditch	3.2
140	140	2	cut	ditch	2.1
141	140	2	fill	ditch	2.1
142	140	2	fill	ditch	2.1
143	143	143	cut	tree throw	5
144	144	144	cut	tree throw	5
145	145	145	fill	tree throw	5

<i>Context</i>	<i>Cut</i>	<i>Master Number</i>	<i>Category</i>	<i>Feature Type</i>	<i>Phase</i>
146	146	145	cut	tree throw	5
147	148	118	fill	cremation	2.3
148	148	118	cut	cremation	2.3
149	149	118	cut	cremation	2.3
150	149	118	fill	cremation	2.3
151	152	152	fill	tree throw	5
152	152	152	cut	tree throw	5
153	154	154	fill	tree throw	5
154	154	154	cut	tree throw	5
155	156	109	fill	ditch	3.2
156	156	109	cut	ditch	3.2
157	158	109	fill	ditch	3.2
158	158	109	cut	ditch	3.2
159	160	160	fill	ditch	3.2
160	160	160	cut	ditch	3.2
161	163	163	fill	tree throw	5
162	163	163	fill	tree throw	5
163	163	163	cut	tree throw	5
164	148	118	fill	cremation	2.3
165	149	118	fill	cremation	2.3
166	167	118	fill	cremation	2.3
167	167	118	cut	cremation	2.3
168	168	2	cut	ditch	2.1
169	168	2	fill	ditch	2.1
170	168	2	fill	ditch	2.1
171	167	118	fill	cremation	2.3
172	143	143	fill	tree throw	5
173	144	144	fill	tree throw	5
174	175	118	fill	cremation	2.3
175	175	118	cut	cremation	2.3
176	176	0	cut	pit	0
177	176	0	fill	pit	0
178	178	118	cut	cremation	2.3
179	178	118	fill	cremation	2.3
180	175	118	fill	cremation	2.3
181	175	118	fill	cremation	2.3
182	176	118	fill	cremation	2.3
183	176	118	fill	cremation	2.3
184	187	2	fill	ditch	2.1
185	187	2	fill	ditch	2.1
186	187	2	fill	ditch	2.1
187	187	2	cut	ditch	2.1
188	178	118	fill	cremation	2.3
189	178	118	fill	cremation	2.3
190	178	118	Fill	Cremation	2.3
191	192	118	fill	cremation	2.3
192	192	118	cut	cremation	2.3
193	192	118	fill	cremation	2.3

<i>Context</i>	<i>Cut</i>	<i>Master Number</i>	<i>Category</i>	<i>Feature Type</i>	<i>Phase</i>
194	194	109	cut	ditch	3.2
195	194	109	fill	ditch	3.2
196	196	118	cut	cremation	2.3
197	196	118	fill	cremation	2.3
198	200	2	fill	ditch	2.1
199	200	2	fill	ditch	2.1
200	200	2	cut	ditch	2.1
201	196	118	fill	cremation	2.3
202	202	0	finds unit		0
203	203	118	cut	cremation	2.3
204	203	118	fill	cremation	2.3
205	206	118	fill	cremation	2.3
206	206	118	cut	cremation	2.3
207	206	118	fill	cremation	2.3
208	209	118	fill	cremation	2.3
209	209	118	cut	cremation	2.3
210	203	118	fill	cremation	2.3
211	212	118	fill	cremation	2.3
212	212	118	cut	cremation	2.3
213	0	0	finds unit		0
214	215	118	fill	cremation	2.3
215	215	118	cut	cremation	2.3
216	217	217	fill	ditch	3.2
217	217	217	cut	ditch	3.2
218	219	109	fill	ditch	3.2
219	219	109	cut	ditch	3.2
220	215	118	fill	cremation	2.3
221	215	118	cut	cremation	2.3
222	221	118	fill	cremation	2.3
223	224	118	fill	cremation	2.3
224	224	118	cut	cremation	2.3
225	221	118	fill	cremation	2.3
226	0	241	finds unit		2.3
227	227	227	cut	pit	2.3
228	227	227	fill	pit	2.3
229	230	118	fill	cremation	2.3
230	230	118	cut	cremation	2.3
231	231	118	cut	cremation	2.3
232	231	118	fill	cremation	2.3
233	234	234	fill	plough scar	5
234	234	234	cut	plough scar	5
235	230	118	fill	cremation	2.3
236	0	0	layer	layer	0
237	106	2	fill	ditch	2.1
238	106	2	fill	ditch	2.1
239	126	2	fill	ditch	2.1
240	126	2	fill	ditch	2.1
241	249	241	fill	ditch	2.3



<i>Context</i>	<i>Cut</i>	<i>Master Number</i>	<i>Category</i>	<i>Feature Type</i>	<i>Phase</i>
242	249	241	fill	ditch	2.3
243	249	243	fill	ditch	2.3
244	249	244	fill	ditch	2.3
245	249	245	fill	ditch	2.3
246	249	246	fill	ditch	2.1
247	249	246	fill	ditch	2.1
248	249	246	fill	ditch	2.1
249	249	249	cut	ditch	2.1
250	251	251	fill	tree throw	0
251	251	251	cut	tree throw	0
252	255	255	fill	hollow	5
253	255	255	fill	hollow	5
254	255	255	fill	hollow	5
255	255	255	cut	natural hollow	5
256	257	257	fill	burrow	0
257	257	257	cut	burrow	0
258	0	253	layer	layer	2.1
259	260	118	fill	cremation	2.3
260	260	118	cut	cremation	2.3
261	0	261	finds unit	finds unit	2.1
262	263	263	fill	pit	2
263	263	263	cut	pit	2
264	264	249	cut	ditch	2.1
265	263	263	fill	pit	2
266	270	241	fill	ditch	2.3
267	270	241	fill	ditch	2.3
268	270	268	fill	ditch	2.3
269	270	246	fill	ditch	2.1
270	270	249	cut	ditch	2.1
271	264	241	fill	ditch	2.3
272	264	246	fill	ditch	2.1
273	276	241	fill	ditch	2.3
274	276	243	fill	ditch	2.3
275	278	246	fill	ditch	2.1
276	276	249	cut	ditch	2.1
277	278	278	fill	pit	2
278	278	278	cut	pit	2
279	280	280	fill	pit	2
280	280	280	cut	pit	2
281	285	241	fill	ditch	2.3
282	285	268	fill	ditch	2.3
283	285	246	fill	ditch	2.1
284	285	246	fill	ditch	2.1
285	285	249	cut	ditch	2.1
286	289	289	fill	natural hollow	5
287	289	289	fill	natural hollow	5
288	289	289	fill	natural hollow	5
289	289	289	cut	natural hollow	5

<i>Context</i>	<i>Cut</i>	<i>Master Number</i>	<i>Category</i>	<i>Feature Type</i>	<i>Phase</i>
290	290	249	cut	ditch	2.1
291	290	246	fill	ditch	2.1
292	290	246	fill	ditch	2.1
293	290	241	fill	ditch	2.3
294	294	109	cut	ditch	3.2
295	294	109	fill	ditch	3.2
296	402	241	fill	ditch	2.3
297	402	246	fill	ditch	2.1
298	402	370	fill	ditch	2.3
299	402	246	fill	ditch	2.1
300	0	268	fill	ditch	2.3
301	0	268	fill	ditch	2.3
302	0	268	fill	ditch	2.3
303	0	268	fill	ditch	2.3
304	0	268	fill	ditch	2.3
305	0	268	fill	ditch	2.3
306	0	268	fill	ditch	2.3
307	0	268	fill	ditch	2.3
308	0	268	fill	ditch	2.3
309	0	268	fill	ditch	2.3
310	0	268	fill	ditch	2.3
311	0	268	fill	ditch	2.3
312	0	268	fill	ditch	2.3
313	0	268	fill	ditch	2.3
314	0	268	fill	ditch	2.3
315	0	268	fill	ditch	2.3
316	0	268	fill	ditch	2.3
317	0	268	fill	ditch	2.3
318	0	268	fill	ditch	2.3
319	0	268	fill	ditch	2.3
320	0	268	fill	ditch	2.3
321	0	268	fill	ditch	2.3
322	0	268	fill	ditch	2.3
323	0	268	fill	ditch	2.3
324	0	268	fill	ditch	2.3
325	0	268	fill	ditch	2.3
326	0	268	fill	ditch	2.3
327	0	268	fill	ditch	2.3
328	0	268	fill	ditch	2.3
329	0	268	fill	ditch	2.3
330	0	243	fill	ditch	2.3
331	0	244	fill	ditch	2.3
332	0	243	fill	ditch	2.3
333	0	244	fill	ditch	2.3
334	0	241	fill	ditch	2.3
335	0	244	fill	ditch	2.3
336	373	243	fill	ditch	2.3
337	373	245	fill	ditch	2.3

<i>Context</i>	<i>Cut</i>	<i>Master Number</i>	<i>Category</i>	<i>Feature Type</i>	<i>Phase</i>
338	0	243	fill	ditch	2.3
339	0	244	fill	ditch	2.3
340	0	243	fill	ditch	2.3
341	0	244	fill	ditch	2.3
342	0	243	fill	ditch	2.3
343	0	244	fill	ditch	2.3
344	0	243	fill	ditch	2.3
345	0	244	fill	ditch	2.3
346	0	243	fill	ditch	2.3
347	0	244	fill	ditch	2.3
348	0	243	fill	ditch	2.3
349	0	244	fill	ditch	2.3
350	0	244	fill	ditch	2.3
351	0	244	fill	ditch	2.3
352	0	243	fill	ditch	2.3
353	0	244	fill	ditch	2.3
354	0	243	fill	ditch	2.3
355	0	244	fill	ditch	2.3
356	0	243	fill	ditch	2.3
357	0	244	fill	ditch	2.3
358	0	244	fill	ditch	2.3
359	0	244	fill	ditch	2.3
360	0	243	fill	ditch	2.3
361	0	244	fill	ditch	2.3
362	0	243	fill	ditch	2.3
363	0	244	fill	ditch	2.3
364	0	241	fill	ditch	2.3
365	373	243	fill	ditch	2.3
366	0	244	fill	ditch	2.3
367	373	245	fill	ditch	2.3
368	0	243	fill	ditch	2.3
369	0	244	fill	ditch	2.3
370	0	370	fill	ditch	2.3
371	0	370	fill	ditch	2.3
372	373	246	fill	ditch	2.1
373	373	249	cut	ditch	2.1
397	0	268	fill	ditch	2.3
398	0	268	fill	ditch	2.3
399	0	268	fill	ditch	2.3
400	0	268	fill	ditch	2.3
401	402	246	fill	ditch	2.1
402	402	249	cut	ditch	2.1
403	0	406	finds unit		0
404	406	406	fill	grave	1.3
405	406	406	skeleton	animal	1.3
406	406	406	cut	grave	1.3
407	406	406	fill	grave	1.3
408	406	406	fill	grave	1.3

<i>Context</i>	<i>Cut</i>	<i>Master Number</i>	<i>Category</i>	<i>Feature Type</i>	<i>Phase</i>
409	406	406	fill	grave	1.3
410	412	410	HSR	grave	2.1
411	412	410	fill	grave	2.1
412	412	410	cut	grave	2.1
413	406	406	fill	grave	1.3
414	406	406	fill	grave	1.3
415	406	406	fill	grave	1.3
416	406	406	HSR	grave	1.3
417	406	406	fill	grave	1.3
418	0	418	fill	burrow	5
419	0	418	fill	burrow	5
420	0	418	fill	burrow	5
421	0	418	fill	burrow	5
422	0	418	fill	burrow	5
423	0	418	fill	burrow	5
424	0	418	fill	burrow	5
425	402	241	fill	ditch	2.3
426	402	370	fill	ditch	2.3
427	402	246	fill	ditch	2.1
428	402	241	fill	ditch	2.3
429	402	370	fill	ditch	2.3
430	402	246	fill	ditch	2.1
431	402	370	fill	ditch	2.3
432	402	246	fill	ditch	2.1
433	439	241	fill	ditch	2.3
434	439	370	fill	ditch	2.3
435	439	246	fill	ditch	2.1
436	439	246	fill	ditch	2.1
437	439	246	fill	ditch	2.1
438	439	246	fill	ditch	2.1
439	439	249	cut	ditch	2.1
440	445	241	fill	ditch	2.3
441	445	441	fill	ditch	2.3
442	445	246	fill	ditch	2.1
443	445	246	fill	ditch	2.1
444	445	246	fill	ditch	2.1
445	445	249	cut	ditch	2.1
446	450	241	fill	ditch	2.3
447	450	441	fill	ditch	2.3
448	450	246	fill	ditch	2.1
449	450	246	fill	ditch	2.1
450	450	249	cut	ditch	2.1
451	0	0	layer	topsoil	0
452	0	0	layer	subsoil	0
453	0	0	layer	natural	0
454	103	103	fill	cremation	1.3
455	103	103	fill	cremation	1.3
456	456	456	cut	ditch	3.2

## APPENDIX B. FINDS QUANTIFICATION

Context	Material	Object Name	Weight in kg
3	Bone		0.104
4	Flint	burnt	0.151
4	Bone		0.068
13	Flint	burnt	0.019
24	Ceramic	Vessel	0.005
25	Ceramic	Vessel	0.002
26	Ceramic	Vessel	0.004
37	Ceramic	Vessel	0.001
38	Ceramic	Vessel	0.004
46	Ceramic	Vessel	0.006
47	Ceramic	Vessel	0.022
47	Flint	burnt	0.273
47	Bone		0.008
48	Ceramic	Vessel	0.036
48	Flint	burnt	0.043
48	Bone		0.004
50	Ceramic	Vessel	0.003
50	Flint	burnt	0.089
50	Bone		0.496
51	Flint	burnt	0.016
51	Bone		0.003
54	Ceramic	Vessel	0.003
57	Flint	burnt	0.031
60	Bone		0.036
61	Ceramic	Vessel	0.009
61	Flint	burnt	0.010
61	Bone		0.078
72	Bone		0.032
74	Ceramic	Vessel	0.053
74	Flint	burnt	0.033
74	Bone		0.042
100	Flint		7.432
100	Bone		0.414
100	Stone		2.194
100	Stone	axehead	0.086
100	Ceramic	Vessel	0.578
100	Bone	cremated	0.020

Context	Material	Object Name	Weight in kg
100	Flint	burnt	0.145
102	Flint		0.003
102	Ceramic	Vessel	0.155
105	Flint		0.146
105	Ceramic	Vessel	0.014
107	Flint		0.053
112	Bone		0.007
112	Flint		0.043
114	Flint		0.296
114	Ceramic	Vessel	0.067
114	Bone		0.003
116	Bone		0.002
123	Bone		0.053
123	Ceramic	Vessel	0.018
127	Bone		0.026
129	Flint		0.257
129	Stone		0.242
129	Bone		0.047
129	Fired clay		0.006
129	Ceramic	Vessel	0.010
130	Flint		0.011
130	Bone		0.093
135	Flint		0.091
135	Bone		0.086
138	Flint		0.038
138	bone		0.031
138	Ceramic	Vessel	0.017
142	Flint		0.172
142	bone		0.082
142	Ceramic	Vessel	0.004
143	Flint		0.165
158	Bone		0.000
170	Flint		0.166
170	Bone		0.098
174	Flint		0.003
174	Bone		0.002



Context	Material	Object Name	Weight in kg
177	Flint		0.002
184	Flint		0.046
185	Bone		0.005
188	Ceramic	Vessel	0.006
190	Bone		0.001
198	Bone		0.258
198	Flint		0.273
202	Ceramic	Vessel	0.019
220	Flint		0.002
220	Ceramic	Vessel	0.005
224	Bone		0.792
225	Bone		0.005
226	Ceramic	Vessel	0.018
228	Flint		0.174
228	Bone		0.099
228	Ceramic	Vessel	1.799
233	Ceramic	Vessel	0.006
235	Flint		0.014
235	Ceramic	Vessel	0.001
235	Glass	Vessel	0.003
241	Flint		3.324
241	Ceramic	Vessel	0.119
241	Bone		0.005
242	Bone		0.081
242	Ceramic	Vessel	0.007
243	Flint		0.594
243	Bone		0.041
243	Ceramic	Vessel	0.014
244	Flint		1.684
244	Bone		0.021
244	Ceramic	Vessel	0.444
244	Fired clay		0.059
245	Flint		2.287
245	Bone		0.023
245	Ceramic	Vessel	0.016
246	Flint		1.483
246	Bone		0.271

Context	Material	Object Name	Weight in kg
247	Flint		2.080
256	Lava	Stone	0.092
259	Flint		0.011
259	Bone	burnt	0.005
261	Bone		0.250
261	Flint		0.002
262	Flint	burnt	0.188
266	Bone		0.009
266	Flint		0.127
266	Ceramic	Vessel	0.005
267	Bone		0.142
267	Flint		0.057
267	Ceramic	Vessel	0.034
268	Bone		1.176
268	Flint		0.063
268	Ceramic	Vessel	0.061
268	Flint	burnt	0.002
271	Bone		0.193
271	Shell		0.003
271	Ceramic	Vessel	0.007
271	Flint		0.616
272	Ceramic	Vessel	0.021
273	Flint		0.490
273	Shell		0.002
273	Ceramic	Vessel	0.041
273	Bone		0.017
274	Flint		0.279
275	Flint		0.023
277	Flint		0.017
281	Ceramic	Vessel	0.010
281	Bone		0.047
281	Flint		0.021
282	Flint		0.026
282	Bone		0.304
282	Ceramic	Vessel	0.006
282	Flint		0.021
286	Flint		0.073

Context	Material	Object Name	Weight in kg
291	Flint		0.097
292	Flint		0.162
292	Bone		0.072
292	Shell		0.006
293	Bone		0.226
293	Ceramic	Vessel	0.012
293	Flint		0.096
293	Ceramic	Vessel	0.005
296	Flint		0.244
296	Ceramic	Vessel	0.023
296	Bone		0.017
297	Ceramic	Vessel	0.028
297	Flint		0.082
298	Ceramic	Vessel	0.034
298	Flint		0.222
298	Bone		0.183
298	Flint		0.049
299	Bone		0.559
299	Flint		0.087
300	Flint		0.717
300	Bone		0.147
300	Ceramic	Vessel	0.027
301	Flint		0.524
301	Bone		0.378
301	Ceramic	Vessel	0.031
301	Shell		0.049
302	Bone		0.126
302	Flint		0.476
303	Flint		1.239
303	Shell		0.019
303	Bone		0.256
303	Ceramic	Vessel	0.003
304	Flint		0.382
304	Shell		0.019
304	Ceramic	Vessel	0.023
304	Bone		0.189
305	Flint		0.432
305	Ceramic	Vessel	0.021

Context	Material	Object Name	Weight in kg
305	Bone		0.284
305	Shell		0.010
306	Flint		0.762
306	Bone		0.387
306	Ceramic	Vessel	0.003
307	Flint		1.522
307	Shell		0.004
307	Bone		0.066
308	Bone		0.110
308	Flint		1.701
309	Flint		1.040
309	Bone		0.200
310	Flint		2.760
310	Ceramic	Vessel	0.014
310	Bone		0.500
310	Flint		0.554
311	Bone		0.709
311	Ceramic	Vessel	0.054
311	Flint		6.265
312	Bone		0.405
312	Flint		5.481
312	Ceramic	Vessel	0.042
313	Bone		1.120
313	Flint		8.266
313	Ceramic	Vessel	0.055
314	Ceramic	Vessel	0.028
314	Bone		0.722
314	Flint		4.715
315	Bone		0.371
315	Ceramic	Vessel	0.057
315	Flint		5.395
316	Flint		1.623
316	Ceramic	Vessel	0.005
316	Bone		0.232
317	Flint		1.784
317	Ceramic	Vessel	0.148

Context	Material	Object Name	Weight in kg
317	Bone		0.909
318	Flint		0.293
318	Bone		0.307
318	Ceramic	Vessel	0.013
319	Ceramic	Vessel	0.042
319	Bone		0.267
319	Flint		0.729
320	Bone		0.797
320	Ceramic	Vessel	0.069
320	Shell		0.002
320	Flint		0.053
320	Flint		1.550
321	Bone		0.274
321	Ceramic	Vessel	0.007
321	Flint		0.547
322	Bone		0.447
322	Flint		2.501
322	Ceramic	Vessel	0.021
322	Fired clay		0.006
323	Flint		1.361
323	Bone		0.081
323	Ceramic	Vessel	0.013
324	Bone		0.383
324	Flint		3.525
324	Ceramic	Vessel	0.096
325	Bone		0.108
325	Flint		0.354
326	Flint		0.508
326	Ceramic	Vessel	0.084
326	Bone		0.309
327	Flint		0.161
327	Bone		0.020
327	Bone		0.093
328	Flint		0.063
328	Bone		0.006
329	Flint		0.418
329	Ceramic	Daub	0.010

Context	Material	Object Name	Weight in kg
329	Bone		0.058
330	Bone		0.039
330	Ceramic	Vessel	0.010
330	Flint		0.096
331	Bone		0.273
331	Ceramic	Vessel	0.164
331	Flint		0.451
331	Flint	burnt	0.016
332	Flint		0.301
332	Bone		0.067
332	Ceramic	Vessel	0.012
333	Flint		0.415
333	Ceramic	Vessel	0.065
333	Bone		0.944
334	Bone		0.017
336	Flint		0.500
336	Ceramic	Vessel	0.153
336	Bone		0.323
337	Flint		1.913
337	Ceramic	Vessel	0.117
337	Bone		0.138
338	Flint		0.264
338	Ceramic	Vessel	0.021
338	Bone		0.152
339	Flint		0.085
339	Ceramic	Fired clay	0.198
339	Bone		0.323
339	Ceramic	Vessel	0.008
340	Ceramic	Vessel	0.019
340	Bone		0.035
340	Flint		0.261
341	Flint		0.741
341	Ceramic	Vessel	0.107
341	Bone		0.258
342	Flint		0.124
343	Flint		0.366
343	Bone		0.017
343	Ceramic	Vessel	0.030



Context	Material	Object Name	Weight in kg
344	Flint		0.291
344	Ceramic	Vessel	0.012
344	Bone		0.010
345	Bone		0.121
345	Flint		4.873
345	Ceramic	Fired clay	0.081
345	Ceramic	Vessel	0.117
346	Bone		0.022
346	Flint		0.096
347	Flint		0.214
347	Ceramic	Vessel	0.013
347	Bone		0.179
348	Ceramic	Vessel	0.035
349	Bone		0.008
349	Flint		0.015
350	Ceramic	Vessel	0.022
350	Bone		0.021
350	Flint		0.159
351	Bone		0.024
351	Flint		0.040
352	Bone		0.039
352	Flint		0.452
352	Ceramic	Vessel	0.019
353	Ceramic	Vessel	0.052
353	Bone		0.177
353	Flint		1.668
353	Ceramic	Daub	0.052
354	Flint		0.064
354	Bone		0.014
355	Flint		0.520
355	Ceramic	Vessel	0.011
356	Flint		0.079
356	Ceramic	Vessel	0.025
356	Bone		0.005
357	Flint		0.295
357	Bone		0.064
357	Ceramic	Vessel	0.028

Context	Material	Object Name	Weight in kg
358	Flint		0.023
358	Ceramic	Vessel	0.008
358	Bone		0.012
359	Flint		0.004
359	Bone		0.036
359	Ceramic	Vessel	0.017
360	Flint		0.412
360	Bone		0.254
360	Ceramic	Vessel	0.030
361	Flint		1.090
361	Bone		1.177
361	Ceramic	Vessel	0.239
361	Bone	awl	0.040
362	Flint		0.507
362	Ceramic	Vessel	0.017
362	Bone		0.471
363	Ceramic	Vessel	0.208
363	Stone	Hammer	0.157
363	Stone		0.056
363	Flint		1.613
363	Bone		0.217
364	Ceramic	Vessel	0.011
364	Ceramic		0.067
364	Flint		0.388
365	Bone		0.166
365	Ceramic	Vessel	0.056
365	Flint		0.314
367	Flint		3.174
367	Ceramic	Vessel	0.069
367	Bone		0.713
368	Flint		0.669
368	Ceramic	Vessel	0.016
368	Bone		0.090
369	Flint		0.417
369	Ceramic	Fired clay	0.025
369	Ceramic	Vessel	0.109

Context	Material	Object Name	Weight in kg
369	Bone		0.342
370	Flint		0.260
370	Ceramic	Vessel	0.034
370	Bone		0.185
371	Flint		0.455
371	Ceramic	Vessel	0.019
372	Bone		0.285
372	Flint		0.319
372	Ceramic	Vessel	0.007
397	Flint		2.502
397	Ceramic	Vessel	0.036
397	Bone		0.580
398	Flint		2.824
398	Ceramic	Vessel	0.006
398	Bone		0.416
398	Shell		0.002
399	Flint		2.241
399	Ceramic	Vessel	0.006
399	Bone		0.165
400	Flint		0.592
400	Bone		0.382
401	Bone		0.032
403	Bone		0.008
404	Bone		0.000
405	Bone		0.004
405	Bone		0.025
407	Flint		0.013
407	Bone		0.004
408	Flint		0.011
408	Bone		0.014
409	Flint		0.016
409	Bone		0.031
413	Bone		0.053
414	Ceramic	Vessel	0.006
414	Bone		0.033
415	Flint		0.018
415	Ceramic	Vessel	0.004

Context	Material	Object Name	Weight in kg
415	Bone		0.002
416	Bone		0.010
417	Ceramic	Vessel	0.004
418	Bone		0.005
419	Bone		0.021
422	Bone		0.003
423	Bone		0.007
424	Bone		0.012
424	Flint		0.002
425	Flint		0.181
425	Bone		0.002
425	Ceramic	Vessel	0.026
426	Flint		1.631
426	Ceramic	Vessel	0.024
426	Bone		0.188
427	Bone		0.001
428	Flint		0.287
428	Ceramic	Vessel	0.057
428	Bone		0.016
429	Flint		1.684
429	Bone		0.583
429	Ceramic	Vessel	0.014
430	Flint		0.062
431	Ceramic	Vessel	0.006
432	Flint		0.004
433	Flint		0.019
434	Flint		0.638
434	Ceramic	Vessel	0.025
434	Bone		0.183
435	Bone		0.002
435	Flint		0.016
436	Bone		0.166
436	Flint		0.419
441	Flint		0.448
441	Ceramic	Vessel	0.020
441	Bone		0.760
444	Bone		0.058

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Context	Material	Object Name	Weight in kg
444	Flint		0.012
447	Bone		0.239
447	Flint		0.042
447	Ceramic	Vessel	0.057
451	Flint		0.504

## APPENDIX C. FINDS REPORTS

### C.1 Small Finds from Burials

*By Nick Gilmour*

#### **Barrow 1, Central Burial 416**

- C.1.1 A small fragment of a jet or jet-like object was recovered from the burial of a middle-aged adult male. Bone from this individual returned a radiocarbon date of 1903 – 1744 cal. BC (SUERC-44497; 3501 ± 29BP)

#### ***Jet or jet-like object***

- C.1.2 The object is made from a jet-like material, most likely cannal coal or shale, given its wood-like appearance and brown colour, although this cannot be ascertained with any certainty without further tests (e.g. Sheridan and Davis 2002 ). The fragment measures 18.9mm long, and has a slightly oval profile. In section it measures 8.4mm wide and 6.8mm thick. The function of this object is unclear. Assuming it originally formed a complete circle, it would have had an internal diameter of c. 60mm. This is too large to be a 'pulley-ring' but equally quite small for a bracelet or armlet. In any case, jet bracelets from Early Bronze Age contexts are difficult to parallel. Only one shale example could be found; an armlet from Redlands Farm, Stanwick, Northamptonshire, on the arm of a female crouched burial, radiocarbon dated to 1890–1630 cal. BC (3450 ± 45 BP; BM-2833) (Bradley 2007). However, this has a more complex form, with two grooves running around the outside and a larger internal diameter at 71mm. There are however, several examples of bronze D-sectioned armlets of this date, which are of similar form (Needham 2000).
- C.1.3 It seems most likely it is part of a bracelet, perhaps intended for use by a child. Although the precise function of this object cannot be ascertained with certainty, it fits with a pattern of a broad range of forms and materials used for Early Bronze Age personal ornamentation.

#### **Barrow 2, Collared Urn Burial 103**

- C.1.4 A single blade (SF 36) was recovered from within a Collared Urn (SF 1), together with a cremated bone needle (SF 37). These accompanied the cremated remains of a possible male individual, probably a young adult (Appendix D.1). Bone from this individual failed to produce a consistent radiocarbon date.

#### ***Knife-Dagger***

- C.1.5 The blade (SF 36, Plate 8) appears to be manufactured from copper alloy and in places retains a bright golden copper colour. The tip and edges of the blade are more highly corroded.
- C.1.6 The blade measures 62mm in length, with a maximum width of 28mm and thickness of 2.75mm. It therefore fits within Gerloff's (1975) classification as a knife-dagger, being less than 10cm in length (*ibid.* p159). It has two rivet holes and a straight hilt-mark. It has a flat cross section and weighs 15g. Although the blade is slightly asymmetrical, it is not worn, and the surviving surface is highly polished. The exception to this is on one side of the butt, where a series of slight scratches are present.



- C.1.7 No rivets were present and there is no clear damage to the rivet holes. There was also no sign of a hilt or pommel. The blade has not been heated and so it would appear that the hilt had been removed prior to deposition, but the knife-dagger was not placed on the cremation pyre. It is also possible that the blade was deposited shortly after production.

***Pierced bone object***

- C.1.8 A cremated bone object (SF 37), probably a dress accessory, was found amongst the cremated human remains. It survived in two fragments, 40.5mm and 18mm long (57mm long when joined). It tapers from 10.0mm wide to 3.6mm wide, the point having presumably been lost. There is a perforation 5mm from the widest end, which is roughly circular, with a diameter of 3.9mm. This object is clearly too wide to have functioned as a needle and is most likely to have been a toggle or dress accessory. The fact that this object is cremated suggests the individual interred in burial pit **103** was clothed when cremated. Similar objects are known from several other Early Bronze Age burials, such as at Upton Lovell, Barrow G2, where at least 41 similar objects were recovered (Annable and Simpson 1964, 49) and were originally interpreted as a decorative fringe to a garment (Piggott 1962b). More locally, around 3.2km away at Snailwell, ten similar pins, nine of which had been perforated, were found (Lethbridge 1950). These were not cremated, but were recovered from adjacent to a Collared Urn containing a cremation, at the centre of one of the barrows (*ibid*, 33). There are several other examples of single finds of such objects, including that from Wimbourne St. Giles, Dorset, which also accompanied a cremation with a dagger (Annable and Simpson 1964, 55).

## C.2 Later Bronze Age Small Finds

*By Chris Howard-Davis*

### **Worked Bone**

- C.2.1 There were, in all, 10 bone artefacts (14 fragments) recovered from the ditch of Barrow 1. All are in fair to good condition, although in all cases, part, or all, of the original surface is eroded. The objects fall into two groups, with pins used, presumably about the person, possibly in hair, but also in clothing. The second group is tools, predominantly awls, used for a number of purposes, including leather-working and a delicate spatulate object that could have been used in textile-working. The majority of bone artefacts are not chronologically sensitive, so that most can be dated only by their stratigraphic position, all but one being from successive layers 244 and 268.
- C.2.2 There were two well-made 'needles', or more probably pins with perforated heads (**1**, **2**), similar to the 'loop-headed' pins seen in some Welsh burials (eg Savory 1980, no342.2) and similar pins in antler are known from burials in Beaker and early Bronze Age barrow groups from Amesbury (see, for instance Moore and Rowlands 1972, pl 3). Their carefully-made heads seem to suggest that they were intended to act as a stop, preventing the pins from passing straight through any fabric or leather into which they were inserted, and both would have been difficult to use in sewing. Alternatively they could have had a cord or thong looped through the perforation, allowing their use in closing bags, and it should be noted that the head of pin **2**, seems to show some sign of wear.
- 1 Complete small spatulate-headed pin or needle, in fair condition, but now in two fragments. Surfaces badly eroded. Trapezoidal head has a central round perforation, c 2mm diameter, with no obvious wear.  
L: 49mm; Diam Shaft: 2.75mm; W head: 6mm; Th head: 1.5mm  
SF19, Cxt 313 (layer 268)
  - 2 Head and shaft fragment of a perforated pin, in good condition, with little erosion of the surfaces. The sub-rectangular head, with a slightly oval perforation, is differentiated from the shaft by a slight shoulder, c 8mm from the top. It is possible that the slightly elongated shape of the perforation is a result of wear.  
L: 29mm; Diam Shaft: 2.5mm; W head: 6mm; Th head: 1mm  
SF25, Cxt 341 (layer 244)
- C.2.3 Pin **3** is, again, very carefully made, being a very fine bone or antler splinter, with a small, almost square head, only a few millimetres in length. It seems unusually fine and would even be unusually fine in a Roman context. Pin **4** is somewhat different, with a relatively thick tapering shaft and a carefully cut but otherwise unmodified rectangular head, now with a high polish, presumably through wear. Objects **5** and **6** are both fragments of pin shaft, both are clearly well-made, and have some areas of high polish, as a result of wear.
- 3 Complete small but eroded pin with parallel-sided shaft. There is a shallow groove c 3mm below the head and above this head flares slightly and has an approximately square cross-section.  
L: 60.5mm; Diam shaft: 1.75mm; W: head: 3mm; Th head: 2.5mm  
SF5, Cxt 244 (layer 244)
  - 4 Shaft and head only, good condition. Incomplete with part of shaft and point missing. For most of its length the pin has an approximately round section, but towards the head it flattens to give a rectangular-sectioned head. Some use polish.  
L: 35mm; W head: 4.5mm; Th head: 2.5mm  
SF 9, Cxt 319 (layer 268)
  - 5 Three joining fragments comprising the point and part of the shaft of a pin. The shaft is now eroded, but retains some patches of polish from use.  
L: 72.5mm; Max diam: 3.5mm  
Cxt 369, SF31(layer244)
  - 6 Two joining fragments, shaft only, both head and point missing. Some wear polish

L: 41.5mm; Max diam: 4mm  
SF24, Cxt 337 (layer 245)

C.2.4 There are two awls (*sensu* Barclay *et al.* 1988, 235), and a third fragmentary example. A robust awl (7) is made from the proximal end of a cow ulna, with the irregularities of the bone clearly intended to be used to allow considerable downward force to be applied in its use. Object 8 is made from a split longbone, the articular end is now lost, but may have originally been retained to provide a handle. A third example (9) retains only the extreme point, but is again clearly made from a split longbone, but could have been used as either a point or an awl.

7 Cow ulna fragment reduced to point at distal end. Good condition, almost complete? Some wear or polish, especially at the point, where there is obvious faceting, and groups of relatively deep parallel scratches, perhaps a tool signature from trimming the bone rather than caused by use.

L: 125mm  
SF27, Cxt 361 (layer 244)

8 Longitudinally split longbone, the narrower end cut to a point, the articular end now badly weathered and damaged. Polished from use, and with marked groups of deep parallel scratches running parallel to the axis of the awl.

L: 83mm; W: 13mm; Th: 7mm  
SF23, Cxt 331 (layer 244)

9 Short fragment of split longbone, carefully trimmed to a point. Fair condition but incomplete.

L: 27mm; W: 13mm; Th: 3.5mm  
SF20, Cxt 314 (layer 268)

C.2.5 Object 10 is a delicate and carefully-made asymmetrical spatula bearing a reasonable resemblance to a group of Late Bronze Age bone objects from North Shoebury in Essex, which has been associated with weaving ([www.finestprospect.org.uk](http://www.finestprospect.org.uk)). More robust spatulae, made from cattle ribs, have long been associated with leather-working (Smith and Simpson 1966, 134-6; Choyke and Schiblen 2007, fig 13), although many Beaker and later Bronze Age examples are made from antler. A robust bone example is amongst the group of late Bronze Age worked bone artefacts from Washingborough, Lincolnshire (Howard-Davis 2009, fig 4.14, object 10). By comparison to these, however, object 10 is a rather more delicate item that could not, presumably, have been used with much force, and thus might seem more suited to textile-working.

10 Finely-made spatula, asymmetrical, but coming to a well-defined point at one end. Fair condition, incomplete, with one end missing. Surfaces eroded.

L: 57mm; W: 17mm; Th: 1.5mm  
SF33, Cxt 306 (layer 268)

### **Worked stone**

C.2.6 In all, there were eight worked stone objects (nine fragments) recovered from the site, all but one of them made from chalk. All are in good condition, but in one or two cases there are hairline cracks visible on the exposed surfaces. The group comprises spindle whorls, possible loom weights, and other small perforated objects, perhaps pendants or weights. Chalk items such as these are easily made, most probably on an *ad hoc* basis (Roe *nd*) and have an extremely long date range, from the Neolithic period to at least the medieval period, if not later (Walton Rogers 1997, 1736). Thus they can be dated only by their stratigraphic position, all being from successive layers 244, 268, and 370.

C.2.7 Object 1 is a small, carefully made spindle whorl. There is a slight ridge around the central perforation, on the upper surface only. Although less regular in outline, with a flattened biconical cross-section, and with the hour-glass perforation somewhat off-centre and rather constricted, 2 is of comparable size to 1, and is thus probably a second spindle whorl. Object 3 is effectively discoidal, but is considerably larger than 1

or **2**, and by comparison with the large collection of medieval stone spindle whorls from York (Walton Rogers 1997), where almost all are between 30-40mm in diameter, might be regarded as too large to serve as a whorl. Object **4** was originally annular, with the central perforation in excess of 17mm in diameter, and seems most likely to be a loom weight. All four objects seem to indicate textile working, but could well reflect the disposal of domestic rubbish rather than a specific concentration of textile-working equipment.

- 1 Almost complete discoidal spindle whorl, now cracked. Carefully made, with a slightly domed upper surface. Some recent damage.  
Diam: 38.5mm; Diam perf: 8mm; Th: 13mm  
SF10, Cxt 310 (layer 268)
- 2 Approximately circular flattened biconical chalk whorl or weight with flattened circumference. The hour-glass perforation is markedly off-centre.  
L: 34mm; W: 32mm; Th: 10mm; Diam perf: 3mm  
SF28, Cxt 363 (layer 244)
- 3 Approximately half of large chalk spindle whorl or loom weight. Discoidal but not of an entirely constant thickness.  
Diam: c 57mm; Th: 17mm  
SF32, Cxt 371 (layer 370)
- 4 Two non-joining fragments chalk annular or bun-shaped object, possibly a loom weight. Markedly hour-glass perforation.  
L: 47mm; W: 28mm; Th: 25mm  
SF11, Cxt 310 (layer 268)

C.2.8 Two more fragments (**5**, **6**) show clear signs of a perforation. Object **5** was clearly originally oval, with a roughly central hour-glass drilled hole, and could have served as a small weight or some sort of bead or pendant, but object **6** is too small for its original shape to be determined. Triangular fragment **7**, has no obvious purpose, but could originally have been round.

- 5 Apparently oval weight with irregular section and off-centre perforation. Hour-glass perforation is noticeably mis-aligned.  
L: 28mm; W: 28mm; Th: 11mm  
SF17, Cxt 317 (layer 268)
- 6 Fragmentary object with possible perforation.  
L: 32.5mm; W: 23mm; Th: 11.5  
SF35, Cxt 322 (layer 268)
- 7 Triangular fragment, possibly approximately one quarter of a discoidal object, there is no indication of any perforation. Surface scratches could be the result of use.  
L: 39mm; W: 28.5mm; Th: 12mm  
SF8, Cxt 244 (layer 244)

C.2.9 The final worked stone object (**10**, Plate 6) is a small oval counter in a fine yellowish sandstone or sandy limestone, quite unlike the chalk used for other stone objects from the site. It is decorated on both sides with fine radiating grooves, presumably scratched with a sharp pointed tool. No obvious parallels have been forthcoming, but its size and decorative nature suggests the possibility that it is a gaming counter, although this is by no means a confident identification. Plain rounded stones of comparable size, tentatively identified as gaming counters, have been noted in Neolithic and Iron Age contexts in Southern Ireland (Johnston 2007) and clay gaming counters are amongst material from the Iron Age settlement at Meare, in the Somerset Levels (Gray and Cotton 1966, 378-9), but they are neither common, nor reported on in any detail until the late Iron Age, when glass counters appear.

- 8 Oval fragment of yellowish, sandy ?limestone. One flat side is inscribed with lines at 90 degrees, which meet in the approximate centre of the face. The quadrants thus created each have a further two radiating lines. The opposite side has a slightly differing arrangement, with the two lines crossing well below the centre of the face, three radiating lines in the two larger quadrants, but only two in the smaller ones, giving the design a passing resemblance to a scallop shell. There are four roughly equidistant lines running around the periphery of the piece.

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L: 25mm; W: 21.5mm; Th: 6.5mm  
SF21, Cxt 315 (layer 268)

***Metalwork***

- C.2.10 There were, in addition two fragmentary copper alloy objects (SF22, SF15), both very poorly preserved, from layers 244 and 268 respectively. Both are around 9mm in maximum dimension, and whilst the former is effectively amorphous, SF15 is a short length of very fine wire, less than 0.5mm in diameter. A small curving fragment of iron, possibly a slender nail with a slightly spatulate head, no more than 16mm in maximum dimension came from a late layer (241).

