

JOHN MOORE HERITAGE SERVICES

**AN ARCHAEOLOGICAL EXCAVATION AND  
RECORDING ACTION**

**AT**

**LAND ADJACENT TO FARWAYS, YARNTON ROAD,**

**CASSINGTON, OXFORDSHIRE**

**NGR SP 4553 1122**

*On behalf of*

*Blenheim Palace*

**APRIL 2015**

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## **Summary**

*John Moore Heritage Services was commissioned by Blenheim Palace to undertake archaeological excavation and recording action at land adjacent to Farways at Yarnton Road in Cassington, Oxfordshire (SP 4553 1122) in advance of development of ten dwellings. The site is located on second gravel terrace approximately 1.5km north from confluence of the River Evenlode with the River Thames at an approximate height of 65m above OD.*

*The site was known to contain a number of cropmark features including a ring ditch identified from aerial photographs. The ring ditch was part of wider barrow cemetery formed of at least of three barrows situated on second gravel terrace overseeing the flood plain to the east-southeast.*

*The archaeological investigations were carried within the structure of a three-stage programme of works. The first stage of work covered a predetermination archaeological field evaluation completed in October 2013. A subsequent archaeological excavation and watching brief were carried out from February to the end of May 2014.*

*The overall development area was approximately 0.42 hectares. A 40% sample of the development area was reduced to the archaeological horizon or the natural geological layer. Where the thickness of the subsoil was greater than 0.3m (60% of the area), only the ploughsoil was removed, this area was subject to a watching brief.*

*During the archaeological investigations 84 features were investigated. Thirty-five features were securely dated; these covered the period from late Neolithic / early Bronze Age to late Roman period, the rest of the features were undated. They represent activity within the area up to the present day.*

*The late Neolithic / early Bronze Age was represented by a pit containing Beaker pottery, and associated postholes. The character of these features suggested domestic or short-term, task-specific activities. The Beaker pit seems to predate the ring ditch or is related with its initial construction.*

*The major feature investigated during the excavation was the ring ditch constructed in the early Bronze Age of which 42% was exposed during the excavation. The outer diameter of the ring ditch was c. 25m, and it was between 2.70-2.80m wide and its depth varied from 0.86m to 1.12m. The profile of the ditch was V shaped, with steep to stepped concave sides and a narrow relatively flat base.*

*Three major phases of the ditch were established during the investigations. The first phase represents natural deposition of eroded material within the lower parts of the ring ditch. The second phase was represented by two inhumation burials 190 and 269 discovered inside of the ditch. Both burials were dated to the earlier phase of the middle Bronze Age. The third phase was represented by gradual silting of the ditch during the course of the middle Bronze Age and to some extent the late Bronze Age. A large assemblage of pottery and animal bones was associated with this phase. The animal bones represent a range of domestic animals in particular cattle, sheep/goat and pig. Two fragments of human bones were recovered from the upper fills of the*

*ring ditch as well. Although the centre of the inner area of the ring ditch was exposed during the excavation, a primary burial was not present within the investigated area. The barrow mound did not survive as a visible earthwork, however numerous layers of eroded material mainly on the insides of the ring ditch suggested its existence; presumably it was of bowl shape. Based on stratigraphic relationships, the ring ditch was fully silted by the beginning of the Iron Age.*

*During the course of the middle Bronze Age the Cassington barrow cemetery was in use as burial ground, and both inhumation and cremation burials were recorded during the excavation. Two satellite inhumation burials (190 and 269) were discovered inside of the fill of the ring ditch. Both burials contained well preserved remains of adult females. In grave 269, Sk. 2 was in crouched position lying on left side orientated southeast to northwest. However in the grave 190, SK. 1 was in a very unusual seated position originally facing the centre of the ring ditch, and dated to 1391 cal BC. The seated burial was the most significant discovery made during the excavation.*

*The later phase of the middle Bronze Age was represented by cremation burial activity within the excavation area. In total eleven cremation burials were investigated. Eight cremation burials (106, 117, 121, 123, 133, 135, 161, and 3/08) were located to the east of the ring ditch, cremation burial 230 was discovered in the upper fill of the ditch, and two were on its edge (114 and 176). The majority of the burials were truncated by later features which fitted well with the dating established on pottery grounds. Only in the case of burial 161 was cremated remains placed in a Globular Urn, unfortunately this burial was disturbed by a later ditch.*

*From the beginning of the Iron Age onwards the site was incorporated in to the wider agricultural landscape. The early Iron Age activity is represented by two ditches (151 and 127) and clusters of postholes spaced east of the ring ditch that may possibly represent short-term settlement or activity related to stockbreeding. The incoherent character of these clusters of postholes does not allow the identification of any structures. Ditch 110 is dated to the late Iron Age and represents a field boundary presumably of a wider field system within the area.*

*The beginning of the Roman period is represented by a linear ditch 143, which ran parallel to ditch 110, and may possible reflecte changes in land ownership and/or reorganisation of field structures during this transition period. The late Roman period is represented by a large solitary pit 149=303, which contained a very small assemblage of finds for its size. The function of this pit is slightly ambiguous; however it may possibly be for gravel extraction.*

*The majority of undated features investigated during the excavation, were highly likely to be prehistoric and/or Roman. Three parallel linear ditches located at the north and middle of the area represent post-medieval and modern field boundaries.*

## 1 INTRODUCTION

### 1.1 Site Location (Figure 1)

The development site is located on land adjacent to Farways on the northwest side of Yarnton Road in Cassington (SP 4553 1122). The overall development area, encompassing the driveways and temporary compound, was approximately 0.42 hectares.

The site lies on second gravel terrace *c.* 1.5km north from the confluence of the River Evenlode with the River Thames at an approximate height of 65m above OD. The bedrock geology is Oxford Clay Formation overlaid by superficial deposits of Summertown Radley sands and gravels. The site was in agricultural use before development, and was relatively flat, gently sloping to the north.

### 1.2 Planning Background

West Oxfordshire District Council granted planning permission to erect ten dwellings on a plot of land north of Farways in Cassington (13/1249/P/FP). Due to the high archaeological potential of site, a program of archaeological investigations was required by Oxfordshire Historic and Natural Environment Team (OHaNET) in advance of development. OHaNET prepared a *Design Brief* (OHaNET 2014) for such archaeological work.

John Moore Heritage Services (JMHS) was commissioned to undertake this work, and a *Written Scheme of Investigation* (JMHS 2014) was prepared to satisfy the requirements of the *Brief*. This *Written Scheme of Investigation* (WSI) proposed the methodology by which the archaeological investigations were to be carried out.

### 1.3 Archaeological Background

The site was known to contain a number of cropmark features (EH Monument No. 336749) including a circular feature (EH Monument No. 1201101) identified from aerial photographs (Benson & Miles 1974, 52-53; Past Scape). The circular feature (ring ditch) with a diameter of approximately 25m, appears to form part of a wider barrow cemetery (Fig. 3b & 14).

As a part of the planning process pre-determination archaeological field evaluation was carried out by JMHS in 2013. Four machine-dug trenches were excavated, of which two (Trenches 1 and 3) were placed across known cropmarks within application area.

Trench 1 was placed across a linear cropmark orientated northeast to southwest. During the evaluation this cropmark was identified as linear ditch 1/04. The dimensions of ditch suggest that it might be part of larger enclosure or field system. Lack of dating evidence does not allow exact date of the ditch; however it was presumably of Iron Age or Roman date (Fig. 4).