### C.3 The Struck flint and Unworked Burnt Flint

By Barry Bishop

#### Introduction

- C.3.1 The excavations at Turner's Yard resulted in the recovery of a substantial assemblage of struck flint, worked stone and burnt unworked stone. This report quantifies and assesses the material, and provides a brief chronologically based account of the use of lithic material at the site, based on the preliminary phasing offered by the excavator. It also includes a few observations on the significance of the material and recommendations for potential future research. A full catalogue of the material by individual contexts is presented in a catalogue below and further details of the cores and implements are provided in tables below this; these should be consulted for information relating to detailed spatial and contextual variations in the assemblage.

#### Quantification

	Decorification Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Complete Core	Conchoidal Shatter	Retouched Flake	Core Tool	Total Struck Flint	Stone Axe	Percussive/ Grinding Stone	Other Worked Stone	Burnt Stone (no.)	Burnt Stone (wt:g)
No.	1419	2070	42	59	39	746	730	247	225	5577	1	11	1	1,474	47,981
%	25.4	37.1	0.8	1.1	0.7	13.4	13.1	4.4	4.0	100					

Table 7: Quantification of Lithic Material from Turner's Yard

- C.3.2 The lithic assemblage from Turner's Yard comprises 5,577 pieces of struck flint, one ground stone axe, eleven fragments of other worked stone and just under 48kg of unworked burnt stone fragments (Table 7). Over 85% of the struck flint was recovered from the fills of the Barrow 1 ditch with a further 10% coming from a single pit, (**101**), which also contained the ground stone axe fragment. The largest quantities of unworked burnt stone, comprising just under half of the total, were recovered from Barrow 1, but substantial amounts, over a third of the total, came from four pits which contained no struck flint or other dating evidence. The bulk of the remaining unworked burnt stone, just over 15% of the total, came from pit (**101**). Similarly, the majority of the worked stone fragments, most of which are querns, rubber-stones or hammerstone / pounders, came from the fills of the Barrow 1 ditch.

#### Pre-Bronze Age flintworking at the site

- C.3.3 The earliest evidence for flintworking at the site comes from a small but not insignificant collection of pieces that derive from a blade-based reduction strategy and which can be dated to the Mesolithic or Early Neolithic. Over a hundred blades, many prismatic, were recovered and at least seven of the cores from the site are blade-producing types. Several blades retained edge-damage consistent with utilization and a number of retouched pieces are also likely to date to these periods. These include a serrated blade (from context 325), a piercer made on an obliquely truncated blade (from context 268) and a carefully produced long-end scraper (from context 312), all of which are likely to date to the Mesolithic or Early Neolithic, whilst a small number of end-scrapers



have very finely executed and perfectly arced retouch that is characteristic of Later Neolithic examples.

- C.3.4 No flintwork can with certainty be associated with pre-Bronze Age features, but a few otherwise undated features, such as tree-throw **108** and hollow **289** did produce small assemblages of flintwork of Mesolithic or Neolithic date. Most of this flintwork was instead found as residual material, mainly from within the large and predominantly later assemblages from the fills of the Barrow 1 ditch, but also in low quantities from a range of other later features. Although only representing a very small proportion of that material, taken together the flintwork of Mesolithic and Neolithic date demonstrates a significant and persistent, if not continuous, presence at the site during these periods.

### **Early Bronze Age**

#### ***Pit 101 and tree-throw 115***

- C.3.5 The most notable feature producing Early Bronze Age lithics at the site was pit **101**, which, despite being unremarkable in size, produced an exceptionally large assemblage of lithics, comprising 490 struck flints, a fragment of an exotic stone ground axehead, two quern or grinding-stone fragments and over 7kg of unworked burnt stone (Table 8). A smaller but still substantial and technologically similar assemblage was also recovered from tree-throw **115** which had disturbed the pit and this material is likely to have been redeposited from the pit.

Feature	Decortication Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Complete Core	Conchoidal Shatter	Core Tool	Retouched Flake	Total Struck	Stone Axe	Burnt Stone (no.)	Burnt Stone (wt:g)
Pit 101 (no.)	137	231	7	11	9	21	39	1	34	490	1	269	7,189
Pit 101 (%)	28.0	47.1	1.4	2.2	1.8	4.3	8.0	0.2	6.9	100			
Tree-throw 115 (no.)	5	27	1	1	6	1			8	49		5	48

**Table 8: Quantification of Lithic Material from Pit 101 and Tree-throw hollow 115**

### **Struck Flint**

- C.3.6 The struck flint from these features was made from a mix of rounded water-worn cobbles and relatively unweathered but thermally fractured nodular cobbles that are likely to derive from alluvial and glacial till deposits respectively. The former are present in the gravel terraces of the river Snail which occur to the west of the site, whilst the latter are commonly present within the local surface deposits. The condition of the assemblage is variable but most pieces are in a good and often even sharp condition, suggesting the possibility that, although the assemblage may have been accumulated elsewhere prior to final discard, it had suffered little attrition and is likely to have been deposited not long after manufacture.
- C.3.7 The assemblage is the product of a simple but competently undertaken flake-based industry, typical of assemblages dating to the later third or the first half of the second millennium BC. Nevertheless, there is considerable technological variability within the

assemblage as a whole and its specific characteristics are fluid and not always easy to precisely define. The flakes are generally small and thick and have wide and unmodified or cortical striking platforms with lots of mis-hits being identified. However, a substantial proportion, perhaps a quarter of the flakes, does suggest a much more structured and even systematic approach to reduction. This is typified by well-struck, often relatively thin flakes with narrow striking platforms that are frequently trimmed and sometimes even faceted. There are few blades, but dorsal scar patterns do suggest the repetitive removal of relatively standardized flakes was often achieved.

- C.3.8 The cores, which make up just under 5% of the assemblage, also reflect this dual approach to reduction. There is very little evidence for attempts at pre-shaping beyond simply splitting the nodule. Most are fairly minimally reduced; 14% have five or fewer flakes removed and half have only a single or a keeled platform. One of these latter types has a minimally flaked keeled edge with heavy battering along the edge, and had clearly been used as a chopping tool, although this is the only core-tool that has been identified
- C.3.9 The other cores have been more extensively reduced and although there is no evidence for rejuvenation, platform edges were often maintained by trimming. Even with these, however, flake production tends to be very opportunistic involving numerous platforms and resulting in amorphous or globular shaped cores.
- C.3.10 Retouched flakes account for a relatively high proportion of nearly 8% of the assemblage from these features (Table 9)

	Battered edge Flake	Denticulated Blade	Edge-retouched flake	Knife	Notch	Scraper: circular	Scraper: long-end	Scraper: short-end	Scraper: side	Scraper: side and end	Scraper: thumbnail	Scraper: irregular
Pit <b>101</b>	2	1	11	2	1	1	1		2	3	7	3
Tree-throw <b>115</b>			5					1	1			1

*Table 9: Retouched Flakes from Pit **101** and Tree-throw hollow **115***

- C.3.11 As is commonly encountered in industries of this date, scrapers and simple edge-trimmed flakes dominate the retouched inventory, although a fairly wide variety of other implement types are also present. Most of the edge retouched flakes have lightly blunted edges, consistent with either having been modified to facilitate handling or else to strengthen a sharp edge, and some damage may even have accrued from heavy use. In whichever case, most of these are likely to have been used for cutting tasks. One does differ, however; this comprises a wide and thin flake made from a Lincolnshire-Wolds type 'porcelain-like' flint. It has a faceted striking platform and is comparable to axe-thinning flakes, but it also has inverse semi-invasive shallow scalar retouch around its distal end and it may have been used as a wedge or similar implement. Scrapers are the most numerous type of implement and these account for nearly half of the retouched pieces. Overall they show a distinct lack of standardization and they vary widely in form, suggesting that they may have been put to a number of purposes. The long-end scraper has been resharpened after recortication and is a much earlier piece, probably of Mesolithic or Early Neolithic date, that has been reused. Also of interest are the seven 'thumbnail' scrapers which have semi-invasive retouch

around most of their perimeters and notably homogeneous in their morphology and in the methods of their manufacture. These types are particularly associated with Beaker contexts, where they often form very high proportions of the lithic implements present. The actual use of this particular type remains enigmatic although their diminutive size would suggest their use was restricted to a limited range of tasks, and they have been associated with personal grooming (Edmonds 1995, 140-141). Both knives are narrow and of a similar form to plano-convex types, another classic Early Bronze Age implement, but these are atypical in that they are very minimally retouched.

#### *Stone Axe*

- C.3.12 The ground stone axe consists of a large fragment of fine-grained laminated greyish green stone weighing 84g. It consists of one side of the medial section of an axe, retaining one of the faces and both sides, these being rounded with only a very hint of faceting. The blade or cutting end and its butt are missing and, although the sides are clearly tapering, it is not possible to estimate the axe's original shape in plan or its length. The axe would have been at least 63mm wide and was an estimated 36mm thick at this point along its length. It is very finely ground, almost polished but with a dull surface sheen, and there are no remnant pre-grinding flake scars or any evidence for use or damage. The breaks show some evidence of conchoidal fracture and there is a prominent hinged termination, and the possibility that it was deliberately broken cannot be excluded. It is in a very fresh condition, shows no discernible surface discolouration and appears to have been deposited shortly after fragmentation. Without petrological analysis it cannot be definitively sourced but it is macroscopically comparable to the epidotized tuff 'greenstone' (Group VI) that has its principal source in the central fells of the Cumbrian Lake District.

#### *Worked Stone*

- C.3.13 Two other possibly worked stones were also recovered from pit **101**, both of which consist of sandstone cobbles with smooth worn facets on one side, indicating that they were probably used as rubber-stones.

#### *Burnt Stone*

- C.3.14 The pit also produced a large quantity of unworked burnt stone with just over 7kg being recovered, the second largest quantity from any single feature at the site, excluding the dumps in the Barrow 1 ditch (see Table 10 and discussion, below, for more details).

#### ***Pits 128, 263, 278 and 280***

- C.3.15 These four pits provided no struck flint or other datable material but they have been reported on here due to the similarities in the quantities and composition of the burnt stone included within their fills to that in pit **101** (Table 10). With the exception of the dumps in Ring-ditch 1 (see below), no other features at the site contained anything near the quantities produced by these pits.

Context	Total Burnt Stone (no.)	Total Burnt Stone (%)	Ave. Clast size	% comprising sandstone (no.)	% comprising sandstone (wt)
Pit <b>128</b>	76	2,200	29g	5.3	5.5
Pit <b>263</b>	302	12,991	43g	33.8	63.1
Pit <b>278</b>	88	1,200	13g	0.0	0.0
Pit <b>280</b>	24	900	38g	50.0	77.8

Context	Total Burnt Stone (no.)	Total Burnt Stone (%)	Ave. Clast size	% comprising sandstone (no.)	% comprising sandstone (wt)
Pit <b>101</b>	264	7,172	27g	5.7	26.0

*Table 10: Details of Unworked Burnt Stone from Pits **128, 263, 278, 280**, with that from Pit **101** shown for comparison. (NB. Most of the unworked burnt stone was processed and subsequently discarded on site, and therefore not seen by this author – the figures provided here depend on the notes taken at the time of excavation)*

- C.3.16 The burnt stone included both flint and sandstone and both were present, although in widely varying proportion in all but one of the pits, the exception being pit **278** which only contained flint. Whilst all of the flint had clearly been heated to a very high temperature, causing it to become fire crazed and attain a grey-white colour, it was not always certain that every piece of the sandstone had been definitely burnt; nevertheless, sufficient pieces were cracked and reddened to be persuaded that the majority, if not all, had indeed been burnt. None of this material showed any signs of working, although it is possible that some of the sandstone and even flint could be fragmented querns or grinding equipment, but have lost any worked surfaces. Whatever their precise histories, there are far higher quantities of sandstone present than could be accounted for by incidental incorporation or the random selection of local stone into the hearths, and they had clearly been deliberately gathered and eventually deposited together.

### **The Barrows**

#### *Barrow 1: central grave fills, 406 and disturbance 418*

- C.3.17 The central grave fills of Barrow 1 produced 19 struck pieces with a further flake being recovered from the disturbance to the grave. The only other flintwork possibly associated with the primary phase of this monument was a small trimming flake, found in association with the cattle skull 261. The assemblage from the central grave mostly consisted of competently made small trimming flakes, decortication flakes and flake fragments that represent unusable knapping waste although one piece is retouched, a small flake with an inverse shallow notch cut into its right margin. Most of the pieces are sharp or only very slightly abraded but there are some variations in their condition and none could be refitted. The pieces are technologically homogeneous and consistent with a Later Neolithic or Early Bronze Age date, but it is unlikely that they represent any form of grave goods or offerings. Instead they were most probably residually incorporated from background waste into the grave, leaving it possible, if perhaps unlikely, that they derive from knapping activities associated with the burial rites.

#### *Barrow 2: central cremation pit **103***

- C.3.18 The central cremation pit in Barrow 2 produced only a single struck flint, recovered from its secondary fill. It consists of a small but well struck narrow flake that may have been used as a cortically backed cutting implement. It may be at least broadly contemporary with the cremation, but it is not elaborate and there is nothing else to suggest that it was directly associated with the funerary activity; its recovery from the secondary backfill suggesting it was more likely to have been residually incorporated into the grave.

### ***Later Prehistoric (Middle and Late Bronze Age)***

- C.3.19 The bulk of the later prehistoric flintwork from the site came from the ditch of Barrow 1. Barrow 2 contained a much smaller but still significant assemblage. The cremation cemetery and a few scattered features also provided small quantities of lithic material.

#### ***Barrow 1***

##### ***The assemblages from the fills of Barrow 1 ditch***

- C.3.20 The fills of the Barrow 1 ditch produced the largest lithics assemblages from the site, accounting for over 85% of all the struck flint, just under half of the unworked burnt stone and seven of the eleven fragments of worked stone. It has been divided into four main sub-assemblages, based on the position of the material within the ditch's infilling sequence. These are the primary fills (M246), the middle and main artefact-rich fills of the ditch, much of which were also control-excavated using 1m long sondages (M244, M245, M268, M370, M441), fills overlying the artefact-rich dumps (M243) and the final fills sealing the ring-ditch (M241) (Table 11).

Fill Sequence	Decorification Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Complete Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Struck Total	Struck as % of total from R-D1
Final Fills (no.)	122	234	3	6	4	52	2	62	31	18	534	11.2
<i>Final Fills (%)</i>	22.8	43.8	0.6	1.1	0.7	9.7	0.4	11.6	5.8	3.4	100	
Post-dump fills (no.)	75	107			4	44		43	19	18	310	6.5
<i>Post-dump fills (%)</i>	24.2	34.5			1.3	14.2	0.0	13.9	6.1	5.8	100	
Main fills (no.)	985	1267	6	28	16	605	1	559	137	180	3,784	79.5
<i>Main fills (%)</i>	26.0	33.5	0.2	0.7	0.4	16.0		14.8	3.6	4.8	100	
Primary fills (no.)	30	55	5	3		9	1	19	4	6	132	2.8
<i>Primary fills (%)</i>	22.7	41.7	3.8	2.3		6.8	0.8	14.4	3.0	4.5	100	
Total (no.)	1,212	1,663	14	37	24	710	4	683	191	222	4,760	100
<i>Total Struck (%)</i>	25.5	34.9	0.3	0.8	0.5	14.9	0.1	14.3	4.0	4.7	100	

***Table 11: Struck flint from the fills of the Barrow 1 ditch***

#### ***Description***

- C.3.21 Although detailed metrical and technological attribute analyses have not been undertaken, the technological characteristics of the material are broadly homogeneous both horizontally around the ditch and stratigraphically throughout its fills. The following will therefore present a brief description of the assemblages from the Ring-ditch fills as a single entity.

#### ***Early pieces***

- C.3.22 The material from all fills of the Barrow 1 ditch is dominated by pieces that are technologically characteristic of later second or early first millennium BC industries. Some evidently residual material is also present, however, as is demonstrated by a small number of prismatic blades and blade cores, as well as a few flakes and retouched pieces that are likely to date to the Mesolithic or Neolithic periods. Although representing a reasonable quantity of worked flint, this material forms only a very small



proportion, possibly less than 1% of the total struck flint from the ring-ditch. Contributing a larger proportion, perhaps nearer the order of 10%, are flakes and occasionally cores than are more typical of later third or earlier second millennium BC industries, and which are technologically similar to the assemblage from pit **101**. The most notable pieces are two barbed and tanged arrowheads, one from the main fills (308) and one from the final fills (242). Although these are the most diagnostic Early Bronze Age items, they do lend support to an impression that a small but significant quantity of flintwork of this date was present throughout the fills, which is at least broadly detectable via differences in technology as well as condition, recortication and mineral staining. Unfortunately, none of these differences are absolute and it is therefore difficult to precisely quantify the proportions of this material; but it is important to note that the assemblage from the ditch is not from a single or closely contemporaneous series of knapping episodes, but may have built up over the course of perhaps a few hundred years.

*The Middle-Late Bronze Age material*

- C.3.23 The remainder and by far the larger part of the assemblage from the ring-ditch is characterized by the simple and seemingly random removal of mostly short and thick flakes from pieces of raw materials that rarely showed any evidence for preparation or maintenance. This element of the assemblage can confidently be dated to the later second and perhaps early first millennium BC, it being technologically very comparable to the similar dated assemblages from Clay Farm, Trumpington and Linton Village College. The characteristics of the assemblages from these sites have previously been described in detail (Bishop 2011; forthcoming a), and there is no need at this stage to repeat the technological and metrical analyses for this assemblage beyond presenting a broad description of the material. As with those assemblages, the very basic approaches taken to manufacturing the assemblage means that it is difficult to describe it in the same terms as most other post-glacial assemblages and the basic cataloguing of both debitage and tools follows that employed for the Clay Farm assemblage.
- C.3.24 The raw materials are similar to those used to produce the earlier material found at the site and consist of locally obtainable alluvial cobbles and thermally fractured and flawed but otherwise unrolled nodular cobbles with a mix of rough cortex and often heavily recorticated thermal scars. The cobbles occasionally weigh in excess of 0.5kg and measure over 150mm in maximum size, but for the large part much smaller cobbles and large pebbles were used.
- C.3.25 The assemblage represents the full knapping sequence and includes knapping waste, with cores and decortication flakes being particularly well represented. Flakes form just over 60% of the total assemblage and over two-fifths of these have cortex covering more than half of their dorsal faces. They vary considerably in shape and size, although they are mostly small and short and, despite their small size, tend to be notably thick. Few exceed 50mm in maximum dimension and majority are less than 30mm. Striking platforms are mostly thick and often very obtuse with few showing any attempts at platform modification beyond perfunctory trimming of flake scar overhangs. Most striking platforms comprise either scars from previous removals or remain cortical with thermal planes often preferred. A few faceted and dihedral platforms probably reflect the use of keeling, rather than deliberate platform modification. A probable exclusive use of hard hammer percussion is indicated by the prevalence of pronounced bulbs of percussion, cracked striking platforms and prominent points of percussion, and in some cases the entire platform has disintegrated from the use of excessive force. Conversely, many platforms exhibit additional but undeveloped Hertzian cones from failed previous

attempts at detachment. Just over 6% of the flakes, accounting for 4% of the total assemblage, show evidence of secondary working or damage from use. Additionally, around a quarter of all cores appear to have been either created primarily for or were modified to be used as core tools. With the exception of a few formally retouched flakes which are likely to date to the Early Bronze Age or earlier, none of these conform to standard typologies and they have therefore been categorized according to the morphology of their perceived 'working' edges, following the schemes devised for the Linton Village College and Clay Farm assemblages (Bishop 2011; forthcoming a) (Table 12).

	Final fills	Post-dump fills	Main fills	Primary fills						
<b>Irregular retouched flakes and core tools</b>										
	Flakes	Core Tools	Flakes	Core Tools	Flakes	Core Tools	Flakes	Core Tools	Total	%
Acute uniaxially worked edge	8		4	1	21	3	2		39	9.7
Acute bifacially worked edge	3	1	1		3		1		9	2.2
Notch - retouched flake scar	5	4	2	4	29	45		2	91	22.7
Steep smooth worked edge	5	1	1		10	7	1		25	6.2
Coarse denticulated edge	1	9	2	9	28	75		2	126	31.4
Finer denticulated edge	3	1	5		20	6		1	36	9.0
Battered Edge	1				7	11			19	4.7
Spur / Piercer	2	2	3	4	11	33		1	56	14.0
<b>Total Irregular Retouched</b>	<b>31</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>137</b>	<b>180</b>	<b>4</b>	<b>6</b>	<b>412</b>	<b>100</b>
<b>Regular, or formal tools</b>										
Edge retouched blade	1				2				3	
Barbed and Tanged Arrowhead	1				1				2	
Elaborate Piercer	1				1				2	
Scrapers					4				4	
<b>Total</b>	<b>3</b>				<b>8</b>				<b>11</b>	

**Table 12: Secondary Worked Flakes and Core Tools from the Barrow 1 ditch**

C.3.26 Pieces with denticulated edges are the most common type, the majority of which are fairly coarse, with c. 1-2 teeth per cm of edge. The edges themselves may be straight, concave or convex as well as varying from being sharp to fairly blunt, but all resemble the teeth of modern wood saws, and may have been used as coarse cutting implements. A further possibility is that they were used as retting combs, to separate the



fibres from plants such as flax or nettles. The finer toothed denticulates have edges that have been 'nicked' creating a rough serrated edge. They are comparable to the serrated blades and flakes of the Mesolithic and Neolithic and may have been used in a similar way. Serrated implements are normally associated with plant processing, although many of the examples here display edge-crushing suggesting that they were used to work harder materials such as wood or bone, or possibly that they were used in conjunction with an anvil. Notched pieces are also common. These nearly all consist of flakes or cores that have a deep concave scar caused by the removal of a flake with a pronounced bulb of percussion. This is a common feature seen on many later prehistoric flakes and cores, but in all of these cases there is additional retouch or damage to the concavity, indicating deliberate modification. They are similar to the notched flakes seen in earlier industries, albeit more opportunistically made. The earlier examples are mostly interpreted as either concave scrapers or implements akin to spokeshaves. Flakes and cores with retouch that forms points, interpreted as piercing or boring tools, are also well represented. The working edges of these vary quite considerably, from fairly blunt 'spurs' or wide-angled edges, to pieces with fine sharp points, and it is likely that they were employed on a wide variety of materials. Pieces with retouched sharp edges are mostly confined to flakes and these were most likely to have been used as cutting tools. The 'retouch' is often very crude or sporadic and at least some of this may have been created during use. Again, use on a wide variety of materials is indicated. Flakes with steep smooth edges, resembling the ubiquitous scrapers of earlier industries, are present but relatively uncommon. Many of the retouched flakes do resemble scrapers but these all have irregular or denticulated edges, which would have been of no use for scraping hides or any materials that would have ripped or cut easily.

- C.3.27 Cores contribute a high 20% of the assemblage, of which a quarter were probably used as tools, as described above. With the exception of the four blade cores and a few examples that show some structure to their working, they have all been rather randomly reduced and are typical of later prehistoric types (Table 13). Many of these have at least partially disintegrated due to the thermally flawed nature of the raw materials, although despite this many continued to be worked and a high proportion have incipient Hertzian cones from further but failed attempts at flaking. Those that had badly disintegrated have been listed as conchoidal chunks, although the majority of these appear to be pieces of raw materials that shattered early in the reduction sequence, and many are little more than 'tested' pieces. Although all have clearly been struck, it is not certain in every case whether this had been done deliberately and a few could represent cobbles that have been accidentally hit, such as may have occurred during the digging the ditch.

Core Type	Minimally worked	Single Platform	Two Platforms	Multi-platform	Keeled	Total	Smallest (g)	Largest (g)	Ave. (g)
Final fills	11	13	5	10	4	43	14	102	41.3
Post-dump fills	14	11	2	8	3	38	9	123	41.8
Main fills	183	163	56	157	52	611	7	277	45.9
Primary fills	4	2	2		2	10	26	142	65.8
Total	212	198	65	175	61	702			
%	30.2	26.9	9.2	24.9	8.7	100			

*Table 13: Cores from the Barrow 1 ditch*

- C.3.28 The cores vary considerably in shape and size although most are rather small, reflecting both the size of the raw materials chosen and also the repeated flaking of pieces that had previously shattered. Although broken pieces often continued to be

worked down, few cores could be considered exhausted and most still largely retained the shape of the original cobbles. Nearly a third had been abandoned before more than five flakes had been detached and a further quarter has flakes removed from just one platform. Even with the multi-platform cores, few individual platforms have been extensively worked, and it appears that usually any suitable surface was chosen from which to detach flakes; there is certainly little evidence for any deliberate creation or maintenance of striking platforms. Around a tenth of the cores have keeled platforms, where flakes have been removed alternately from either side of the core, resulting in it becoming wedge-shaped. Some of these had clearly been used as cutting or chopping tools and have been classified as core-tools. The ones listed here may also have been used as such but display no evidence, and are perhaps just as likely to be random forms arising out of the opportunistic ways flakes were obtained.

#### *Barrow 1: Distribution and Deposition*

- C.3.29 Detailed spatial analysis has not been undertaken but struck flint appears to have been present as a continuous spread around the circumference of the ring-ditch as well as horizontally throughout its fills. Stratigraphically, the bulk of the material came from the middle fills, with smaller assemblages coming from both below and above these (see Table 11). These sub-assemblages are mostly comparable although a few differences may be noted. The primary fills of the ring-ditch, which may have started to form during the initial or funerary phases of the barrow, produced slightly higher proportions of flakes and blades, and fewer cores and core tools than the later fills. Whilst these difference are not great, they do support an overall impression that the primary fill assemblages contain higher proportions of earlier pieces, particularly those dating to the Mesolithic or Early Neolithic but also some that are more characteristic of Later Neolithic and Early Bronze Age industries. It is possible that the earlier material was residually deposited during early episodes of erosion of the ring-ditch from adjacent land surfaces, and some may even be contemporary with the primary use of the barrow. Conversely, and perhaps just as importantly however, this material remains very similar to the assemblages from higher in the sequence, and if not intrusive it indicates that the ring-ditch had not substantially infilled before the intensive dumping of artefactual material commenced.
- C.3.30 Although there was what appears to be a more-or-less continual spread of struck flint around the barrow ditch it was not evenly distributed. Judging by the quantities recovered from the various sections cut through the ditch as well as the controlled sondage excavations, the greatest densities of struck flint were found in the north-eastern quadrant where concentrations in excess of 100 pieces per sondage were regularly encountered. Even here, however, the flintwork was not distributed evenly, the quantities per sondage varying from eight pieces to 250 and giving the impression that the material was formed from a series of small but overlapping dumps. The densities in this quadrant can be contrasted with those recorded from the western side of the ring-ditch; here the sondages produced between one and 104 pieces although, again, the distribution was not even and is suggestive of relatively discrete clusters of material. A limited refitting exercise was also conducted on the material from the ring-ditch and a small number of sequential conjoins were identified. However, it is also evident that, at least within individual and adjacent sondages, the greater part of any single knapping sequence is missing, and there is no evidence for any *in-situ* knapping or for any concentrations of knapping waste from particular knapping episodes. Instead the flintwork appear to represent accumulated debris from numerous knapping sessions, built up and subsequently redeposited into the ditches as smaller and perhaps separate but probably closely related dumps.

### *The Burnt Stone from Ring-ditch 1*

- C.3.31 The ring-ditch also produced a considerable quantity of unworked burnt stone, most of which also came from the main fills (Table 14). As with the unworked burnt stone from pits **101**, **128**, **263**, and **280**, high proportions consist of sandstone although this was nearly all confined to the main fills.

Context	Total Burnt Stone (no.)	Total Burnt Stone (%)	Ave. Clast size	% comprising sandstone (no.)	% comprising sandstone (wt)
Final fills	68	808	12g	2.9	7.4
Post-dump fills	33	680	21g	0	0
Main fills	585	21,292	36g	9.1	22.7
Primary fills	10	335	33g	0	0
Total	696	23,115	33g	7.9	21.2

*Table 14: Details of Unworked Burnt Stone from the Barrow 1 ditch*

- C.3.32 Interestingly, the distribution of unworked burnt stone presents a different distribution to that of the struck flint. Small quantities were recovered from within all excavated parts of the ring-ditch but the greatest quantities were found in the north-west section, which produced 60% of the burnt stone (compared to only 10% of the struck flint), and it was particularly concentrated within slot **249** and the sondages excavated adjacent to it. Conversely, the north-east sector contained a little less than 40% of the unworked burnt stone from the ring-ditch, despite it producing over 80% of the struck flint. Here it was also highly concentrated in patches, with two-thirds of it coming from a limited area towards the centre of the sondage-excavated area (Sondages 310-314, 398).

### *Worked Stone from the Barrow 1 ditch*

- C.3.33 Seven fragments of worked stone were recovered from the fills of the ring-ditch, all but one from the main fills, the exception coming from the post-dump fills. This comprised a small oval pebble with what appear to be smoothed facets consistent with it having been used as a rubber-stone. The worked stone from the main fills include a fragment from a flint quern, two cobbles of hard siliceous sandstone with abraded edges consistent with having been used as hammerstones or pounders and a fragment of a carved chalk disk of similar form to spindle whorls although it is larger than most. The remaining piece is more intriguing. This is a pebble of hard greenish grey porphyritic igneous rock with yellow and black crystalline 'mottling', one side of which appears smoothed, possibly even ground. The stone is exotic to the area although may have been found locally as an erratic, but it does appear to have been worked. It is possibly, although far from certainly, a fragment of a ground axe but whether or not this is the case, it is striking in appearance and may have been kept as a talisman or charm.

### **Barrow 2**

- C.3.34 The fills of the Barrow 2 ditch produced a notably smaller assemblage of lithic material although there are some similarities with that from Barrow 1 (Table 15).

	Decortication Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Complete Core	Conchoidal Shatter	Core Tool	Retouched Flake	Struck Total	Worked Stone	Burnt Stone (no.)	Burnt Stone (wt:g)
Barrow 2 All fills (no.)	32	73	4	3	2	3	1	4	122	1	2	121
Barrow 2 All fills (%)	26.2	59.8	3.3	2.5	1.6	2.5	0.8	3.3	100			

Table 15: Lithic Material from the fills of the Barrow 2 ditch

- C.3.35 The primary fills (130) produced only three flakes which, although not particularly diagnostic, are in good condition and could easily be at least broadly contemporary with the construction and initial use of the barrow. The remaining struck pieces from the ring-ditch came from its upper fills. Technologically they are perhaps most comparable to the bulk of the struck flint from the Barrow 1 ditch but there some differences in the composition of the assemblages. The assemblage from the Barrow 2 ditch contains higher proportions of flakes, blades and correspondingly fewer cores, core-tools and conchoidal shatter. There are also relatively high proportions of flakes that are more characteristic of earlier industries. These include pieces of Mesolithic or Early Neolithic date, such as the blades, but also many of the flakes are well-struck; a thumbnail scraper from context (123) is indistinguishable from those from pit **101** and both cores could easily be contemporary with the initial use of the barrow. As such the assemblage appears to contain some Middle or Late Bronze Age flintwork but it also includes a high proportion, perhaps even a majority, of pieces that are earlier and, taken together the assemblage is most suggestive of general background waste from all periods entering the ditch as it silts up. Unlike with Barrow 1, there is no evidence for any deliberate acts of deposition. Two fragments of unworked burnt flint weighing a total 121g were also found in the fills the Barrow 2 ditch, as was a single worked stone fragment. This comprises a small piece of possibly burnt siliceous sandstone with a small but very smooth facet, which may be a fragment from a quern.

### ***The Cremation Cemetery***

- C.3.36 Despite the cremation cemetery being at least broadly contemporary with the production of the assemblages from Barrow 1, remarkably few pieces of struck flint, amounting to only nine pieces, was found in association with the burials and most if not all of this is likely to pre-date the Bronze Age (Table 16). Similarly, only small quantities of unworked burnt stone were recovered, all consisting of small fragments of flint that may have been incidentally incorporated into the cremations from the cremation pyres. There is certainly no evidence that struck flint played any part in the activities associated the cemetery, either in the form of grave goods or as part of the funerary rituals.

Fill	Cremation	Decorative Flake	Unmodified Flake	Prismatic Blade	Non- prismatic Blade	Burnt Stone (no.)	Burnt Stone (wt:g)
174	175	1			1		
177	176					1	4
220	215		1			1	1
229	230					5	69
235	230	1	3	2			
<b>Total</b>		<b>2</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>7</b>	<b>74</b>

Table 16: Struck flint and Unworked Burnt Stone from the Cremation Cemetery

### Undated or Post-Bronze Age Features

- C.3.37 Very few struck flints were recovered from any of the other features at the site. A cortical blade of probable Mesolithic or Early Neolithic date was recovered from tree-throw hollow **108**, whilst Late Bronze Age pit **228** produced a small quantity of unworked burnt flint and two struck flakes, both of which are rather nondescript but are quite possibly residual. Natural hollow **289** contained three struck pieces. These include a finely-made scraper and two cores; one a bifacially worked flake core made on a very thin thermal spall, the other a narrow flake or blade core made on a pebble but which is in a very chipped condition. The late prehistoric field-system produced only two struck flints, a notch and a scraper, both of which are likely to have been made in the Early Bronze Age at the latest and therefore residual. The lack of struck flint from these features is perhaps somewhat surprising, given that Iron Age flintworking has been amply attested at other sites in the area (e.g. Pendleton 2011), but the findings here are consistent with those from the adjacent excavations at the Fordham bypass, which despite producing ample evidence for Late Bronze Age flintworking, produced almost no struck flint from Iron Age features (Bishop forthcoming b).

### Summary and Conclusion

- C.3.38 The excavations at Turner's Yard have produced a large and regionally significant assemblage of lithic material that demonstrates the use of stone tools occurring at the site over a considerable period.
- C.3.39 The earliest evidence of flintworking comes from a proportionally low but nevertheless still large and significant assemblage derived from a blade-based reduction sequence that can be dated to the Mesolithic or Early Neolithic. Pieces that can be dated to the later parts of the Neolithic are more difficult to identify although the presence of a low number of competently made flakes and distinctively worked scrapers does suggest some activity during this time. This evidence is certainly consistent with the findings from the adjacent excavations at Fordham bypass and at other sites in the vicinity, such as at Fordham Road, Newmarket, which demonstrate both an extensive and fairly intensive use of this part of the landscape from at least the Later Mesolithic and throughout the Neolithic.
- C.3.40 Of considerable significance, and representing the earliest intensive use of the flintworking at the site is the remarkable assemblage recovered from pit **101**, which



includes substantial collections of struck flint, unworked burnt stone and a fragment from a polished greenstone axe.

- C.3.41 The struck flint is a particularly large assemblage for a single feature of this period and it contains both knapping debris and a high percentage of retouched pieces, these being dominated by a range of scrapers that includes a set of classic thumbnail types, as is typical for assemblages of this period. Even by this time, the deliberate or formal deposition of flintwork as well as other categories of material culture within pits had a long history, beginning at least by the Early Neolithic, but in most cases these practices take on a much less prominent role in the Beaker period than seen earlier (Garrow 2006). Beaker period pits themselves are not uncommon but very few in the region have produced struck flint assemblages amounting to more than a hundred pieces, and the vast majority are measurable in single digits. Whilst significant in terms of wider depositional practices, the assemblage from this pit is therefore also one of the largest from the region that can be attributable to a securely contexted single event. The pit also produced a large assemblage of unworked burnt stone, a high proportion of it consisting of sandstone. It is similar in quantity and composition to the stone recovered from a few other pits excavated at the site, as well as some of the dumps of unworked burnt stone recovered from the main fills of the Barrow 1 ditch. Whilst these features cannot be directly related to each other, the similarities in the composition of their assemblages suggest these have been generated from comparable processes. Burnt stone can be expected to be generated as incidental waste at sites where hearths are regularly constructed directly on to the ground, but this usually results in small quantities being found distributed at low densities across many features. The high concentrations recorded in these particular features strongly suggest that in these cases it was being deliberately produced and formally disposed of. The high proportions of burnt sandstone present in some of the larger deposits are also intriguing. Whilst sandstone can be found as glacial detritus in the local surface deposits, it only forms a minor component and in these particular contexts it is better represented than would be expected if the stone clasts were randomly selected from the landscape. It may have been preferentially selected as it has a much lower tendency to violently fracture when heated than flint. The exotic ground stone axe is also a significant find. The currency of these chronologically overlaps with the use of Beakers but they are much more commonly associated with Neolithic ceramics and flint assemblages. In the few instances that they can be directly associated with Beaker period contexts they are often either burnt or flaked down (e.g. Bishop forthcoming c), and it has been suggested that this may have been done to mitigate or control the metaphorical qualities often regarded as being invested in these items, particularly if they were associated with ancestral or other cultural groups.
- C.3.42 By far the largest assemblages from the site came from the fills of the Barrow 1 ditch which produced nearly 5,000 struck pieces in total and, other than those from some of the shafts at Grime's Graves (Saville 1981; Herne 1991), is the largest later prehistoric struck flint assemblage from any single feature in the region. This material was concentrated in the middle fills of the ditch and the bulk of it was technologically consistent with industries that date to the later second or first millennium BC. It was dumped into the ring-ditch sometime after its initial use as a barrow and probably around the time that the Late Bronze Age cremation cemetery sprang up alongside it. Large assemblages of this date are rare in Britain; where flintworking remained a facet of material technology at all, worked flints are normally found in low densities within settlements or scattered across field-systems, representing the residues of short-lived knapping and tool use episodes. Even at extensive settlement sites that have seen

intensive excavation, struck flint assemblages tend to be measurable in the dozens or at most low hundreds, rather than in the thousands as is seen here. However, the assemblage from the ring-ditch does join a small but growing number of others of similar size and character that have recently been excavated in southern Cambridgeshire. These include the remarkably comparable assemblages recovered from a boundary ditch at Clay Farm in Trumpington, and also others from enclosure ditches at Sawston Police Station, Linton Village College and Granta Park, Abington (see Bishop 2011). These were all found in what appear to be Middle Bronze Age settlements or enclosures, albeit ones that appear to have been, or were in the process of being, abandoned. Closer-by, a much smaller but still relatively large assemblage of Late Bronze Age flintwork was placed as a series of discrete dumps into a shaft at the Fordham By-pass site (Bishop forthcoming b). More comparable depositional events to that of Turner's Yard are perhaps the large but poorly-characterized and now missing assemblage of worked flint that was used to cover and seal an Early Bronze Age barrow at Thriplow (Trump 1956), and the technologically comparable and similarly sized assemblages recovered from the semi-infilled ditches of two barrows at Raunds, in Northamptonshire (Ballin 2002).

- C.3.43 The assemblage from the Barrow 1 ditch, along with others mentioned here, are enigmatic. The casual and expedient style of the flintworking, combined with the relatively high proportions of utilized pieces and potential tools, would suggest that it would best fit within a utilitarian context of production and use, a scenario that would also fit with the other elements of material culture present in the dumps, such as the burnt stone, pottery and bone. The sheer scale of the assemblage, however, is worryingly at odds with what is normally encountered at domestic sites of this period, and the contexts in which these assemblages were placed are decidedly non-domestic. General accounts exploring the character and depositional history of these unusually large later Bronze Age assemblages have already been formulated and need not be repeated here (McLaren 2009; Bishop 2011; forthcoming a). What is of particular interest here is that, although dominated by Middle or Late Bronze Age lithics, this assemblage also contains a small but significant proportion of Early Bronze Age material, comparable to that from pit **101**, the most notable pieces being two barbed and tanged arrowheads. In this respect, it is tempting to suggest some sort of relationship between the deposition of the assemblages within pit **101** and the later ones from the ring-ditch, not least because they both represent some of the largest assemblages of their date from the region. It is possible, for example, that the practices that led to the ring-ditch deposits developed out of those that led to the infilling of pit **101**. The presence of this earlier material within the ring-ditch indicates that the accumulations from which the dumps of material were gathered had been formed over a long period, perhaps a midden that began life during the Early Bronze Age and continued through to the later Bronze Age when the main depositional events occurred. Middens or other surface accumulations of material of this date are not well-represented in the archaeological record but they have been identified as plough-eroded sites along the eastern Fenland margin (e.g. Leaf 1935; Clark 1936; Bamford 1982) and a partially preserved Early Bronze Age midden was recorded at the Fordham Road Newmarket site (Bishop 2013).
- C.3.44 The barrow ditch was deliberately chosen as a receptacle for the material; it is not simply discarded waste from an adjacent settlement and must have been transported at least a short distance, furthermore there are no signs that the Barrow 2 ditch was accorded this special status. The singular treatment of the Barrow 1 ditch is also demonstrated by the general paucity of worked flint of this date from other

contemporary features or as residual material within later features, suggesting that flintworking was not conducted at any scale on the site, but that the flintwork had been brought in and carefully placed in the ring-ditch. The deposition of the material is likely to have occurred over a relatively short time, even if the material itself had accumulated over a longer period. Why this should occur when it did is difficult to determine but it is at least interesting that it happened when the barrows became a focus for funerary activity in the Later Bronze Age, and it is possibly pertinent that the greatest densities of material were dumped into the ditch nearest to where it faced on to the cemetery.

### ***Technological changes in the Struck Flint Assemblages during the Second Millennium BC***

- C.3.45 The assemblages from pit **101** and the dumps of the Barrow 1 ditch are also of considerable interest in terms of charting technological changes in struck flint industries during the second millennium. BC. The differences in the technological approaches seen within these two assemblages are not huge and the evidence is not easy to interpret, particularly as the material from the Barrow 1 ditch was likely to have been produced over a long period of time. Some differences are evident; there are proportionally fewer cores from pit **101** and these tend to have been flaked to a greater extent than those from the ring-ditch. The ring-ditch assemblage also includes much higher proportions of core-tools, whilst the implements from the pit were made almost entirely using flakes, and unlike the retouched flakes from the ring-ditch, most of these can be accommodated within standard or formal tool typologies. Additionally, there is proportionally less conchoidal shatter in the assemblage from the pit, suggesting either a greater control over was exercised flaking or that there was a more considered selection of raw materials. But just as importantly, both assemblages show a mix of relatively competent flake production, which is perhaps best typified by third millennium Later Neolithic industries, occurring alongside a much less structured approach to core reduction that is more characteristic of later second millennium and later industries.



## Flint Catalogue

Context	Cut	Category	Feature Type	Master Number	Phase	Decoratification Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
3					Eval												1			small fragment of friable sandstone, possibly burnt, had a small very smooth facet suggesting it may have been part of a quern. Weighs 30g
3					Eval	7	8	3	1											chronologically mixed but mostly M-LBA
4					Eval		1													MBA-like squat flake good condition
5					Eval		1	2												All Meso / ENeo? in v good condition
7					Eval	4	2	2	1					1	1					chronologically mixed, variable condition
12					Eval	4	8		1		1		2							mixed but mostly M-LBA
47	52	Fill	R-D1 Final fill	241	2.4	17	34				5		3	1	2					Mostly MBA-IA
48	52	Fill	R-D1 post-dump fill	243	2.3	11	10			2	4		1	3						Mostly MBA-IA
50	52	Fill	R-D1 1st fill	246	2.1	8	14		1				3	1	1					Mostly MBA-IA
51	52	Fill	R-D1 1st fill	246	2.1			1												M / EN
53		Fill			Eval			1												M / EN very chipped and heavily recorticated
60	63	Fill	R-D1 Final fill	241	2.5	9	15			1	6		3	2	2					Mostly MBA-IA
61	63	Fill	R-D1 Dump	268	2.3	1	2							1						Mostly MBA-IA
69					Eval	1	1	1					1							All very chipped
74					Eval	1	4	1					2							Chronologically mixed the blade may have some inverse edge retouch

Context	Cut	Category	Feature Type	Master Number	Phase	Decortication Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
100	101	Fill	Pit	101	1.3													264	7172	15 fragments of burnt sandstone weighing 1866g, the rest is unworked burnt flint
100	101	Fill	Pit	101	1.3												1			disk-shaped yellow siliceous sandstone cobble weighing 185g with a worn facet on one side indicating use as a rubber/pounder
100	101	Fill	Pit	101	1.3												1			Fragmented oval greyish-yellow sandstone cobble with one flattened reasonably convincingly worn face . Weighs 344g
100	101	Fill	Pit	101	1.3											1				Fragment of a ground greenstone axe
100	101	Fill	Pit	101	1.3	130	210	5	11	6	21	38	33	1						EBA
102	103	Fill	R-D2 Central Crem	103	2.1		1													small reasonably well made but undiagnostic narrowish flake, possibly a cortically backed cutting flake
105	101	Finds	Pit	101	1.3												5	17		Heavily burnt unworked flint fragments
105	101	Finds	Pit	101	1.3	7	21	2		3			1	1						EBA
107	108	Fill	Tree-throw	108	5												1	42		Unworked heavily burnt fragment
107	108	Fill	Tree-throw	108	5				1											M / EN?
112	106	Fill	Ring-ditch 2	2	2.1	1	11	2	1											Similar to others, a few earlier blade-based pieces, some nice flakes that could be LN/EBA but also some M-LBA squat flakes
114	115	Fill	Tree-throw	101	1.3												5	48		Heavily burnt unworked flint fragments

Context	Cut	Category	Feature Type	Master Number	Phase	Decoratation Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
114	115	Fill	Tree-throw	101	1.3	5	27	1	1	6	1			8						Very similar to that from Pit 101 and very probably redeposited from it. The core is well struck with a single platform on the front and side of a nodular cobble and weighs 60g.
123	126	Fill	Ring-ditch 2	2	2.1	4	9						2	1	1					All very M-LBA-like except a classic thumbnail scraper. There is also a core that has a very bashed edge used as a hammerstone
127	128	Fill	Pit	128	2												76	2200		4 pieces sandstone @ 120g and 72 pieces of flint @ 2.1kg
129	132	Fill	Ring-ditch 2	2	2.1												2	121		Moderately burnt unworked flint fragments
129	132	Fill	Ring-ditch 2	2	2.1											1				Small fragment of siliceous sandstone, possibly burnt, had a small very smooth facet. Weighs 31g. Possible quern
129	132	Fill	Ring-ditch 2	2	2.1	6	16		1		1									Mostly MBA-IA
130	132	Fill	Ring-ditch 2	2	2.1		3													3 small flakes good condition undiagnostic but could easily be EBA
135	133	Fill	Ring-ditch 2	2	2.1	6	9						1							all very M-LBA - like
138	139	Fill	MIA-RB Ditch	139	3.2									2						Irregular but well struck flake with steep convex scalar retouch on distal; Thick narrow flake with shallow notch 11mm wide by 3mm deep cut into right margin near proximal end
142	140	Fill	Ring-ditch 2	2	2.1	5	5													mostly similar to those from the R-D1 dumps

Context	Cut	Category	Feature Type	Master Number	Phase	Decortication Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
170	168	Fill	Ring-ditch 2	2	2.1	7	7	1	1					2						Some M-LBA-like but others early, including the blades. 2 M-LBA-like utilized flakes. 2 flakes, both late looking, unrecorticated and also chipped and sand glossed – unlike the others from this feature
174	175	Fill	Tree-throw	118	2.3	1			1											1 blade shaped DF and a NPB, both pre-LBA?
177	176	Fill	Cremation	118	2.3												1	4		<30> Unworked heavily burnt fragment
184	187	Fill	Ring-ditch 2	2	2.1	2	6	1												Mixed, mostly M-LBA but some earlier
198	200	Fill	Ring-ditch 2	2	2.1	1	7				1			1						3 flakes are thin with finely edge-trimmed SPs, the others squat. Core is large extensively worked and globular, Ret is large predominantly cortical flake with a mostly thermal ventral and fine ret / heavy use-wear along right margin. Altogether there are several 'early' pieces that could be LN/EBA but overall it is not unlike the M-LBA dumps in R-D1
220	215	Fill	Cremation	118	2.3												1	1		Unworked heavily burnt fragment
220	215	Fill	Cremation	118	2.3		1													small and undiagnostic
228	227	Fill	LBA pit	227	2.3												4	101		Variably burnt unworked flint fragments
228	227	Fill	LBA pit	227	2.3		2													two flakes, rather nondescript but perhaps most likely pre-LBA
229	230	Fill	Cremation	118	2.3												5	69		Variably burnt unworked flint

Context	Cut	Category	Feature Type	Master Number	Phase	Decoratification Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
235	230	Fill	Cremation	118	2.3	1	3	2												burnt fragment and a platform trimming flake, most if not all probably Meso /ENeo
241		Fill	R-D1 Final fill	241	2.3													37	390	Unworked variably burnt flint fragments
241		Fill	R-D1 Final fill	241	2.3	17	45		2		20	1	17	4	7					Includes a small single platformed blade core
242	249	Fill	R-D1 Final fill	241	2.3													23	310	2 pieces burnt sandstone @ 60g and rest burnt flint
242	249	Fill	R-D1 Final fill	241	2.3	15	27				11		15	9	3					barbed and tanged arrowhead
243	249	Fill	R-D1 post-dump fill	243	2.3													24	435	Unworked heavily burnt flint fragments
243	249	Fill	R-D1 post-dump fill	243	2.3	10	7				2		7	2	1					Mostly MBA-IA
244	249	Fill	R-D1 Dump	244	2.3													159	3588	8 pieces of burnt sandstone @ 600g, the rest burnt flint
244	249	Fill	R-D1 Dump	244	2.3	12	25				10		11	3	2					Mostly MBA-IA
245	249	Fill	R-D1 Dump	245	2.3													10	220	Unworked heavily burnt flint fragments
245	249	Fill	R-D1 Dump	245	2.3	15	11				11		24	2	6					Mostly MBA-IA
246	249	Fill	R-D1 1st fill	246	2.1													5	167	Heavily burnt unworked flint
246	249	Fill	R-D1 1st fill	246	2.1	2	5	1	1		4	1	9	1	3					Includes a B2 type front and back blade core of M /EN date
261	0	Finds	Cow skull	261	2.1		1													Small trimming flake

Context	Cut	Category	Feature Type	Master Number	Phase	Decoratification Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
262	263	Fill	Pit	263	2													302	1299 1	102 fragments of burnt sandstone @ 8200g the rest is burnt unworked flint
266	270	Fill	R-D1 Final fill	241	2.3	1	5	2			1									Mostly MBA-IA
267	270	Fill	R-D1 Final fill	241	2.3	1	5						1							Mostly MBA-IA
268	270	Fill	R-D1 Dump	268	2.3												3	38		Heavily burnt unworked flint fragments
268	270	Fill	R-D1 Dump	268	2.3								2							Both retouched look pre-MBA, including a LN type E+S scraper and a truncated piercer
269	270	Fill	R-D1 1st fill	246	2.1												1	19		Unworked heavily burnt flint
271	264	Fill	R-D1 Final fill	241	2.3												1	12		Unworked heavily burnt fragment
271	264	Fill	R-D1 Final fill	241	2.3	20	31	1	4	1	1	9	5	2						Mostly MBA-IA
273	276	Fill	R-D1 Final fill	241	2.3												2	54		Unworked heavily burnt flint fragments
273	276	Fill	R-D1 Final fill	241	2.3	14	17				1	6	1							Mostly MBA-IA
274	276	Fill	R-D1 post- dump fill	243	2.3	1	2				3	2	1							Mostly MBA-IA
275	278	Fill	R-D1 1st fill	246	2.1	1		1	1											?MBA-IA flake and earlier blades
277	278	Fill	Pit	278	2												88	1,20 0		unworked heavily burnt flint
279	280	Fill	Pit	280	2												24	900		12 pieces of burnt sandstone weighing 700g, 12 pieces burnt flint weighing 200g
281	285	Fill	R-D1 Final fill	241	2.3	1	2													Mostly MBA-IA
282	285	Fill	R-D1 Dump	268	2.3	1	4													Mostly MBA-IA

Context	Cut	Category	Feature Type	Master Number	Phase	Decoratification Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
286	289	Fill	Nat hollow	289	5						1	1		1						2 cores, one a bifacial flake core in good condition that had produced large and useful flakes but which was made on a very thin thermal spall, the other is flake/blade core made on a pebble but in a very chipped condition. Also a thin shallow end scraper in a chipped condition.
291	290	Fill	R-D1 1st fill	246	2.1	3	8							2	1					Mostly MBA-IA
292	290	Fill	R-D1 1st fill	246	2.1												1	7		Unworked moderately burnt flint
292	290	Fill	R-D1 1st fill	246	2.1	7	10						2		1					Mostly MBA-IA
293	290	Fill	R-D1 Final fill	241	2.3	3	9							3	1					Mostly MBA-IA
296	402	Fill	R-D1 Final fill	241	2.3												2	21		Unworked heavily burnt flint fragments
296	402	Fill	R-D1 Final fill	241	2.3	5	17				1		1	2						Mostly MBA-IA
297	402	Fill	R-D1 1st fill	246	2.1												1	50		Unworked heavily burnt fragment
297	402	Fill	R-D1 1st fill	246	2.1	1							1							Mostly MBA-IA
298	402	Fill	R-D1 Dump	370	2.3												4	321		2 pieces burnt sandstone @266g, rest are unworked burnt flint fragments
298	402	Fill	R-D1 Dump	370	2.3	2	9				1			2	1					Mostly MBA-IA
300		Fill	R-D1 Dump	268	2.3												1	27		Unworked heavily burnt fragment
300		Fill	R-D1 Dump	268	2.3	12	16				5		2	1	1					Mostly MBA-IA
301		Fill	R-D1 Dump	268	2.3												1	116		Unworked heavily burnt fragment
301		Fill	R-D1 Dump	268	2.3	13	22				2		4	1						Mostly MBA-IA

Context	Cut	Category	Feature Type	Master Number	Phase	Decortication Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
302		Fill	R-D1 Dump	268	2.3	14	9	1			4		4	2	1					Mostly MBA-IA
303		Fill	R-D1 Dump	268	2.3												4	98		Heavily burnt unworked flint fragments
303		Fill	R-D1 Dump	268	2.3	20	28				3		9	2	1					Mostly MBA-IA
304		Fill	R-D1 Dump	268	2.3												1	4		Unworked heavily burnt fragment
304		Fill	R-D1 Dump	268	2.3	11	18						6							Mostly MBA-IA
305		Fill	R-D1 Dump	268	2.3	20	30			1	2		1	3	2					Mostly MBA-IA
306		Fill	R-D1 Dump	268	2.3	20	23				3		8	1	1					Mostly MBA-IA
307		Fill	R-D1 Dump	268	2.3												1			Possibly deliberately smoothed but irregularly shaped pebble of hard light greyish green stone with frequent sub-angular yellow inclusions c. 1mm in size. Weighs 43g
307		Fill	R-D1 Dump	268	2.3	19	20		2		14		7	3	2					Mostly MBA-IA
308		Fill	R-D1 Dump	268	2.3												3	84		Heavily burnt unworked flint fragments
308		Fill	R-D1 Dump	268	2.3	22	16		2	3	15		4	1	7					Barbed and tanged arrowhead
309		Fill	R-D1 Dump	268	2.3	18	31			2	6		9	2	2					Mostly MBA-IA
310		Fill	R-D1 Dump	268	2.3												18	870		2 pieces burnt sandstone weighing 183g rest is unworked variably but mostly heavily burnt flint fragments
310		Fill	R-D1 Dump	268	2.3	34	32				26		25	3	7					Mostly MBA-IA
311		Fill	R-D1 Dump	268	2.3												13	1547		4 pieces burnt sandstone weighing 1173g rest is unworked heavily burnt flint



Context	Cut	Category	Feature Type	Master Number	Phase	Decoratation Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
311		Fill	R-D1 Dump	268	2.3	42	47		5	1	56		40	8	7					Mostly MBA-IA
312		Fill	R-D1 Dump	268	2.3													13	856	1 piece burnt sandstone weighing 24g rest is unworked variably but mostly heavily burnt flint fragments
312		Fill	R-D1 Dump	268	2.3	54	47	2		1	37		32	8	10					Includes a well produced M/EN long-end scraper
313		Fill	R-D1 Dump	268	2.3													16	797	3 pieces burnt sandstone weighing 226g rest is unworked variably but mostly heavily burnt flint fragments. Also an unworked where quartz pebble weighing 30g
313		Fill	R-D1 Dump	268	2.3	43	55				65		57	9	21					Mostly MBA-IA
314		Fill	R-D1 Dump	268	2.3													12	545	2 pieces burnt sandstone weighing 93g rest is unworked variably but mostly heavily burnt flint fragments
314		Fill	R-D1 Dump	268	2.3	44	61		1	2	28		35	5	21					Mostly MBA-IA
315		Fill	R-D1 Dump	268	2.3	35	39	1	1		45		32	6	12					Mostly MBA-IA
316		Fill	R-D1 Dump	268	2.3													5	294	Heavily burnt unworked flint
316		Fill	R-D1 Dump	268	2.3	26	57				13		2	4	4					Mostly MBA-IA
317		Fill	R-D1 Dump	268	2.3													4	314	Unworked heavily burnt flint fragments
317		Fill	R-D1 Dump	268	2.3	22	33		2		14		9	2	2					Mostly MBA-IA
318		Fill	R-D1 Dump	268	2.3													1	34	Unworked heavily burnt fragment
318		Fill	R-D1 Dump	268	2.3	7	30				1			3						Mostly MBA-IA

																				Notes
Context	Cut	Category	Feature Type	Master Number	Phase	Decortication Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	
319		Fill	R-D1 Dump	268	2.3	18	32		1	1	4		4	2	1					Mostly MBA-IA
320		Fill	R-D1 Dump	268	2.3													2	235	1 pieces burnt sandstone weighing 184g the other is an unworked heavily burnt flint fragment
320		Fill	R-D1 Dump	268	2.3	26	54				9		11	5	4					Mostly MBA-IA
321		Fill	R-D1 Dump	268	2.3													1	7	Unworked moderately burnt flint fragment
321		Fill	R-D1 Dump	268	2.3	12	17				4		6	2						Mostly MBA-IA
322		Fill	R-D1 Dump	268	2.3													6	409	3 pieces burnt sandstone weighing 354g the others are unworked heavily burnt flint fragment
322		Fill	R-D1 Dump	268	2.3												1			Heavily burnt side fragment of a flint quern and a flaked side and a flat smooth-worn chattermarked surface and also retaining some cortex. Weighs 115g
322		Fill	R-D1 Dump	268	2.3	27	28				23		22	2	6					Mostly MBA-IA
323		Fill	R-D1 Dump	268	2.3													1	48	Unworked moderately burnt flint fragment
323		Fill	R-D1 Dump	268	2.3	13	27		2		11		12	2						Mostly MBA-IA
324		Fill	R-D1 Dump	268	2.3													5	259	heavily burnt unworked sandstone - 3 pieces @177g and 2 pieces of unworked flint @ 82g
324		Fill	R-D1 Dump	268	2.3	31	55		1		34		22	5	7					Includes a M / EN serrated blade

Context	Cut	Category	Feature Type	Master Number	Phase	Decortication Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
325		Fill	R-D1 Dump	268	2.3													8	290	Unworked heavily burnt flint fragments
325		Fill	R-D1 Dump	268	2.3		7							1						Retouched is a prismatic blade serrated along right margin and with 'cortical backing'
326		Fill	R-D1 Dump	268	2.3													1	121	Unworked heavily burnt flint fragment
326		Fill	R-D1 Dump	268	2.3												1			Apparently burnt fragment of a chalk disk of spindle whorl but rather large weighs 75g
326		Fill	R-D1 Dump	268	2.3	11	9			1	2		4	2						Mostly MBA-IA
327		Fill	R-D1 Dump	268	2.3	9	3				1			3						Mostly MBA-IA
328		Fill	R-D1 Dump	268	2.3	5	3	1					1							Mostly MBA-IA
329		Fill	R-D1 Dump	268	2.3	7	5			1	4	1	2	1						includes a M / EN front type blade core
330		Fill	R-D1 post-dump fill	243	2.3	2	6							2	2					Mostly MBA-IA
331		Fill	R-D1 Dump	244	2.3													4	39	<70> heavily burnt unworked flint
331		Fill	R-D1 Dump	244	2.3	11	6		1		2		4							Mostly MBA-IA
332		Fill	R-D1 post-dump fill	243	2.3	5	10				3		1							Mostly MBA-IA
333		Fill	R-D1 Dump	244	2.3	2	6		2		2		3							Mostly MBA-IA
335		Fill	R-D1 Dump	244	2.3															Mostly MBA-IA
336	373	Fill	R-D1 post-dump fill	243	2.3													1	4	Unworked heavily burnt fragment

Context	Cut	Category	Feature Type	Master Number	Phase	Decorification Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
336	373	Fill	R-D1 post-dump fill	243	2.3	3	3				5		3	3	3					Mostly MBA-IA
337	373	Fill	R-D1 Dump	245	2.3	21	23				13		16	4	4					Mostly MBA-IA
338		Fill	R-D1 post-dump fill	243	2.3	7	8				3		3		2					Mostly MBA-IA
339		Fill	R-D1 Dump	244	2.3	4	2				1									Mostly MBA-IA
340		Fill	R-D1 post-dump fill	243	2.3	3	7				1		1		1					Mostly MBA-IA
341		Fill	R-D1 Dump	244	2.3												14	528		1 pieces burnt sandstone weighing 48g, the others are heavily burnt flint fragments
341		Fill	R-D1 Dump	244	2.3	5	8				1		2							Mostly MBA-IA
342		Fill	R-D1 post-dump fill	243	2.3	2					1				1					Mostly MBA-IA
343		Fill	R-D1 Dump	244	2.3	2	4				2		2							Mostly MBA-IA
344		Fill	R-D1 post-dump fill	243	2.3												1	10		Unworked heavily burnt fragment
344		Fill	R-D1 post-dump fill	243	2.3	2	9				1		2	1	3					Mostly MBA-IA
345		Fill	R-D1 Dump	244	2.3												143	4713		12 pieces burnt sandstone weighing 572g rest is unworked heavily burnt flint fragments
345		Fill	R-D1 Dump	244	2.3	11	9				1		7	1	2					Mostly MBA-IA
346		Fill	R-D1 post-dump fill	243	2.3	2	3				2				1					Mostly MBA-IA

Context	Cut	Category	Feature Type	Master Number	Phase	Decoratation Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
347		Fill	R-D1 Dump	244	2.3	1	2				3		1		1					Mostly MBA-IA
349		Fill	R-D1 Dump	244	2.3		2													Mostly MBA-IA
350		Fill	R-D1 Dump	244	2.3								1	1	1					Large ?LN/EBA flake with faceted SP and a fine arced convex scalar retouched distal
351		Fill	R-D1 Dump	244	2.3	2	3													Mostly MBA-IA
352		Fill	R-D1 post-dump fill	243	2.3												2	36		Unworked heavily burnt flint fragments
352		Fill	R-D1 post-dump fill	243	2.3	6	10			2	3		1	1	2					Mostly MBA-IA
353		Fill	R-D1 Dump	244	2.3												56	1461		5 piece of burnt sandstone weighing 182g, the rest is unworked heavily burnt flint
353		Fill	R-D1 Dump	244	2.3	6	13	1	1		3		3	1						Mostly MBA-IA
354		Fill	R-D1 post-dump fill	243	2.3						1			2						Mostly MBA-IA
355		Fill	R-D1 Dump	244	2.3												12	388		Unworked heavily burnt flint fragments
355		Fill	R-D1 Dump	244	2.3	2	6						2		2					Mostly MBA-IA
356		Fill	R-D1 post-dump fill	243	2.3	2							5							Mostly MBA-IA
357		Fill	R-D1 Dump	244	2.3	2	5				1		3							Mostly MBA-IA
358		Fill	R-D1 Dump	244	2.3	2	1						1							Mostly MBA-IA
359		Fill	R-D1 Dump	244	2.3		1													Mostly MBA-IA

Context	Cut	Category	Feature Type	Master Number	Phase	Decoratation Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
360		Fill	R-D1 post-dump fill	243	2.3													1	8	Unworked heavily burnt fragment
360		Fill	R-D1 post-dump fill	243	2.3	2	9				4		8	2	1					Mostly MBA-IA
361		Fill	R-D1 Dump	244	2.3													15	722	2 pieces burnt sandstone weighing 351g, rest is unworked heavily burnt flint fragments
361		Fill	R-D1 Dump	244	2.3	6	14				3		6	2						Mostly MBA-IA
362		Fill	R-D1 post-dump fill	243	2.3													2	74	Unworked heavily burnt flint fragments
362		Fill	R-D1 post-dump fill	243	2.3												1			Small oval pebble of reddish brown siliceous sandstone with possible small abraded facets. Possible rubber-stone. Weighs 99g.
362		Fill	R-D1 post-dump fill	243	2.3	6	13				3		5							Mostly MBA-IA
363		Fill	R-D1 Dump	244	2.3													16	499	Unworked heavily burnt flint fragments
363		Fill	R-D1 Dump	244	2.3												1			rounded cobble of siliceous sandstone with patches of abrasion on one side, suggesting possible use as a hammerstone or pounder. Weighs 53g
363		Fill	R-D1 Dump	244	2.3												1			Complete rounded cobble of siliceous sandstone with fairly convincing abrasion around its edges suggesting use as a hammerstone / pounder. Weighs 155g

Context	Cut	Category	Feature Type	Master Number	Phase	Decoratation Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
363		Fill	R-D1 Dump	244	2.3	59					9		6	2	1					Mostly MBA-IA
364		Fill	R-D1 Final fill	241	2.3	10	8			1	3		6							Mostly MBA-IA
365	373	Fill	R-D1 post-dump fill	243	2.3												2	113		Unworked heavily burnt flint fragments
365	373	Fill	R-D1 post-dump fill	243	2.3	1	2				1		3	1						Mostly MBA-IA
367	373	Fill	R-D1 Dump	245	2.3												6	693		2 pieces burnt sandstone weighing 349g rest is unworked heavily burnt flint fragments
367	373	Fill	R-D1 Dump	245	2.3	20	24		2	2	19		25	4	5					Mostly MBA-IA
368		Fill	R-D1 post-dump fill	243	2.3	10	8				7		1	1	1					Mostly MBA-IA
369		Fill	R-D1 Dump	244	2.3	10	9			1	2		4							Mostly MBA-IA
370		Fill	R-D1 Dump	370	2.3												1	7		Unworked heavily burnt fragment
370		Fill	R-D1 Dump	370	2.3		15				1		2	1	1					Mostly MBA-IA
371		Fill	R-D1 Dump	370	2.3	5	8				5		5		1					Mostly MBA-IA
372	373	Fill	R-D1 1st fill	246	2.1		2				3		1							Mostly MBA-IA
397		Fill	R-D1 Dump	268	2.3												7	158		Heavily burnt unworked flint
397		Fill	R-D1 Dump	268	2.3	44	46		2		15		5	4	13					Mostly MBA-IA
398		Fill	R-D1 Dump	268	2.3												7	571		3 pieces burnt sandstone weighing 365g rest is unworked heavily burnt flint fragments
398		Fill	R-D1 Dump	268	2.3	22	34				24		14	1	4					Mostly MBA-IA

Context	Cut	Category	Feature Type	Master Number	Phase	Decortication Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
399		Fill	R-D1 Dump	268	2.3													5	125	1 piece burnt sandstone weighing 44g rest is unworked heavily burnt flint fragments
399		Fill	R-D1 Dump	268	2.3	21	25		2		17		14	4	4					Mostly MBA-IA
400		Fill	R-D1 Dump	268	2.3	13	10				5		3	2	1					Mostly MBA-IA
407	406	spit 2	R-D1 Cent Grave	406	1.3	2	2													LN / BA flakes
408	406	spit 3	R-D1 Cent Grave	406	1.3	2	3		1					1						all small flakes or fragments, includes a notched flake
409	406	spit 4	R-D1 Cent Grave	406	1.3	2	3													Mostly small trimming flakes
413	406	spit 5	R-D1 Cent Grave	406	1.3		3													Includes 2 small trimming flakes, one burnt
424		Fill	R-D1 Cent Grave	418	5		1													Small but well struck flake
425	402	Fill	R-D1 Final fill	241	2.3													2	11	Unworked heavily burnt flint fragments
425	402	Fill	R-D1 Final fill	241	2.3	3	4				1	1		1						Includes a M / EN blade core
426	402	Fill	R-D1 Dump	370	2.3													5	248	Heavily burnt unworked flint
426	402	Fill	R-D1 Dump	370	2.3												1			rounded cobble of siliceous sandstone with patches of abrasion on one end suggesting possible use as a hammerstone / pounder. Weighs 186g
426	402	Fill	R-D1 Dump	370	2.3	17	15		1		3		5	4	1					Mostly MBA-IA
428	402	Fill	R-D1 Final fill	241	2.3													1	10	Unworked heavily burnt fragment



Context	Cut	Category	Feature Type	Master Number	Phase	Decorification Flake	Unmodified Flake	Prismatic Blade	Non-prismatic Blade	Micro-debitage	Flake Core	Blade Core	Conchoidal Shatter	Retouched Flake	Core Tool	Ground Stone Axe	Other worked stone	Burnt Stone (no.)	Burnt Stone (wt:g)	Notes
428	402	Fill	R-D1 Final fill	241	2.3	6	15			1	2		2	1	1					Mostly MBA-IA
429	402	Fill	R-D1 Dump	370	2.3												2	18		Moderately burnt unworked flint fragments
429	402	Fill	R-D1 Dump	370	2.3	8	26				14		13	3	4					Mostly MBA-IA
430	402	Fill	R-D1 1st fill	246	2.1	3	1						2							Mostly MBA-IA
433	439	Fill	R-D1 Final fill	241	2.3									1						ET prismatic blade
434	439	Fill	R-D1 Dump	370	2.3	12	21				4		2	3	7					Mostly MBA-IA
435	439	Fill	R-D1 1st fill	246	2.1		1	2												All M / EN, flake is blade-like and appears utilized
436	439	Fill	R-D1 1st fill	246	2.1												2	92		Heavily burnt unworked flint fragments
436	439	Fill	R-D1 1st fill	246	2.1	5	13				2		1							Mostly MBA-IA, includes two refitting flakes
441	445	Fill	R-D1 Dump	441	2.3	10	18				2		5	1						Mostly MBA-IA
444	445	Fill	R-D1 1st fill	246	2.1		1													?LN/EBA
447	450	Fill	R-D1 Dump	441	2.3	1	6													Mostly MBA-IA



		Informally Retouched Flakes								Core Tool								Formal Retouched Implements													
	Context	Master	Acute uniaxially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer		Acute uniaxially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Denticulated Blade	Edge trimmed blade	Barbed and tang arrowhead	Knife	Notch	Piercer	Circular scraper	Thumbnail scraper	End scraper	End and side scraper	Side Scraper	Long-end scraper
7	eval									1						1															

	Informally Retouched Flakes								Core Tool								Formal Retouched Implements												
Context	Master	Acute unifacially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Acute unifacially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Denticulated Blade	Edge trimmed blade	Barbed and tang arrowhead	Knife	Notch	Piercer	Circular scraper	Thumbnail scraper	End scraper	End and side scraper	Side Scraper	Long-end scraper
47	241			1								1			1														
48	243		1	1			1																						
50	246				1							1																	
60	241	2												2															
61	268						1																						
100	101				3			1										1	11		2	1		1	7		3	2	1
105	101							1																					
114	101																												
123	2															1									1				
138	139																					1				1			
170	2	2																											
198	2																	1											

	Informally Retouched Flakes								Core Tool								Formal Retouched Implements												
Context	Master	Acute unifacially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Acute unifacially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Denticulated Blade	Edge trimmed blade	Barbed and tang arrowhead	Knife	Notch	Piercer	Circular scraper	Thumbnail scraper	End scraper	End and side scraper	Side Scraper	Long-end scraper
241	241	1	1		1		1				1	2		4															
242	241																			1			1						
242	241	1	1	2			2		1			1	1				1												
243	243	1			1												1												
244	244	1				1			1			1					1												
245	245			2									2	1	1		2												
246	246	1										1		1	1														
267	241																		1										
268	268																						1				1		
271	241	2		1	1	1								2															
273	241				1																								
274	243						1																						
286	289																										1		

	Informally Retouched Flakes								Core Tool								Formal Retouched Implements												
Context	Master	Acute uniaxially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Acute uniaxially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Denticulated Blade	Edge trimmed blade	Barbed and tang arrowhead	Knife	Notch	Piercer	Circular scraper	Thumbnail scraper	End scraper	End and side scraper	Side Scraper	Long-end scraper
291	246	1	1														1												
292	246													1															
293	241	1		1				1						1															
296	241	1	1																										
298	370							2								1													
300	268								1								1												
301	268							1																					
302	268	2												1															
303	268			2										1															
305	268	1			1		1							2															
306	268								1								1												
307	268	3												2															
308	268											2		3		1	1												

	Informally Retouched Flakes								Core Tool								Formal Retouched Implements												
Context	Master	Acute uniaxially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Acute uniaxially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Denticulated Blade	Edge trimmed blade	Barbed and tang arrowhead	Knife	Notch	Piercer	Circular scraper	Thumbnail scraper	End scraper	End and side scraper	Side Scraper	Long-end scraper
308	268																		1										
309	268			2													2												
310	268			3								1		5			1												
311	268	1		1	2	2	1	1				2	1	3			1												
312	268			2		4	1					2		7			1												1
313	268	1		2	1	3	2					2	1	11		3	4												
314	268			1	1	2			1	1		6		9		3	2												
315	268	1		3		2						6	1	2			3												
316	268		1	1			2					1		2			1												
317	268	1				1								2															
318	268			3																									
319	268			1					1			1																	
320	268	2		1	1	1							2	1	1														



	Informally Retouched Flakes								Core Tool								Formal Retouched Implements												
Context	Master	Acute unifacially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Acute unifacially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Denticulated Blade	Edge trimmed blade	Barbed and tang arrowhead	Knife	Notch	Piercer	Circular scraper	Thumbnail scraper	End scraper	End and side scraper	Side Scraper	Long-end scraper
321	268					2																							
322	268					1			1			3		1			1										1		
323	268							1	1																				
324	268	2							1			1		1			1												
324	268			1			1							4															
325	268																	1											
326	268					1	1																						
327	268					2			1																				
329	268					1																							
330	243						2					1		1															
336	243	1				2						1		2															
337	245					1	1		1			2		1			1		1										
338	243													1			1												

	Informally Retouched Flakes								Core Tool								Formal Retouched Implements												
Context	Master	Acute unifacially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Acute unifacially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Denticulated Blade	Edge trimmed blade	Barbed and tang arrowhead	Knife	Notch	Piercer	Circular scraper	Thumbnail scraper	End scraper	End and side scraper	Side Scraper	Long-end scraper
340	243													1															
342	243																1												
344	243													2			1											1	
345	244						1				1				1														
346	243										1																		
347	244												1																
350	244								1																	1			
352	243					1					1		1																
353	244	1																											
354	243	1						1																					
355	244													2															
360	243	1							1				1																
361	244		1		1																								

	Informally Retouched Flakes								Core Tool								Formal Retouched Implements												
Context	Master	Acute unifacially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Acute unifacially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Denticulated Blade	Edge trimmed blade	Barbed and tang arrowhead	Knife	Notch	Piercer	Circular scraper	Thumbnail scraper	End scraper	End and side scraper	Side Scraper	Long-end scraper
363	244							1	1			1																	
365	243								1																				
367	245				1	1	1		1			2		1		1	1												
368	243			1						1																			
370	370	1														1													
371	370														1														
397	268	1		1	1	1						4		5			4												
398	268						1					2		1															
398	268															1													
399	268	1		1			2					1		2	1														
400	268	1				1											1												
408	406																					1							
425	241								1																				

	Informally Retouched Flakes								Core Tool								Formal Retouched Implements												
Context	Master	Acute unifacially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Acute unifacially worked edge	Acute bifacially worked edge	Notch - retouched flake scar	Steep smooth worked edge	Coarse toothed denticulated edge	Finer toothed denticulated edge	Battered Edge	Spur / Piercer	Denticulated Blade	Edge trimmed blade	Barbed and tang arrowhead	Knife	Notch	Piercer	Circular scraper	Thumbnail scraper	End scraper	End and side scraper	Side Scraper	Long-end scraper
426	370			1	1	1	1					1																	
428	241				1												1												
429	370	1		1		1						2		2															
433	241				1																								
434	370					1	2					1		2	1		3												
441	441		1																										
451	+	1			1	1																			1	1			

Context	Master	Minimal <5 flake removals	Single Platform	2 platforms	Multiplat -form	Keeled	Min Wt (g)	Max Wt (g)	Ave Wt (g)
12	Eval					1	59		
47	Eval	2	2		1		14	48	33
48	Eval		1		2	1	61	112	82
60	Eval	3	2		1		19	39	30
69	Eval	1					37		
100	101	3	8		3	7	18	113	42
129	2		1				43		
198	2				1		142		
241	241	4	6	3	6	2	14	102	38
242	241	3	4	2		2	30	94	53
243	243	2					17	18	18
244	244	5	2		2	1	17	72	38
245	245	4	2	1	4		18	93	54
246	246	2	1	1		1	27	142	73
266	241		1				24		
271	241	1					20		
273	241				1		38		
274	243	1	2				31	121	70
286	289			1		1	26	36	31
296	241				1		48		
298	370	1					28		
300	268	1	3		1		21	50	35
301	268				1	1	22	48	35
302	268	1	2		1		32	48	38
303	268	1	1		1		27	58	40
305	268		1		1		12	42	27
306	268	2				1	27	79	47
307	268	5	3	2	5		17	85	55
308	268	4	4	2	4	1	7	171	56
309	268	3	1		1	1	33	105	55
310	268	5	13		8		12	111	36
311	268	14	22	8	11	1	13	138	55
312	268	11	11	6	7	2	15	98	43
313	268	24	17	8	13	3	13	144	45
314	268	6	9	3	7	3	10	81	37
315	268	14	10	5	12	4	14	177	49
316	268	3	1	2	5	1	24	87	44
317	268	5	3	1	3	2	27	90	56
318	268	1					25		

Context	Master	Minimal <5 flake removals	Single Platform	2 platforms	Multiplat -form	Keeled	Min Wt (g)	Max Wt (g)	Ave Wt (g)
319	268	1	1	1	1		24	80	49
320	268	4	2		2	1	12	277	59
320	268	1	1	1		1	33	65	45
322	268	7	3		10	4	7	86	35
323	268	3	3		4	1	19	86	36
324	268	8	6	1	9	3	9	85	37
326	268	3	3	1			9	56	36
326	268			1	1		19	52	36
327	268				1		27		
329	268	2	2		1		23	80	48
331	244	1				1	25	29	27
332	243	2	1				17	48	30
333	244				1	1	60	159	101
336	243		1	1	2	1	9	123	48
337	245	6	1		4	2	17	81	47
338	243	2			1		24	35	29
339	244					1	39		
340	243		1				57		
341	244			2			34		
342	342				1		47		
343	244	1			1		61	57	59
344	243				1		47	47	47
345	244	1					53	53	53
346	243	1			1		18	19	19
347	244	1	1		1		22	51	36
352	243	1	1		1		32	48	42
353	244				2	1	27	35	31
357	244			1			180		
360	243	1	2		1		21	64	35
361	244	1	1		1		26	38	22
362	243	2				1	23	65	39
363	244	4	1	2	1	1	37	76	51
364	241	2	1				17	44	28
365	243				1		78		
367	245	3	5	1	4	1	17	77	45
367	245	3			2		13	69	44
368	243	2	3	1		1	27	96	46
369	244					2	60	72	66
370	370		1				33		

Context	Master	Minimal <5 flake removals	Single Platform	2 platforms	Multiplat -form	Keeled	Min Wt (g)	Max Wt (g)	Ave Wt (g)
371	370		2		2	1	16	62	41
372	246	1	1	1			48	106	77
397	268	3	5	2	5		16	118	47
398	268	5	8	1	5	3	16	107	54
399	268	4	5	1	5	2	20	147	52
400	268	2	2		1		15	60	37
425	241		1		1		31	75	53
426	370	1	1	1	1	1	24	76	47
428	241	1			1		35	41	38
429	370	6	4	1	2	1	20	88	45
434	370	1			1	2	11	59	32
436	246	1				1	26	36	31
441	441	1			1		62	70	66
451	Unstrat		3	1		1	11	39	36



## C.4 Earlier Prehistoric Pottery

*By Mark Knight*

### **Introduction**

- C.4.1 Sizeable fragmented assemblages of Beaker, Early Bronze Age/Collared Urn and Deverel-Rimbury wares made up the bulk of the earlier prehistoric pottery. The Beaker component stood-out because of its variability of decoration and form as well as its relative magnitude whilst the ostensibly plain Early and Middle Bronze Age components were less impressive both qualitatively and quantitatively. At the same time, there was a degree of material overlap or ambiguity between the Early and Middle Bronze Age types as both shared similar fabrics as well as comparable plain body forms.
- C.4.2 The assemblage of earlier prehistoric pottery comprised 633 sherds weighing 2006g (MSW 3.2g). The condition of the material was fair to good and much of the collection was made up of small, plain featureless fragments retaining original surfaces. Feature sherds were relatively uncommon with 36 rims, 96 decorated pieces and ten base parts making up the remainder of the collection. In addition, two sherds had pre-firing perforations. Eleven different fabric types were identified and these incorporated predominantly grog-tempered pieces with different admixtures of sand, flint and shell though flint as well as shell exclusive fragments were also present.
- C.4.3 The assemblage composition included just one sherd of Early Neolithic pottery (0.5% by weight) amongst substantial assemblages of Beaker (38%), Early Bronze Age/Collared Urn (28%) and Deverel-Rimbury (33%) wares. The Beaker assemblage contrasted with the Early and Middle Bronze Age collections in that it was mainly made up of thin-walled decorated 'finewares' as opposed to heavier, typically plain thick-walled forms.