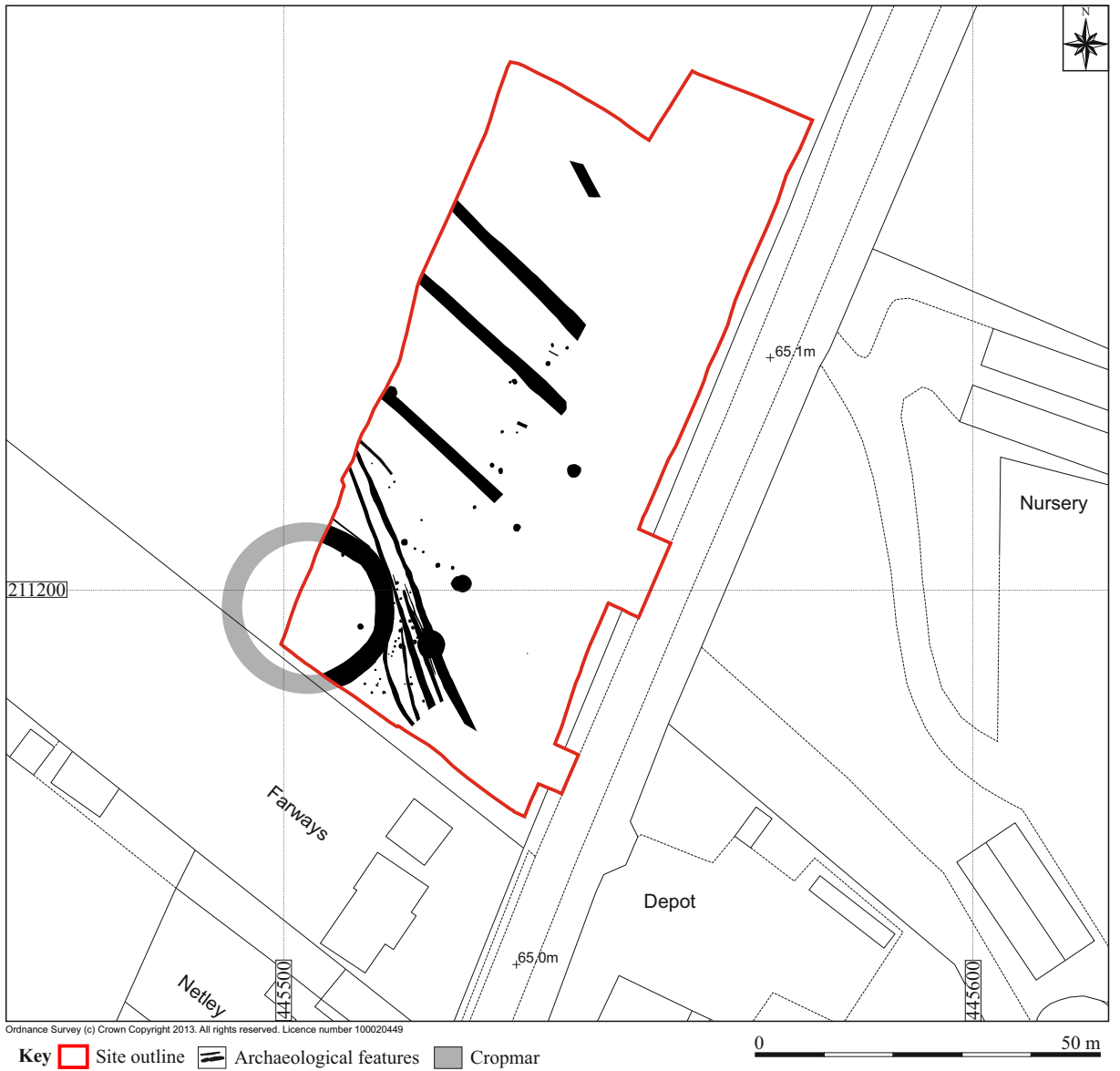
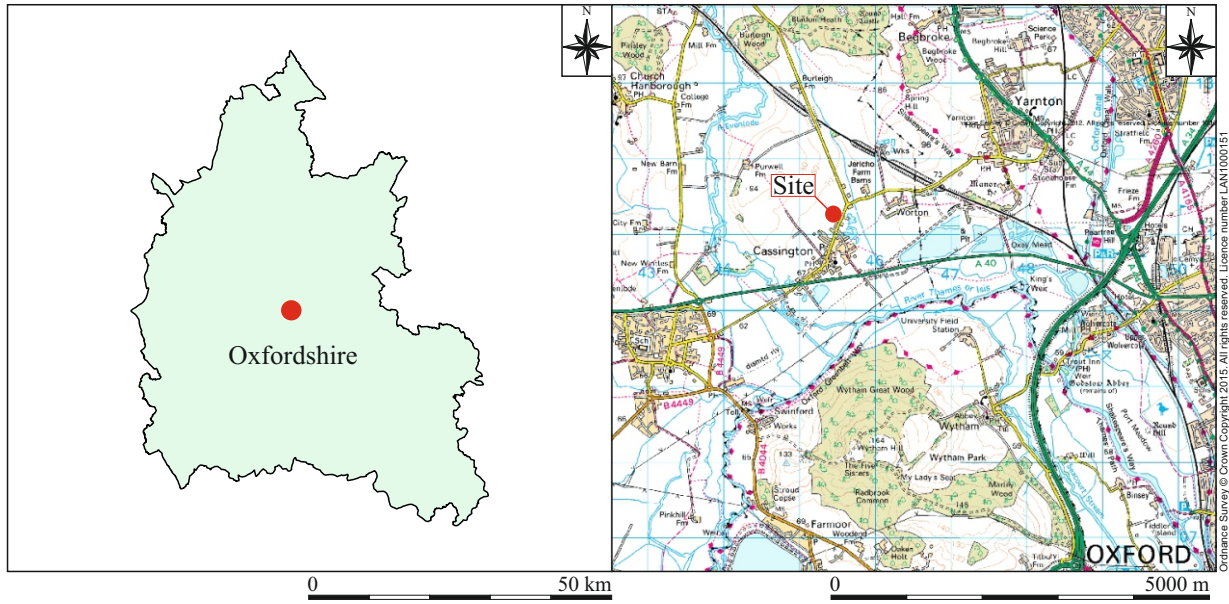


Figure 1: Site location



Trench 2 was located approximately in the middle of the site. Apart from a shallow gully 2/04, post-medieval or modern in date (Fig. 4), no other archaeological features of significance were discovered during the investigation.

Trench 3 was placed across the circular and linear cropmarks. The circular cropmark was identified as a ring ditch 3/14 of an early Bronze Age barrow. Middle Bronze Age pottery recovered from the fill (3/10) and (3/12) are associated with later activities on the site. A cremation burial 3/08 (see 5.4), located next to the ring ditch confirmed the presence of the burial ground in the area, during the middle to late Bronze Age.

The linear cropmark running in a north and south direction to the east of ring ditch, was identified in Trenches 3 and 4 as a ditch, presumably related to a field system dating to the late Iron Age / early Roman period (JMHS 2013).

## **2 AIMS OF THE INVESTIGATION**

The aims of the investigation as laid out in the WSI were:

- To make a record of any significant remains revealed during the course of any operations that may disturb or destroy archaeological remains.

And in particular:

- To excavate and record the cropmark features and any other discrete features present.

## **3 STRATEGY**

### **3.1 Research Design**

In accordance with the WSI (JMHS 2014) approved by OHaNET, JMHS carried out the archaeological investigation of the development area. Site procedures for the investigation and the recording of potential archaeological deposits and features were defined in the WSI (Sections 3.1 – 3.13).

### **3.2 Methodology**

The archaeological investigation at Yarnton Road in Cassington was carried out within the structure of a three-stage programme of works (Fig. 2). The first stage of work covered a predetermination archaeological field evaluation completed in 2013 (see 1.3). The main excavation of a fully striped area covered the second stage of fieldwork, and the final third stage involved monitoring work for foundation and service trenches outside of the main excavation area.

The ground reduction of the footprint of development area and the temporary compound was executed with a 10 tonne excavator equipped with a toothless 1.8m wide bucket, under archaeological supervision. Approximately 40% of the



Figure 2: Stages of archaeological investigations



Figure 3: Aerial photographs showing the site through time

development area was reduced to the archaeological horizon that was the natural geological layer. Where the thickness of subsoil was greater than 0.3m (60% of development area), only the ploughsoil was removed. This area was subject to a watching brief. The excavation of foundation and service trenches was carried out with different types of excavators and trenching buckets.

The resultant surfaces were cleaned by hand and planned. All archaeological deposits and features revealed were then manually cleaned and excavated, and recorded at an appropriate level. Archaeological features had written, drawn and photographic records made of them, and all deposits and features were assigned individual context numbers. The recording was carried out in accordance with the standards specified by the Institute for Archaeologists (2008) (current at the time of work) and the principles of MoRPHE (English Heritage 2006).

A 34.5% sample of the ring ditch was excavated manually (six sections) and an additional 29.5% sample was excavated by 1 tonne excavator (sixteen sections). All pits, postholes, cremation burials were subject to 100% sampling, apart from a few exceptions when 50% of the feature was excavated. The majority of linear features were excavated between 10-50%, which was determined by the length of the feature. Three linear ditches which represent post-medieval and modern field boundaries each were tested by single 1m wide section.

Human remains discovered were recorded in plan and then full excavated. A Ministry of Justice licence No. 13-0192 under Section 25 of the Burial Act 1857 was obtained. Exhumation and post-excavation treatment was carried out in accordance with published guidelines (McKinley & Roberts 1993; Brickley & McKinley 2004).

All finds and artefacts were collected, cleaned, marked, bagged and boxed in accordance with the guidelines set out in the WSI, analysed by specialists and retained.

All variations to procedures specified in the WSI were in consultation with Hugh Coddington Principal Archaeologist of OHaNET, who visited the site on a weekly basis.

Archaeological excavation and recording of features was carried out by a team of archaeologist comprised of one project officer, two project supervisors and three site assistants under the overall direction of JMHS director John Moore.

## **4 RESULTS**

### **4.1 Field Results**

All features were assigned with individual context numbers. Context numbers with no brackets indicate feature cuts, numbers in round brackets ( ) show feature fills or deposits of material.

During the archaeological investigations 357 single context numbers were assigned to 84 features, 3 main site plans were created and 138 sections were recorded. Thirty-

five features were dated and covered the period from the late Neolithic / early Bronze Age to late Roman, and the post-medieval/modern period.

### **General deposits**

The lowest deposits encountered during the archaeological investigation were layers of natural Summertown Radley fine sands and gravels of light yellowish to mid brown colour (103). In the north and east areas of the site natural deposits (103) were overlaid by 0.20-0.30m thick lower ploughsoil (102), described as mid brown clayey loam (Pl. 1). From this were recovered residual Iron Age pottery sherds. The uppermost deposit covering the entire site was 0.25-0.30m thick grey brown sandy loam (101); a present day ploughsoil. From this deposit a fragment of clay tobacco pipe was recovered (see 5.6).



Plate 1: Representative section showing deposits (102) and (103)

## **4.2 Bronze Age**

### **Late Neolithic / Early Bronze Age (2500 to 1700 cal BCE)**

The Neolithic / early Bronze Age represents the earliest stage of human activities within the investigated area. Securely dated to this period was pit 188 located 3.7m to the northeast from the ring ditch (Fig. 5). Pit 188 was sub-circular in plan, measuring 1m in diameter and 0.46m in depth, with steep concave side and slightly rounded base (Fig.6: S. 8). The single fill of the pit (189) was described as soft dark grey-brown silty sand mixed with ash and occasional gravel (Pl. 2). From this pit were recovered two flint blades, one fragment of uncorticated flint flake (see 5.3), five sherds of Beaker pottery (see 5.1), and two red deer antlers (see 5.5).

Possibly associated with pit 188 were three postholes 180, 195, and 197, located in the vicinity of the pit (Fig. 5; Table 1). However they were undated.

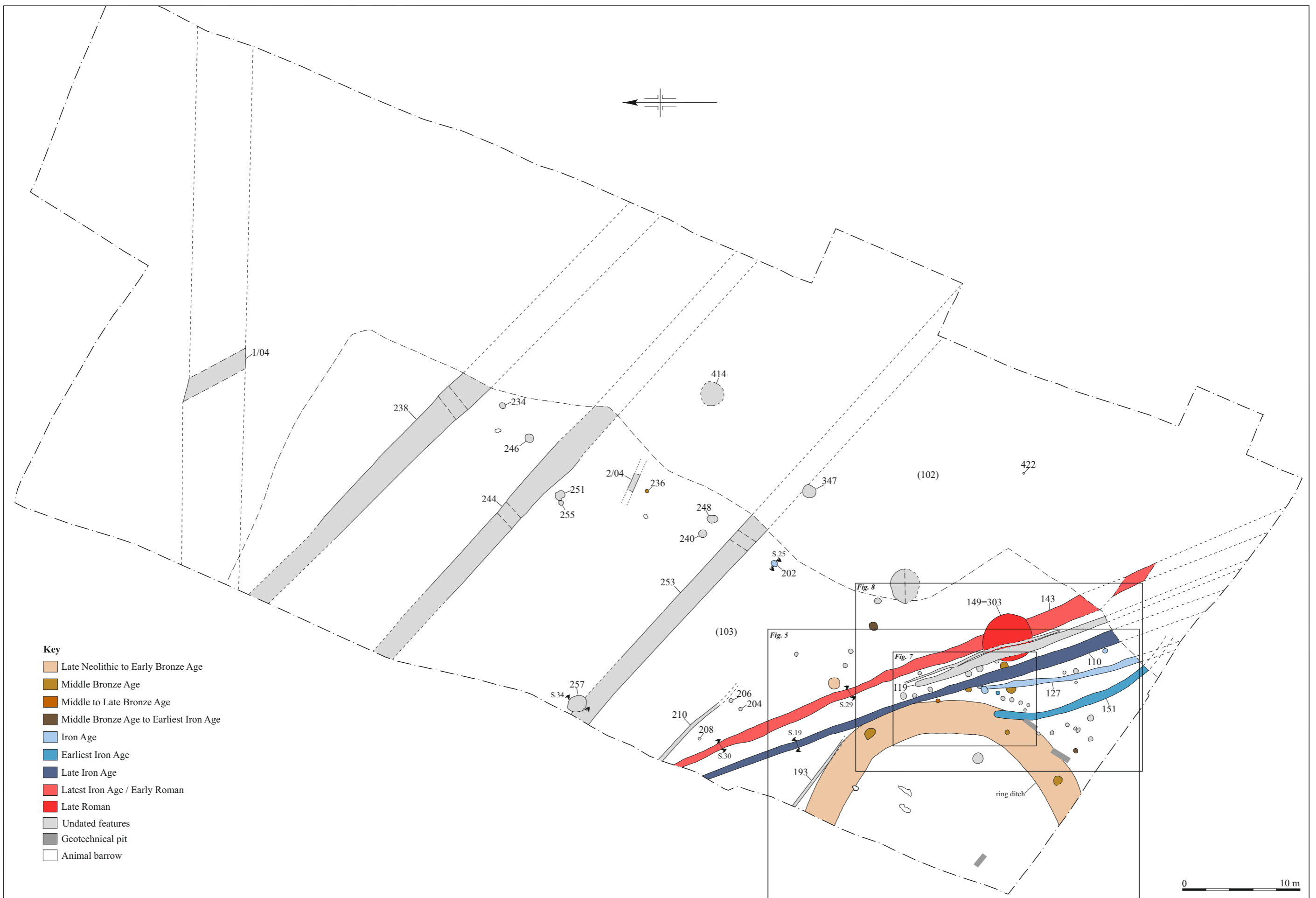


Figure 4: Overall site plan

Cut	Diameter	Depth	Fill
180	0.4m	0.22m	Dark grey-brown sandy silt (181)
195	0.37m	0.18m	Dark grey-brown silty sand (196)
197	0.42m	0.17m	Dark red-brown silty sand (198)

Table 1: Undated postholes, possible late Neolithic / early Bronze Age



Plate 2: Half section of pit 188, looking northeast

## Ring ditch

The major feature investigated during the excavation was a ring ditch, located at the southwest edge of the development area (Fig. 4 & 5; Pl. 3). The ring ditch was originally identified from aerial photographs as a cropmark, along with three ring ditches and a series of linear features. It was positively tested during the field evaluation (JMHS 2013). Based on stratigraphic relationships, dating evidence, and analogies, the construction of the ring ditch was placed in the early Bronze Age. As a landmark this barrow was clearly visible at least to the end of Bronze Age.

During the field evaluation and excavation 165 single contexts were assigned to the ring ditch. Due to the fact that majority of its fill represents eroded material, only dated and representative contexts will be discussed in this report.

The outer diameter of the ring ditch was approximately 25m, and inner diameter measured c. 19.5m, which account an area of approximately 196m<sup>2</sup>. The area of the ring ditch exposed during the excavation was c. 81.5m<sup>2</sup>, approximately 42% of total area of the ring ditch (Fig. 5)

Initially six hand-excavated slots (104, 174, 178, 216, 232, 242), were excavated along the exposed ring ditch (Fig. 5; Pl. 12), which covered c. 28m<sup>2</sup> (34.5% of exposed ring ditch). Satellite burials were discovered within the ring ditch, two inhumation burials in lower fills in sections 2 and 5, and one cremation burial in the upper fill in the extension of section 4. This led to further investigation of the ring

ditch in order to establish the presence or absence of additional satellite cremations and/or inhumations burials. It was decided that the uppermost fill be reduced by 0.3m



Plate 3: General overview of ring ditch, looking north

and an additional sixteen sections 7-22 (315, 359, 372, 373, 385, 391, 397, 402, 409) in a chequer pattern excavated across remaining areas of ring ditch. This work was executed very carefully using a one tonne excavator fitted with a 0.9m wide toothless ditching bucket. Sections 14 and 15 were not recorded, due to the fact that this area was investigated during the evaluation 3/14. Approximately 64% of the exposed area of ring ditch was investigated in total.

The width of the ring ditch was between 2.70-2.80m and the depth varied from 0.86m to 1.12m. The profile of the ditch was a V shape, with relatively steep to stepped concave sides and a narrow relatively flat base (Fig. 6: S. 1-7; Pl. 4 & 5).

Three major phases of the ring ditch were established during the investigation. The first phase represented the natural deposition of eroded material within the lower parts of the ditch. This process was characterized by a series of deposits of varied composition from pure sand through sandy gravel and sandy silt to clayey silt of different shades of brown, and with a thickness (0.03m – 0.20m) (Table 2; Fig. 6: S. 1-7; Pl. 4 & 5). The inner deposits presumably represented eroded material from the original sides of ring ditch and material eroded from the barrow mound. The outer deposits represented eroded material from original sides of the ring ditch, rather than material from an outer bank. No dating evidence was recovered from these deposits, however, based on stratigraphic relationships these deposits must be dated to the early Bronze Age. Also related with phase 1 was an anthropogenic deposit (163)=(364)=(375) investigated in sections 2, 8, 9, 11, and 12 located in the northern part of the ditch. This deposit was described as dark grey sandy silt containing a high percentage of charcoal, which suggests extensive burning within ring ditch (Fig. 6: S.2). No finds were recovered from this deposit. A bulk sample <12> of 25 litres was taken for floatation; no further analysis was required (see 5.7).