	Number	Weight	Mean Sherd Weight	Fabric Type
Early Neolithic	1	10g	-	6
Beaker	212	769g	3.6g	1, 3
Early Bronze Age/Collared Urn	307	565g	1.8g	2, 10
Deverel-Rimbury	113	662g	5.8g	4, 5, 7, 8, 9, 11
<b>Total:</b>	<b>663</b>	<b>2006g</b>	<b>3.2g</b>	<b>11</b>

Table 17: Earlier prehistoric pottery assemblage composition

### *Fabric Series:*

1. Hard compact with common **sand** and occasional small **grog** (BK).
  2. Medium hard with frequent small medium rounded **grog** (EBA/CU?).
  3. Hard with abundant **sand** and common small burnt **flint** (BK).
  4. Medium hard with common burnt **flint**, **sand** and rare **grog** (MBA).
  5. Medium with common small **grog** and occasional **flint** (MBA?).
  6. Hard with abundant poorly sorted small, medium and large **flint** and common **sand** (EN).
  7. Medium with common to frequent small crushed **shell** (MBA).
  8. Hard abundant very small burnt **flint** (MBA).
  9. Medium (thin) very common angular **grog** (MBA?).
  10. Medium with common small, medium **shell** and occasional **grog** (EBA/CU?).
  11. Medium with frequent medium and large **grog** and moderate small **shell** (MBA).
- C.4.4 Diagnostic characteristics involved distinctive decorative motifs, rim types and varied wall thicknesses, although the primary indicative attribute was fabric type. Apart from the comparatively amply decorated Beaker assemblage, the predominance of plain

featureless sherds made the task of assigning fragments to particular types problematic, especially as the majority of these belonged to medium and large-sized urns made with grog-rich fabrics (specifically Fabrics 2 and 5). Subtle differences, including the presence/absence of burnt flint or shell inclusions and/or applied slips afforded some assistance particularly when these attributes occasionally coincided with much more familiar traits such as twisted-cord decoration (Early Bronze Age) or single horizontal cordons of fingertip impressions (Middle Bronze Age). Ultimately, there remains the possibility that some of the sherds assigned to the Deverel-Rimbury tradition on the basis of fabric alone, might actually be Early Bronze Age/Collared Urn (or *vice versa*).

### **Earlier Neolithic**

- C.4.5 The Early Neolithic material comprised a single residual piece of Early Neolithic or Mildenhall pottery: a plain body or neck fragment with a pre-firing perforation from context (320).

### **Beaker**

- C.4.6 The Beaker assemblage represented the largest component by weight and the second largest by number. The bulk of the Beaker assemblage (90.5% by number and 85.5% by weight) came from just two contexts: (100) & (114); notably, sherds from the same vessel were present in both. Smaller quantities, including single residual sherds from features containing Middle Bronze Age material, were recovered from other contexts and included pieces of fineware vessels decorated with impressed (comb) and incised decoration.

Context	Number	Weight	Rim	Dec.	Base
<i>100</i>	<i>176</i>	<i>586g</i>	<i>19</i>	<i>60</i>	<i>7</i>
105	4	13g	1	4	2
<i>114</i>	<i>15</i>	<i>65g</i>	<i>1</i>	<i>6</i>	<i>0</i>
226	2	17g	1	2	0
233	2	4g	0	1	0
241	2	46g	0	0	0
266	2	4g	0	1	0
314	1	4g	0	1	0
357	1	2g	0	0	0
397	2	7g	0	0	0
398	1	5g	0	0	0
414	1	5g	0	1	0
<i>Total:</i>	<i>209</i>	<i>758g</i>	<i>22</i>	<i>76</i>	<i>9</i>

Table 18: Pottery from Beaker Contexts (key assemblage italicised).

- C.4.7 The collection from (100) and (114) comprised the particularly fragmented remains of at least seven different vessels including 'fine' small globular forms decorated with 'Barbed-Wire', comb and incised motifs as well as larger 'coarser' or rusticated forms with crows-foot designs. Rim types such as simple rounded, out-turned and flattened were present and those with measurable rim diameters equalled between 15 and 25cm. Many of the sherds were weathered or abraded whilst a few appeared fresh.
- C.4.8 The distinctive 'Barbed-Wire' vessel involved a combination of horizontal decorative techniques including incised parallel grooves (neck), rows of Barbed-Wire divided by a single row of diagonal slashes or stabs. Fragments of this vessel occurred in both (100) and (114).

### **Early Bronze Age/Collared Urn**

- C.4.9 The Early Bronze Age/Collared Urn assemblage incorporated fragments of recognizable forms together with multiple plain sherds. Familiar traits such as impressed twisted-cord (102), comb-point (305), incised hurdle motifs (353), as well as rounded T-shaped (305) and internally bevelled rims (353) confirmed the presence of Collared Urn whereas multiple pale buff-coloured, plain sherds with dark oxidised interiors and 'soapy' grog-rich fabrics indicated a greater Early Bronze Age element. Similarly, a burnished applied slip (pink in colour and soapy in texture) on two refitting sherds with (361) could also be seen as an attribute particular to the Early Bronze Age urn tradition. Contexts with plain featureless Early Bronze Age sherds included (129), (241), (244), (272), (296), (297), (311), (312), (321), (332), (334), (361), (415), (417) and (428).
- C.4.10 The Collared Urn vessel (102) is discussed in detail in Appendix C.5.

### **Deverel-Rimbury**

- C.4.11 The Middle Bronze Age or Deverel-Rimbury assemblage was made up almost exclusively of plain, unremarkable pieces belonging to medium to large straight-sided forms. Exceptions included simple flattened or flattened in-turned rims from (244), (320), (326), (333), (367), and (369) as well as a horizontal cordon of fingertip impressions from (138). The rim fragment from (320) also had a pre-firing perforation which in combination with the rim form/fabric represents another Deverel-Rimbury attribute.
- C.4.12 Deverel-Rimbury sherds were also present in 26 other contexts: (243), (271), (300), (301), (304), (309), (313), (317), (319), (324), (327), (337), (338), (340), (341), (343), (350), (356), (362), (370), (371), (372), 425), (431), (434) and (447).

### **Discussion**

- C.4.13 The Fordham Beaker assemblage is typical of domestic collections found throughout East Anglia (Bamford 1982, Gibson 1982, Healy 1996, Garrow 2006) and in particular Bamford's Breck-Fen 'group' (1982, 33). Within the context of the Breckland/Fen-edge region, the pattern seems to reflect a relatively extensive distribution of individually insubstantial but collectively impressive domestic Beaker assemblages which can now be extended to incorporate large parts of the western fen-edge (Gibson 1982, Knight 2009).

Site	County	Weight
Over North Ridge	Cambridgeshire	4972g
Over South Ridge	Cambridgeshire	4577g
Edgerley Drain Road	Peterborough	1534g
Longham	Norfolk	1436g
Feltwell Quarry	Norfolk	1282g
Northwold	Norfolk	1264g
Bradley Fen	Cambridgeshire	1237g
Sutton Gault	Cambridgeshire	1215g
<i>Fordham</i>	<i>Cambridgeshire</i>	<i>1023g</i>

Table 19: East Anglian domestic Beaker assemblages

- C.4.14 Stylistically the assemblage corresponds with Clarke's Southern and East Anglian Beaker traditions. The Barbed Wire Beaker would appear to demonstrate a greater fen-edge presence that previously recorded (Healy 1996, 177) and at the same time demonstrate a contextual association between outwardly stylistically different Beaker traditions.

- 
- C.4.15 The deposition of small, often abraded/weathered fragments representing the partial remains of multiple vessels would appear to be customary practice and analogous assemblages include those from the adjacent Fordham Bypass (Percival 2005) and NFT 047 sites in addition to the nearby Chippenham barrow cemetery (Gibson 1982). Similarly, there seems to be a strong contextual correlation between occupation derived assemblages and the construction of round barrows (Gibson 1982, Knight 2008).
- C.4.16 The fragmentary and plain character of much of the Collared Urn/Deverel-Rimbury material made the distinction of the two traditions difficult. Occasional diagnostic fragments highlighted the presence of both types although the identification of Early Bronze Age forms was made easier by the occurrence of distinctively characteristic decorative motifs. Interestingly, Percival describes fragments of grog-tempered thick walled vessels belonging to both Collared Urn and possible Middle Bronze Age bucket urns amongst the Fordham Bypass assemblage (Percival 2005).

## C.5 Collared Urn

*By Sarah Percival*

- C.5.1 The Collared Urn, found in burial pit **103**, had been placed inverted over a cremation burial, containing the remains of a single individual along with two artefacts, a copper alloy knife-dagger put into the vessel unburned and a burnt bone pin which had been gathered from the cremation debris. The base of the urn is missing, destroyed prior to excavation, and the remainder of the vessel is extremely fragmented, having been crushed and shattered after deposition. Over 70 large sherds plus numerous small fragments and crumbs were recovered weighing approximately 3kg, these include 239 tiny sherds weighing 147g recovered from samples (see Knight above).
- C.5.2 The poor condition of the vessel prohibits reconstruction of its original form. The rim and collar are largely absent however what is present of the collar is decorated with twisted cord impressions, which appear to form a hurdle motif. Below the rim is a concave neck and angular shoulder giving the vessel a tripartite profile. From the shoulder the body of the urn tapers sharply towards the base. Immediately below the collar the urn is undecorated but the remainder of the neck to the shoulder is filled with cord-impressed herring bone formed of individual impressions each 16mm long (c.f. Longworth 1984, plate 28, a). The walls of the urn are around 9mm thick. Other dimensions are not measurable.
- C.5.3 The urn is made of grog-tempered fabric containing common angular pieces of pale orange to buff grog up to 4mm long. Common small, dark grey, rounded clay pellets are also present within a fine clay matrix. The fabric has a blocky texture and is extremely crumbly. The exterior surfaces of the urn are pale orange to buff and have been wet hand wiped. The interior is dark grey to brown.
- C.5.4 The urn is too fragmented to be accurately dated by form however several characteristics place it within Burgess's early group, particularly the concave neck and angular shoulder and the use of repetitive short-line motifs for decoration which extends below the collar and onto the upper body (Burgess 1986). The urn is probably of similar shape to an example excavated from a barrow in nearby Chippenham (Longworth 1984, plate 64, a), whilst the decoration is more similar to examples from Snailwell, (Longworth 1984, plate 46, c.).

## C.6 Late Bronze Age Pottery

*By Matt Brudenell*

### **Introduction**

- C.6.1 A total of 558 sherds (4446g) of Late Bronze Age pottery were recovered from the excavations, displaying a mean sherd weight (MSW) of 8.0g. The pottery was recovered from 77 contexts relating to a small number of features and deposits (Table 20), with the largest and most significant assemblages deriving from the barrow ditch and pit 227 (collectively accounting for 98.8% of the pottery by weight). This material, and that in the rest of the assemblage described below, has been assigned to the Plainware phase of the Post Deverel-Rimbury (PDR) ceramic tradition, dating to the Late Bronze Age c. 1150-800 BC. The pottery was in good condition, though sherd sizes and levels of edge abrasion varied greatly between the two principle features assemblages: sherds from the barrow being smaller and more abraded than those from pit 277. In general, however, small sherds dominated the assemblage (79% by sherd count)
- C.6.2 This report provides a detailed quantified description of the pottery, and includes recommendation for publication.

Feature	No. Contexts	No./wt.(g) sherds	% assemblage (by wt.)
Barrow ditch	71	421/2605	58.6
Cremation 230	1	1/1	<0.1
Cut 52, T9 ring ditch	2	7/31	0.7
Pit 227	1	122/1786	40.2
Surface finds (near cremations)	1	6/17	0.4
Subsoil	1	1/6	0.1
<b>TOTAL</b>	<b>77</b>	<b>558/4446</b>	<b>100.0</b>

Table 20: Quantification of later prehistoric pottery by feature.

### **Methodology**

- C.6.3 All the pottery has been fully recorded following the recommendations laid out by the Prehistoric Ceramic Research Group (2009). After a full inspection of the assemblage, fabric groups were devised on the basis of dominant inclusion types, their density and modal size. Sherds from all contexts were counted, weighed (to the nearest whole gram) and assigned to a fabric group (sherds broken in excavation were refitted and counted as single entities). Sherd type was recorded, along with technology (wheel-made or handmade), evidence for surface treatment, decoration, and the presence of soot and/or residue. Rim and base forms were described using a codified system recorded in the catalogue, and were assigned vessel numbers. Where possible, rim and base diameters were measured, and surviving percentages noted. In cases where a sherd or groups of refitting sherds retained portions of the rim and shoulder, the vessel was also categorised by form. These vessels were classified using a form series devised by the author (Brudenell 2011; 2012), and the class scheme created by John Barrett (1980). All pottery was subject to sherd size analysis. Sherds less than 4cm in diameter were classified as 'small' (79% by sherd count); sherds measuring 4-8cm were classified as 'medium' (11%), and sherds over 8cm in diameter were classified as 'large' (2%). A programme of refitting was also conducted, with sherd joins noted within and between contexts. Crumbs of pottery (individually weighing less than 1g) were not counted but weighed collectively by context (10g in total). These are not included in the



quantification below, but are noted in a column on the Excel data sheet held with the site archive.

### ***Assemblage characteristics***

C.6.4 Whilst potters potentially had access to a variety of clay sources and tempering ingredients within the local area, in keeping with the broader character of the PDR ceramic tradition in this part of Cambridgeshire and beyond, calcined flint was the preferred additive; crushed to varying grades and mixed in different quantities depending largely upon vessel size and quality of ware. By weight, 95% pottery had burnt flint inclusions (F-F3); dominant amongst which was coarseware fabric F1 (Table 21). In general, these flint fabrics were hard, abrasive and tended to have a little sand in the clay matrix, distinguishing them from the softer textured earlier prehistoric flint-tempered wares. Of the remaining pottery in the 'minor' fabric groups, 3% contained fossil shell (S1-S2, possibly derived from chalk, or from Ampthill or Kimmeridge Clay sources from further afield), 1% a combination of flint and sand (FQ1-2), and <1% grog and flint (GF1) and sand (Q1).

Fabric	Group	No./wt.(g) sherds	% of fabric (by wt.)	No./wt. (g) sherds burnished	% of fabric burnished (by wt.)	MNV	MNV burnished
F	Flint	47/70	1.6	-/-	-	5	-
F1	Flint	394/3671	82.6	1/2	0.1	26	-
F2	Flint	53/410	9.2	17/181	44.1	8	-
F3	Flint	22/80	1.8	19/71	88.8	3	3
FQ1	Flint & sand	6/30	0.7	-/-	-	-	-
FQ2	Flint & sand	4/29	0.7	-/-	-	-	-
GF1	Grog & flint	2/12	0.3	-/-	-	-	-
Q1	Sand	4/14	0.3	-/-	-	1	-
S1	Shell	12/79	1.8	1/2	2.5	1	-
S2	Shell	14/51	1.1	-/-	-	-	-
TOTAL	-	558/4446	100.1	38/256	5.8	44	3

Table 21: Quantified Late Bronze Age pottery. MNV = minimum number of vessels, calculated as the total number of different rims and bases (23 rims, 20 bases and one complete vessel profile).

### ***Fabrics series***

#### ***Flint fabrics***

F1: Sparse to common medium and coarse burnt flint (mainly 2-4mm). The clay matrix may contain rare to sparse sand

F2: Sparse to common medium burnt flint (mainly 1-2mm). Clay matrix as F1

F3: Moderate to common finely crushed burnt flint (mainly 0.25-1mm). Clay matrix as F1

F: Generic category for sherds with burnt flint inclusions too small to assign to a numbered fabric group

#### ***Flint and sand fabrics***

FQ1: Moderate to common coarse burnt flint (mainly 2-4mm) in a dense sandy clay matrix

FQ2: Moderate to common medium burnt flint (mainly 1-2mm) in a dense sandy clay matrix



#### *Grog and flint fabrics*

GF1: Sparse medium grog (mainly 1-2mm) with spare fine to mod flint (1-2mm)

#### *Quartz sand fabrics*

Q1: Sparse to common quartz sand. Clay matrix may also contain rare coarse flint and/or calcareous grits (1-3mm)

#### *Shell fabrics*

S1: Moderate to common medium to very coarse shell (mainly 1-3mm)

S2: Moderate to common medium shell (1-2mm)

- C.6.5 As with all Late Bronze Age pottery assemblages from Eastern England, the ceramics could be divided into burnished finewares and un-burnished coarsewares (Barrett 1980). Some 38 sherds (256g) in the assemblage were identified as being burnished, polished or carefully smoothed. Although this accounts for just 5.8% of the pottery by weight, or 6.8% by sherd count, these frequencies are actually typical of most Plainware assemblages from Cambridgeshire, with comparable figures recorded in the published assemblages from Addenbrooke's Hutchinson Site (Brudenell 2008, 38) Striplands Farm (Brudenell 2011, 21) and Rhee Lakeside South (Brudenell 2013, 140; also see Brudenell 2012 for regional discussion). As is usual, this form of surface treatment was most prevalent on sherds whose inclusions were graded at finer end of fabric spectrum, notably fabric F3.
- C.6.6 Based on the minimum number of different identifiable rims and bases, the assemblage is estimated to contain fragments of at least 44 different vessels. However, the largely fragmented condition of the pottery meant that the partial and complete profiles of just six vessels could be reconstructed and assigned to form (Table 22, incorporating 74 sherds, 1515g). The vessels represented were jars: five Class I vessels, one Class II. They included a group of small, simple profiled jars with no distinct neck zone (Form B), and a series of round shouldered jars (Forms A and F) – forms typical of the Plainware tradition. The rims of the non-form assigned vessels were predominately simple, displaying rounded or flattened lips. A selection were rounded or pinched on the exterior, or had slightly everted, tapered profiles, while one had an internal bevel, and one displayed an in-turned or 'hooked' rim. Again, all fell within the normal range of rim morphology exhibited by Plainware assemblages. The same was true of the base forms, one of which had the distinct heavy flint gritting on the underside. The only notable omissions were examples of omphalos bases, though given that these are normally burnished fineware base forms, their absence reflects the paucity of burnished/fineware pottery in the assemblage at large.

Form	Brief description	No. vessel	No. burnished	Rim diam. (cm)
A	Jar, rounded shoulder, constricted neck	1	-	-
B	Jar, ellipsoid, no distinct neck-zone	3	1	11-14cm
F	Jar, high rounded shoulder	2	-	22cm
TOTAL	-	6	1	11-22cm

Table 22: Quantification of vessel forms

- C.6.7 Decoration was present on seven sherds (99g) derived from a maximum of three vessels. Two of these vessels were coarseware rims with fingertip impressions on the rim-top (3 sherds, 49g); two sherds belonging to the Form A jar in the assemblage. The remaining four ornamented sherds belonged to a burnished angular-shouldered fineware vessel (probably a Class II jar), decorated with grooved horizontal lines on the

neck and shoulder. The profile of these sherds and the manner of decoration are reminiscent of Early Iron Age fineware vessels. However, since there were no other Early Iron wares in the assemblage, and these sherds were stratified amongst Late Bronze Age sherds, there is no reason to assume a later date. Decorated finewares may be rare in Plainware assemblages, but they do form part of the Late Bronze Age ceramic repertoire, particularly in 'late' or 'mature' Plainware groups dated around the ninth century BC (Brudenell 2012).

- C.6.8 Evidence for vessel use was identified in the form of carbonized residues adhering to sherd surfaces (82 sherds, 1195g). 'Sooting', or thin residue, was present on half these sherds (744g), mainly rims and shoulders. The other half displayed thicker 'food crusts' (451g), confined to sherd interiors, mainly body sherds and bases. Some of these could potentially be sampled for radiocarbon dating.

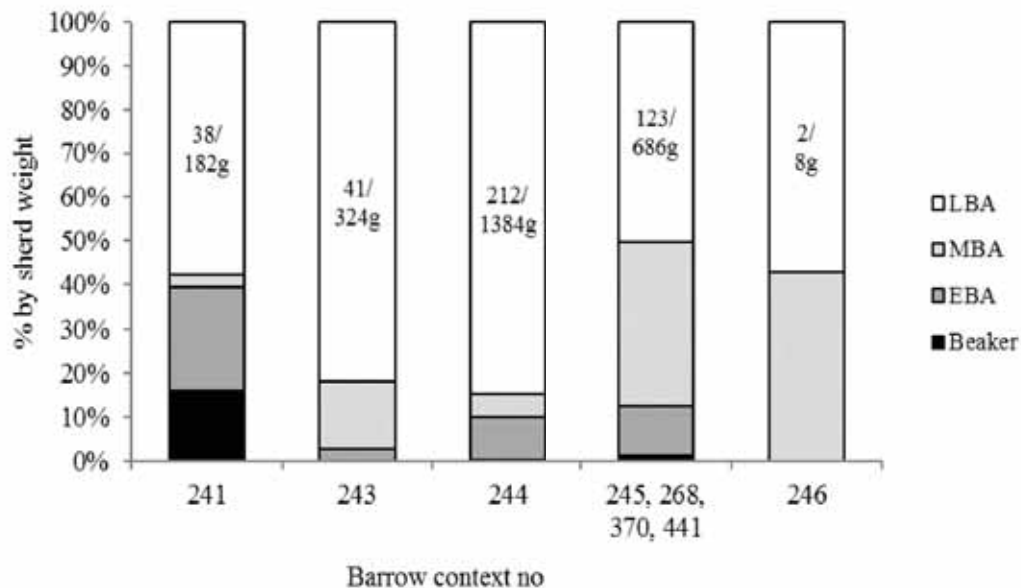
***Key pottery groups: Pit 227 and the Barrow 1 ditch assemblage***

- C.6.9 Pit **227** yielded 122 sherds, weighing 1786g. Unlike the rest of the pottery from the assemblage, the material from this pit was predominantly fresh and unabraded, and included a high number of refitting sherds (43 identified in total, representing 35% of the sherds from pit **227**). The good condition of the material was also reflected in the comparatively high MSW of 14.6g (compared to 8.0 for the overall assemblage), and the relative frequency of sherd sizes recorded: 63% small; 29% medium, 8% large. Fragments of at least six vessels were represented in the assemblage, three of which were sufficiently intact to assign to form. These comprised coarseware fragments of a Form A jar decorated with fingertip impressions on the rim-top, and two plain Form B jars. The programme of refitting demonstrated that much of the pottery in this pit belonged to just one of the Form F jars, which could be reconstructed to form a complete vessel profile. In total 58 sherds (1336g) were identified as belonging to this one pot, 39 of which could be refitted. The jar was 23cm tall, had a base diameter of 11cm, and an internal rim diameter of 22cm. It is estimated that around half the vessel was represented. The pot had sooting on the rim and shoulder exterior, suggesting it was used for cooking.
- C.6.10 The overall condition of the pottery from pit **227** implies that that it was deposited relatively soon after breakage. Though the presence of a complete vessel profile could invite interpretations of selective deposition, the fact that fragments of this one pot were found mixed amongst those of other jars and vessels should make us cautious about leaping to such a conclusion. If considered as just part of a composition of relatively freshly broken pottery, perhaps derived from recent dumps on a surface midden, its inclusion here could be viewed as more incidental than deliberate. Consideration and symbolic intent may certainly have been articulated through the act of drawing on fresh midden material and burying it in a small pit. But it is questionable whether those mixed fragments of pottery in the matrix of refuse were themselves being explicitly acknowledged as individually important in such moments.
- C.6.11 In short, and as is often the case, ambiguity surrounds the finer points of interpretation, especially in instances where evidence for the selection or arrangement of pottery in the ground is absent. Similar issues can be raised in relation to the pottery assemblage from the barrow ditch, though here it is the context of deposition which forms the more obvious focus of discussion. Interestingly the condition of pottery in this assemblage was very different to that from pit **227**. It comprised 421 sherds (2605g), but had a MSW less than half of that displayed by the pit **227** material (6.1g). On the whole, sherds were visibly smaller and more abraded, as is reflected in the sherd frequencies: 84% small; 16% medium; <1% large. None of the material could be described as 'fresh'.

Context assemblages were thoroughly mixed, and only 12 refitting sherds were identified (3% as opposed to 35% in pit 227).

- C.6.12 Unsurprisingly, few vessel forms could be reconstructed from the fragments, though based on the minimum number of different rims and bases recorded, the assemblage is estimated to contain at least 37 different vessels. In total only three of these could be form-assigned, and all were classified as fragments of ellipsoid jars with no distinct neck-zone and simple upright or slightly in-turned rims (Form B; two Class II vessels and one Class II vessel). This form of pot is found throughout the Late Bronze Age, but on typological grounds, it recalls the bucket and barrel-shaped urns of the antecedent Deverel-Rimbury tradition, and is regarded as a potential point of continuity in the ceramic series. Interestingly, the paucity of obvious shoulder sherds from the barrow ditch may imply that much of the pottery belonged to similar vessels, which could in turn suggest that this is an 'early' Plainware assemblage (Brudenell 2012). This is an attractive possibility. The stratigraphic distribution of the material displayed in Graph 1 shows that the lower units of the 'finds rich' layer (contexts 245, 268, 370, and 441) contained a relatively balanced proportion of Middle and Late Bronze Age wares, which hints at the possibility that this material was deposited around the time when ceramic traditions were in transition.
- C.6.13 As plausible as this seems however, it should be noted that all of the major stratigraphic units from the barrow contained a mix of pottery of different date. As such, the material sequence is not as neat as one might hope for. Indeed most of the earlier Bronze Age pottery derived from the final fills (context 241), and adjoining and non-adjoining sherds clearly derived from the same Late Bronze Age vessels were identified between contexts 241 and 268, 243 and 245, and 243 and 244. These details aside, when we look at the stratigraphic sequence it is clear that most of the Late Bronze Age pottery was deposited in the upper units of the 'finds rich' layer (context 244), with high relative frequencies in the units above (contexts 243 and 241). Mention must also be made of the two sherds from basal fills (context 246). These were plain body sherds, and may easily have been misdated, or have otherwise been intrusive. In other words, they are unlikely to date the formation of this deposit.
- C.6.14 Overall then, it appears that the 'finds rich' contexts from the ditch of Barrow 1 were predominately characterised by Late Bronze Age ceramics, with a significant Middle Bronze Age component in the lower units of this layer. The scale of the assemblage is not vast, but the condition of the pottery indicates that it had been heavily reworked (fragments, abraded), probably over a relatively long period of time. The ceramics were certainly not as fresh as those which entered pit **227**, and had clearly become caught up with pottery and other artefacts that were much older. This mixing and reworking possibly occurred both prior to entering the ditch and within the ditch itself. Indeed, in terms of its wider character and composition, the assemblage is reminiscent of a generalised but degraded midden-type deposit, which spatially formed concentrated spreads with the excavated portion of the barrow ditch. Whether these formed gradually within the silted earthwork, or represent a series of dumps derived from one or more external midden heaps is difficult to tell. Either way, they suggest a settlement presence in the vicinity. Another question which is difficult to answer is why the barrow ditch formed the focus for these deposits in the first place. Was it simply that the silted ditch was a convenient dumping ground for spent materials on the periphery of settlement, or did the fact that this was a monument in some way condition what, how, and why material was deposited here? In truth, the evidence is not clear cut, but the example here adds to a growing regional picture of ring-ditches being reutilised and

reappropriated by communities in the later second millennium BC (a good published parallel being Broom, Bedfordshire (Cooper and Edmonds 2007)).



Graph 1: Relative frequency (by sherd weight) of pottery from the Barrow 1 ditch contexts. The contexts are arranged in broad stratigraphic order, with the final fill (241) at the far left and the basal fill (246) at the far right. The number and weight of LBA sherds derived from these units (416 sherds, 2584g in total) is also labelled. Note that very little pottery was recovered from the basal fill.

### Discussion

- C.6.15 There is little doubt that the pottery described in this report belongs to the Plainware phase of the PDR ceramic tradition, and like most assemblages from the region, is dominated by fragments of coarseware vessels, mainly jars. Pottery of the Plainware phase is broadly dated c. 1150-800 BC. However, within this c. 350 year period there are hints that the ceramic repertoire gradually evolved from an 'early' Plainware phase (c. 1150-1000 BC), characterised by a restricted range of convex-walled and barrel-shaped jars accompanied by a few open and round-bodied bowls to, a 'mature' phase (c. 1000-800 BC) exhibiting a more diverse range of shouldered jars, bowls and cups, some becoming angular and decorated toward the close of the Late Bronze Age (Brudenell 2012). Although these changes are imperfectly understood at present, the differing character of the two principle feature assemblages (pit **227** and the Barrow 1 ditch) suggest that pottery from both these phases may be represented here.
- C.6.16 The material from pit **227** could certainly be classed as a 'mature' Plainware group, and is very similar to the pottery recovered pits **544** and **534** in the adjacent excavations of Area A of the Fordham bypass investigations (Mortimer 2005). Here pit **544** was associated with a radiocarbon date of 910-800 cal. BC (95.4%SUERC-14058; 2695 ± 34 BP), which fits perfectly within the suggested chronological range of the 'mature' Plainware group. More broadly, this assemblage finds parallel with other published assemblages from Cambridgeshire including material from Striplands Farm (Brudenell 2011), the Addenbrooke's Hutchison Site (Brudenell 2008) and Stonea (Needham 1996).

- C.6.17 Most of the pottery from the barrow ditch, however, may be earlier. Whereas the assemblage from pit **227** yielded fragments from a series of shouldered jars, obvious shoulder sherds were remarkably scarce amongst the barrow ditch group. This suggests that most vessels here are likely to have been convex-walled and/or barrel-shaped jars. Indeed, all three of those sufficiently intact to assign to form have been classified as such (Form B), and the range of simple upright rims provides further hints of similar vessels from this context. These vessels clearly evolved from Deverel-Rimbury roots, and given that some of the pottery from the barrow ditch was found alongside a proportion of diagnostic ceramics of the Middle Bronze Age (the lower units of the finds rich layer), it is not inconceivable that this context includes an 'early' Plainware or transitional group.
- C.6.18 To date, isolating groups of 'early' Plainware PDR in Cambridgeshire has proved extremely difficult. Most sizeable assemblages tend to be characteristic of 'mature' Plainware groups, and likewise, most radiocarbon determinations in association with PDR pottery have tended to fall within the 1000-800 cal. BC date range. The only notable published group of early Plainware pottery from the county derives from a large pit at Rhee Lakeside South (Brudenell 2013), associated with a date of 1130-920 cal. BC (95.4%; Beta-2293595; 2860 ± 40 BP). Whilst this determination does not necessarily *prove* that the group pre-dates 1000 BC, at present it is the best fit between the typological and absolute dating evidence. The pottery from the 'finds-rich' layers of the barrow ditch could well be contemporary with the material from Rhee Lakeside South, and if so, would represent a small but significant assemblage given the rarity of such groups. However, as noted above, the context assemblages from the barrow ditch do not form homogeneous groups progressing in age through the stratigraphic sequence. If anything, they are mixed in composition and date, and probably result from various refuse maintenance practices involving different episodes of movement and reworking prior to final deposition in the barrow ditch. Consequently, though we may be looking at groups of Late Bronze Age pottery with predominately 'early' characteristics, these assemblages are not discrete and may have been formed from many punctuated episodes of discard over many years. Indeed, some additions may have been made in the period after c. 1000 BC, which could explain fragments of the burnished angular-shouldered fineware vessel which is likely to be late in the Late Bronze Age sequence.

### **Recommendations**

- C.6.19 All the pottery has been fully recorded and does not require further analysis. A shorter version of this text could be prepared for publication, and should include reference to any relevant radiocarbon dates obtained. It is also recommended that a publication includes illustrations of five of the form assigned vessels (catalogue provided below).
- V7 (Rim 13cm). Fabric F1, Class I, Form B, Barrow ditch [315], M268
- V23 (Rim 14cm). Fabric F1, Class I, Form B, Barrow ditch [341], M244
- V36 (Rim 22cm, base 11). Fabric F1, Class I, Form F, Pit 227 [228]
- V37. Fabric F1, Class I, Form F, Pit 227 [228]
- V38. Fabric F1, Class I, Form A, Fingertip impressions on the rim-top, Pit 227 [228]



## APPENDIX D. ENVIRONMENTAL REPORTS

### D.1 Human Skeletal Remains

*By Helen Webb*

#### **Introduction**

- D.1.1 The following report details the specialist analysis of human remains recovered during archaeological excavations at Turner's Yard, Fordham, on land adjacent to the Fordham Bypass. In total, two inhumations (Skeletons 410 and 416), an urned cremation burial (103), 20 unurned cremation deposits (118, 120, 122, 148, 149, 167, 175, 176, 178, 192, 196, 203, 206, 212, 215, 221, 224, 230, 231 and 260) and two fragments of disarticulated, unburnt human bone, underwent osteological analysis. In addition, another feature was also interpreted as a cremation pit, based on its form, charcoal-rich fill and location (within the cremation cemetery), although no bone was actually recovered. The human remains recovered span the Late Beaker period to the Late Bronze Age.

#### **Provenance**

- D.1.2 The principal features of the Turners Yard archaeological excavations were two barrows. The two inhumation burials were associated with the largest of the two barrows (Barrow 1), situated at the western end of the site. Skeleton 416 was buried within an irregular shaped (but heavily truncated) grave (**406**), positioned centrally within the barrow. The exact position of the torso and skull could not be ascertained due to the poor condition and post-mortem disturbance of the bones, but it was clear that the arms were lying across the torso and the legs were drawn up to the body in a tightly flexed (crouched) position. The head was at the south-western end of the grave. Radiocarbon dating suggests that this burial dates to the very end of the Beaker period (c. 1900 – 1800 BC). No finds were found in direct association with the burial, although fragments of animal bone, pottery sherds, struck flints and a fragment of jet (SF 39) were found in the backfill of the pit.
- D.1.3 Skeleton 410 was buried within an oval-shaped grave, which was cut through the primary natural in-fill of the Barrow 1 ring-ditch. This skeleton, which was very well preserved, was laid on its back with the forearms positioned across the abdomen. The head was positioned against the north-western end of the grave cut. The feet were flat on the base of the grave and drawn up towards the pelvis, with the femora (thigh bones) angled upwards, and knees together against the side of the grave. Radiocarbon dating of this skeleton indicates an Early Bronze Age date, probably towards the end of this period (c. 1666 – 1509 BC). No finds were recovered from this grave.
- D.1.4 Another, smaller barrow (Barrow 2) was revealed at the eastern end of site. Positioned centrally within this barrow was Cremation burial 103, interred within an inverted, collared urn (SF 1). Although radiocarbon dating of this cremation deposit failed to produce a consistent date, the finds from it suggest this burial is later than the central burial within the larger barrow. A total of four context numbers were assigned to the fills within and surrounding the urn. These are summarised in Table 23.

Fill no.	Fill composition	Fill interpretation
454	Cremated bone, mixed with orange-brown silty sand	Main cremation deposit within urn (SF 1)
104	Mid orange-brown, silty sand	Fill of urn (SF 1) directly overlying 454, probably represents sandy infilling of urn following deposition + breaking of urn (moderate bone content)
455	Mid orange-brown, silty sand	Fill of urn (SF 1) overlying 455, probably represents sandy infilling of urn following deposition + breaking of urn (low bone content)
102	Mid grey-brown, silty sand	Backfill of pit 103, surrounding urn (SF 1) (very low bone content – post-depositional mixing only)

Table 23: Summary of contexts relating to Cremation burial 103

- D.1.5 Situated between the two barrows, although slightly closer to the north-eastern side of Barrow 1, was a cremation cemetery, comprising 21 small pits. The fills of these pits generally comprised mixed deposits of sandy/silt natural, with charcoal and varying quantities of cremated bone, although none contained more than 500g. Radiocarbon dating of these cremation deposits indicates a Late Bronze Age date (1119 – 844 BC).
- D.1.6 For most of the pits, the fills could be physically divided into two (or more) contexts. Table 24 summarises the nature of the fill/s within each pit. The upper-most fills generally comprised the more charcoal-rich material, containing the majority of burnt bone (the 'main' deposits). Below these deposits were more mixed soils, representing natural deposits mixed (e.g. by root/animal activity) with the upper, more charcoal-rich deposits.
- D.1.7 Pit **178** differed slightly from the rest of the pits in that it contained two distinct charcoal-rich deposits (179 and 189), separated by a silty-sand deposit (188) containing very little charcoal.
- D.1.8 One of the pits (**209**) contained no bone at all, although its location and its charcoal-rich fill was consistent with the others. At just 0.27m by 0.18m in size, this was the smallest of all the pits, which may indicate that this feature had suffered heavy truncation.
- D.1.9 It should be noted here that throughout the following report, the urned and unurned cremation deposits will be referred to by pit number. Unless otherwise stated, the total bone weights given comprise the main cremation deposits plus cremated bone recovered from any related context.

Pit no.	Fill no.	Fill composition	Fill interpretation
<b>118</b>	116	Dark grey-black, silty sand with charcoal	Main deposit
	117	Orange/yellow brown, silty sand	Mixed deposit 116 + natural
<b>120</b>	119	Dark yellow-brown, silty sand	Sole deposit
<b>122</b>	121	Mid grey-brown, sandy silt with charcoal	Sole deposit
<b>148</b>	147	Dark brown-grey, silty sand with charcoal	Main deposit
	164	Mid grey-brown, silty sand with charcoal	Mixed deposit 147 + natural
<b>149</b>	150	Black, sand, charcoal, ash	Main deposit
	165	Mid yellow-brown, sand with charcoal	Mixed deposit 150 + natural
<b>167</b>	166	Dark brown-grey, silty sand with charcoal	Main deposit
	171	Mid grey-brown, silty sand with charcoal	Mixed deposit 166 with natural

Pit no.	Fill no.	Fill composition	Fill interpretation
<b>175</b>	174	Dark brown-grey, silty sand, charcoal-rich	Main deposit – charcoal-rich
	180	Mid brown-grey, silty sand with charcoal	Main deposit – slightly less charcoal
	181	Mid grey-brown + yellow-brown, silty sand	Mixed deposit 180 + natural
<b>176</b>	177	Dark brown-grey, silty sand, charcoal-rich	Main deposit – charcoal-rich
	183	Mid reddish-brown, silty sand, with charcoal	Mixed deposit 177 + 182
	182	Mid brown-grey, silty sand with charcoal	Mixed deposit 183 + natural
<b>178</b>	179	Black-brown, charcoal with some silty sand	Upper deposit of charcoal
	188	Brown, silty sand, little charcoal	Deposit between 179 + 189 – little charcoal
	189	Black, charcoal	Lower deposit of charcoal – separated from 179 by 188.
	190	Brown-yellow sand, little charcoal	Mixed deposit 189 + natural
<b>192</b>	191	Dark brown-black, silty sand with charcoal	Main deposit
	193	Mid grey-brown, silty sand, little charcoal	Mixed deposit 191 + natural
<b>196</b>	197	Black, silty sand, charcoal-rich	Main deposit
	201	Brown, silty sand with charcoal	Mixed deposit 197 + natural
<b>203</b>	204	Black, charcoal + sand	Main deposit
<b>206</b>	210	Orange-yellow, sandy silt	Mixed deposit 204 + natural
	205	Dark brown-grey, silty sand with charcoal	Main deposit
<b>209</b>	207	Mid grey-brown, silty sand	Mixed deposit 205 + natural
	208	Black + dark brown (mottled), silty sand, charcoal-rich	Sole deposit (no bone recovered)
<b>212</b>	211	Black, silty sand, charcoal-rich	Sole deposit – charcoal-rich
<b>215</b>	214	Black-brown, silty sand with charcoal	Main deposit
	220	Mid grey-brown, silty sand	Mixed deposit 214 + natural
<b>221</b>	222	Black, charcoal + sand	Main deposit – charcoal-rich, upper fill
	225	Reddish-brown, silty sand with charcoal	Lower pit fill
<b>224</b>	223	Dark reddish-brown + black silty sand with charcoal	Sole deposit
<b>230</b>	229	Black with dark grey-brown silty sand	Main deposit - charcoal-rich
	235	Mid grey-brown, silty sand	Mixed deposit 229 + natural
<b>231</b>	232	Dark reddish-brown, silty sand with charcoal	Sole deposit
<b>260</b>	259	Black + mid grey-brown silty sand, charcoal-rich	Sole deposit – charcoal-rich

Table 24: Summary of cremation pit fills

D.1.10 Two disarticulated fragments of possible human bone (unburnt) were also examined. One of these was recovered from context 413, the backfill of grave **406**, overlying



Skeleton 416. The other fragment was recovered from a Late Bronze Age accumulation layer (269) within Barrow 1.

### ***Disturbance and truncation***

- D.1.11 Pit **406**, containing Skeleton 416, had previously been half-sectioned during the evaluation phase of works. In addition, the pit had been heavily disturbed by animal burrowing. Unsurprisingly, Skeleton 416 had suffered significant disturbance. There was no evidence for disturbance or truncation of Skeleton 410.
- D.1.12 The upper part of pit **103**, and the base of inverted urn (SF 1), had suffered plough truncation. However, given that the cremation deposit was concentrated at the base of the pit, the truncation is unlikely to have had any significant effect on the bone weight recovered.
- D.1.13 At least seven of the pits (**118, 178, 212, 215, 221, 230 and 260**) within the cremation cemetery were recorded as having been disturbed by rooting and/or animal burrowing. In addition, the majority of pits were also recorded as having been truncated by plough action. It is impossible to estimate the effect that such disturbance would have on the total bone weight recovered, but given that in the majority of cases the cremation deposits were concentrated at the tops of the pits, it seems likely that at least some bone will have been lost. As suggested above, the total absence of cremated bone in Pit **209** may reflect this.

### ***Methodology***

#### ***Recovery and processing***

- D.1.14 Recovery and processing of both the inhumations and cremation deposits was undertaken in accordance with published guidelines (Brickley and McKinley 2004; BABAO 2010).
- D.1.15 All cremation deposits (urned and unurned) were subject to whole-earth recovery. This involved not only 100% recovery of the main cremation deposits, but also of any surrounding, mixed deposits containing bone (e.g. natural and cremation deposits mixed by bioturbation).
- D.1.16 Urned cremation pit **103** (fill 454) was excavated in four spits, with spit 1 the upper-most spit (towards the base of the inverted urn) and spit 4 the lower-most spit (closest to the rim of the inverted urn). The bone and soil from each of the spits were kept separately and processed, which involved wet sieving.
- D.1.17 Wet sieving, which was carried out for all cremation deposits, was undertaken by passing the material through varying sieve sizes. This sorted the cremated bone into groups comprising fragments that were >10mm, 10-4mm and 4-2mm in size. This process allows the degree of fragmentation to be explored.

#### ***Analysis – articulated skeletons***

- D.1.18 All osteological analysis was undertaken in accordance with published guidelines (Brickley and McKinley 2004). For the articulated skeletons, completeness was scored as one of: <25%, 25-50%, 50-75% or 75-100%. Fragmentation was scored as high, moderate or low, and condition (surface preservation) of the bone was graded in accordance with the criteria set out by McKinley (2004a, 16) (Grades 0 to 5+).
- D.1.19 Age estimation was based on the degenerative changes of the auricular surface (Lovejoy *et al* 1985; Buckberry and Chamberlain 2002), the morphology of the pubic symphyses (Brooks and Suchey 1990), the observation of late-fusing epiphyses

(Scheuer and Black 2000), morphology of the sternal rib ends (Iskan and Loth 1986) and on dental attrition (Miles 1963; Brothwell 1981). Skeletons were assigned to one of the age categories given in Table 25.

Age category	Age range
Pre-term	<37 weeks gestation
Neonate	Birth-1 month
Infant	1 month-1 year
Young child	1-5 years
Older child	6-12 years
Adolescent	13-17 years
Young adult	18-25 years
Prime adult	26-35 years
Middle adult	36-45 years
Mature adult	>45 years
Adult (non-specific)	>18 years

Table 25: Age categories employed

D.1.20 Biological sex was estimated based on observations of cranial, mandibular (Bass 1987; Aksádi and Nemeskéri 1970), and pelvic (Buikstra and Ubelaker 1994) morphology. Stature could be estimated for one of the skeletons (410) only. This was calculated using a complete long bone length and applying it to the appropriate regression formula (Trotter and Gleser 1952; 1958; Trotter 1970).

D.1.21 Non-metric traits – minor anomalies of skeletal anatomy that may be genetically or environmentally induced (Mays 1998) – were scored as present or absent. Any pathology or bony abnormality was fully described and recorded, and differential diagnoses explored, with reference to standard texts (for example, Aufderheide and Rodriguez-Martin 1998, Ortner and Putschar 2003).

*Analysis – disarticulated, unburnt bone*

D.1.22 The disarticulated bone fragments were rapidly analysed in order to confirm that they were human, to identify the fragments to skeletal element and, if possible, to estimate age and sex. A comment was also made on the condition of the bone, following McKinley's (2004a, 16) grading system.

*Analysis – cremation deposits*

D.1.23 Analysis of the cremation deposits involved recording their colour, weight and maximum fragment sizes. This information can facilitate the interpretation of the nature of the deposits, for example, whether they represent formal burials, or dumps of redeposited pyre debris (McKinley 2004b, 10). The colour of the bone can be used to reflect the efficiency of the cremation process (ibid., 11).

D.1.24 The deposits were also examined for identifiable bone elements and, for each deposit, the minimum number of individuals (MNI) represented, was determined. Where possible, estimation of age and sex was attempted, following the same methods outlined above for inhumations. No attempt was made to estimate the sex of juvenile skeletons, in accordance with accepted practice (Brickley 2004, 23). Estimation of juvenile age was carried out based on tooth crown and root development stages (Moorrees *et al* 1963).

D.1.25 It should be noted that as standard, the wet sieved residues (2 – 0.5mm fraction size) were retained, but not sorted. For each cremation deposit, the residues were scanned

for identifiable fragments. Where the bone content within an unsorted residue was deemed to be significant (i.e. to have an effect on the overall weight of the cremation deposit), a 4g sample was sorted in order to more accurately estimate the total weight of bone present.

## Results

### Skeleton 410

<b>Completeness</b>	75 - 100%
<b>Condition (McKinley 2004)</b>	Grade 2
<b>Fragmentation</b>	Moderate - low
<b>Sex</b>	Female
<b>Age</b>	Young adult, 18–22 yrs
<b>Stature</b>	1.58m (+/- 3.57cm)
<b>Non-metric traits</b>	<p><i>Cranial:</i> Metopism, parietal foramina, accessory supraorbital foramen, extrasutural mastoid foramen, accessory lesser palatine foramen.</p> <p><i>Post-cranial:</i> Humeral septal apertures, acetabular crease, patella vastus notch, tibia lateral squatting facets, calcaneus double anterior facet, calcaneus peroneal tubercles.</p>
<b>Dental pathology</b>	Calculus, caries, periodontitis
<b>Other pathology</b>	<p><i>Metabolic disease:</i> Cribra orbitalia, cribra femoralis.</p> <p><i>Trauma:</i> Myositis ossificans traumatica (L femur), possible healed fractures in R metatarsals 3-4.</p> <p><i>Spinal joint disease:</i> Schmorl's nodes</p> <p><i>Extra-spinal joint disease:</i> Osteoarthritis (L lunate)</p> <p><i>Inflammation/infection:</i> Periostitis affecting mandible, maxilla, radii, L + R scaphoid, hamates, L + R capitate, R metacarpals 2-5, sacrum, L innominate, R rib, L tibia</p>

Table 26: Skeleton 410 – osteological summary

- D.1.26 This skeleton was in good condition. It was almost 100% complete, with only parts of the distal femora and a few small bones of the hands and feet missing. Fragmentation was moderate to low, meaning that less than 50% of bones were fragmented. The bone surfaces exhibited surface erosion (diffuse rootlet etching), consistent with McKinley's (2004a,16) Grade 2.
- D.1.27 All features of the skull, mandible and pelvis were observable for sex estimation and the vast majority of these were typical of female morphology. Multiple skeletal features were also observable for age estimation, including a number of unfused and fusing epiphyses. All age indicators were suggestive of a young adult, probably 18 – 22 years of age.

- D.1.28 Based on the measurement of a complete left fibula, the living stature of Skeleton 410 was calculated as 1.58m (+/- 3.57cm), approximately 5 ft 2 in. This lies within the range of statures published for Bronze Age females (1.54 – 1.61m) (Roberts and Cox 2003, 86).
- D.1.29 A number of cranial and post-cranial non-metric traits were observed in this skeleton. The majority of cranial traits included accessory foramen (parietal, supraorbital, lesser palatine), and the individual also exhibited metopism, retention of the metopic suture into adulthood. Non-metric traits may be genetically or environmentally induced (Mays 1998, 110; Tyrrell 2000), and it is thought that variations in the sutures of the skull, such as metopism, are under significant genetic control (Torgersen 1951a, b, 1954; Sjøvold 1984, 1987).
- D.1.30 The post-cranial non-metric traits observed include bilateral humeral septal apertures, a vastus fossa on the right patella (left not observable), bilateral peroneal tubercles on the calcanei, lateral squatting facets of both tibiae and a unilateral double anterior calcaneus facet (right side only). Hypostotic traits, such as the septal aperture, have been recorded as more frequent in females than males (Saunders 1989, 100). Traits which involve variations in joint surfaces tend to be more environmentally influenced, probably a reflection of mechanical factors operating on the bones (Mays 1998, 110).
- D.1.31 All 32 permanent teeth and sockets were present for analysis and a number of pathological lesions were noted. A total of 23 teeth had calculus (mineralised plaque) deposits, although most of these were only slight. Dental calculus, an extremely common disease, has been linked to diets high in protein and/or carbohydrates (Hillson 1996, 254). It may, therefore, be an indication of diet, as well as of oral hygiene practices, or lack thereof.
- D.1.32 Three of the mandibular teeth and two maxillary teeth had carious lesions. Dental caries is a destruction of enamel, dentine and cement resulting from acid production by acidogenic bacteria in dental plaque (Hillson 1996, 269). Most of the carious lesions observed were small to medium sized but the right mandibular second molar had a very large lesion, which had destroyed much of the occlusal and lingual crown surfaces. The mandible and maxilla exhibited deposits of porous, inflammatory new bone (periostitis). The location of these new bone deposits, adjacent to teeth with carious lesions, suggests that they were secondary to the caries.
- D.1.33 Of the 32 observable tooth sockets, 15 exhibited periodontitis. Periodontal disease is brought on by chronic inflammation of the tissues of the mouth, specifically the gums, periodontal ligament and alveolar bone, and may be linked to genetics, environment, diet and oral hygiene (Hillson 1996, 262, 269). There is a strong link between heavy calculus deposits and the development of periodontal disease (Roberts and Manchester 1995, 56). The first stage of periodontal disease involves only the gingivae (gingivitis), but left untreated, all of the periodontal tissues, including the alveolar bone, may be affected (periodontitis) (ibid, 262). Detachment of the periodontal ligament and progressive resorption of alveolar bone can ultimately lead to tooth loss, after which, the tooth socket will remodel (ibid, 266). In Skeleton 410, most sockets exhibited only slight periodontitis (Grade 2), although in three sockets, the disease was more advanced (Grade 3-4) (after Ogden 2008, 293).
- D.1.34 Multiple lesions of non-dental pathology were also observed in this skeleton. These included lesions of metabolic disease, joint disease (spinal and non-spinal), trauma and infection/inflammation.

- D.1.35 Both the left and right orbit roofs exhibited porous lesions known as *cribra orbitalia*. Several hypotheses exist as to the aetiology of these changes, but the most popular, and generally accepted, is iron deficiency anaemia (Stuart-Macadam 1991). Aside from a diet deficient in iron, excessive blood loss through injury, chronic disease such as cancer, and malabsorption (due to gastro-intestinal infection or parasites) may all have played a significant part in iron deficiency during this period (Roberts and Manchester 1995, 166; Roberts and Cox 2003, 234). The scattered, fine foramina observed on the present skeleton were consistent with Stuart-Macadam's (ibid.) type 2 lesions. A crude prevalence rate of 10% is reported for cases of *cribra orbitalia* in Bronze Age Britain (Roberts and Cox 2003, 85). Porous lesions were also present on the anterior surfaces of the left and right femoral necks, and are known as *cribra femoralis*. These are also believed to be a manifestation of iron deficiency anaemia (Djuric *et al.* 2008).
- D.1.36 The posterior surface of the left femur exhibited a large, bony exostosis, approximately 34mm long by 14mm wide. The exostosis, comprising compact bone with an irregular/spiculed surface, extended from the linea aspera, a site of multiple muscle attachments. The appearance and location of this lesion is consistent with myositis ossificans traumatica. This usually occurs when tendons and/or muscles are avulsed, and the resultant haematoma ossifies (Aufderheide and Rodríguez-Martín 1998, 26).
- D.1.37 Possible traumatic lesions were also noted in the right foot. The mid-shaft regions of the third and fourth metatarsals appeared swollen, possibly representing healed fractures. However, the actual bone surface texture in the region of the swellings appeared normal, with no clear indication of fracture lines. If these bones had been fractured, they had healed a long time before death, with no misalignment. In the absence of radiographic analysis it is not possible to explore this further.
- D.1.38 Within the spine, Schmorl's nodes were observed. These are identified on dry bone as indentations on the vertebral end plates and are essentially 'pressure defects' arising from herniation of the intervertebral disc (Rogers and Waldron 1995, 27). The eighth and tenth thoracic vertebrae exhibited these lesions. Disc herniation is usually a gradual, age-related occurrence in adults, associated with weakening of the posterior longitudinal ligaments of the spine, but it may also occur as a result of an injury, such as a jump or fall from height (Lovell 1997, 159). Schmorl's nodes in adolescence are thought most likely to relate to activity or trauma (Jurmain 1999, 165). No other joint changes were observed in the spine. This finding is consistent with this being a young adult.
- D.1.39 Gross pathological changes were observed in the left lunate, a small bone of the wrist. The majority of the superior half of the bone was missing, with the inner trabecular structure exposed. Microscopically the exposed trabeculae appeared denser and more sclerotic than normal. The margins of the eroded, superior surface exhibited eburnation (polishing), a lesion pathognomonic of osteoarthritis (OA).
- D.1.40 There are a number of conditions that may cause such erosion of a carpal bone, including rheumatoid arthritis (RA), psoriatic arthritis (PA) and Kienböck's disease (lunatomalacia). The wrist is commonly affected in RA, and the early stages of the disease may affect just a single joint (Resnick 1995, 868), as in the present case. However, wrist abnormalities are normally accompanied by similar changes to the fingers (ibid., 877), of which there were none. In PA, whilst erosive lesions may occur, the distal interphalangeal joints of the hands and feet are more typically affected and in the absence of these, it was not possible to confirm the presence of this condition (Aufderheide and Rodríguez-Martín 1998, 104). Kienböck's disease is osteochondrosis of the lunate, which specifically causes erosion and collapse of this bone (ibid, 88;



Resnick 1995, 3578). The solitary, unilateral nature of the lesion in the present skeleton is perhaps more in keeping with this condition. A relatively uncommon condition, Kienböck's disease is believed to arise from trauma (single or repeated episodes) and can occur in early adulthood or as late as 50 years of age (*ibid.*, 88; Resnick 1995, 3578-80). The sclerotic nature of the trabeculae is in keeping with the radiographic abnormalities observed in clinical cases of this condition and secondary radiocarpal joint disease, as seen in the present case, is said to occur rapidly (*ibid.*, 3580; Aufderheide and Rodríguez-Martín 1998, 88).

- D.1.41 Aside from the inflammatory new bone already noted in the mandible and maxilla, probably relating to dental disease, a number of other bones also exhibited inflammation. The ectocranial (outer) surface of the skull appeared dense with increased porosity and an 'orange peel' texture, indicative of healed inflammation. In addition, healed periostitis was noted on the left tibia (shin bone). Healed and active periostitis was noted on the anterior surfaces of the distal radii, the left and right scaphoid, hamate and capitate bones, and a number of right metacarpals and phalanges. Active periostitis was also present on an unsided rib fragment, the sacrum and the left innominate bone.
- D.1.42 The periostitis on the tibia probably represents minor trauma. The tibia is often cited as the most frequently affected bone because it lies close to the skin surface and is subsequently subject to recurrent minor injury (Roberts and Manchester 1995, 130). Scalp irritation or infection, as may be caused by head lice, for example, may have contributed to the skull lesions.
- D.1.43 The other cases of inflammation are perhaps more significant as they may represent more serious, or systemic conditions. Psoriatic arthritis, which causes erosive lesions on bone, may also cause inflammatory skin lesions that can lead to periostitis. The bilateral lesions on the radii, carpals, metacarpals and phalanges are certainly suggestive of a systemic condition such as PA although, as noted above, in the absence of erosive lesions on the interphalangeal joints, the presence of this condition could not be confirmed.
- D.1.44 The distribution of the inflammatory lesions affecting the pelvic bones, that is, on the anterior surface of the sacrum and the posterior surfaces of the left ilio-pubic ramus and pubis, suggests that they may have stemmed from a condition affecting the internal organs of the pelvic cavity. The organs potentially involved include the small and large intestine and the bladder, the ovaries and uterus. Inflammation of any one of these organs, perhaps due to infection, such as pelvic inflammatory disease (Aufderheide and Rodríguez-Martín 1998, 288), neoplastic disease or a disorder of the digestive tract, could result in the periosteal lesions observed. Given that the lesions were active at the time of death, it is entirely possible that the causative factor was also responsible for the death of the individual.

### Skeleton 416

<b>Completeness</b>	25 – 50%
<b>Condition (McKinley 2004)</b>	Grade 4
<b>Fragmentation</b>	High
<b>Sex</b>	Male
<b>Age</b>	Middle adult, 36 – 45 yrs
<b>Stature</b>	Not recordable
<b>Non-metric traits</b>	<i>Cranial:</i> Parietal foramen <i>Post-cranial:</i> None observed
<b>Dental pathology</b>	Calculus, caries, periodontitis, ante-mortem tooth loss
<b>Other pathology</b>	None observed

Table 27: Skeleton 416 – osteological summary

- D.1.45 Skeleton 416 was markedly less well preserved than Skeleton 410. It was just 25 – 50% complete, mainly comprising upper and lower long bone shaft and cranium fragments. Fragmentation was high meaning that over 75% of the ones present were fragmented. The trabecular-rich areas of the skeletons, namely the spine, pelvis and long bone ends, were poorly represented. The skeleton was assigned McKinley's (2004a, 16) condition Grade 4, meaning that all bone surfaces were affected by erosive action (heavy root etching), but the depth of modification was not uniform across all surfaces.
- D.1.46 Whilst none of the sexually dimorphic features of the pelvis were observable, a number of features of the cranium and mandible were present and these were all indicative of a male. The level of dental attrition was consistent with middle adulthood (36 – 45 years) and a partial auricular surface exhibited features in keeping with this age category.
- D.1.47 Unsurprisingly, given the poor condition of this skeleton, no metrical analysis could be undertaken and very few non-metric traits were recordable. The only non-metric traits observed were left and right parietal foramen, which are relatively common in archaeological skeletons.
- D.1.48 A total of 23 teeth and 27 sockets were observable for pathology. Only one tooth, the right maxillary first molar, had a carious lesion, and this was a small cavity on the mesial surface. All teeth had deposits of calculus. These varied from very slight, to very heavy, thick deposits.
- D.1.49 Post-mortem damage of many of the tooth socket margins precluded the recording of periodontal disease, but of the four sockets in the right maxilla that were not damaged, all exhibited this condition. Two sockets were scored as having slight periodontitis (Grade 2), whilst two had more severe periodontitis (Grade 4) (after Ogden 2008, 293).
- D.1.50 Ante-mortem tooth loss (AMTL) was also observed. In the case of the left maxillary first molar, the socket exhibited incomplete remodelling, indicating that the tooth had probably been lost less than a year before death. The right mandibular third molar socket was completely remodelled, indicating that this tooth had been over a year before death. Ante-mortem tooth loss can result from a multitude of factors, including trauma or deliberate extraction, pulp exposure and abscess formation secondary to caries or severe attrition, or, as stated above, severe periodontal disease.

- D.1.51 Aside from dental pathology, no other lesions of pathology were observed. This was probably due to the post-mortem erosion of the skeleton, masking the bone/joint surfaces.

*Disarticulated human bone fragments (unburnt)*

- D.1.52 The disarticulated bone fragment from context (413) was consistent, in terms of morphology and size, with a neonate femur shaft. However, given the absence of the ends of the bone, there were no diagnostic features to confirm this. The bone fragment had suffered heavy erosion (root etching) over the entire surface (McKinley 2004a Grade 5).
- D.1.53 The bone from context (269) comprised a fragment of cranial vault. The curvature and thickness of the fragment were consistent with an adult human, although in the absence of diagnostic features, this could not be confirmed. All surfaces of the fragment were affected by some degree of erosive root action (McKinley 2004a Grade 3).
- D.1.54 No pathological lesions were observed on either bone fragment.

*Urned cremation burial 103*

- D.1.55 Urned cremation burial **103** weighed a total of 1760.2g. This is within the range of weights (1000 – 2400g), but above the average weight (1650g), observed for cremated adult individuals from modern crematoria (McKinley 2000a, 269). A bone weight this high is, therefore, unusual for an archaeological cremation deposit, especially given that, on average, ancient adult cremation deposits contain approximately 40 – 60% of the expected bone weights reported from modern studies (McKinley 2006).
- D.1.56 The vast majority (1634.6g, 92.9%) of the total bone weight recovered came from context 454, identified as the main cremation deposit, inside the urn. A total of 114.3 g, 6.5% of the total bone weight, was recovered from contexts 104 and 455. These were interpreted as mixed, post-depositional infill deposits within the urn, overlying deposit 454. Only 0.6% (11.3g) of the total bone weight came from the pit fill (102) surrounding the urn. Table 28 summarises the distribution of bone weight by context and skeletal region.
- D.1.57 The vast majority (c. 90%) of bone fragments were white in colour. This indicates that the cremation process had been efficient in terms of temperature, reaching over 600°C (McKinley 2004b, 11). The remaining 10% of fragments were generally grey in colour, and these included fragments of hand and foot bones (metacarpals/metatarsals and phalanges), a radius or ulna shaft fragment, and rib and vertebra fragments. These may represent the skeletal regions that were subject to slightly lower temperatures on the pyre, perhaps because, particularly in the case of the arm, hands and feet, they were positioned towards the edges of the pyre structure. McKinley (1989, 66) noted that metatarsals remained grey or blue in colour in modern cremations, probably because the lack of soft tissue, and thus combustible fats, in the lower leg/foot region, reduced the burning time of these bones.
- D.1.58 A small number of fragments, including a fragment of frontal bone and a probably tibia shaft fragment, exhibited small spots of bright green staining, consistent with the colour of corroded copper alloy. A copper alloy knife was present within the urn and this was probably the source of the staining. During the osteological analysis, a number of very tiny, copper alloy fragments were recovered. These appeared simply to be fragments of corroded metal, probably having separated from the surface of the knife.
- D.1.59 In terms of fragmentation, a large proportion of the total bone weight, and in fact the largest proportion in any one fraction size, comprised fragments that were over 10mm



(658.6g, 37.4%). A slightly smaller proportion (604.5g, 34.3%) of the total bone weight was from the 10 – 4mm sieve fraction, and 19.5% (343.0g) was recovered from the 4 – 2mm sieve fraction. Only 8.8% (154.1g) of the total bone weight was estimated to be amongst the unsorted residues (2 – 0.5mm). These figures are comparable with other Bronze Age cremation deposits (McKinley 2008; McCarthy 2010). The largest fragment observed, a piece of tibia shaft, was 66mm in length. This fragment size falls below the range of maximum fragment sizes recorded from modern crematoria where long bone fragments averaged at between 68 – 195 mm in length (prior to cremulation) (Gibson 2007).

- D.1.60 All regions of the skeleton were represented within this cremation burial. Table 28 summarises the distribution of bone weight by skeletal region, but a detailed inventory of the individual skeletal elements identified is available in the archive. Overall, 38.2% (672.5g) of the total bone weight could be identified to a specific skeletal region (skull, torso, upper limb or upper limb). Of the identified bone fragments, the greatest proportion by weight (12.4%, 218.4g) comprised lower limb bones. This is perhaps not surprising, given the proportionally large mass of the lower limb bones compared with the other body regions. The second most well represented skeletal region, in terms of bone weight, was the skull. Whilst the skull does not constitute the next highest overall mass within the body, it is often very well represented in cremation deposits because the skull vault is so easily identifiable, even within the smaller fractions.
- D.1.61 The unidentified bone fragments comprised 61.8% (1087.7g) of the total bone weight. Around a quarter (25.6%, 278.0g) of the unidentified bone weight was made up of unidentified long bone shaft fragments, and 55.0g (5.1%) comprised unidentified hand and/or foot bone and joint surface fragments.

	Context no.							TOTAL
	454 (spit 1)	454 (spit 2)	454 (spit 3)	454 (spit 4)	104	455	102	
<b>Skull</b>	17.2g	22.5g	32.5g	111.4g	14.6g	6.8g	3.3g	<b>208.3g (11.8%)</b>
<b>Torso</b>	19.1g	10.3g	25.4g	65.1g	3.6g	2.0g	0.9g	<b>126.4g (7.2%)</b>
<b>Upper limb</b>	5.0g	5.1g	23.9g	83.5g	1.6g	0.3g	-	<b>119.4g (6.8%)</b>
<b>Lower limb</b>	22.7g	27.7g	38.2g	118.6g	9.7g	0.8g	0.7g	<b>218.4g (12.4%)</b>
<b>Unid. long bone</b>	9.0g	18.9g	47.8g	184.5g	9.4g	5.5g	2.9g	<b>278.0g (15.8%)</b>
<b>Unid. hand/foot</b>	0.3g	2.3g	3.2g	4.0g	0.6g	0.9g	-	<b>11.3g (0.6%)</b>
<b>Unid. joint surface</b>	3.6g	1.1g	6.0g	29.2g	3.0g	0.8g	-	<b>43.7g (2.5%)</b>
<b>Unid. other</b>	34.8g	37.2g	176.4g	448.1g	30.9g	23.8g	3.5g	<b>754.7g (42.9%)</b>
<b>TOTAL</b>	<b>111.7g (6.3%)</b>	<b>125.1g (7.1%)</b>	<b>353.4g (20.1%)</b>	<b>1044.4g (59.3%)</b>	<b>73.4g (4.2%)</b>	<b>40.9g (2.3%)</b>	<b>11.3g (0.6%)</b>	<b>1760.2g (100%)</b>

Table 28. Urned cremation burial **103** – distribution of bone weight by skeletal region and context. N.B. The 'Unid. other' weights include the unidentified bone fragments within the unsorted residues. See Table 1 for description of contexts.

- D.1.62 Because the main cremation deposit (454) was excavated in spits, it was possible to examine the distribution of elements within the urn. There was no indication of order or patterning to the distribution of elements, as seen in other Bronze Age urned cremation burials (Webb and Dean in prep; McCarthy 2010). In all four spits, the lower limbs were the best represented skeletal region, followed by the skull in spits 2, 3 and 4, and the torso in spit 1. The torso was most poorly represented in spit 4, whilst the upper limbs were the least well represented skeletal region in spits 1, 2 and 3. Aside from the distribution of elements within the urn, there was also no discernible pattern in the fragment sizes between spits. A detailed breakdown of the skeletal regions represented within each spit, by fraction size, is available in the archive.
- D.1.63 Given the absence of repeated elements within this cremation deposit, it was estimated that at least one individual was represented. It is estimated that only 5% of cremation burials comprise the remains of two individuals, and even fewer contain three (McKinley 1997, 130). Despite the fact that a large proportion of the fragments were greater than 10mm in size, features indicative of age and sex were scarce. However, very tentative estimates of both biological parameters could be made. Molar root fragments exhibited completed apices and fragments of vertebral arch exhibited completely fused annular rings. These features, along with the general thickness of bone fragments and size of identifiable features, indicated that this was an adult. Fragments of molar crowns were also present. Whilst the actual ageing methods of Miles (1962) and Brothwell (1981) could not be used because the crowns were very incomplete, the level of attrition was notably slight, indicating that this was probably a younger adult, most likely less than 35 years of age. The absence of *any* lesions relating to joint disease, such as osteophytes, was also in keeping with this being a younger adult. The individual was also very tentatively suggested to be male, based on a single, cranial trait. A fragment of left frontal bone exhibited a fairly thick, rounded margin. No non-metric traits or pathological lesions were observed.

#### *Unurned cremation deposits*

- D.1.64 A summary of the osteological findings of the 20 unurned cremation deposits is presented in Table 29. A detailed inventory of skeletal elements identified, by fraction size, is available in the archive.

Deposit	Total weight	Colour of fragments	Max. frag. size	MNI	Age estimation	Sex estimation	Comments
118	17.5g	Brown (10%) Black (45%) White (45%)	22 x 9 mm (unid. long bone)	1	?Juvenile	/	Age est. based on cranial/rib fragment thickness only.
120	1.4g	Brown (5%) Black (10%) White (85%)	14 x 9 mm (unid. long bone)	1	?	?	
122	6.3g	Black (60%) White (40%)	21 x 16 mm (humerus shaft)	1	?	?	
148	3.4g	Black (30%) White (70%)	20 x 8 mm (unid. long bone)	1	?	?	

Deposit	Total weight	Colour of fragments	Max. frag. size	MNI	Age estimation	Sex estimation	Comments
149	86.3g	Black (10%) Grey (15%) White (75%)	26 x 14 mm (femur shaft)	1	?Adult	?	Age est. based on general bone fragment thickness and the presence of molar/pre-molar tooth roots with completed apices only.
167	52.8g	Black (15%) Grey (10%) White (75%)	25 x 21 mm (?pelvis)	1	?Adult	?	Age est. based on general bone fragment thickness only.
175	144.0g	Brown (5%) Black (10%) Grey (25%) White (60%)	24 x 23 mm (temporal squamous)	1	??Older adult	?	Age estimation based on presence of a maxillary central incisor root, exhibiting heavy wear on its lingual surface
176	293.2g	Brown (1%) Black (40%) Grey (10%) White (49%)	34 x 22 mm (femur shaft)	1	?Adult	?	Age est. based on general bone fragment thickness and the presence of molar roots with completed apices only.
178	78.9g	Black (20%) Grey (10%) White (70%)	17 x 15 mm (skull vault)	1	?Adult	?	Age est. based on general bone fragment thickness only.
192	14.2g	Black (15%) Grey (15%) White (70%)	23 x 10 mm (unid. long bone)	1	?Adult	?	Age est. based on general bone fragment thickness only.
196	3.3g	Black (30%) Grey (30%) White (40%)	17 x 15 mm (?femur shaft)	1	?	?	
203	2.2g	Black (60%) Grey (20%) White (20%)	14 x 12 mm (unid. long bone)	1	?	?	
206	152.1g	Brown (1%) Black (5%) Grey (24%) White (70%)	34 x 34 mm (skull vault)	1	?Adult	?	Age est. based on general bone fragment thickness only.
212	15.3g	Black (1%) Grey (4%) White (90%)	15 x 12 mm (skull vault)	1	Older child (8-11years)	/	Age est. based on development stage of deciduous max. molar root + permanent mand. incisor root.

Deposit	Total weight	Colour of fragments	Max. frag. size	MNI	Age estimation	Sex estimation	Comments
215	45.7g	Brown (10%) Black (15%) Grey (15%) White (60%)	24 x 22 mm (?femur shaft)	1	?Adult	?	Age est. based on general bone fragment thickness and the presence of a molar root with completed apex only.
221	425.8g	Brown (1%) Black (9%) Grey (20%) White (70%)	45 x 24 mm (tibia shaft)	1	Adolescent – young adult	?	Age est. based on presence of ilium fragment exhibiting an unfused iliac crest epiphysis, an auricular surface fragment exhibiting youthful feets, and the general thickness of bone fragments.
224	6.7g	Black (10%) Grey (15%) White (75%)	17 x 16 mm (?ilium)	1	?Adult	?	Age est. based on general bone fragment thickness only.
230	79.9g	Black (2%) Grey (8%) White (90%)	24 x 18 mm (skull vault)	1	Young – older child (5 – 12 years)	/	Age est. based on general thickness of bone fragments (notably skull + ribs – appear thin), and the presence/development stage of mand. permanent 1 <sup>st</sup> premolar + incisor crown fragments, which also exhibit no wear at all (prob. unerupted or recently erupted).
231	6.3g	Black (5%) Grey (15%) White (80%)	18 x 10 mm (unid. long bone)	1	?Adult	?	Age est. based on general bone fragment thickness and presence of a max. premolar root with completed apex (>10 years).
260	13.5g	Black (10%) Grey (40%) White (50%)	20 x 14 mm (skull vault)	1	?Adult	?	Age est. based on general bone fragment thickness only.

Table 29: Unurned cremation deposits – summary of osteological data

- D.1.65 The total weights of the unurned cremation deposits ranged from just 1.4g (120) to 425.8g (221). These weights fall well below even the lowest weight observed for modern, adult cremations (1000 – 2400g) (McKinley 2000a, 269).
- D.1.66 Two deposits, 206 and 212, contained non-human bone. Four fragments of burnt animal bone (2.2g) were recovered from deposit 206. These included an animal rib shaft, two adjoining fragments of a probable sheep metapodial and an unidentified fragment. A single fragment (0.8g) of burnt, unidentified animal bone was recovered from deposit 206. These probably represent pyre goods. In a study of around 130 British Bronze Age cremation burials, about 16% contained fragments of cremated animal bone (McKinley 1997, 132), thus their presence in two deposits here, is not unusual.
- D.1.67 In contrast to urned cremation burial **103**, which comprised predominantly (90%) white bone fragments, the unurned deposits were more mixed in colour, with higher proportions of other colours including brown, black and grey. The colour changes of bone undergoing cremation depend on the temperature of the firing, the oxygen supply and the duration of exposure of the body to the flames (McKinley 2000b, 66). Black fragments represent bone that has been charred up to c. 300°C, and brown fragments are considered to be unburnt (McKinley 2004b, 11). Hues of blue and grey indicate temperatures higher than 300°C, but not complete oxidation, which occurs at temperatures over 600°C. Whilst in 17 of the deposits white fragments *were* most frequent, only in four of these (120, 212, 230 and 231) did they comprise 80 – 90% of the total bone fragments. In the other 13 deposits, white bone fragments comprised between 40 and 75% of the deposits. In three deposits (118, 122 and 203) the proportions of white fragments were equal to, or less than, other colours.
- D.1.68 The higher proportions of non-white bone bone fragments in the unurned deposits may suggest that the cremation processes were not as efficient in terms of the temperature achieved and even distribution of the heat. Alternatively, the nature of the deposits, in terms of their function/ritual meaning, may be relevant to the more varied colours observed.
- D.1.69 The maximum fragment size observed in any one of the deposits was 45mm and this was a tibia shaft fragment from deposit 221. In 12 of the deposits (122, 149, 167, 175, 176, 178, 203, 212, 215, 221, 224 and 231), the greatest proportion of the total bone weight came from the 10 – 4mm fraction size. In seven deposits (118, 120, 148, 192, 196, 230 and 260), the greatest proportion was recovered from the smaller fraction (4 – 2mm). Only in deposit 206 did fragments over 10mm account for highest proportion of the total weight.
- D.1.70 For pit **178** the bone recovered was considered as a single deposit. In addition, the bone from each of the associated contexts was considered separately. This is because *in situ*, there were two clear charcoal-rich deposits, separated by a less charcoal-rich deposit. Interestingly, the more charcoal-rich deposits, 179 and 189, contained only very small amounts of bone (2.7g and 8.0g), whilst the deposit lying between them (188) and the mixed natural deposit at the base of the pit (190) contained much higher weights (36.3g and 31.9g). There was no indication that more than one individual was represented.
- D.1.71 Table 30 shows the distribution of bone weight by skeletal region for the unurned cremation deposits. It is clear that in all deposits, unidentified fragments made up large proportions of the total bone weights. Identified bone fragments (skull, torso, upper limb and lower limb) made up less than half the total bone weight in all deposits, varying between 4.5% in deposit 203, and 45.4% in deposit 206. The large quantities of

unidentified bone is a reflection of the high proportions of bone weights within the smaller fraction sizes (i.e. less than 10mm).

D.1.72 No deposits exhibited evidence for deliberate selection of elements. Unsurprisingly, skull fragments were identified in all deposits, a probable reflection of their easily identifiable morphology, rather than deliberate selection of these elements for burial. Lower limb bones generally comprised the next most well represented skeletal region. In most of the deposits, significant portions of the unidentified fragments were long bone shafts.

Deposit	Skull	Torso	Upper limb	Lower limb	Unid. long bone	Unid. Hand/foot	Unid. joint surface	Unid. other	Total
118	1.6g	0.9g	-	-	1.0g	0.2g	-	13.8g	17.5g
120	0.1g	-	-	-	0.3g	-	-	1.0g	1.4g
122	0.1g	-	1.0g	-	1.3g	0.1g	-	3.9g	6.3g
148	0.5g	-	-	-	0.6g	0.2g	-	2.1g	3.4g
149	7.0g	1.2g	2.9g	15.4g	17.2g	1.6g	0.1g	40.9g	86.3g
167	4.2g	2.6g	0.2g	6.2g	10.3g	0.8g	-	26.4g	52.8g
175	22.9g	6.2g	0.5g	12.3g	18.9g	1.2g	0.2g	81.8g	144.0g
176	32.4g	6.7g	20.4g	35.8g	48.3g	0.9g	-	148.7g	293.2g
178	7.7g	1.8g	0.5g	4.3g	8.5g	0.3g	-	55.8g	78.9g
192	0.7g	0.2g	-	0.7g	4.9g	0.3g	-	7.4g	14.2g
196	0.1g	-	-	0.6g	1.0g	-	-	1.6g	3.3g
203	0.1g	-	-	-	1.1g	-	-	1.0g	2.2g
206	35.4g	2.5g	15.8g	15.4g	20.9g	2.1g	-	60.0g	152.1g
212	5.4g	-	0.7g	-	2.0g	0.4g	-	4.8g	15.3g
215	4.7g	1.1g	2.2g	7.7g	9.6g	0.1g	-	20.3g	45.7g
221	54.4g	21.5g	22.1g	85.3g	56.2g	2.2g	1.4g	182.7g	425.8g
224	0.4g	0.3g	0.1g	-	0.7g	0.6g	-	4.6g	6.7g
230	18.7g	1.7g	0.1g	-	6.2g	-	0.1g	53.2g	79.9g
231	1.0g	-	-	-	2.1g	-	-	3.2g	6.3g
260	1.5g	0.5g	-	0.5g	2.9g	-	-	8.1g	13.5g

Table 30: Unurned cremation deposits – distribution of bone weight by skeletal region

D.1.73 All unurned deposits had a MNI of one. For the five smallest deposits (120, 122, 148, 196 and 203) it was not possible to estimate age, even to 'adult' or 'juvenile'. This is unsurprising given that the total bone weights of these deposits ranged from just 1.4g to 6.3g. A total of 11 deposits appeared to comprise adult remains. In the case of deposits 149, 167, 176, 178, 192, 206, 215, 224, 231 and 260, this was based only upon the general bone morphology, for example, the thickness of skull and long bone fragments, and the presence of completed molar root apices.

D.1.74 Only for deposit 175 was a more specific adult age estimated. A maxillary central incisor root exhibited heavy wear on its lingual surface, very tentatively suggesting that this was a mature adult, probably over 45 years. Whilst it is unwise to make inferences



based on a single trait, it seems unlikely that such heavy wear would be seen in a younger individual.

- D.1.75 Deposit 221 comprised the remains of either an adolescent or a young adult, up to the age of 23 years. This was based on the presence of an ilium fragment with an unfused iliac crest epiphysis, and a partial auricular surface, which exhibited youthful features. In addition, the general size/thickness of the bone fragments was not consistent with an individual younger than adolescent.
- D.1.76 Three deposits comprised the remains of juveniles. For deposit 118, this was based solely on the morphology of cranial and rib fragments, which were notably thin. Therefore, a more specific age could not be estimated. Deposit 212 was estimated to be an older child (8 – 11 years), based on the root development stage of a deciduous maxillary molar and a permanent mandibular incisor. The development stage of mandibular premolar and incisor crown fragments in deposit 230, indicated a young to older child (5 – 12 years).
- D.1.77 None of the unurned deposits contained morphological features that could be used to estimate sex. No pathological lesions or non-metric traits were observed.

### ***Summary and conclusions***

- D.1.78 The human remains recovered from Turners Yard, Fordham, provide a valuable insight into the burial practices of a Cambridgeshire population, from the Beaker period, through to the Late Bronze Age. To summarise, the human remains recovered include two inhumations – a Late Beaker Period, middle adult male (416) from the centre of a round barrow and a young adult female (410) from a grave dug into the base of the barrow ditch, dating to the Early Bronze Age (late). An Early Bronze Age, urned cremation burial (**103**), comprising the remains of young or prime adult, possibly male, was recovered from the centre of a second, smaller barrow, and between the two barrows, 20 unurned cremation deposits were recovered from small pits.
- D.1.79 Both inhumed skeletons exhibited lesions of pathology. Whilst the diseases of dentition (calculus, caries, periodontal disease, ante-mortem tooth loss) observed in both skeletons, and the lesions pertaining to metabolic disease (cribra orbitalia) and spinal joint disease (Schmorl's nodes) observed in Skeleton 410, are relatively common conditions in past populations, the diffuse inflammatory lesions in Skeleton 410 are perhaps more significant. It is possible that there is a link between the unusual burial position of Skeleton 410 and the pathology observed, namely the active inflammation within the pelvic cavity, which may relate to the cause of death. For example, the condition may have caused a physical restriction to the way in which the body could be positioned.
- D.1.80 Comparative Early to Middle Bronze Age burials to Skeleton 410 were dug into the primary silting deposits of a barrow ditch at Twyford Down, Hampshire (Walker and Farwell 2000, 10). Here, around 19 inhumation burials were buried in, or within the confines of, the barrow ditch. The vast majority were buried in either tightly or loosely crouched positions (McKinley 2000c, 85-89), but none mirrored the position of Skeleton 410.
- D.1.81 Urned cremation burial **103** had a notably high bone weight. Whilst it is reported that ancient adult cremation deposits contain approximately 40 – 60% of the expected bone weights reported from modern studies (McKinley 2006), it has also been noted that 'primary' Bronze Age barrow burials consistently produce high weights of bone, with a reported range of 902.3g to 2747g and an average of 1525.7g (McKinley 1997, 142). The bone weight from burial 103 (1760.2g) is more in keeping with these weights. The



higher weights in these 'primary' barrow burials is suggested to be a reflection of the time expended on collecting bone for burial and/or the number of individuals involved in the collection, thus also reflecting the status of the deceased (*ibid.*, 142). Status may not only reflect wealth, authority, notoriety or social standing, but also personal popularity of an individual (*ibid.*, 142).