The second phase was represented by two inhumation burials 190 and 269 discovered in sections 2 and 5 of the ring ditch (Fig. 5 & 6: S. 2 & 6; Pl. 4 & 5). Both burials were dated to the earlier phase of the middle Bronze Age (see below), and indicated that the ring ditch had stilted-up considerably by this period. Indeed there is some evidence to suggest that a re-cutting of the ditch and possible remodelling of the monument took place at this date (see below).



Plate 4: Ring ditch section 2, looking northwest



Plate 5: Ring ditch section 6, looking northeast

The third phase represents gradual silting of the ring ditch during the course of the middle Bronze Age up to the late Bronze Age. The number of deposits present varied between investigated sections; their composition was mainly a sandy silt with variations described as clayey silt and silty loam mid red-brown in colour. However some deposits were described as dark red-brown, mid grey-brown or grey-brown (Table 2). The majority of dated contexts represents the uppermost fill of the ditch (105), (175), (179), (217), (233), (243), (304), (305), (349), (350), (351), and (3/10). An additional six dated contexts (182), (213), (218), (221), (263), and (272), represent the lower fills of phase 3 (Fig. 6: S. 1-7). Finds recovered from these deposits were mainly fragments of middle Bronze Age pottery (see 5.1), animal bones (see 5.5) and one disarticulated human mandible recovered from deposit (212) (see. 5.4). Deposits (183) and (272) contained a relatively high percentage of charcoal, which suggests some burning within the ditch or in its close vicinity. The uppermost fill of the ditch, representing the final stage of phase 3, was described as 0.24m to 0.56m thick mid red- to mid grey-brown sandy loam (Table 2). From this deposit the biggest

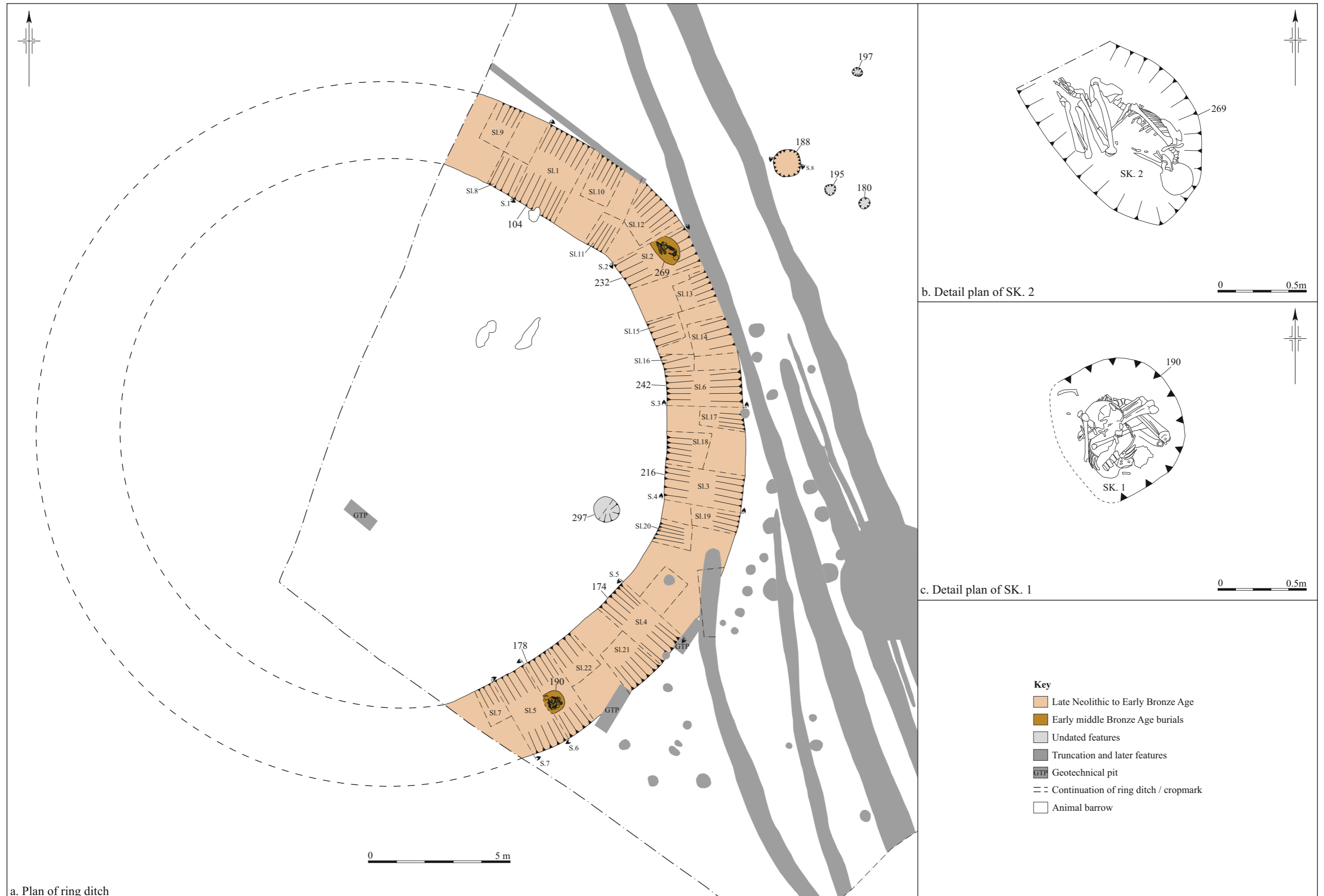


Figure 5: Plan of ring ditch and early Bronze Age features (a) and detail plans of early middle Bronze Age burials (b, c)

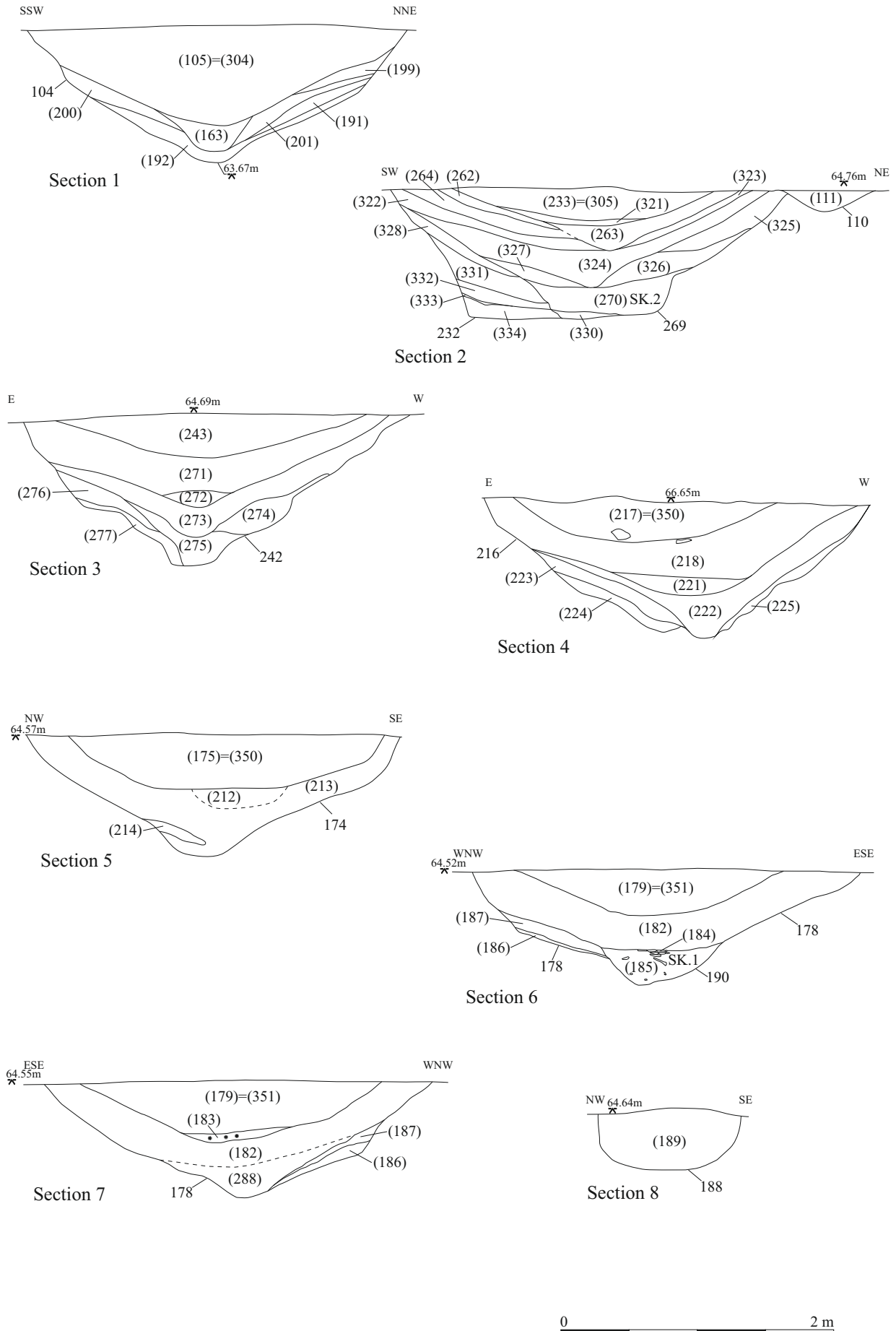


Figure 6: Section 1-8

assemblage of pottery and animal bones was recovered, with the majority of pottery dating to the middle Bronze Age, apart of fragments from one vessel dated to the late Bronze Age recovered from contexts (105) and (179) (see 5.1). Animal bones represents a range of domestic animal in particular cattle, sheep/goat and pig (see 5.5). Fragments of human tibia was recovered from context (350)=(175) (see 5.4) and one cremation burial was discovered within the same context in the extension of section 4 (see 5.4). Five fragments of an indeterminate copper alloy object were recovered from context (179).