- D.1.82 The unurned cremation deposits comprised notably small quantities of bone (all less than 500g). The presence of low bone weights in unurned cremation deposits, compared with urned deposits, was also observed at Coneygre Farm, Nottinghamshire (Allen *et al.* 1987, 211). It is of course impossible to estimate the effect that plough truncation and disturbance via bioturbation at Fordham had on the total bone weights recovered, but it does not seem likely that any of the pits would have contained anywhere near the expected weight of a cremated adult (McKinley 2000a, 269). Even the deposits comprising juvenile remains clearly did not comprise anywhere near a complete skeleton. The low bone weights, combined with the presence of fuel ash (charcoal) in the pits, may indicate that these represent formalised deposits of redeposited pyre debris, rather than actual burials (McKinley 1997, 137-9). In such deposits, the presence of cremated bone appears to be totally incidental and, as such, the bone present generally shows the same mix of skeletal elements and the same proportion of human to animal bone as is found in burials (*ibid.*, 137). Indeed, these patterns were observed. One pit (**209**) contained no bone at all. Whilst this may be a result of truncation, it may further reflect the incidental nature of the presence of bone in the other pits.
- D.1.83 A total of 16 Late Bronze Age cremation deposits, not associated with a barrow, was revealed at Pinden Quarry (Hayden *et al.* 2014), and this was deemed exceptional.
- D.1.84 In terms of colour of the cremated bone deposits, the Early Bronze Age, urned cremation burial (**103**) comprised just a small proportion (10%) of non-white bone fragments, whilst all but two of the unurned deposits comprised higher proportions (15 – 60%) of non-white bone. This may reflect differences in the way the bone was selected for burial, or perhaps *not* specifically selected in the case of the unurned deposits. Alternatively, it may be a reflection of differences in pyre technology between the Early Bronze Age (urned cremation burial) and the Late Bronze Age (unurned deposits).
- D.1.85 Comparative Early to Middle Bronze Age burials to Skeleton 410 were dug into the primary silting deposits of a barrow ditch at Twyford Down, Hampshire (Walker and Farwell 2000, 10). Here, around 19 inhumation burials were buried in, or within the confines of, the barrow ditch. The vast majority were buried in either tightly or loosely crouched positions (McKinley 2000c, 85-89), but none mirrored the position of Skeleton 410.

## D.2 Faunal Remains

*By Chris Faine*

### **Introduction**

- D.2.1 Twenty five point two kilograms of faunal material was recovered from the excavation, yielding 506 “countable” bones (see below). All bones were collected by hand apart from those recovered from environmental samples; hence a bias towards smaller fragments is to be expected. Residuality appears not be an issue and there is no evidence of later contamination of any context. Six hundred and four fragments of animal bone were recovered with 363 identifiable to species (60% of the total sample). Faunal material was recovered from Late Neolithic, Early and Late Bronze Age contexts.

### **Methodology**

- D.2.2 All data was initially recorded using a specially written MS Access database. Bones were recorded using a version of the criteria described in Davis (1992) and Albarella & Davis (1994). Initially all elements were assessed in terms of siding (where appropriate), completeness, tooth wear stages (also where applicable) and epiphyseal fusion. Completeness was assessed in terms of percentage and zones present (after Dobney & Reilly 1988). Initially the whole identifiable assemblage was quantified in terms of number of individual fragments (NISP) and minimum numbers of individuals MNI (see tables 31 & 32). The ageing of the population was largely achieved by examining the wear stages of cheek teeth of cattle, sheep/goat and pig (after Grant, 1982). Wear stages were recorded for lower molars of cattle, sheep/goat and pig, both isolated and in mandibles. The states of epiphyseal fusion for all relevant bones were recorded to give a broad age range for the major domesticates (after Getty 1975 ). Measurements were largely carried out according to the conventions of von den Driesch and Boessneck (1976). Measurements were either carried out using a 150mm sliding calliper or an osteometric board in the case of larger bones.

### **The Assemblage**

- D.2.3 Tables 31 & 32 show the species distribution for the entire assemblage in terms of number of fragments and individuals respectively. Late Neolithic faunal material is limited to anuran amphibian remains and partial dog/fox skeleton from context (405). Cattle is the dominant taxon in both Early and Late Bronze Age samples, along with smaller numbers of sheep/goat with smaller numbers of sheep remains. The largest number of identifiable remains were recovered the late Bronze Age sample, including roughly equal numbers of pig and horse remains along with dog, rabbit and large number of water vole remains from context (241).
- D.2.4 As mentioned above few identifiable fragments were recovered from Late Neolithic contexts. The only mammal fragments consisted of dog remains (NISP: 10), all from the central burial (406) in Barrow 1. These consisted of an intact but fragmentary lower right limb from context 414 and another complete right hind limb from context (405) (including all metatarsals). The withers height for the animal (40cm) is below the range given by Harcourt (1974) for Late Neolithic dogs so it may represent a fox. However, differentiation between the species is problematic, being carried either by observing morphological criteria on the cranium or statistical analysis of a larger sample of long bone measurements, neither of which can be carried out in this case. The remainder of

the identifiable Late Neolithic bone consisted of a large number of amphibian remains from context (415), most likely common frog given their size.

- D.2.5 Early Bronze Age cattle remains consist almost entirely of lower limb and cranial elements, with only 2 meat bearing elements being recovered. Only one instance of butchery was observed. A partially articulated juvenile limb was recovered from context (372). The Early Bronze Age sheep assemblage consists of fragmentary adult limb elements along with a neonatal mandible recovered from context (269). A single horse 1st phalanx was recovered also from context (269).
- D.2.6 The body part distribution for Late Bronze Age cattle is shown in Graph 2. A wide variety of elements were recovered, indicating the presence of complete carcasses on site if not live animals. The higher rates of humeri and tarsal bones can be attributed to their robusticity relative to other elements. Epiphyseal fusion rates suggest the majority of animal were killed around 2-3 years of age (see Graph 3). A single ageable mandible was recovered from context (362) also from an animal around 2-3 years old. Juvenile fragments were recovered from A single measurable metacarpal was recovered from context (301) from a female with a withers height of 1.1m.
- D.2.7 Graph 4 shows the body part distribution for the Late Bronze Age sheep assemblage. The sample is dominated by mandible and distal tibiae along with smaller numbers of lower limb elements. Meat bearing upper limbs and scapulae are rare. The sheep sample is fragmentary therefore not enough ageable epiphyses are available to provide a meaning full sample to analyse. However the mandibular wear stage shown in Graph 5 show sheep being killed from the ages of 1-3 years. A neonatal metacarpal was recovered from context (447).
- D.2.8 Late Bronze Age pig remains are limited to lower limb elements along with a single fragmentary mandible. No ageable elements were recovered. Horse remains consisted of fragmentary metapodia and carpals along with mandible and cranial fragments. Dog remains are also scarce, consisting of lower limb fragments and a single partial cranium from context (310). Rabbit remains were also recovered but are almost certainly intrusive. Context (241) contained two complete water vole skeletons. Water voles are closely associated with slow moving rivers and standing water and frequently favour steep banks as a habitat.

### **Conclusions**

- D.2.9 Aside from the dog remains from context (401), it is possible that no Later Neolithic animal remains were deposited through anthropogenic means. The frog remains are indicative of the environmental conditions at the time. The nature of the canid limb from context (405) remains unclear. Cattle were the dominant taxon in the Late Bronze Age, with live animals being killed and butchered on site when reaching optimum meat bearing age, with no evidence of secondary products. There is some evidence of breeding or at the least the presence of juvenile animals. Sheep were also kept mainly for meat, also being killed when reaching prime meat weight. The large number of cattle in proportion to sheep was also noted at Striplands Farm, Longstanton (Evans & Patten, 2011). It has been suggested that the rise in sheep numbers proportional to cattle seen in the Late Bronze Age elsewhere in the country may have taken place later in East Anglia (not until the Early Iron Age). It is worth noting also that the species distribution at Tuners Yard also mirrors that seen in the Middle Bronze sample seen at Fordham Road, Newmarket (Rees 2014). Pigs were also raised for meat, with horses used as mounts.

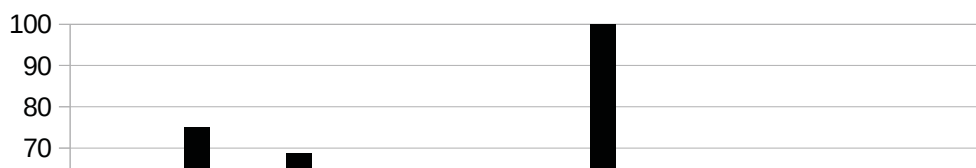
	Late Neolithic		Early Bronze Age		Late Bronze Age	
	NISP	NISP %	NISP	NISP %	NISP	NISP %
Cattle ( <i>Bos</i> )	0	0	15	57.6	152	51.7
Sheep/Goat ( <i>Ovis/Capra</i> )	0	0	10	38.4	90	30.6
Pig ( <i>Sus scrofa</i> )	0	0	0	0	8	2.8
Horse ( <i>Equus caballus</i> )	0	0	1	4	11	3.8
Dog ( <i>Canis familiaris</i> )	10	23.3	0	0	4	1.3
Rabbit ( <i>Oryctolagus cuniculus</i> )	0	0	0	0	6	2
Water Vole ( <i>Arvicola terrestris</i> )	0	0	0	0	22	7.4
Frog/Toad ( <i>Rana/Bufo</i> )	33	76.7	0	0	0	0
Unid. Bird	0	0	0	0	1	0.4
<b>Total:</b>	<b>43</b>	<b>100</b>	<b>26</b>	<b>100</b>	<b>294</b>	<b>100</b>

Table 31: Species distribution for the faunal assemblage (NISP)

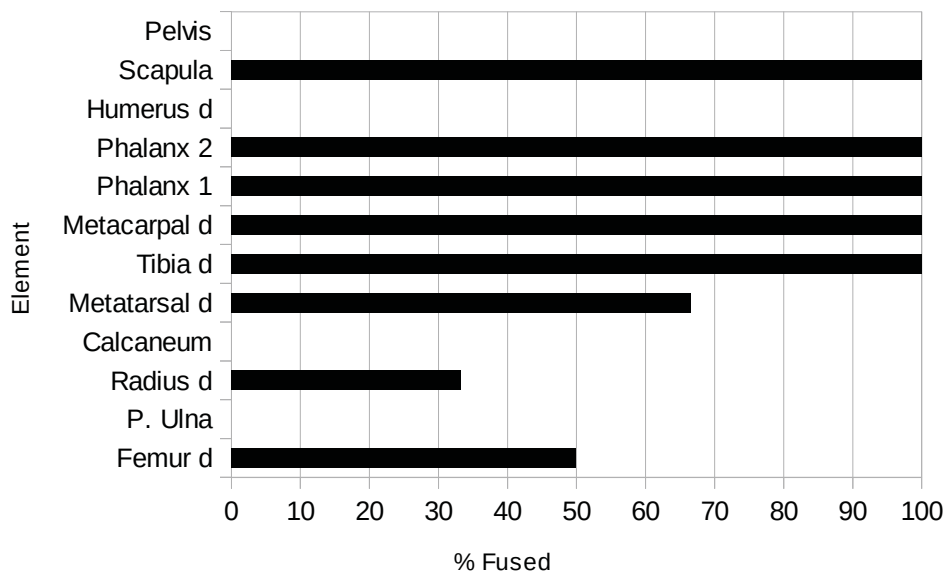
	Late Neolithic		Early Bronze Age		Late Bronze Age	
	MNI	MNI %	MNI	MNI %	MNI	MNI %
Cattle ( <i>Bos</i> )	0	0	8	53.4	49	47
Sheep/Goat ( <i>Ovis/Capra</i> )	0	0	6	40	33	31.8
Pig ( <i>Sus scrofa</i> )	0	0	0	0	6	5.8
Horse ( <i>Equus caballus</i> )	0	0	1	6.6	9	8.8
Dog ( <i>Canis familiaris</i> )	2	25	0	0	3	2.9
Rabbit ( <i>Oryctolagus cuniculus</i> )	0	0	0	0	1	0.9
Water Vole ( <i>Arvicola terrestris</i> )	0	0	0	0	2	1.9
Frog/Toad ( <i>Rana/Bufo</i> )	6	75	0	0	0	0
Unid. Bird	0	0	0	0	1	0.9
<b>Total:</b>	<b>8</b>	<b>100</b>	<b>15</b>	<b>100</b>	<b>104</b>	<b>100</b>

Table 32: Species distribution for the assemblage (MNI)

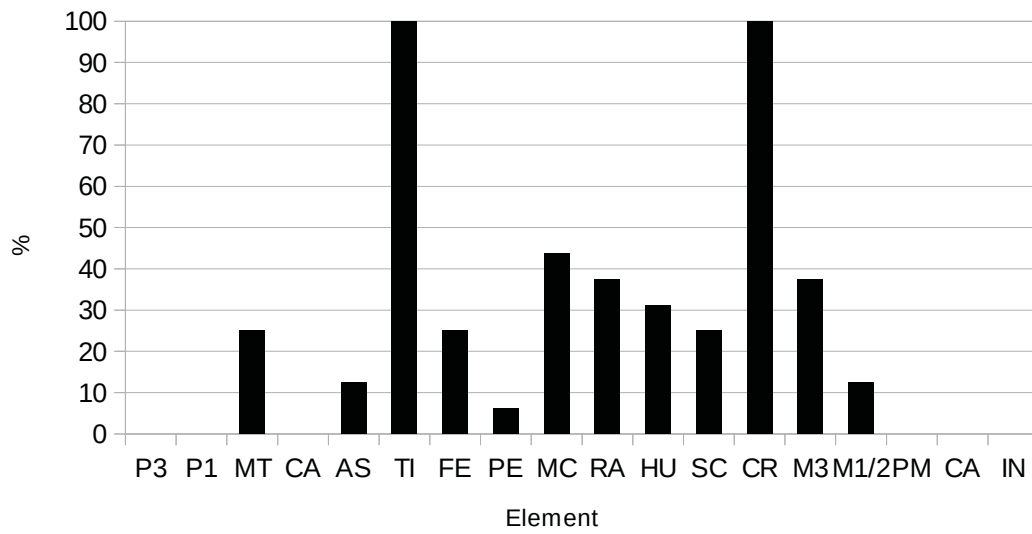
Graph 2: Late Bronze Age cattle body part distribution



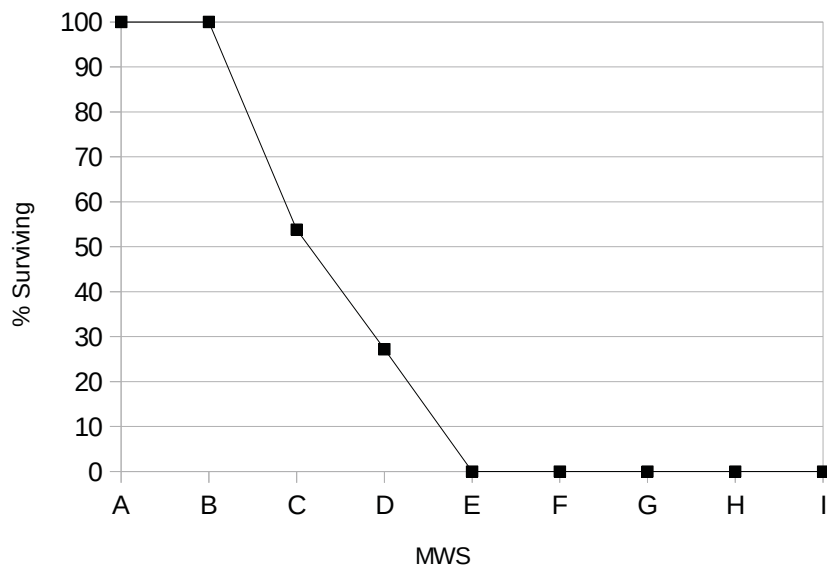
Graph 3: Late Bronze Age epiphyseal fusion rates



Graph 4: Late Bronze Age sheep body part distribution



Graph 5: MWS for Late Bronze Age sheep



### D.3 Environmental samples

*By Rachel Fosberry*

#### **Introduction**

- D.3.1 Seventy-eight bulk samples were taken during the excavations at Turner's Yard, Fordham. Samples were primarily taken for the recovery of human skeletal remains from cremation deposits and two inhumations provisionally dating to the Bronze Age. Additional samples were taken from ditches, pits and a layer to determine whether plant remains are present, their mode of preservation and whether they are of interpretable value with regard to domestic, agricultural and industrial activities, diet, economy and rubbish disposal.

#### **Methodology**

- D.3.2 Forty samples were taken from twenty two features that contained cremation deposits. The total volume of each of these samples was processed and sorted in order to retrieve all of the cremated bone and to determine whether charred plant remains, including charcoal, are present.
- D.3.3 Eleven samples were taken from grave **406** and eight samples from grave **412**. The total volume of each of these samples was processed and sorted in order to retrieve all of the human bone and any other ecofacts or artefacts that may have been deliberately or accidentally included in the grave and backfill.
- D.3.4 Twelve samples were taken from ditch fills. Of these, five were selected for processing. Four out of six pit samples were also selected for processing. One bucket (up to ten litres) of each of the samples was processed by tank flotation for the recovery of charred plant remains, dating evidence and any other artefactual evidence that might be present.
- D.3.5 For all of the samples processed, the flot was collected in a 0.3mm nylon mesh and the residue was washed through a 0.5mm sieve. Both flot and residue were allowed to air dry. The dried residue was passed through 5mm and 2mm sieves and a magnet was dragged through each resulting fraction prior to sorting for artefacts. Any artefacts present were noted and reintegrated with the hand-excavated finds. The flot was examined under a binocular microscope and the presence of any plant remains or other artefacts are noted in Table 33. Identification of plant remains is with reference to the Digital Seed Atlas of the Netherlands (Cappers *et al.* 2006) and the authors' own reference collection. Nomenclature is according to Stace (1997).

#### **Quantification**

- D.3.6 For the purpose of this initial assessment, items such as seeds, cereal grains and small animal bones have been scanned and recorded qualitatively according to the following categories

# = 1-10, ## = 11-50, ### = 51+ specimens ##### = 100+ specimens

Items that cannot be easily quantified such as charcoal, magnetic residues and fragmented bone have been scored for abundance

+ = rare, ++ = moderate, +++ = abundant

## Results

- D.3.7 Plant remains are preserved by carbonization. Charcoal is present in the majority of the samples other than those from the graves which contain only sparse charcoal that may be contamination. The cremation deposits do not contain large volumes of charcoal. Flot volumes are misleading due to the large amounts of fine sand that was washed over into the flot during the flotation procedure. The charcoal appears to be that of wood although species have not been identified. Pieces of carbonized bark were noted in several of the cremation samples which probably represents pyre material.

### Cereals

- D.3.8 Charred grains of cereals occur in fifteen of the cremation samples, and in one each of the ditch and grave samples. The grains are mainly present as single specimens and are generally poorly preserved making identification tentative. The grains are all likely to be barley (*Hordeum vulgare*) or one of the hulled wheat varieties emmer (*Triticum dicoccum*) or spelt (*T. spelta*).

### Weed seeds

- D.3.9 Charred weed seeds are virtually absent other than the characteristic swollen basal internodes of onion-couch grass (*Arrhenatherum elatius* var. *bulbosum*) which occur in Sample 20, fill (171) of cremation **167**, Samples 51 (fill 229) and 54 (fill 235) of cremation pit **230** and Samples 40 (fill 205) and 41 (fill 207) of cremation pit **206**. Charred seeds of grasses (*Poaceae*) and a single sedge (*Carex* sp.) were noted in Sample 51.

## Discussion

- D.3.10 The charred plant assemblage from Turner's Road, Fordham consists of a background scatter of charred cereal grains with occasional weed seeds and tubers of onion-couch grass. This would appear to be a common assemblage for Bronze Age burial sites. At the Early Bronze Age barrow at Deeping St Nicholas, Lincolnshire, grassland plants with roots and tubers were found, with sparse cereal grains and chaff of emmer wheat (Murphy 1994). This was thought to represent a mixture of plant material accidentally charred beneath the pyre, kindling material and perhaps intentional food offerings. The few charred grains recovered from Turner's Road would initially appear unlikely to represent a food offering but the small amounts of charcoal present suggest that very little pyre material has been included and it is likely that the deposits sampled represent a small proportion of the original cremation and pyre debris. Any grain that had been included as an offering is likely to have either been reduced to ash or, if carbonized, would have fallen to the bottom of the pyre.
- D.3.11 Onion-couch grass forms bulbous tubers (basal internodes) just below the soil surface. The burnt tubers are commonly found in cremation deposits and are thought to represent de-turfing around the pyre-site to create a fire break (Stevens 1998) or may simply have become carbonised due to proximity to the pyre.
- D.3.12 The charred cereal assemblage has limited potential for the interpretation of domestic and culinary activities due to the small number of grains recovered and their poor preservation. Charred cereal grains and tubers can be used for radiocarbon dating, as can charcoal, although such items cannot be guaranteed to give a truly accurate date as they may have become charred some time prior to being incorporated into the deposits.



Sample No.	Context No.	Cut No.	Feature Type	Volume processed (L)	Flot Volume (ml)	Cereals	Weed Seeds	Charcoal <2mm	Charcoal > 2mm
10	100	101	pit	129	0	0	0	+	+
11	102	103	cremation	32	2	0	0	+	0
12	102	103	cremation	3	1	0	0	0	0
13	116	118	cremation	30	40	0	0	++	++
14	119	120	cremation	18	30	#	0	++	+
15	121	122	cremation	85	120	#	0	++	++
16	127	128	pit		0	0	0	0	0
17	147	148	cremation	8	25	0	0	++	++
18	164	148	cremation	26	25	#	0	+++	++
19	166	167	cremation	2	1	0	0	0	0
20	171	167	cremation	18	30	0	#	+	+
21	135	133	ditch		0	0	0	0	0
22	170	168	ditch		0	0	0	0	0
23	165	149	cremation	65	60	0	0	++	+
24	150	149	cremation	18	20	#	0	+++	++
25	174	175	cremation	6	80	0	0	++	+
26	180	175	cremation	23	15	#	0	++	++
27	181	175	cremation	75	110	#	0	+	+
28	182	176	cremation	100	100	#	0	++	++
29	183	176	cremation	94	80	#	0	++	++
30	177	176	cremation	44	30	0	0	++	++
31	185	187	ditch	8	30	0	0	+++	+++
32	179	178	cremation	4	1	0	0	+	0
33	188	178	cremation	60	110	0	0	+	+
34	189	178	cremation	5	1	0	0	+	0
35	190	178	cremation	68	80	#	0	++	++
36	191	192	cremation	5	10	0	0	+	+
37	193	192	cremation	4	5	#	0	+	+
38	197	196	cremation	3	1	0	0	+	+
39	201	196	cremation	9	10	#	0	+	+
40	205	206	cremation	5	1	0	0	+	+
41	207	206	cremation	20	20	#	#	+	+
42	204	203	cremation	2	1	0	0	+	+
43	210	203	cremation	7	1	0	0	+	+
44	208	209	cremation	2	1	0	0	+	0
45	211	212	cremation	1	1	0	0	+	0
46	214	215	cremation	3	1	0	0	+	+
47	220	215	cremation	79	60	0	0	++	+
48	222	221	cremation	1	1	0	0	++	++
49	223	224	cremation	56	30	0	0	++	+
50	225	221	cremation	98	20	0	0	+++	+++
51	229	230	cremation	9	35	#	##	+++	+++
52	232	231	cremation	8	20	#	0	++	+
53	228	227	pit	7	1	0	0	0	0
54	235	230	cremation	152	90	0	0	+++	++
55	244	249	ditch	9	0	0	0	0	0
56	259	260	cremation	13	10	0	0	++	++
57	258		layer		0	0	0	0	0
58	262	263	pit	8	10	#	0	+	++
59	265	263	pit	3	1	0	0	0	0
60	268	270	ditch	8	20	0	0	+	+

Sample No.	Context No.	Cut No.	Feature Type	Volume processed (L)	Flot Volume (ml)	Cereals	Weed Seeds	Charcoal <2mm	Charcoal > 2mm
61	269	270	ditch	9	0	0	0	0	0
62	277	278	ditch		0	0	0	0	0
63	279	280	ditch		0	0	0	0	0
64	282	285	pit		0	0	0	0	0
65	292	290	ditch		0	0	0	0	0
66	315	249	ditch		0	0	0	0	0
67	414	406	grave	9	2	0	0	+	+
68	414	406	grave	9	10	0	0	+	+
69	414	406	grave	3	1	0	0	+	0
70	331	249	ditch	9	30	#		++	++
71	404	406	grave	7	30	0	0	+	+
72	415	406	grave	9	5	0	0	+	+
73	415	406	grave	10	20	0	0	+	0
74	415	406	grave	10	2	0	0	+	0
75	415	406	grave	7	1	0	0	+	0
76	415	406	grave	4	1	0	0	0	0
77	417	406	grave	3	1	0	0	0	0
78	417	406	grave	5	1	0	0	0	0
79	337	249	ditch		0	0	0	0	0
80	411	412	grave	10	1	#	0	0	0
81	411	412	grave	7	1	0	0	0	0
82	411	412	grave	10	5	0	0	0	0
83	411	412	grave	5	2	0	0	0	0
84	411	412	grave	3	1	0	0	0	0
85	411	412	grave	6	5	0	0	+	0
86	411	412	grave	6	1	0	0	0	0
87	411	412	grave	21	45	0	0	0	0

Table 33: Quantification of plant macrofossils

## APPENDIX E. BIBLIOGRAPHY

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## APPENDIX F. RADIOCARBON DATING CERTIFICATES



### Scottish Universities Environmental Research Centre

Director: Professor R M Ellam

Rankine Avenue, Scottish Enterprise Technology Park,  
East Kilbride, Glasgow G75 0QF, Scotland, UK

Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 [www.glasgow.ac.uk/suerc](http://www.glasgow.ac.uk/suerc)

## RADIOCARBON DATING CERTIFICATE

19 February 2013

**Laboratory Code** SUERC-44496 (GU29482)

**Submitter** Rachel Fosberry  
Oxford Archaeology East  
15 Trafalgar Way  
Bar Hill  
Cambs. CB23 8SQ

**Site Reference** Turner's Yard, Fordham  
**Context Reference** 410

**Material** Bone : Human femur

**$\delta^{13}\text{C}$  relative to VPDB** -21.2 ‰

**$\delta^{15}\text{N}$  relative to air** 10.6 ‰

**C/N ratio (Molar)** 3.3

**Radiocarbon Age BP** 3306  $\pm$  27

**N.B.** The above  $^{14}\text{C}$  age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standards, background standards and the random machine error.

The calibrated age ranges are determined using the University of Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.1 (Bronk Ramsey 2009). Terrestrial samples are calibrated using the IntCal09 curve while marine samples are calibrated using the Marine09 curve.

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email [g.cook@suerc.gla.ac.uk](mailto:g.cook@suerc.gla.ac.uk) or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :-

Date :-

Checked and signed off by :-

Date :-

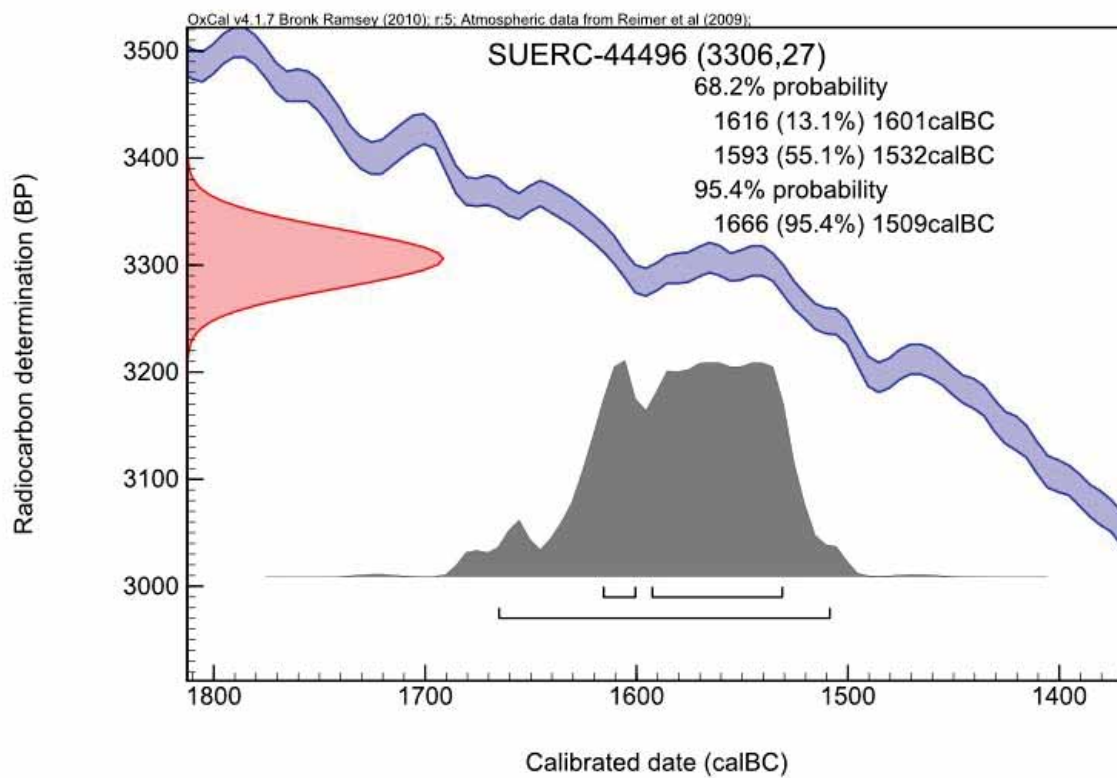


The University of Glasgow, charity number SC004401



The University of Edinburgh is a charitable body, registered in Scotland, with registration number SC005336

### Calibration Plot







## Scottish Universities Environmental Research Centre

Director: Professor R M Ellam

Rankine Avenue, Scottish Enterprise Technology Park,  
East Kilbride, Glasgow G75 0QF, Scotland, UK

Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 [www.glasgow.ac.uk/suerc](http://www.glasgow.ac.uk/suerc)

# RADIOCARBON DATING CERTIFICATE

19 February 2013

**Laboratory Code** SUERC-44497 (GU29483)

**Submitter** Rachel Fosberry  
Oxford Archaeology East  
15 Trafalgar Way  
Bar Hill  
Cambs. CB23 8SQ

**Site Reference** Turner's Yard, Fordham  
**Context Reference** 416

**Material** Bone : Human femur

**$\delta^{13}\text{C}$  relative to VPDB** -21.4 ‰

**$\delta^{15}\text{N}$  relative to air** 10.8 ‰

**C/N ratio (Molar)** 3.3

**Radiocarbon Age BP** 3501  $\pm$  29

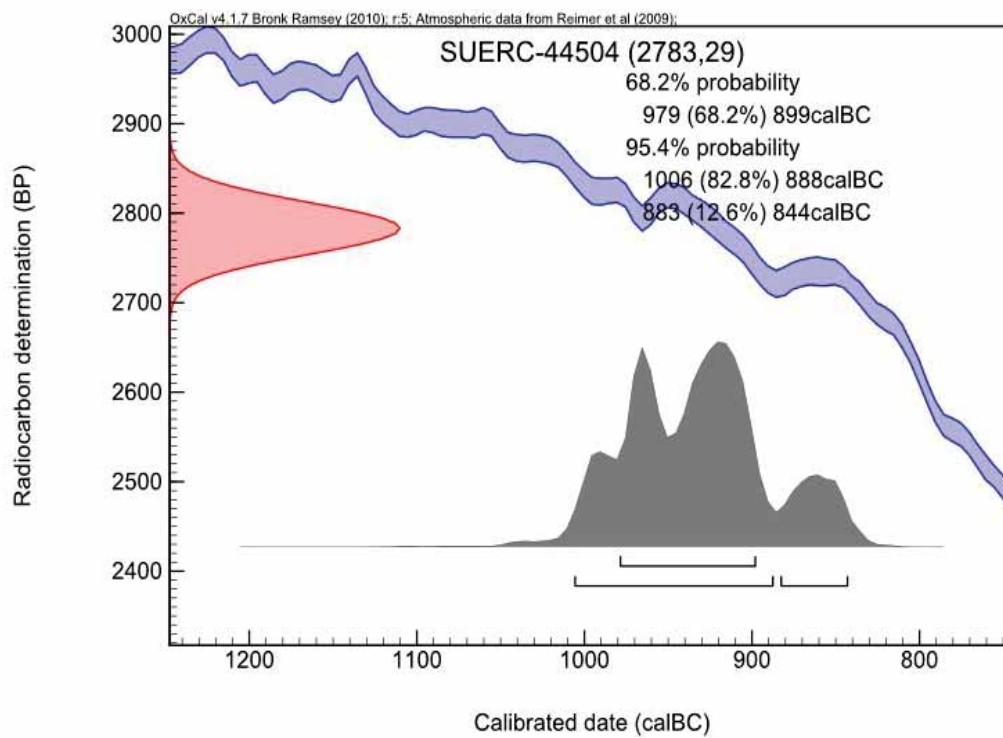
**N.B.** The above  $^{14}\text{C}$  age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standards, background standards and the random machine error.

The calibrated age ranges are determined using the University of Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.1 (Bronk Ramsey 2009). Terrestrial samples are calibrated using the IntCal09 curve while marine samples are calibrated using the Marine09 curve.

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email [g.cook@suerc.gla.ac.uk](mailto:g.cook@suerc.gla.ac.uk) or Telephone 01355 270136 direct line.

*Calibration Plot*







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## RADIOCARBON DATING CERTIFICATE

19 February 2013

**Laboratory Code** SUERC-44498 (GU29484)

**Submitter** Rachel Fosberry  
Oxford Archaeology East  
15 Trafalgar Way  
Bar Hill  
Cambs. CB23 8SQ

**Site Reference** Turner's Yard, Fordham  
**Context Reference** 205

**Material** Cremated Bone : human

**$\delta^{13}\text{C}$  relative to VPDB** -22.0 ‰

**Radiocarbon Age BP** 2856  $\pm$  27

**N.B.** The above  $^{14}\text{C}$  age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standards, background standards and the random machine error.

The calibrated age ranges are determined using the University of Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.1 (Bronk Ramsey 2009). Terrestrial samples are calibrated using the IntCal09 curve while marine samples are calibrated using the Marine09 curve.

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Conventional age and calibration age ranges calculated by :-

Date :-

Checked and signed off by :-

Date :-

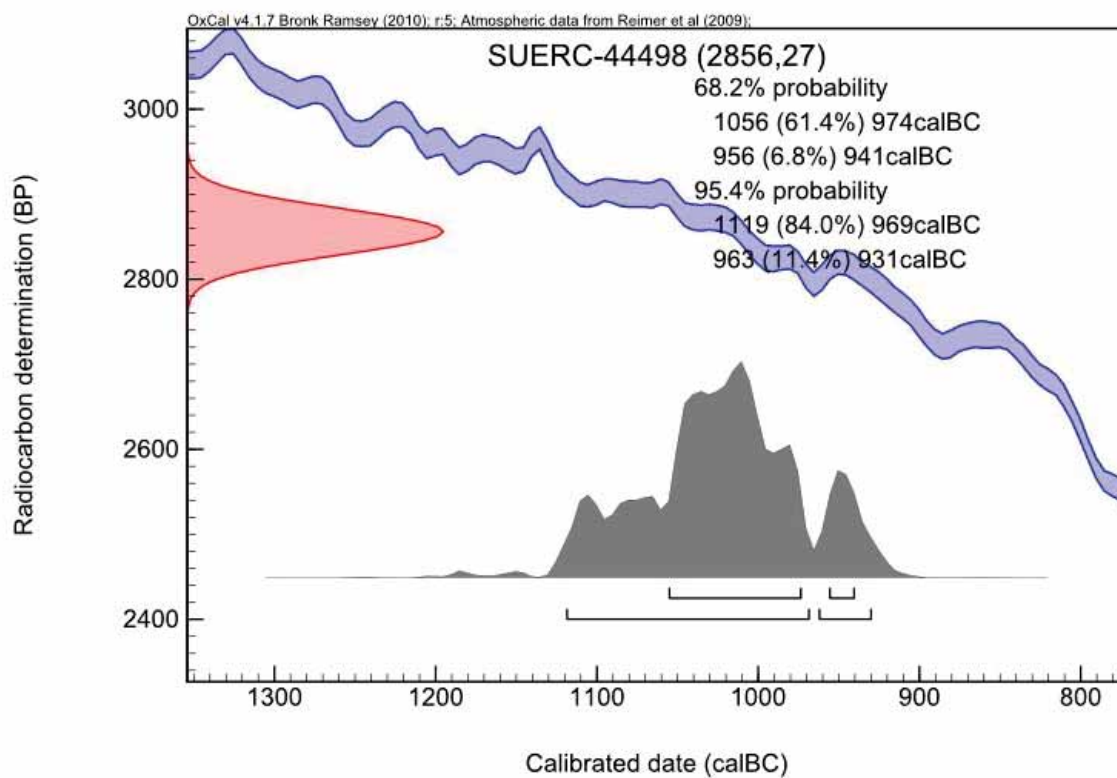


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### Calibration Plot





## Scottish Universities Environmental Research Centre

Director: Professor R M Ellam

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## RADIOCARBON DATING CERTIFICATE

19 February 2013

**Laboratory Code** SUERC-44499 (GU29485)

**Submitter** Rachel Fosberry  
Oxford Archaeology East  
15 Trafalgar Way  
Bar Hill  
Cambs. CB23 8SQ

**Site Reference** Turner's Yard, Fordham  
**Context Reference** 454

**Material** Cremated Bone : human

**$\delta^{13}\text{C}$  relative to VPDB** -24.1 ‰

**Radiocarbon Age BP** 3187  $\pm$  27

**N.B.** The above  $^{14}\text{C}$  age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standards, background standards and the random machine error.

The calibrated age ranges are determined using the University of Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.1 (Bronk Ramsey 2009). Terrestrial samples are calibrated using the IntCal09 curve while marine samples are calibrated using the Marine09 curve.

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email [g.cook@suerc.gla.ac.uk](mailto:g.cook@suerc.gla.ac.uk) or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :-

Date :-

Checked and signed off by :-

Date :-

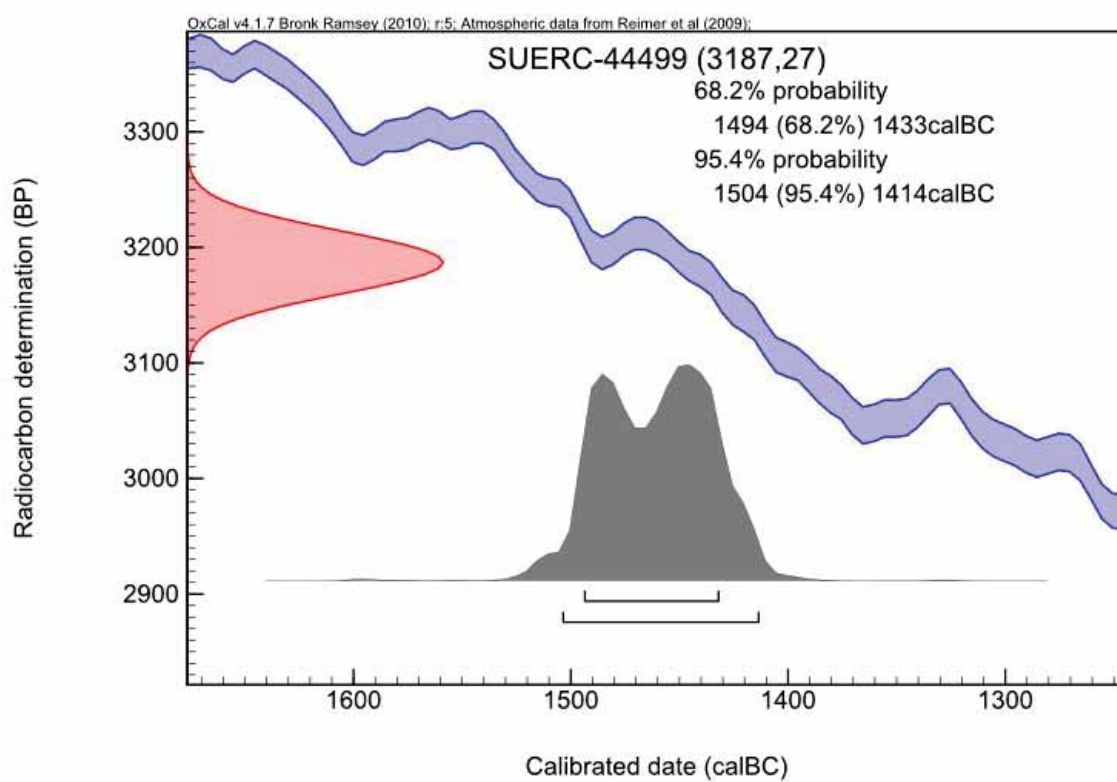


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East Kilbride, Glasgow G75 0QF, Scotland, UK

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## RADIOCARBON DATING CERTIFICATE

19 February 2013

<b>Laboratory Code</b>	SUERC-44500 (GU29486)
<b>Submitter</b>	Rachel Fosberry Oxford Archaeology East 15 Trafalgar Way Bar Hill Cambs. CB23 8SQ
<b>Site Reference</b> <b>Context Reference</b>	Turner's Yard, Fordham 177
<b>Material</b>	Cremated Bone : human
<b><math>\delta^{13}\text{C}</math> relative to VPDB</b>	-20.5 ‰
<b>Radiocarbon Age BP</b>	2814 $\pm$ 27

**N.B.** The above  $^{14}\text{C}$  age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standards, background standards and the random machine error.