Context	Thickness	Extent	Description	Finds	Date/Phase
<b>Section 1, cut 104</b>					
(192)	0.16m	1.92m	Mid brown sandy silt	-	Ph. 1
(191)	0.10m	0.98m	Light tallow-brown sand	-	Ph. 1
(200)	0.10m	1m	Light orange-brown sandy silt	-	Ph. 1
(201)	0.12m	1.05m	Mid red-brown sandy silt	-	Ph. 1
(163)	0.20m	0.50m	Dark grey sandy silt	charcoal	Ph. 1
(199)					
(105)	0.56m	2.76m	Mid red-brown sandy loam	Pot., a. bone, flint	Late BA / Ph. 3
<b>Section 2, cut 232</b>					
(334)	0.10m	0.64m	Mid yellow-brown sandy gravel	-	Ph. 1
(333)	0.03m	0.26m	Mid brown clayey silt	-	Ph. 1
(332)	0.09m	0.61m	Mid yellow-brown silty sand	-	Ph. 1
(331)	0.14m	0.72m	Mid red-brown clayey silt	-	Ph. 1
269	0.25m	1x0.76m	Sub-oval grave cut	n/a	Early mid BA / Ph. 2
(330)	0.05m	0.46m	Mid brown clayey silt	-	Early mid BA / Ph. 2
(270)	0.25m	1x0.76m	Mid red-brown sandy silt	SK. 2, Pot.	Early mid BA / Ph. 2
(328)	0.08m	0.93m	Light yellow-brown silty sand	-	Ph. 3
(327)	0.09m	0.84m	Grey-brown sandy silt	-	Ph. 3
(325)	0.12m	0.98m	Mid yellow-brown silty sand	-	Ph. 3
(326)	0.17m	1.16m	Red-brown sandy silt	-	Ph. 3
(324)	0.27m	2.60m	Mid red-brown clayey silt	-	Ph. 3
(323)	0.05m	1.04m	Mid grey-brown sandy silt	-	Ph. 3
(322)	0.08m	1.68m	Mid grey-brown sandy silt	-	Ph. 3
(264)	0.10m	1.28m	Red-brown clayey silt	-	Ph. 3
(262)	0.08m	0.92m	Grey-brown sandy silt	-	Ph. 3
(263)	0.19m	1.30m	Red-brown clayey silt	-	Ph. 3
(321)	0.14m	0.94m	Dark red-brown silty loam	Pot., a. bone	Mid BA / Ph. 3
(233)	0.24m	1.88m	Mid red-brown	a. Bone, flint	Mid BA / Ph. 3
<b>Section 3, cut 242</b>					
(277)	0.10m	0.84m	Mid brown sand	-	Ph. 1
(276)	0.14m	0.74m	Light yellow-brown sandy gravel	-	Ph. 1
(275)	0.20m	0.90m	Mid orange-brown sandy gravel	-	Ph. 1
(274)	0.20m	0.86m	Mid red-brown sandy gravel	-	Ph. 1
(273)	0.20m	2.60m	Mid orange-brown sand	-	Ph. 3
(272)	0.12m	0.48m	Dark red-brown loamy sand	a. bone	Ph. 3
(271)	0.38m	2.80m	Mid red-brown sand	-	Ph. 3
(243)	0.32m	2.24m	Mid brown loamy sand	Pot.	Mid BA / Ph. 3
<b>Section 4, cut 216</b>					
(225)	0.05m	1.10m	Light orange-brown silty sand	-	Ph. 1
(224)	0.08m	0.85m	Mid brown loamy silt	-	Ph. 1
(223)	0.12m	1m	Light orange-brown sandy gravel	-	Ph. 1
(222)	0.32m	2.60m	Mid red-brown silty loam	-	Ph. 1
(221)	0.14m	0.94m	Dark red brown silty loam	Pot.	Mid BA / Ph. 3
(218)	0.46m	2.82m	Mid red-brown loamy sand	Pot., a. bone,	Mid BA / Ph. 3

(217)	0.30m	1.80m	Mid grey-brown loamy sand	Pot.	Mid BA / Ph. 3
<b>Section 5, cut 174</b>					
(214)	0.10m	0.40m	Light yellow-brown sand	-	Ph. 1
(213)	0.40m	2.40m	Mid red-brown loam	-	Ph. 1
(212)	0.16m	0.20m	Dark brown loam	h. bone	Ph. 3
(175)	0.50m	2.30m	Grey-brown loam	Pot., flint	Mid to Late BA / Ph. 3
<b>Section 6 &amp; 7, cut 178</b>					
(186)	0.05m	0.72m	Mid brown sandy silt	-	Ph. 1
(187)	0.08m	0.80m	Light brown sandy gravel	-	Ph. 1
(288)	0.28m	2.25m	Mid red-brown sandy silt	-	Ph. 1
190	0.26m	0.85m	Sub-circular grave cut	n/a	Early mid BA / Ph. 2
(185)	0.26m	0.85m	Dark brown sandy silt	SK. 1, pot.	1391 cal BC (85.2%) / Ph. 2
(184)	0.15m	0.30m	Light grey sandstone	-	Early mid BA / Ph. 2
(182)	0.32m	2.28m	Mid red-brown sandy silt	Pot., a. bone	Mid BA / Ph. 3
(183)	0.07m	0.78m	Dark grey sandy silt	-	Ph. 3
(179)	0.37m	2.19m	Mid red-brown sandy silt	Pot., a. bone	Mid to Late BA / Ph. 3

Table 2: Description of representative deposits of the ring ditch, by section and stratigraphic order

### Early middle Bronze Age inhumation burials

Two satellite inhumation burials 269 in section 2 and 190 in section 5 were discovered during the investigation of the ring ditch.

The first grave cut 269 was of sub-oval shape, 1m long, 0.76m wide (Fig. 5a, b; Pl. 6) and 0.25m deep with relatively steep sides and a flat base (Fig. 6: S. 2; Pl. 4), cut through deposits (331), (332), (333), and (334) down to the natural deposit (103). The lower fill of grave (330) was 0.05m thick mid brown clayey silt, presumably representing the primary fill (possibly left open until later internment). The well-preserved skeleton of 30-45 years old female was found in a crouched position lying on her left side orientated southeast to northwest (SK. 2) (see 5.4). The backfill of the grave (270) was up to 0.25m thick mid red-brown sandy silt containing *c.* 40% of



Plate 6: SK. 2 during excavation. Scale 1m

gravel inclusion. No grave goods were associated; only a residual fragment of Beaker pottery was recovered from fill (270) (see 5.1). A 100% sample of grave backfill <19> was taken and floated; no further analyses were carried out (see 5.7). No radiocarbon dating was carried out on SK. 2, however dating the burial to the early middle Bronze Age, was based on stratigraphic relationships and a fact that the top of the grave cut was approximately on the same level as top of grave cut 190 (64.93m AOD).

The second grave 190 was sub-circular in plan, measuring 0.85m in diameter (Fig. 5a, c; Pl. 7), and 0.22m in depth. Its concave sides were gradually sloping down to the rounded base (Fig. 6: S. 6; Pl. 5). Stratigraphically, this grave cut into deposits (187) and (186), and through the base of the ring ditch. The clearly visible grave backfill was described as dark brown sandy silt (185) containing approximately 30% of fine gravel. Fill (185) was overlaid by 0.15m thick stone packing (184), formed of 16 sub-rectangular sandstone blocks of maximum dimension 330×200×38mm. However, there is possibility that the grave was original cut from deposit (182), and was backfilled with the same material, so the cut was not visible in upper parts of section. Although it is equally possible that the deposit overlying the grave is in fact within a wider re-cut of the ring ditch, however this was difficult to identify in the field.

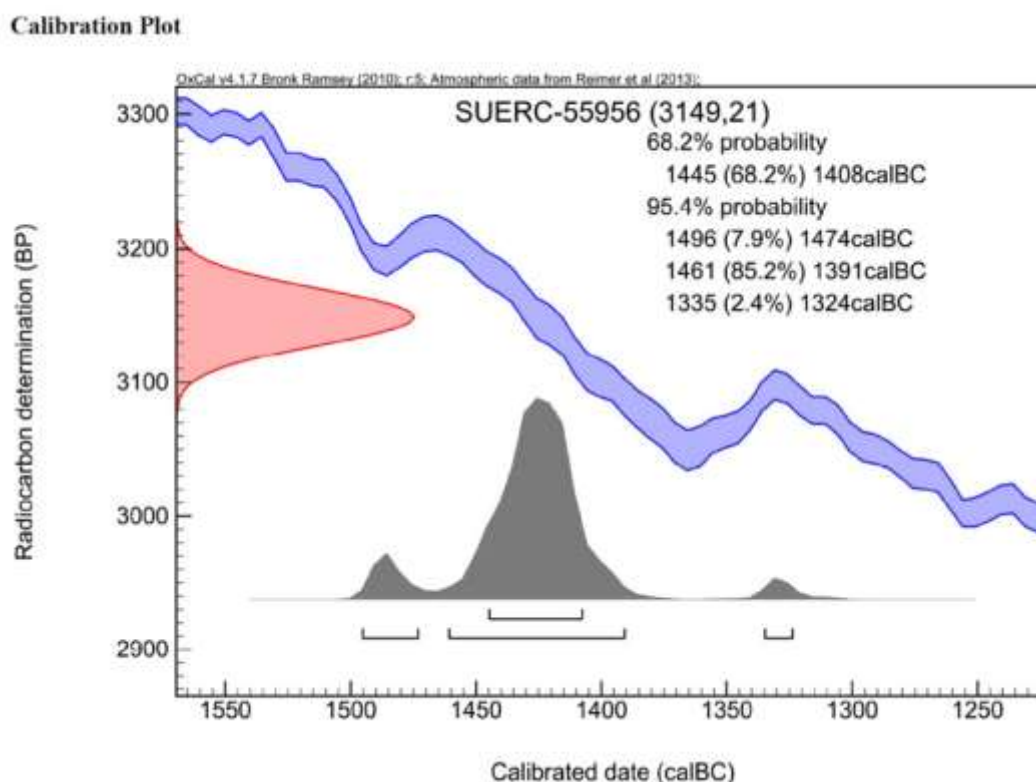


Figure 7: Calibrated date range of SK. 1

Within grave 190 was a relatively well-preserved skeleton of a 25-32 year old female in a very unusual 'collapsed' seated position (SK. 1) (see 5.4). The distribution of skeletal remains, especially pelvis, limbs, feet, hands and skull, suggest that deceased was originally placed in the grave pit in a tight crouched 'seated' position facing the centre of ring ditch (Fig. 5c; Pl. 7), and after decomposition the body collapsed under

pressure of the stone packing and possible upper fill of the grave. In order to establish the date of burial, high precise radiocarbon dating was carried out on the skeletal remains. SK. 1 was dated to 1391 cal BC with 85.2% probability (Fig. 7) (SUERC-55956). Mixed with SK. 1 were found disarticulated bones of a second sub-adult (see 5.4), marked as SK. 3 in the post excavation process. No votive grave goods were found in the grave, only pottery sherds dated to the middle Bronze Age (see 5.1) and fragments of animal bones (see 5.5).



Plate 7: SK. 1 during excavation. Scale 1m

### Middle to Late Bronze Age cremation burials

Eleven cremation burials 106, 114, 117, 121, 123, 133, 135, 161, 176, 230, and 3/08 were discovered during the archaeological evaluation and excavation. All cremation burials were located to the east of the ring ditch, apart from cremation pit 230, located in the centre of ring ditch and cremation pits 114 and 176 located on its edge (Fig. 8). The majority of the cremation pits were of sub-oval in plan with maximum dimensions of 0.80×0.30m, although a few were circular in plan measuring only 0.25m in diameter. The depth of these pits varied from 0.06m to 0.36m (Table 3).

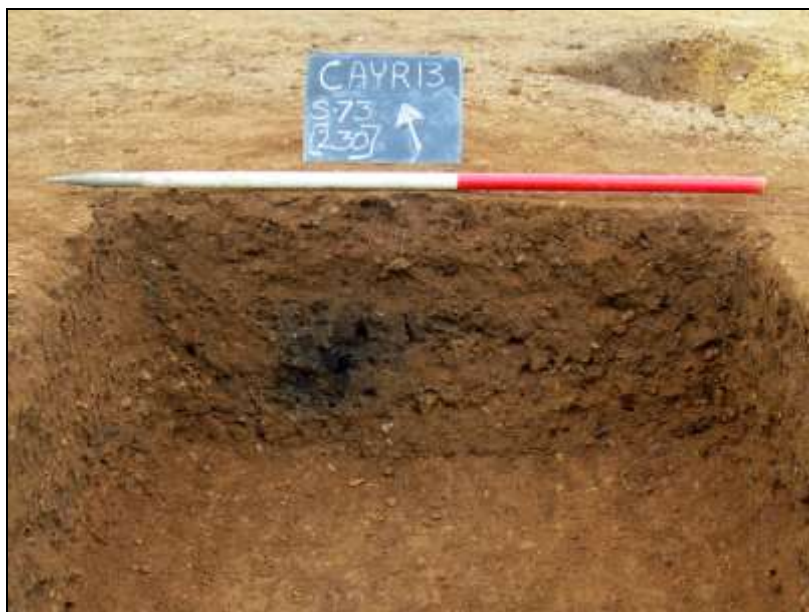


Plate 8: Cremation burial 230 during excavation, looking northeast



Plate 9: Half section of cremation burial 133 showing stratigraphic relationship with ditch 127, looking north



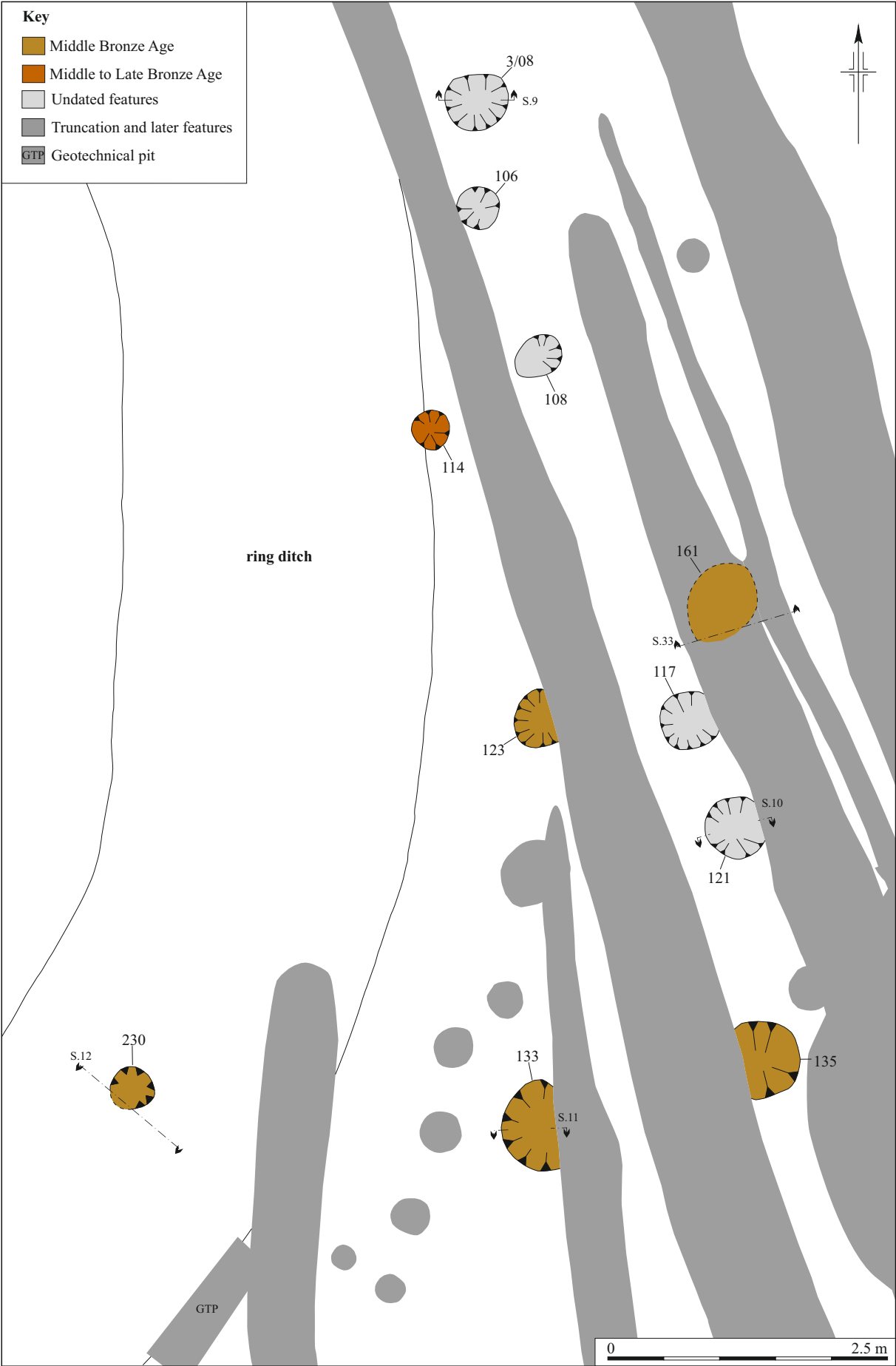


Figure 8: Cremation burials

The fills were mainly composed of silt with a high percentage of burnt material, generally described as very dark grey brown in colour. All cremation pits were 100% excavated and sampled. Human remains were presented in all the taken samples; however the most were found in cremations 3/08 fill (3/06), 121 fill (122), 133 fill (134), and 230 fill (231) (Fig.10: S. 9-12) (see 5.4 & Appendix 3).