The calibrated age ranges are determined using the University of Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.1 (Bronk Ramsey 2009). Terrestrial samples are calibrated using the IntCal09 curve while marine samples are calibrated using the Marine09 curve.

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Conventional age and calibration age ranges calculated by :-

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Checked and signed off by :-

Date :-

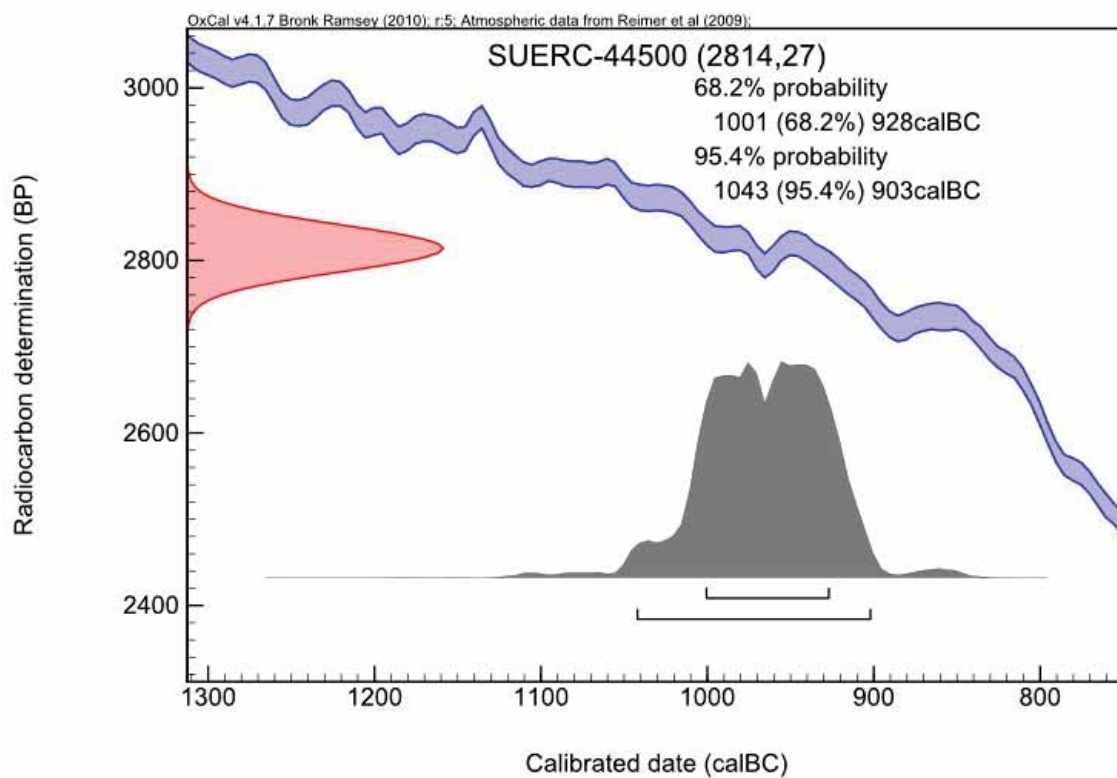


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### Calibration Plot







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## RADIOCARBON DATING CERTIFICATE

19 February 2013

**Laboratory Code** SUERC-44504 (GU29487)

**Submitter** Rachel Fosberry  
Oxford Archaeology East  
15 Trafalgar Way  
Bar Hill  
Cambs. CB23 8SQ

**Site Reference** Turner's Yard, Fordham  
**Context Reference** 188

**Material** Cremated Bone : human

**$\delta^{13}\text{C}$  relative to VPDB** -18.4 ‰

**Radiocarbon Age BP** 2783  $\pm$  29

**N.B.** The above  $^{14}\text{C}$  age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standards, background standards and the random machine error.

The calibrated age ranges are determined using the University of Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.1 (Bronk Ramsey 2009). Terrestrial samples are calibrated using the IntCal09 curve while marine samples are calibrated using the Marine09 curve.

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Conventional age and calibration age ranges calculated by :-

Date :-

Checked and signed off by :-

Date :-

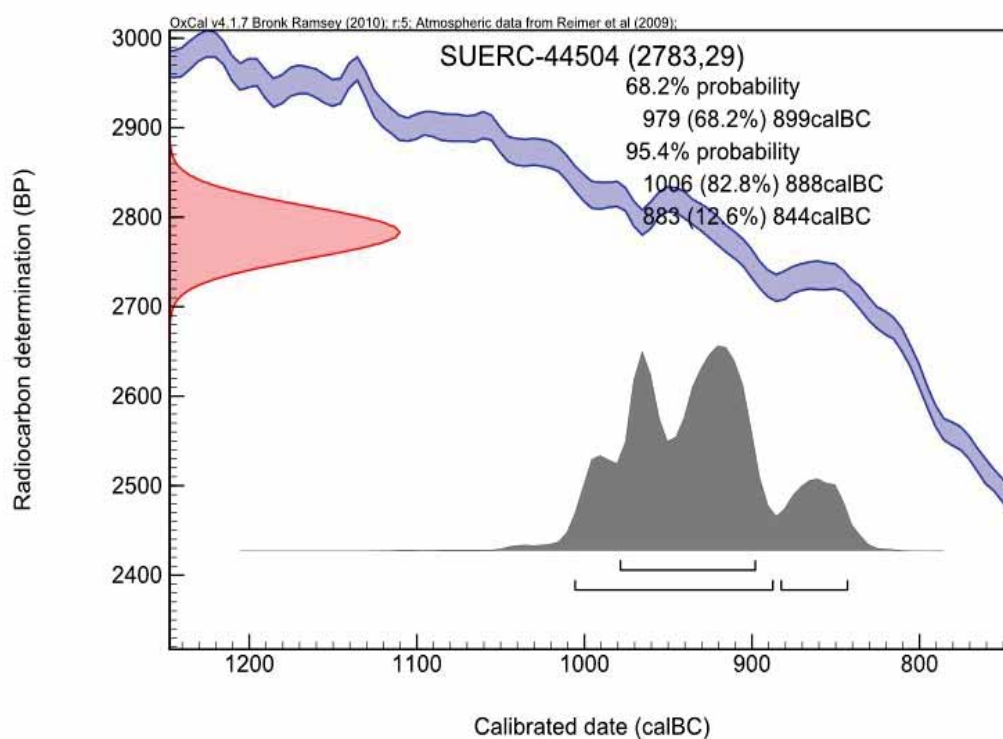


University  
of Glasgow

The University of Glasgow, charity number SC004401



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*Calibration Plot*



**Scottish Universities Environmental Research Centre**

Director: Professor R M Eilam  
Rankine Avenue, Scottish Enterprise Technology Park,  
East Kilbride, Glasgow G75 0QF, Scotland, UK  
Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 [www.glasgow.ac.uk/suerc](http://www.glasgow.ac.uk/suerc)

**RADIOCARBON DATING CERTIFICATE**

21 May 2013

**Laboratory Code** SUERC-46081 (GU30162)

**Submitter** Rachel Fosberry  
Oxford Archaeology East  
15 Trafalgar Way  
Bar Hill  
Cambs. CB23 8SQ

**Site Reference** FORTUY12  
**Context Reference** 454

**Material** Cremated bone : Human

**$\delta^{13}\text{C}$  relative to VPDB** -23.8 ‰

**Radiocarbon Age BP** 3526  $\pm$  29

**N.B.** The above  $^{14}\text{C}$  age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal4).

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email [g.cook@suerc.gla.ac.uk](mailto:g.cook@suerc.gla.ac.uk) or telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :-

Date :-

Checked and signed off by :-

Date :-

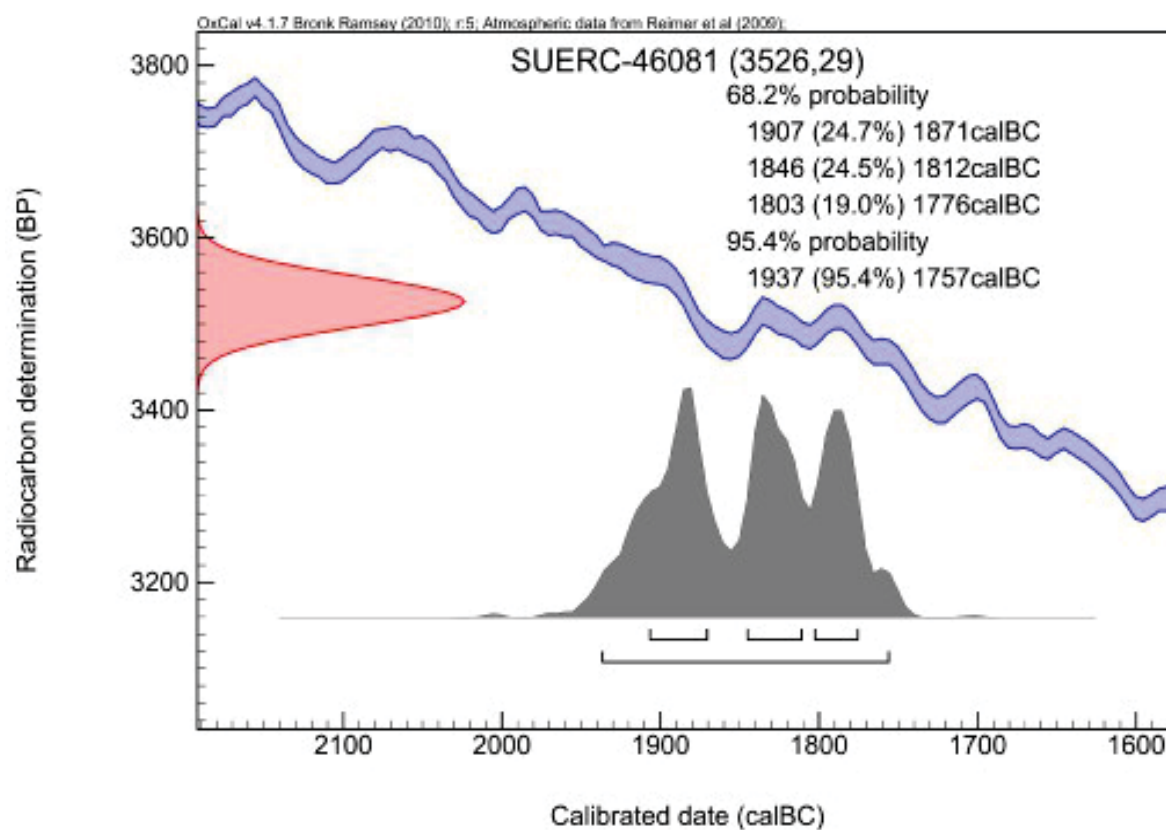


The University of Glasgow, charity number SC004402



The University of Edinburgh is a charitable body registered in Scotland, with registration number SC005508

## Calibration Plot





## Scottish Universities Environmental Research Centre

Director: Professor R M Eilam  
Rankine Avenue, Scottish Enterprise Technology Park,  
East Kilbride, Glasgow G75 0QF, Scotland, UK  
Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229998 [www.glasgow.ac.uk/suerc](http://www.glasgow.ac.uk/suerc)

### RADIOCARBON DATING CERTIFICATE

21 May 2013

**Laboratory Code** SUERC-46082 (GU30163)

**Submitter** Rachel Fosberry  
Oxford Archaeology East  
15 Trafalgar Way  
Bar Hill  
Cambs. CB23 8SQ

**Site Reference** FORTUY12  
**Context Reference** 455

**Material** Cremated bone : Human

**$\delta^{13}\text{C}$  relative to VPDB** -22.8 ‰

**Radiocarbon Age BP** 3376  $\pm$  29

**N.B.** The above  $^{14}\text{C}$  age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal4).

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email [g.cook@suerc.gla.ac.uk](mailto:g.cook@suerc.gla.ac.uk) or telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :-

Date :-

Checked and signed off by :-

Date :-

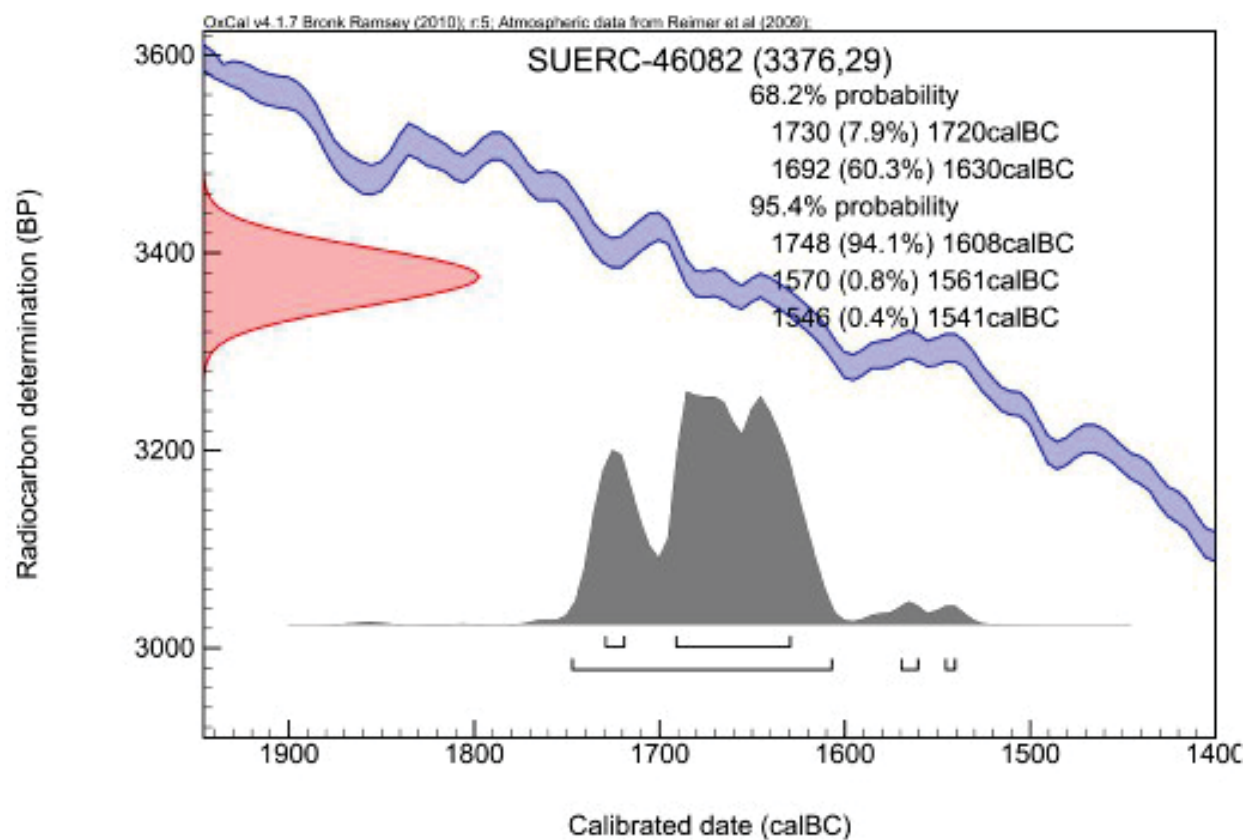


The University of Glasgow, charity number SC009401



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## Calibration Plot







## Scottish Universities Environmental Research Centre

Director: Professor R M Ellam

Rankine Avenue, Scottish Enterprise Technology Park,  
East Kilbride, Glasgow G75 0QF, Scotland, UK

Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 [www.glasgow.ac.uk/suerc](http://www.glasgow.ac.uk/suerc)

### RADIOCARBON DATING CERTIFICATE

21 May 2013

**Laboratory Code** SUERC-46081 (GU30162)

**Submitter** Rachel Fosberry  
Oxford Archaeology East  
15 Trafalgar Way  
Bar Hill  
Cambs. CB23 8SQ

**Site Reference** FORTUY12  
**Context Reference** 454

**Material** Cremated bone : Human

**$\delta^{13}\text{C}$  relative to VPDB** -23.8 ‰

**Radiocarbon Age BP** 3526  $\pm$  29

**N.B.** The above  $^{14}\text{C}$  age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal4).

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email [g.cook@suerc.gla.ac.uk](mailto:g.cook@suerc.gla.ac.uk) or telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :-

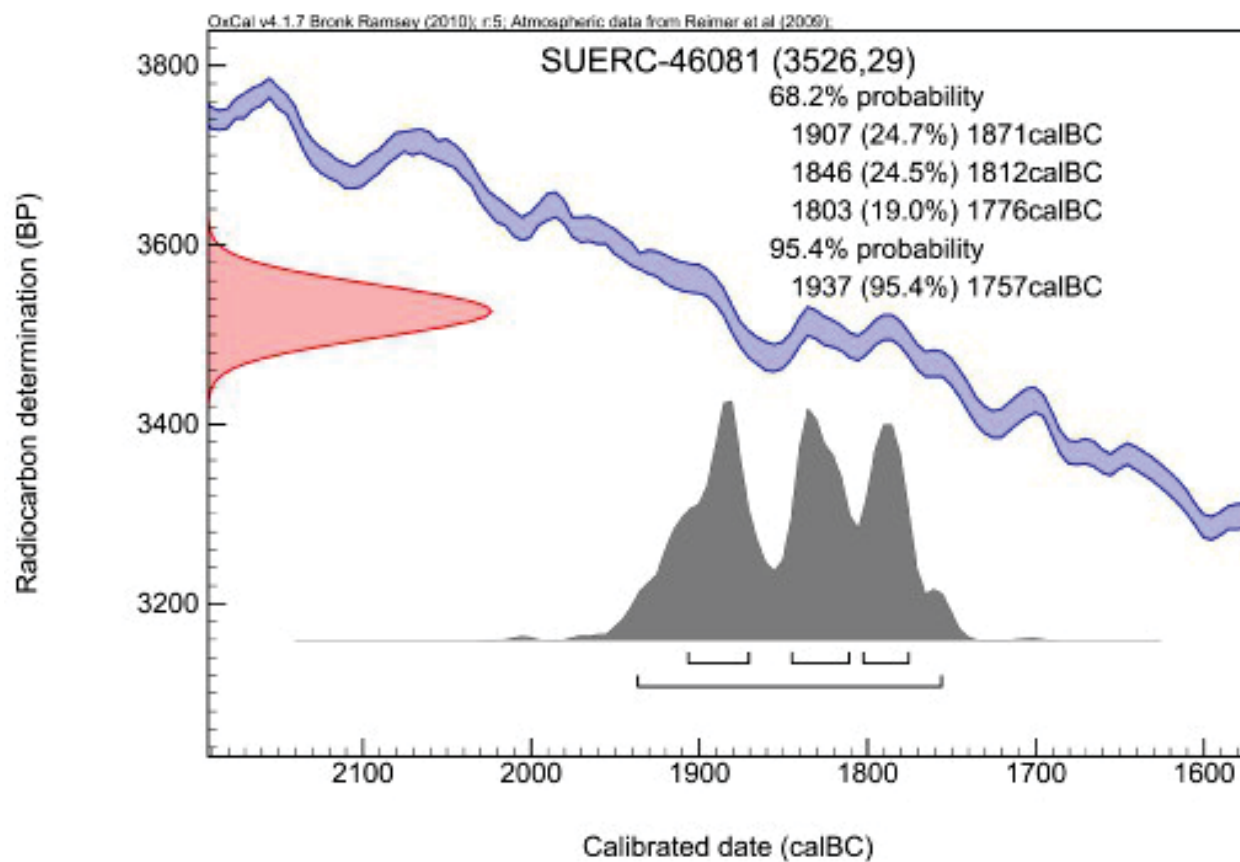
Date :-

Checked and signed off by :-

Date :-



## Calibration Plot





## Scottish Universities Environmental Research Centre

Director: Professor R M Ellam

Rankine Avenue, Scottish Enterprise Technology Park,  
East Kilbride, Glasgow G75 0QF, Scotland, UK

Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 [www.glasgow.ac.uk/suerc](http://www.glasgow.ac.uk/suerc)

### RADIOCARBON DATING CERTIFICATE

21 May 2013

**Laboratory Code** SUERC-46082 (GU30163)

**Submitter** Rachel Fosberry  
Oxford Archaeology East  
15 Trafalgar Way  
Bar Hill  
Cambs. CB23 8SQ

**Site Reference** FORTUY12  
**Context Reference** 455

**Material** Cremated bone : Human

**$\delta^{13}\text{C}$  relative to VPDB** -22.8 ‰

**Radiocarbon Age BP** 3376  $\pm$  29

**N.B.** The above  $^{14}\text{C}$  age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

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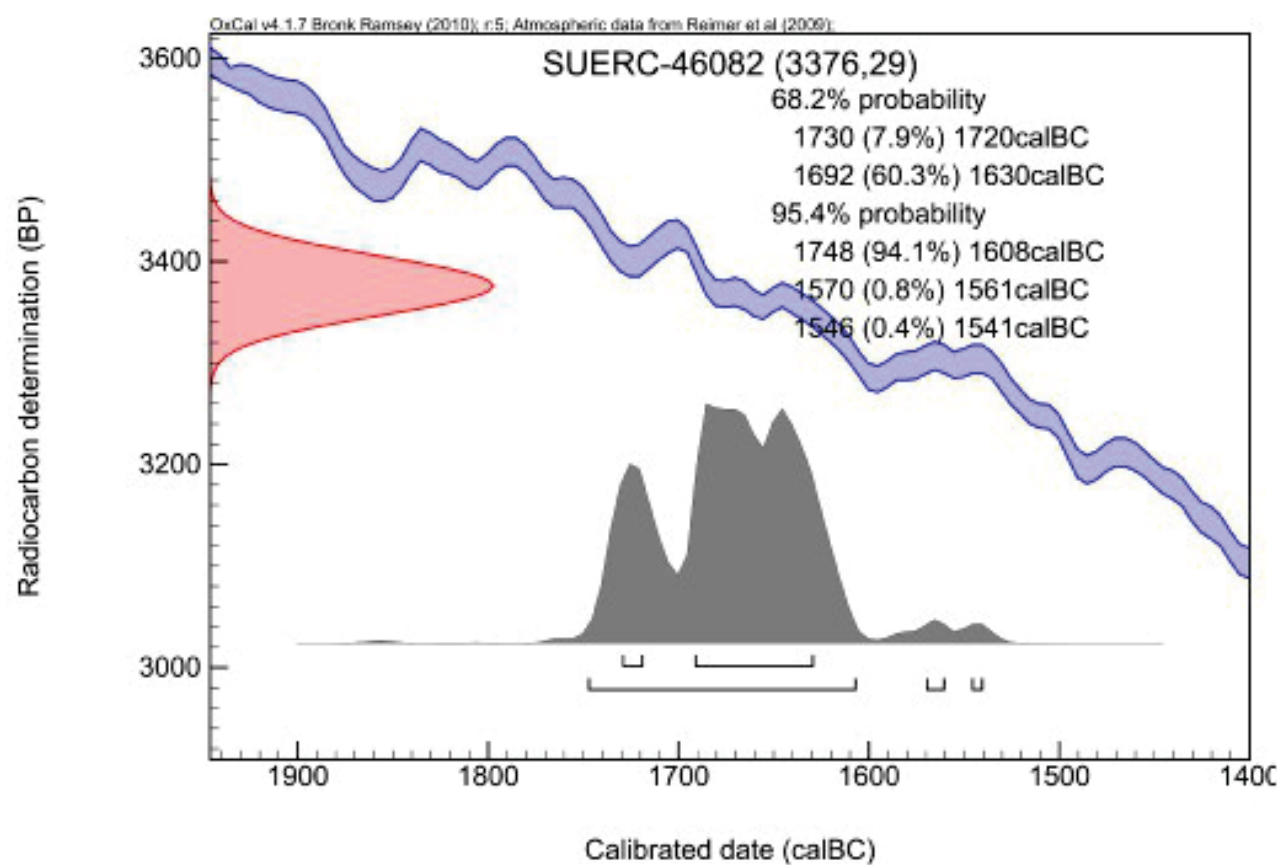
Conventional age and calibration age ranges calculated by :-

Date :-

Checked and signed off by :-

Date :-

## Calibration Plot





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### RADIOCARBON DATING CERTIFICATE

08 January 2014

**Laboratory Code** SUERC-49867 (GU32375)

**Submitter** Rachel Fosberry  
Oxford Archaeology East  
15 Trafalgar Way  
Bar Hill  
Cambs. CB23 8SQ

**Site Reference** FORTUY12  
**Context Reference** 102  
**Sample Reference** 11

**Material** grain

**$\delta^{13}\text{C}$  relative to VPDB** -22.7 ‰

**Radiocarbon Age BP**  $354 \pm 32$

**N.B.** The above  $^{14}\text{C}$  age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal4).

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email [g.cook@suerc.gla.ac.uk](mailto:g.cook@suerc.gla.ac.uk) or telephone 01355 270136 direct line.

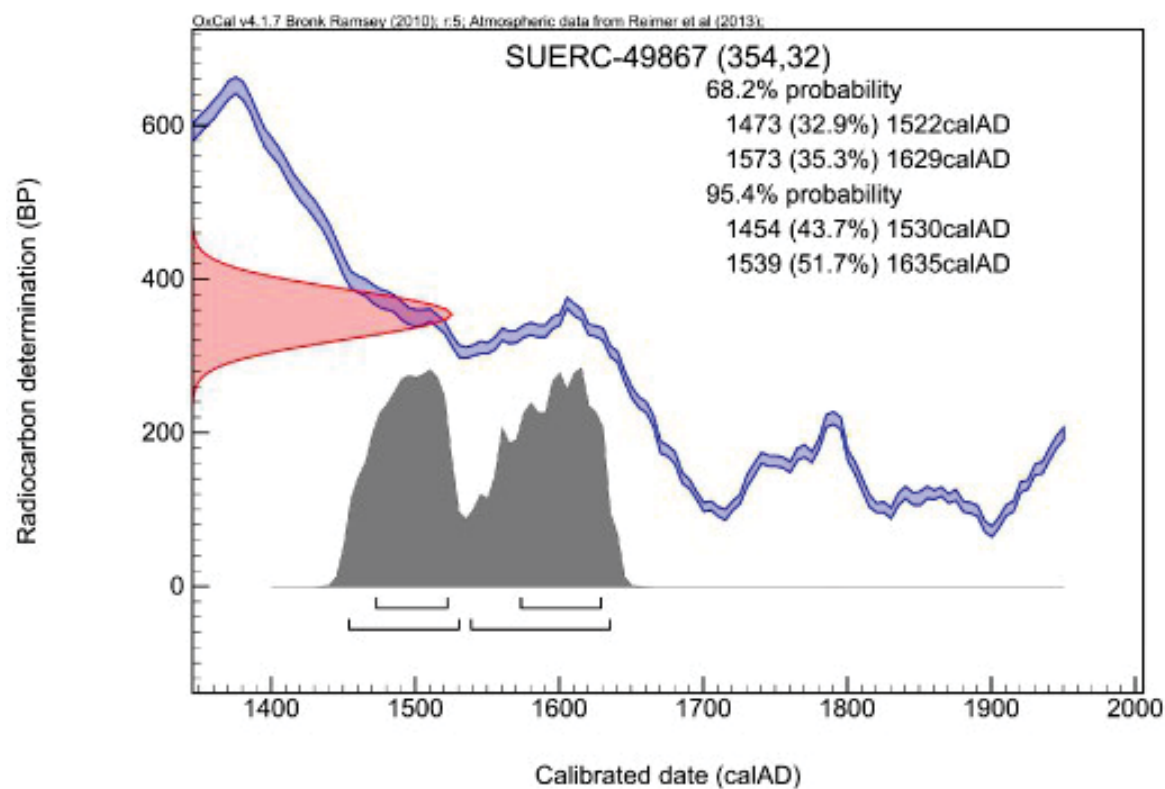
Conventional age and calibration age ranges calculated by :-

Date :-

Checked and signed off by :-

Date :-

## Calibration Plot



## APPENDIX G. OASIS REPORT FORM

### Project Details

OASIS Number	oxfordar3-138195		
Project Name	Two barrows, a cremation cemetery and a Beaker pit at Turners Yard, Fordham, Cambridgeshire		
Project Dates (fieldwork)	Start	10-10-2012	Finish 21-11-2012
Previous Work (by OA East)	No	Future Work	Unknown

### Project Reference Codes

Site Code	FORTUY12	Planning App. No.	11/00681/FUL 10/00607/FUM
HER No.	ECB 3854	Related HER/OASIS No.	

### Type of Project/Techniques Used

Prompt	Direction from Local Planning Authority - PPS 5
--------	---

### Please select all techniques used:

<input type="checkbox"/> Field Observation (periodic visits)	<input checked="" type="checkbox"/> Part Excavation	<input type="checkbox"/> Salvage Record
<input type="checkbox"/> Full Excavation (100%)	<input type="checkbox"/> Part Survey	<input type="checkbox"/> Systematic Field Walking
<input checked="" type="checkbox"/> Full Survey	<input type="checkbox"/> Recorded Observation	<input type="checkbox"/> Systematic Metal Detector Survey
<input type="checkbox"/> Geophysical Survey	<input type="checkbox"/> Remote Operated Vehicle Survey	<input type="checkbox"/> Test Pit Survey
<input checked="" type="checkbox"/> Open-Area Excavation	<input type="checkbox"/> Salvage Excavation	<input type="checkbox"/> Watching Brief

### Monument Types/Significant Finds & Their Periods

List feature types using the [NMR Monument Type Thesaurus](#) and significant finds using the [MDA Object type Thesaurus](#) together with their respective periods. If no features/finds were found, please state "none".

Monument	Period	Object	Period
barrow	Bronze Age -2.5k to -700	pottery	Bronze Age -2.5k to -700
pit	Bronze Age -2.5k to -700	flint	Bronze Age -2.5k to -700
cremation	Bronze Age -2.5k to -700	spindle whorl	Bronze Age -2.5k to -700
inhumation	Bronze Age -2.5k to -700	pin	Bronze Age -2.5k to -700
	Bronze Age -2.5k to -700	needle	Bronze Age -2.5k to -700

### Project Location

County	Cambridgeshire	Site Address (including postcode if possible)
District	East Cambridgeshire	Turner's yard, Fordham road, Fordham,
Parish	Fordham	
HER	Cambridgeshire	
Study Area	0.6ha	National Grid Reference TL 6298 6892



## Project Originators

Organisation	OA EAST
Project Brief Originator	Kashia Gadanic
Project Design Originator	Richard Mortimer
Project Manager	Richard Mortimer
Supervisor	Nick Gilmour

## Project Archives

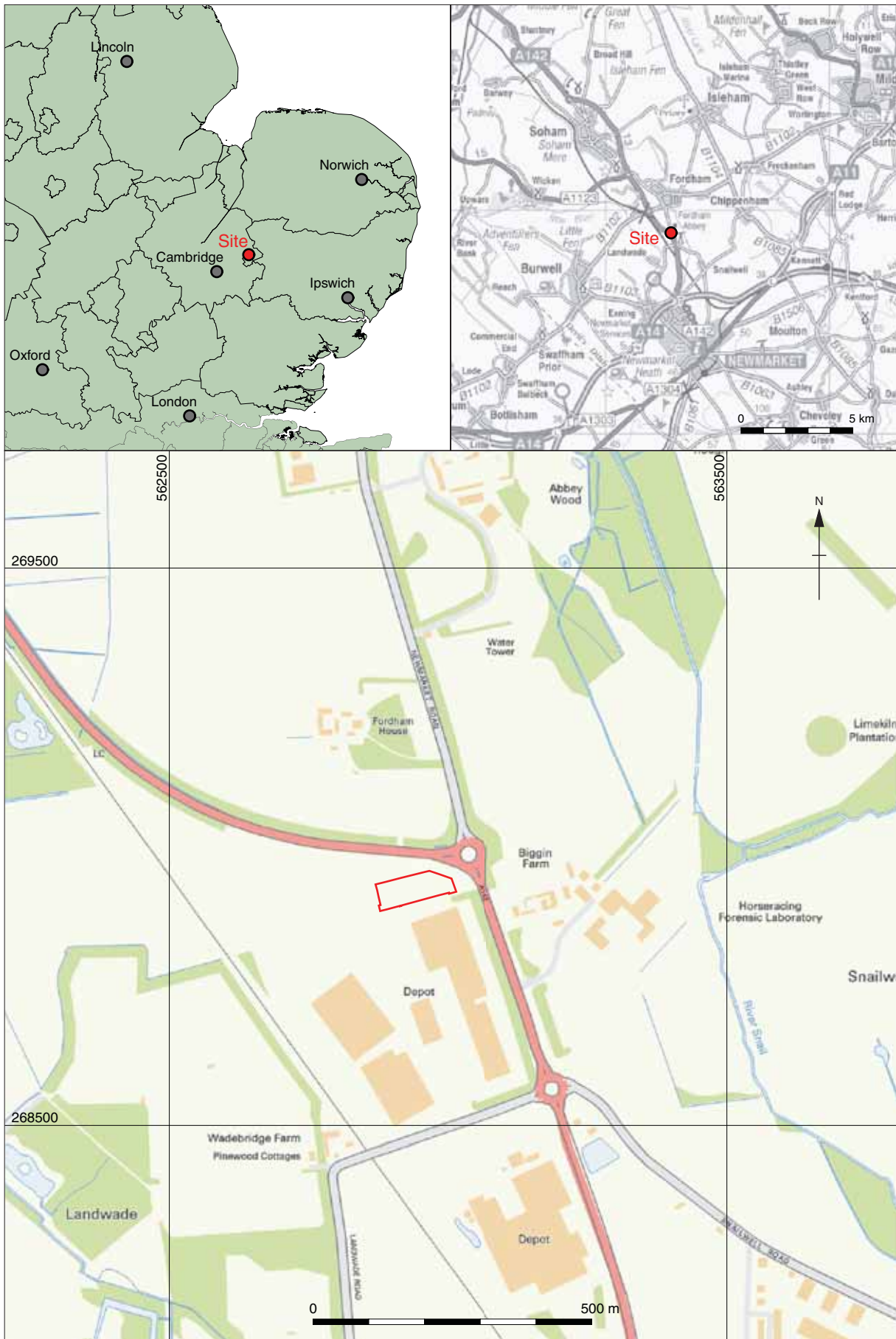
Physical Archive	Digital Archive	Paper Archive
CCC Stores	OA East, Bar Hill	CCC Stores
FORTUY12	FORTUY12	FORTUY12

## Archive Contents/Media

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Animal Bones	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	<input checked="" type="checkbox"/> Photos
	<input checked="" type="checkbox"/> Plans
	<input checked="" type="checkbox"/> Report
	<input checked="" type="checkbox"/> Sections
	<input type="checkbox"/> Survey





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Figure 1: Site location showing development area (red)