Cremation pit 230 was located in the centre of the quarry ring ditch, cut into the fill (212) which is dated to the middle Bronze Age and was overlaid by the uppermost fill of the ring ditch (175) (Fig. 10: S. 12; Pl. 8). Cremation pits 114 and 176 were located on edge of ring ditch cutting the uppermost fill. The rest of the cremation burials 117, 121, 123, 133, 135, 161, and 3/08 were truncated by later Iron Age and undated, but possibly post-Roman, ditches (Fig. 8 & 10: S. 11; Pl. 9).

Dating of the cremation burials, apart from their stratigraphic relationships, was based on the date of ceramic material recovered from individual fills. Four cremation burials 106, 121, 176, 3/08 were aceramic; from the rest of the burials pottery fragments dating to middle Bronze Age with some styles extending to the late Bronze Age were recovered. The majority of ceramic material had a residual character, the only exception was burial 161 (Fig. 8 & 10: S. 33), which contained fragments of a Globular Urn (see 5.1; Fig. 11: P2). From the same cremation burial were recovered fragments of slag (see 5.7), of uncertain metal. Radiocarbon dating was not carried out on burnt human remains or burnt material obtained from palaeoenvironmental samples.

Cut	Diameter	Depth	Fill	Finds	Date
106	0.35m	0.10m	Black-brown silt + charcoal (107)	-	
114	0.38m	0.09m	Dark brown silt + charcoal (115)	Pot.	Mid to late BA
117	0.50m	0.13m	Dark grey sandy silt with 50% ash and charcoal (118)	Pot.	Mid BA
121	0.47m	0.12m	Dark grey sandy silt 50% ash and charcoal (122)	-	
123	0.40m	0.12m	Dark brown sandy loam + frequent charcoal (124)	Pot.	Mid to late BA
133	0.80x0.30m	0.15m	Dark grey sandy loam + 50% ash (134)	Pot.	Mid BA
135	0.60m	0.15m	Dark brown sandy loam + frequent charcoal	Pot.	Mid BA
161	0.50x0.28m	0.06m	Very dark grey sandy silt + 50% charcoal & ash (162)	Urn	Mid BA
176	0.33m	0.36m	Grey-brown loam (177)	-	
230	0.25m	0.19m	Black loam + charcoal (321)	Pot.	Mid BA
3/08	0.60m	0.16m	Dark brown to black sand (3/06) upper fill Grey-brown sand (3/07) primary fill	-	

Table 3: Cremation burials

### 4.3 Iron Age

Seven features were securely dated to the Iron Age (ditches 110, 127, 151 and postholes 155, 159, 202, 289), and two features (posthole 112 and pit 172) were dated

in the broad period from middle Bronze Age to earliest Iron Age. An additional 19 undated postholes may possibly be related to this period (Table 4).

## Ditches

Curvilinear ditch 151=418 was located to the south-southwest edge of the site (Fig. 4 & 9). The ditch was 13m long and gradually curved from north to the southeast. Five hand-excavated sections of total length 6.5m (50% of length) were investigated along it. The width of the ditch varied from 0.50m to 0.80m, and the depth was between 0.23m and 0.32m. Its profile was U-shaped, with shallow concave sides and concave base (Fig. 10, S. 13-15). The primary fill (153) was 0.10m thick, friable grey-brown clayey loam, and contained approximately 50% of small well-rounded stones. Main fill (152)=(419) was described as dark greyish brown sandy silt with a lower frequency of small well-rounded stones than the primary fill (153). Five pottery sherds dating to the earliest Iron Age were recovered from this fill (see 5.1). It was overlaid by subsoil (102).

In order to establish the stratigraphic relationship between the ring ditch and ditch 151 a section was excavated at the north end of the ditch. The confluence of the two ditches was partially disturbed by a geotechnical pit, and the relationship was not clearly visible. However, in the northern section (Fig. 10, S. 15; Pl. 10) ditch 151 cut into the uppermost fill of the ring ditch (175)=(350).



Plate 10: Section 10 showing stratigraphic relationship between ditch 151 and ring ditch

The northern end of ditch 151 seemed to terminate in the ring ditch, due to the fact that a continuation of ditch was not present in sections 3 and 19. The southeast end of ditch was beyond the limit of the excavation area. The relationship between ditches 151 and 127 was not investigated.

A gently curved ditch 127 was located approximately 1.8m to the east from ditch 151=418, aligned north to south (Fig. 4 & 9). Six sections, each 1m long, were excavated along the ditch, which accounted for about 45% of its 13.5m total length.

The depth of the ditch was 0.14m to 0.35m, and its width varied from 0.30m to 0.55m. The profile of the ditch was a V shape, with moderate to steep straight or convex-concave sides, and a narrow concave base (Fig. 10: S. 16-18). The fill of the ditch (128) was a mid greyish brown sandy loam, with up to 30% gravel inclusions. From this fill eight pottery sherds, of which majority were Iron Age in date and rest residual middle Bronze Age (see 5.1), were recovered. Ditch 127 cut into the cremation burial 133, and it was truncated by postholes 155 and 219 (Figs. 8 & 9). The continuation of this ditch to the north was not identified.

The third linear feature dating from the Iron Age was ditch 110, 37.5m long, orientated northwest to southeast. Ten 1m slots (26% of ditch) were investigated along its length (Figs. 4 & 9). It was U-shaped in profile, 0.41m to 1.18m wide, and 0.15m to 0.32 m deep. The sides were shallow to moderate concave and gradually sloping down to the concave base (Fig 10: S. 19-23). The primary fill (154) was only identified in one slot (Fig. 10: S. 21), it was 0.10m thick dark brown silty sand with c. 5% gravel inclusions with pottery sherds dated to the earliest Iron Age (see 5.1). The main fill (111) was up to 0.35m thick mid grey-brown sandy loam with approximately 35% of gravel inclusions. One Iron Age sherd was recovered from this fill (see 5.1). Stratigraphically, ditch 110 cut into the northeast edge of ring ditch (Fig. 6: S. 2, Fig. 10: S. 20) and the western edge of cremation burial 135 (Fig. 8).

### **Postholes**

Posthole 112 was of circular shape, measuring 0.33m in diameter and 0.19m in depth with steep sides and a rounded base (Fig. 9 & 10: S. 24). It was initially interpreted as a cremation burial. Further analysis of bones recovered from fill (113), which was described as a dark grey-brown sandy loam with less than 1% of fine gravel inclusion, revealed that the bones were animal and unburnt (see 5.4). The fill (113) also contained a pottery sherd broadly dated from the middle Bronze Age to the earliest Iron Age (see 5.1). Based on the above information, cut 112 was reinterpreted as posthole, related to the rest of the postholes in area east of ring ditch, and presumed to be Iron Age in date.

Posthole 155 was sub-circular in plan 0.45 m wide, and 0.34 m deep, with steep relatively straight sides, and concave base (Fig. 9 & 10: S. 21). The single fill was a friable mid grey-brown loamy sand (156), containing a small fragment of Iron Age pottery (see 5.1). Posthole 155 was cut into ditch 127 at its north end, and was related to the group of postholes (139, 145, 265, 289, 291, and 293) located to the south-southwest.

Posthole 289 was located immediately to the south of posthole 155 (Fig. 9). It was circular in plan, 0.36m wide and 0.20m deep with steep sides and concave base (Fig. 10: S. 26; Pl. 11). Fill (290) was dark grey-brown sandy loam with c. 10% gravel inclusions. Two pottery sherds dating to the earliest Iron Age and one fragment of animal bone were recovered from this fill.

The fourth dated posthole 159 was of circular shape, 0.46m wide and 0.34m deep, located immediately southwest of ditch 110 (Figs. 9 & 10: S. 23). The fill (160) was a mid brown sandy silt containing approximately 50% of small pebbles and two sherds Iron Age pottery (see 5.1).