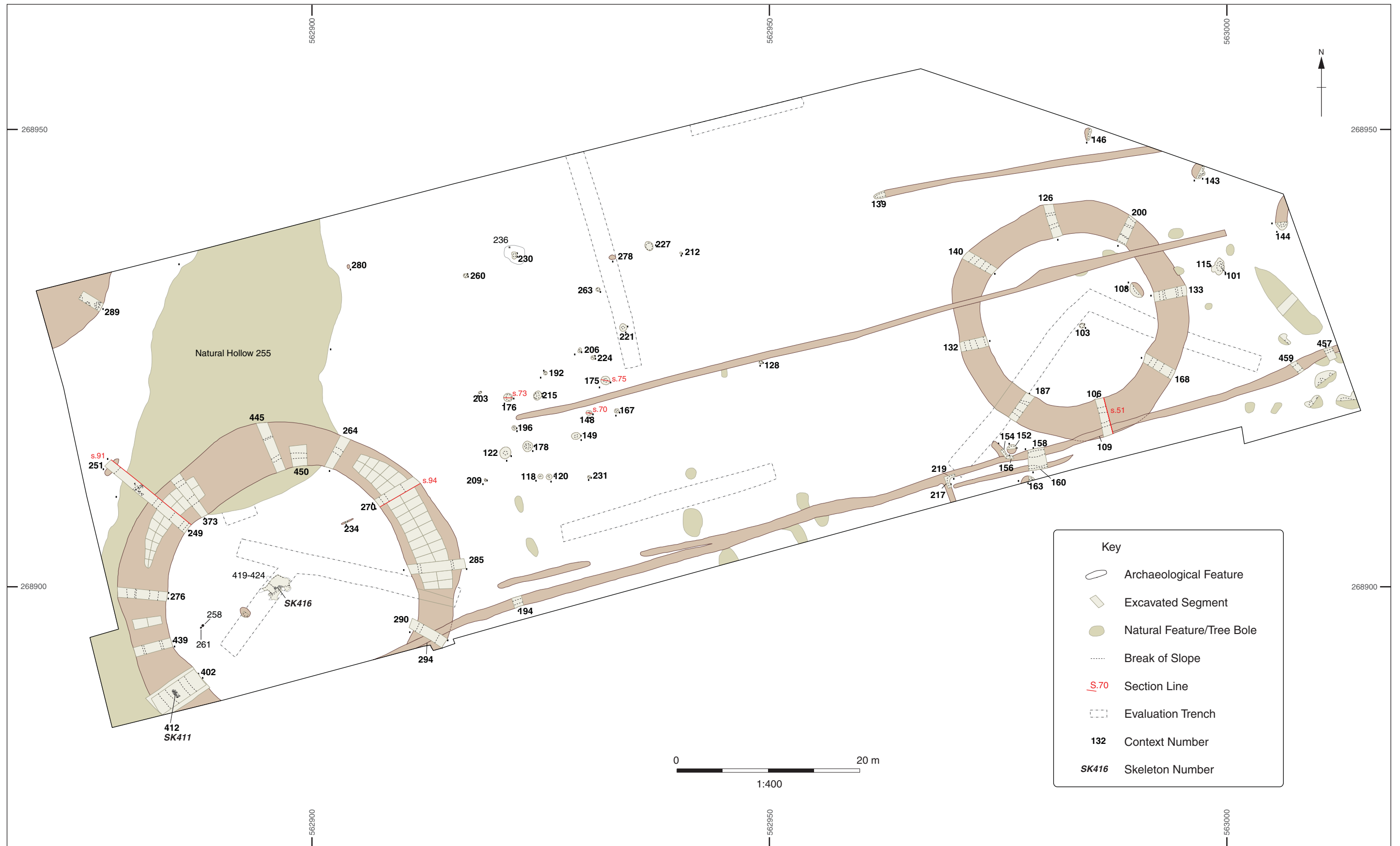


Figure 2: Site plan showing excavated features

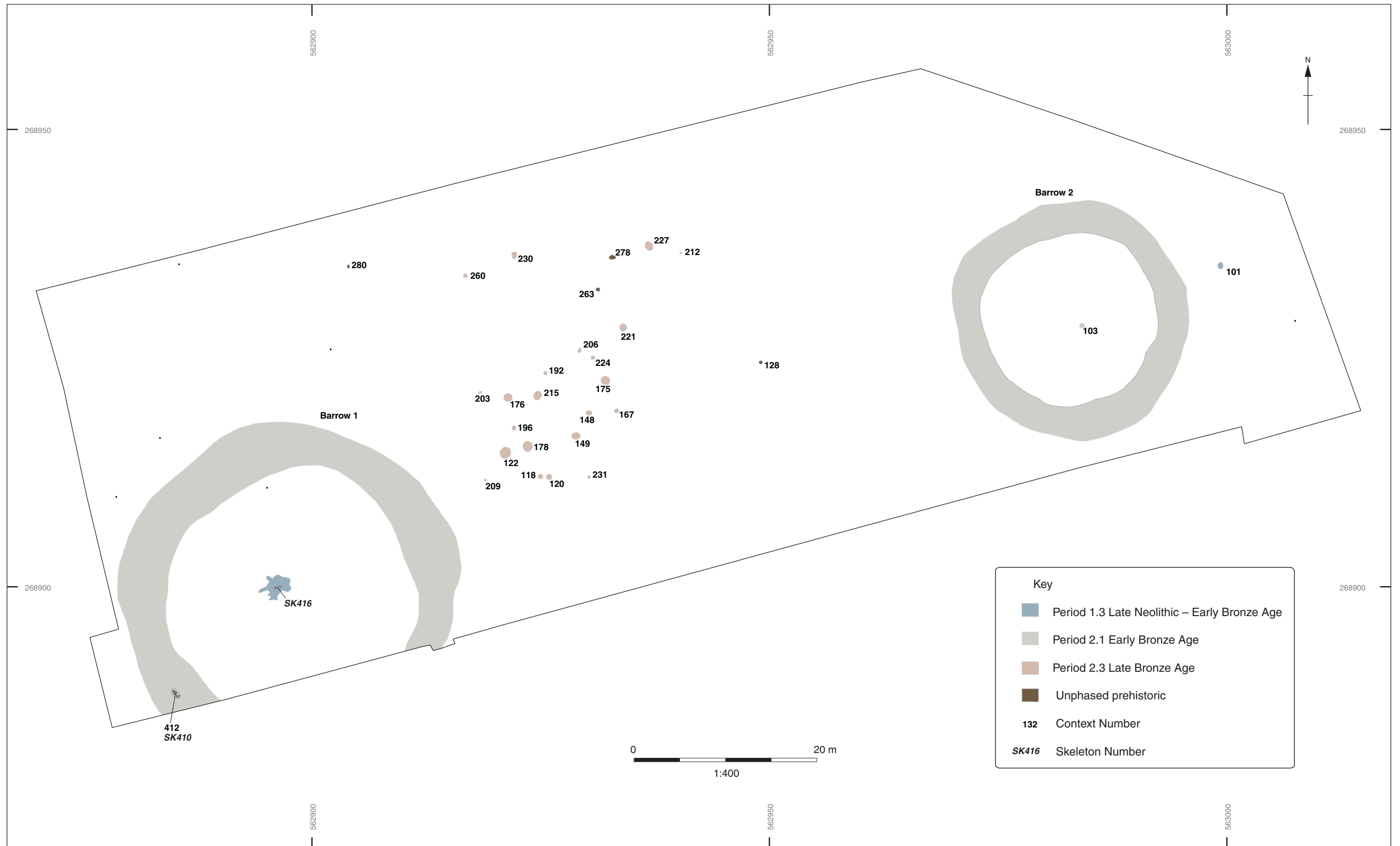


Figure 3: Site phase plan showing prehistoric features

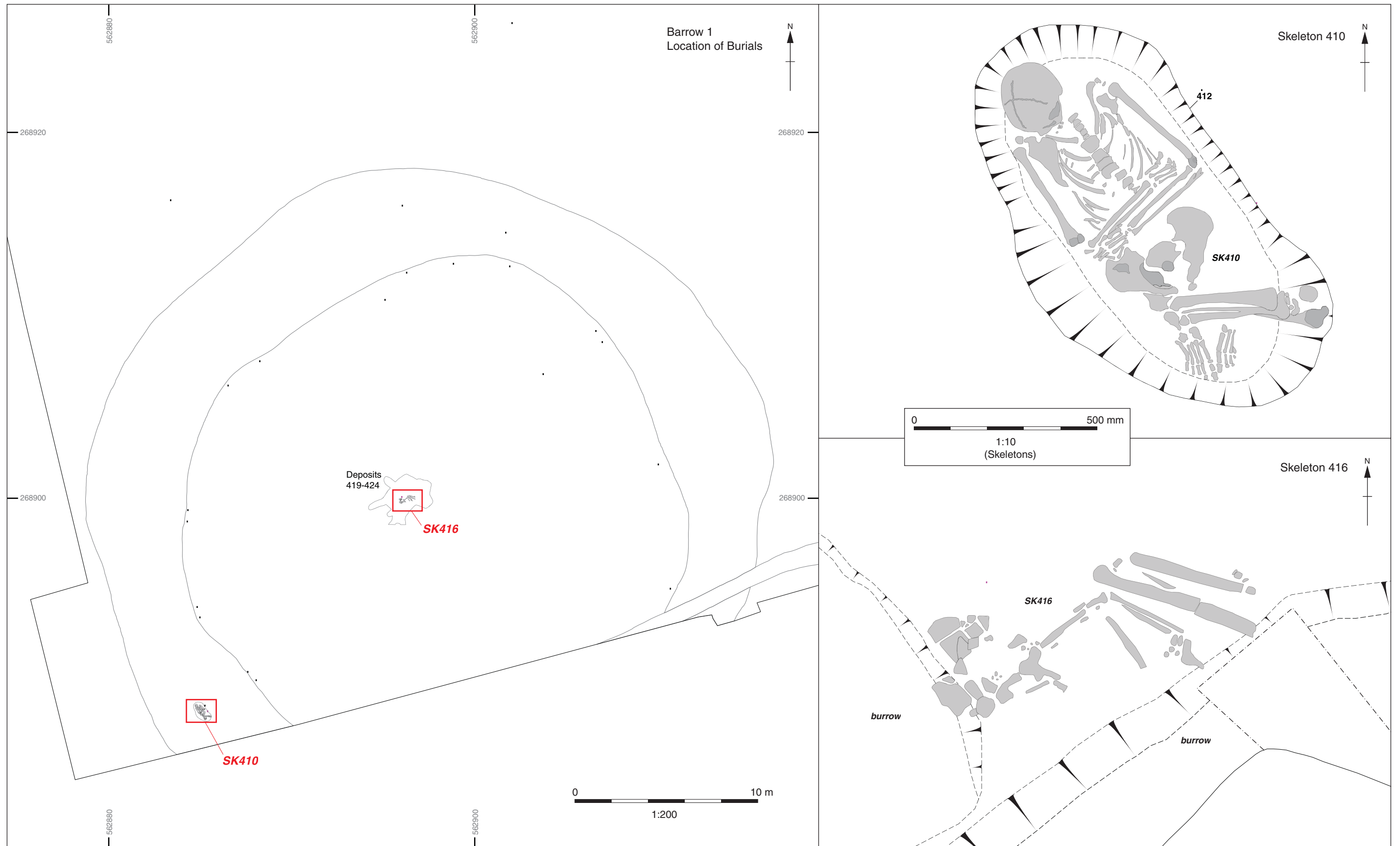


Figure 4: Skeleton 410, Skeleton 416 and burial location

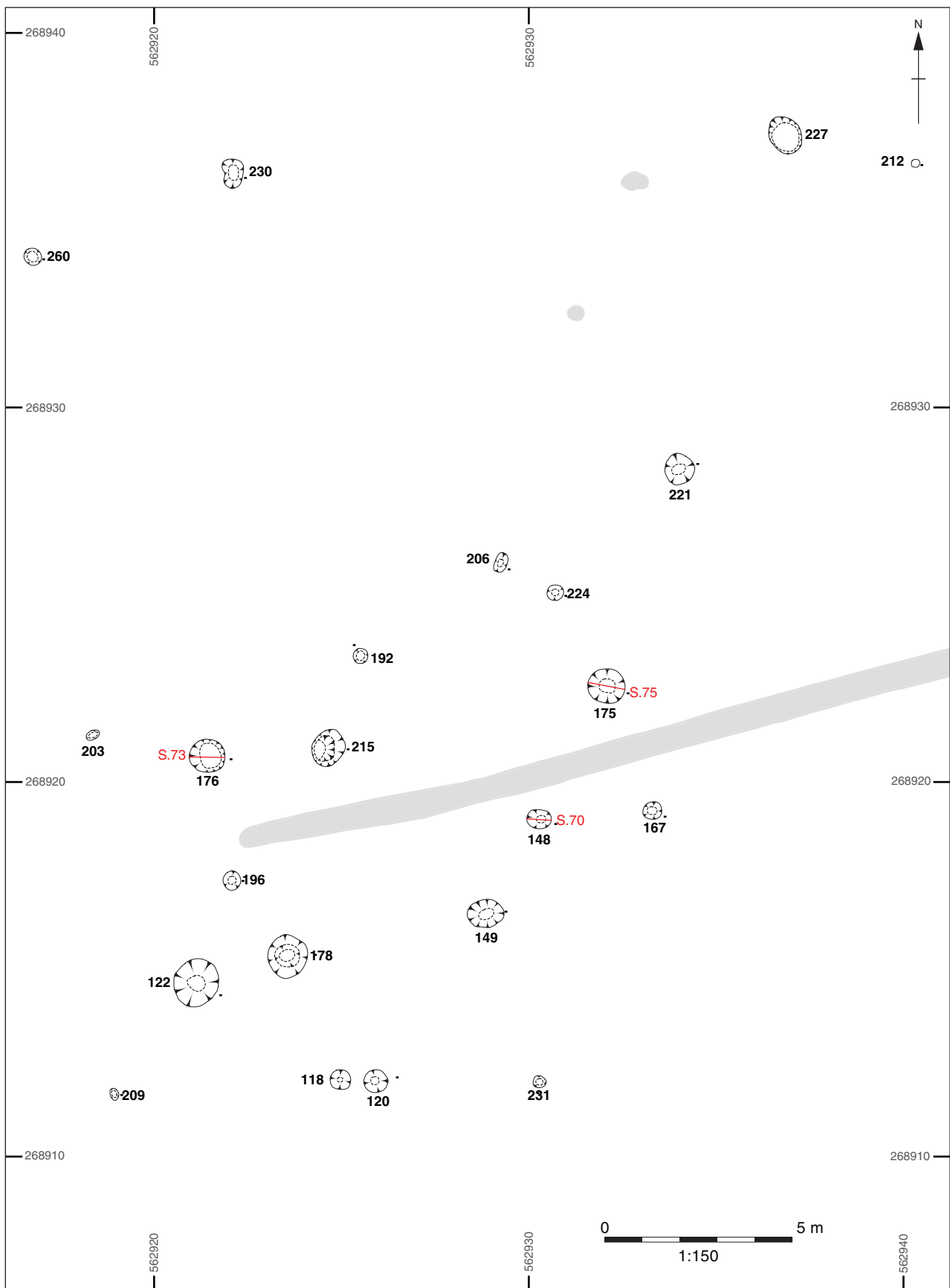


Figure 5: Late Bronze Age cremation cemetery

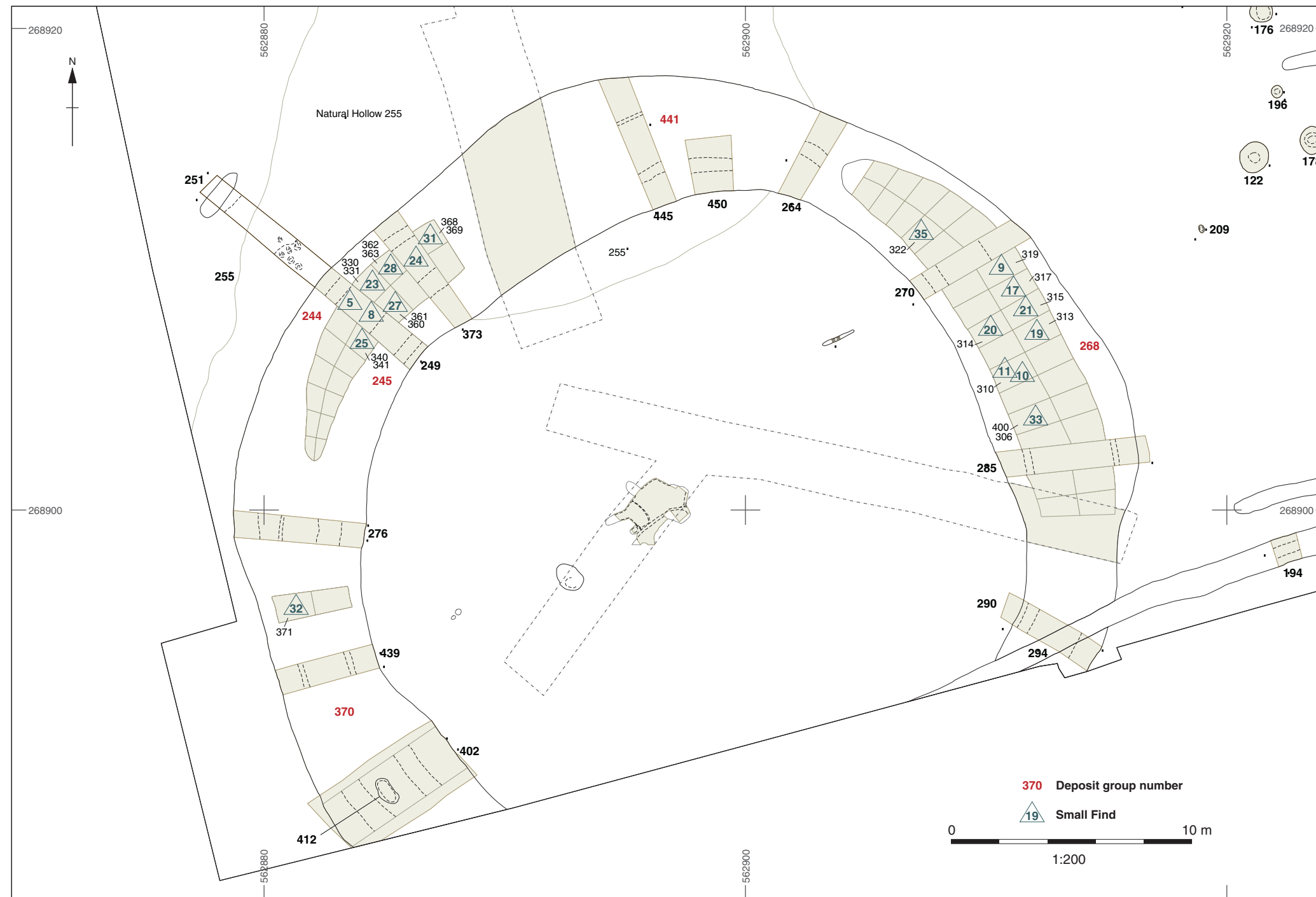


Figure 6a: Barrow 1 showing distribution of small finds



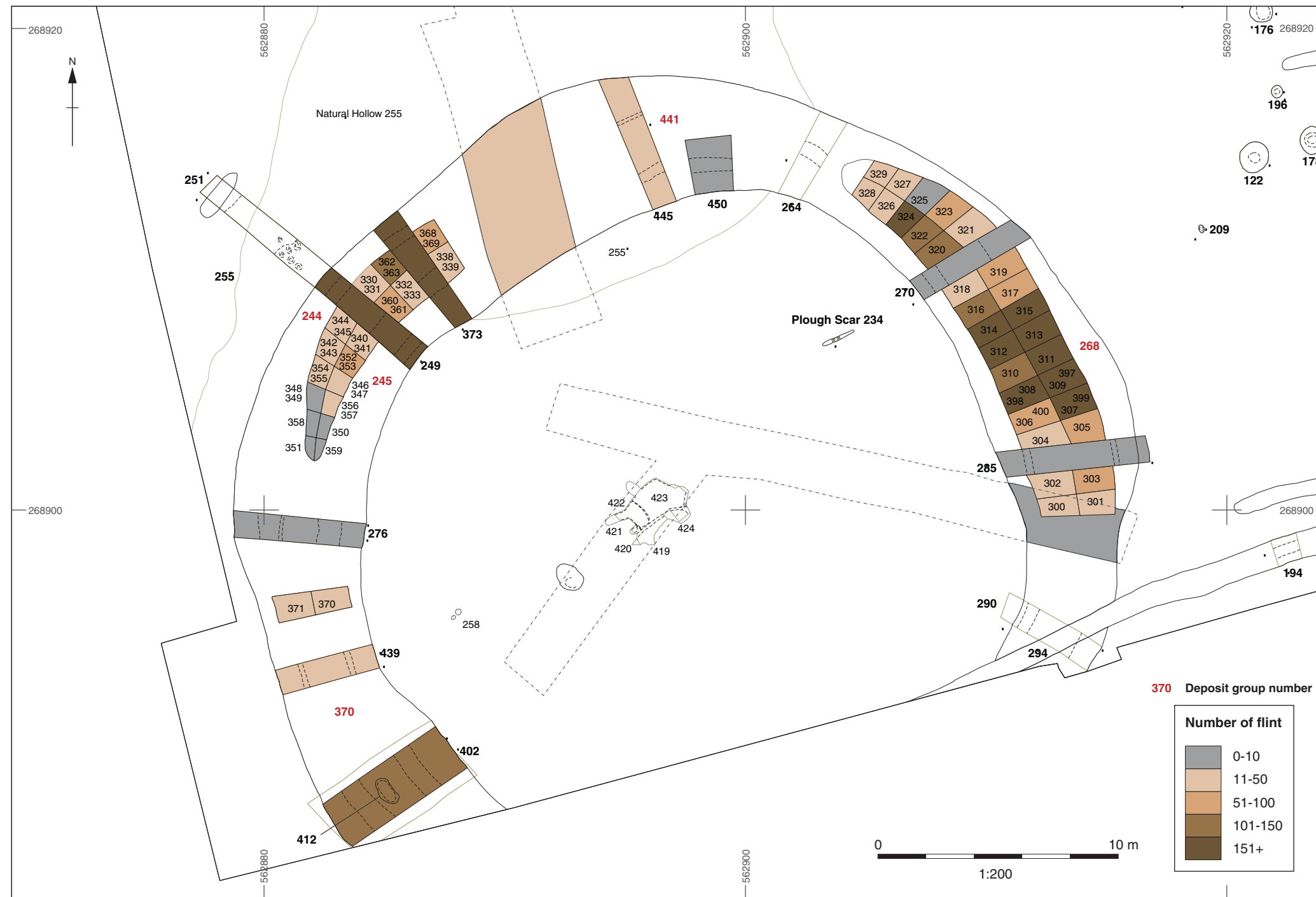


Figure 6b: Barrow 1 showing distribution of struck flint



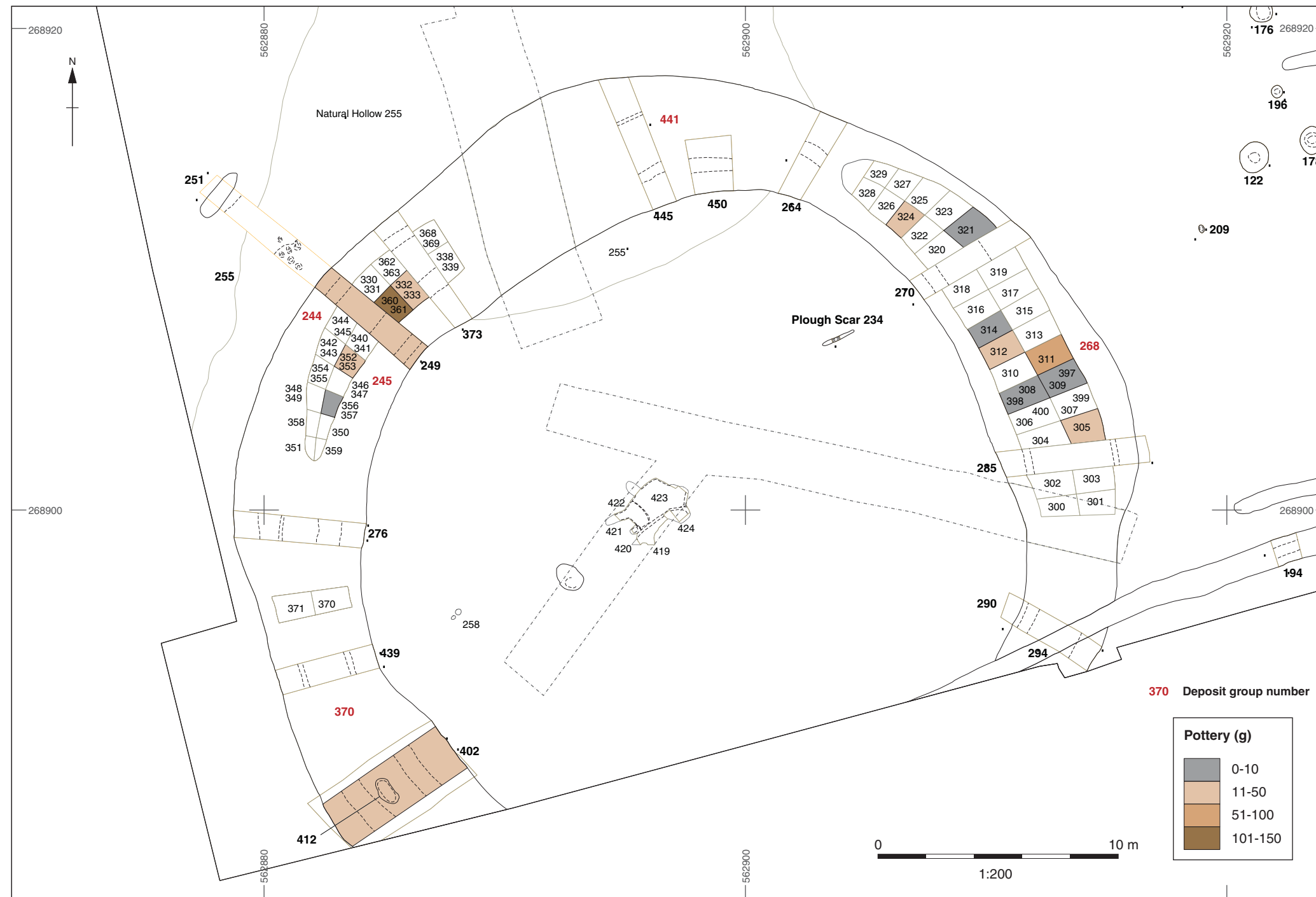


Figure 6c: Barrow 1 showing distribution of Early Bronze Age pottery

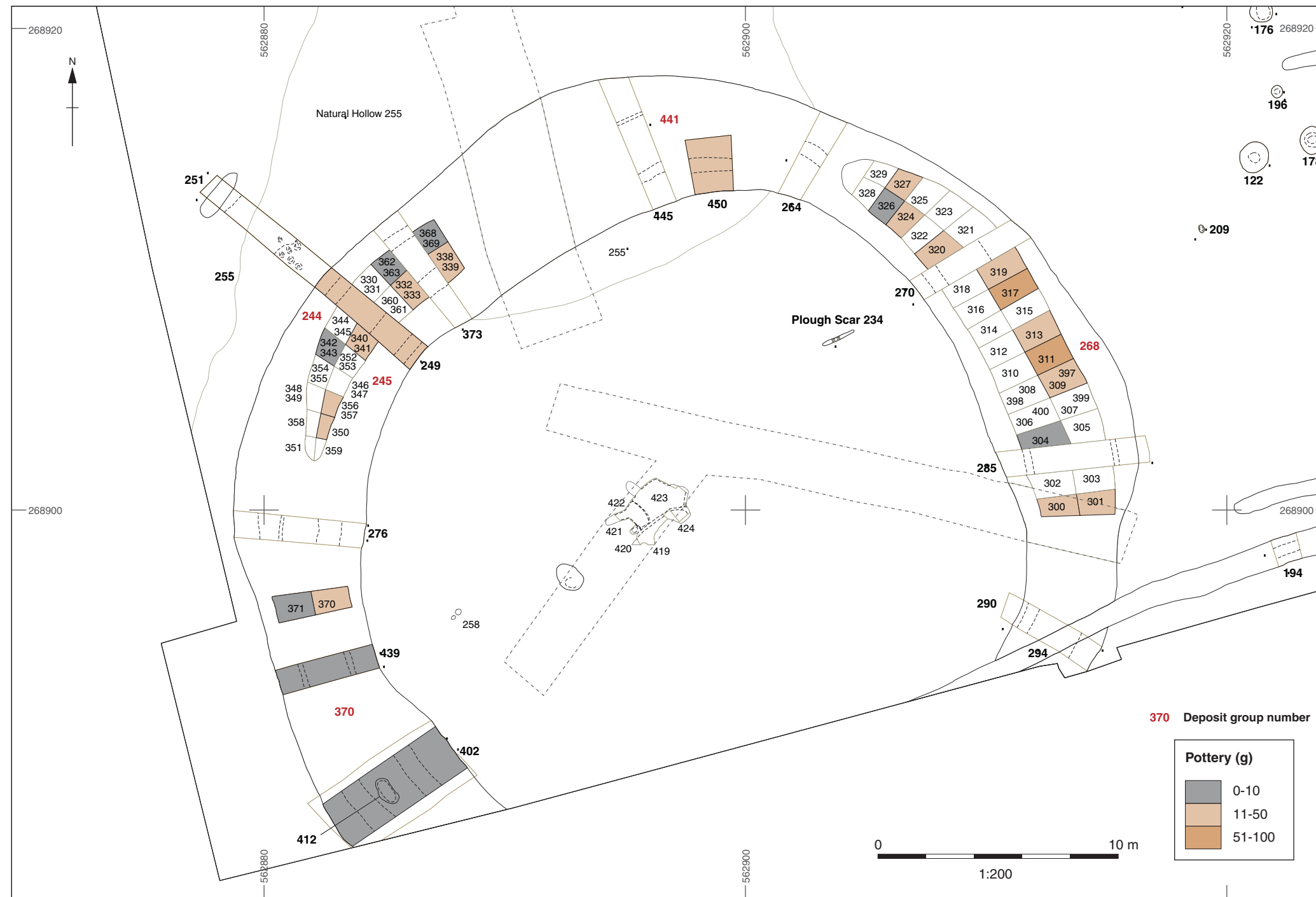


Figure 6d: Barrow 1 showing distribution of Middle Bronze Age pottery

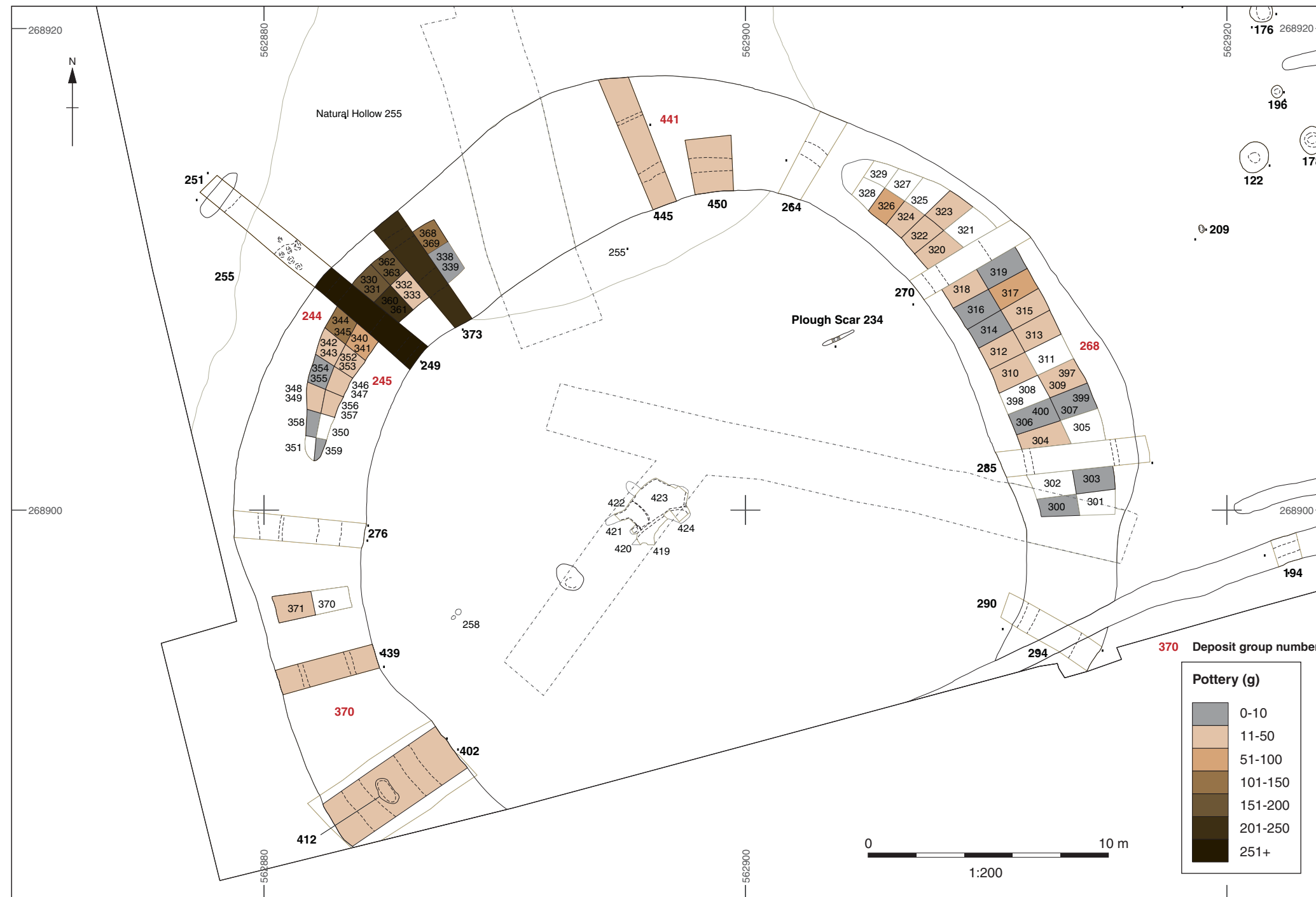
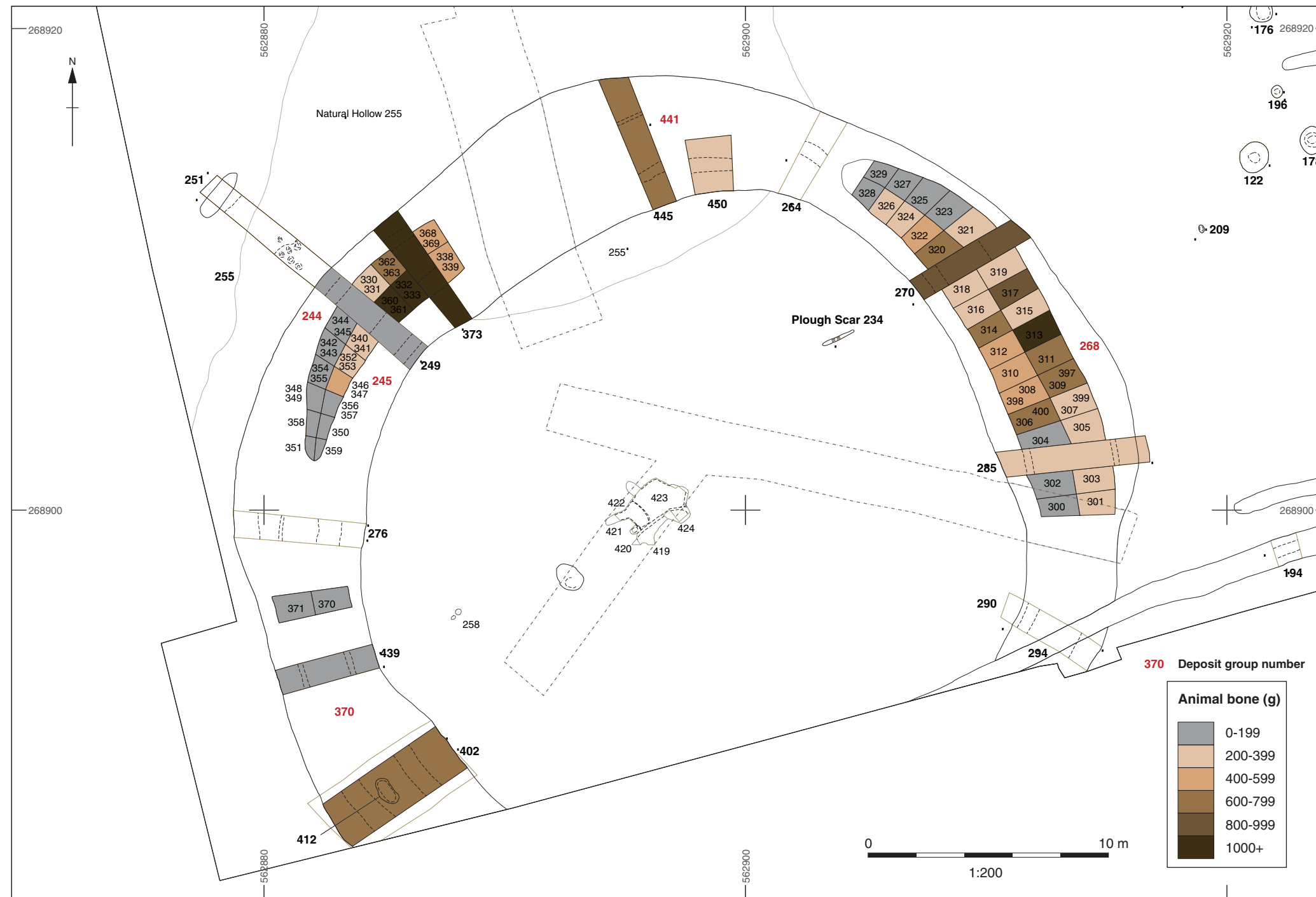


Figure 6e: Barrow 1 showing distribution of Late Bronze Age pottery



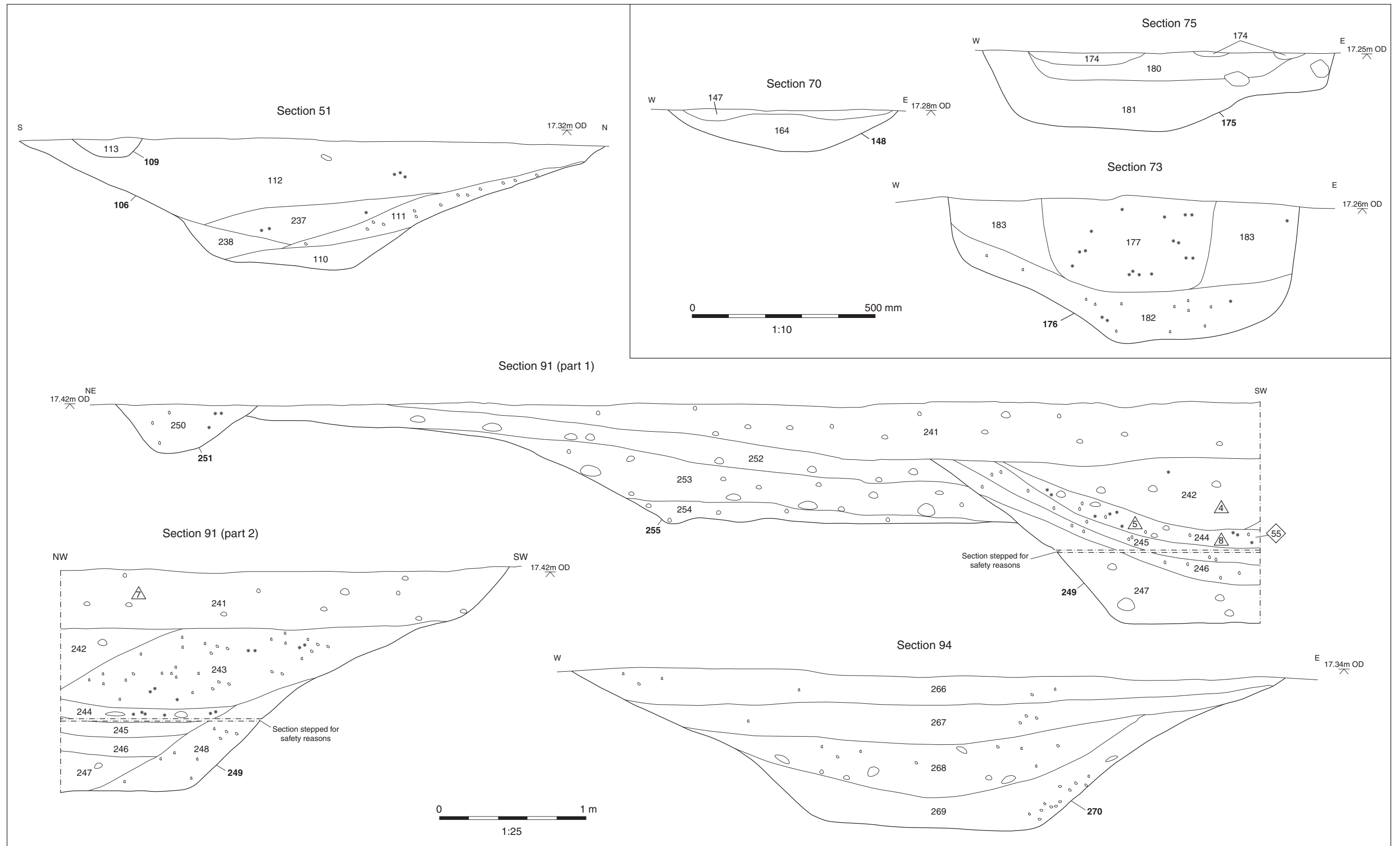


Figure 7: Selected Sections

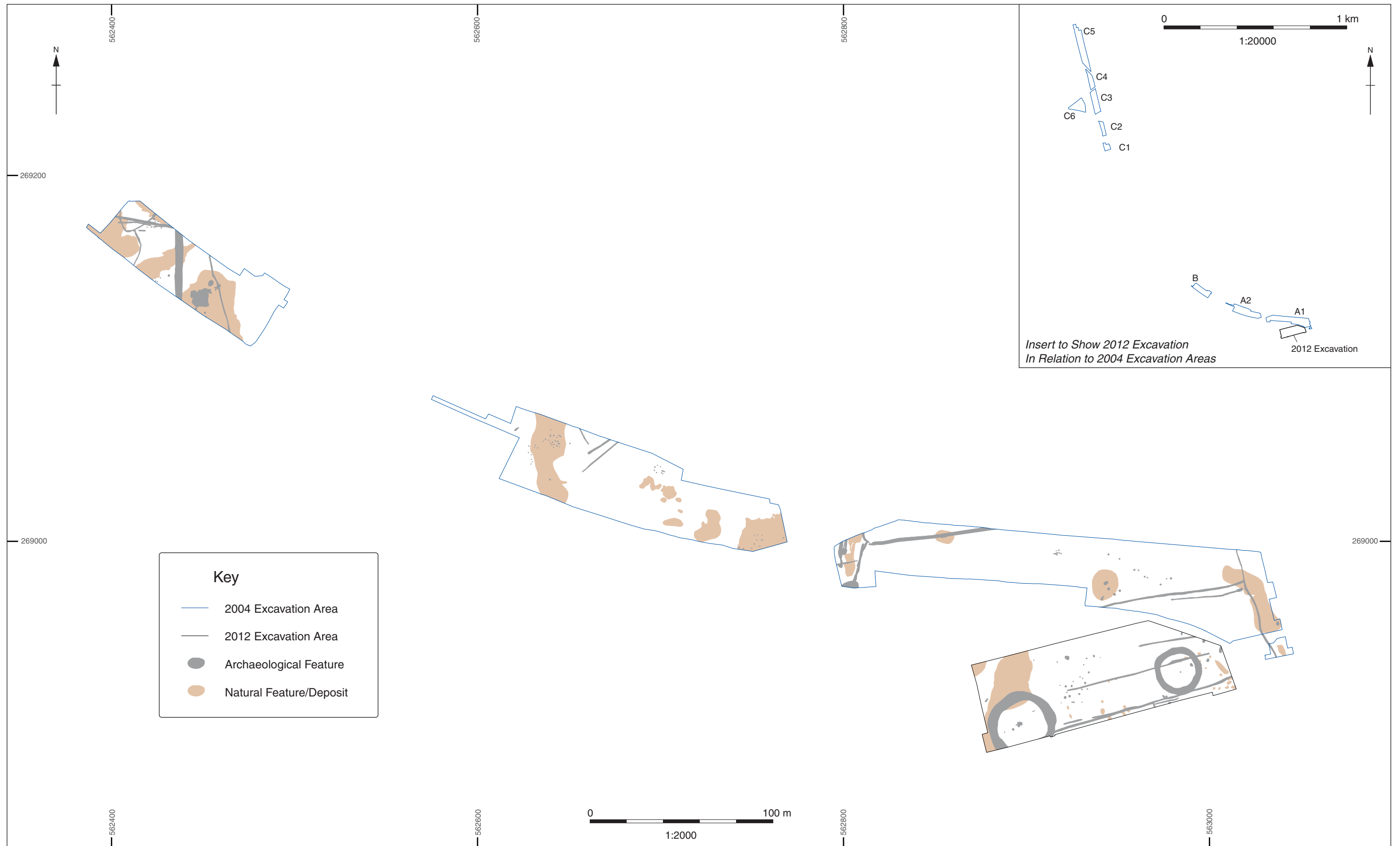


Figure 8: Site plan showing Fordham bypass excavations 2004



Figure 9: Phased site plan and detail of Fordham bypass excavations 2004





Plate 1: Barrow 1



Plate 2: Barrow 2



Plate 3: Central burial 416 from the south-east



Plate 4: Burial 410 from the south-east





Plate 5: Collared Urn cremation 103



Plate 6: Stone object SF 21



Plate 7: Late Bronze Age pottery deposit in Pit 227



Plate 8: Knife-dagger SF36



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