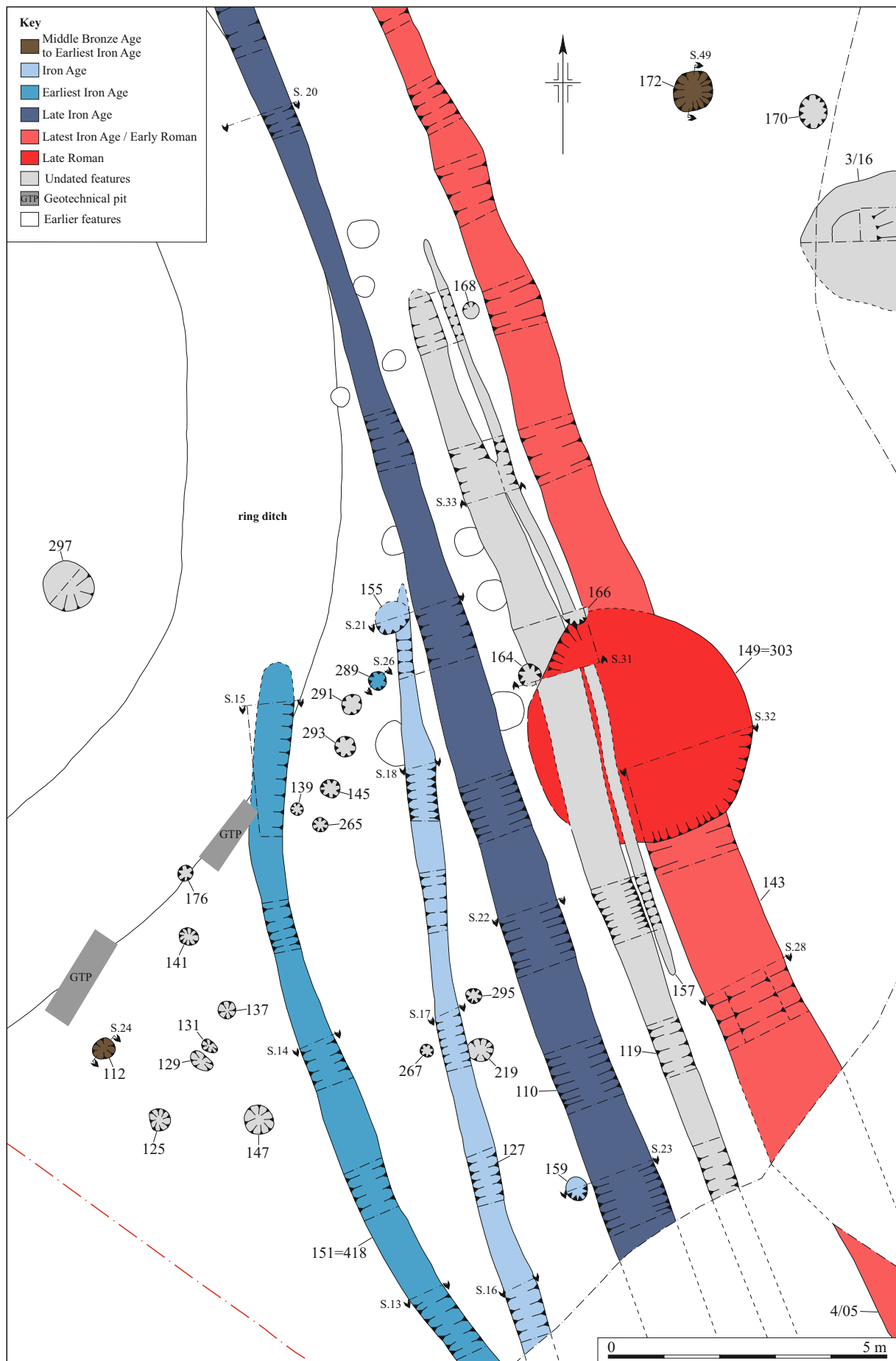


Figure 9: Iron Age and Roman features - area east from the ringditch

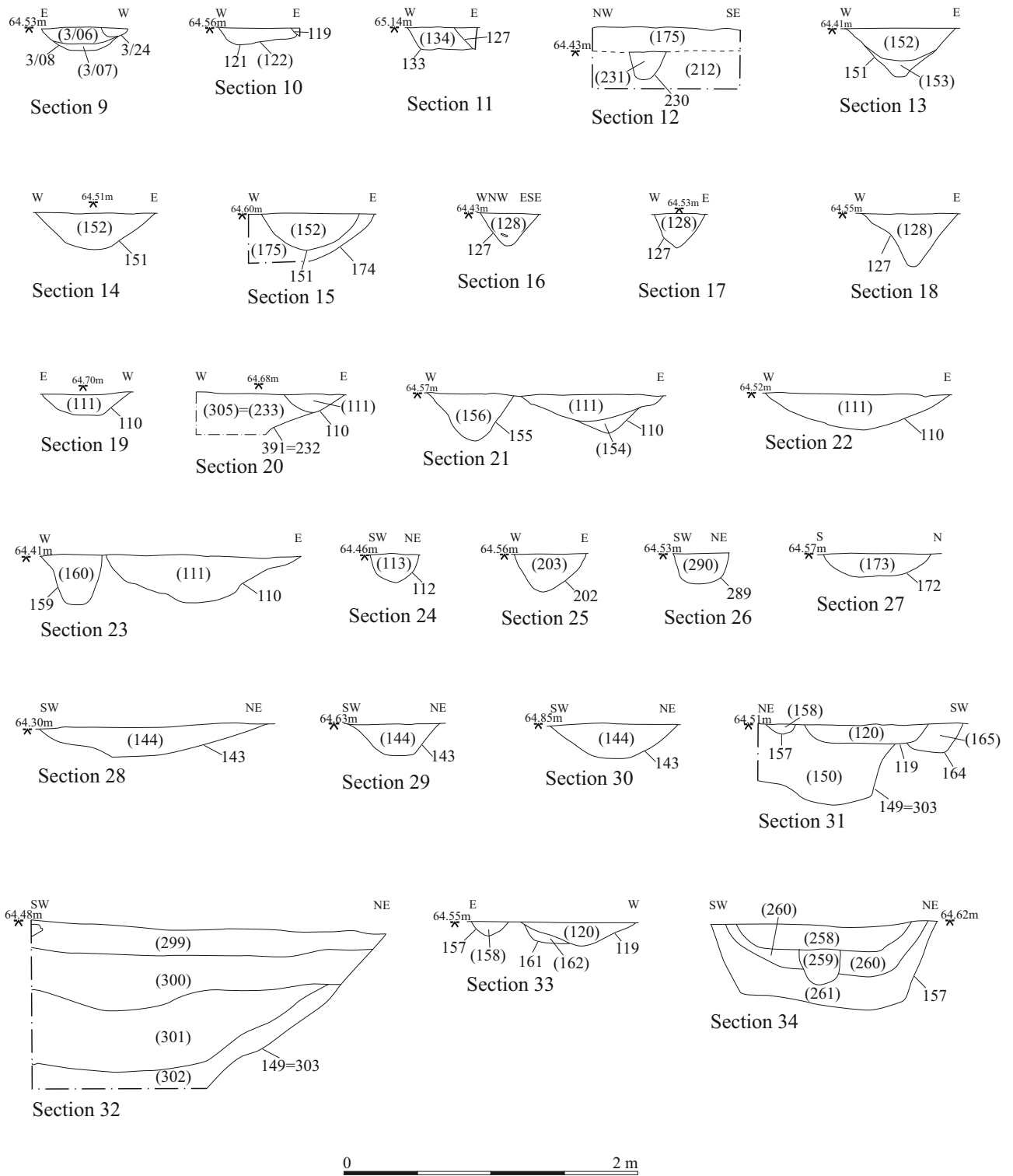


Figure 10: Section 9-34



Plate 11: Posthole 289, 291, and 293 (right to left)

Posthole 202 was sub-circular in plan measuring 0.45m in diameter and 0.25m in depth, located to the southwest of linear ditch 253 (Fig. 4). The profile of the posthole had steep to moderate concave sides and a rounded base (Fig 10: S. 25). The fill (203) was 0.25m thick mid grey-brown silty sand, containing frequent small well rounded stones and two sherds of Iron Age pottery (see. 5.1).

Based on the stratigraphic relationship (postholes 164, 166, and 219 were truncated by later features), and the spatial distribution, an additional 19 postholes might also be of a contemporary Iron Age date (Table 4). Although these postholes represent a major group of features investigated during the excavation, it was not possible to identify any coherent structure or exact function of the postholes.

Cut	Diameter	Depth	Fill
108	0.32m	0.05m	Dark grey-brown clay (109)
125	0.34m	0.07m	Mid grey-brown clay-loam (126)
129	0.21m	0.07m	Mid grey-brown clay-loam (130)
131	0.28m	0.14m	Mid grey-brown clay-loam (132)
137	0.42m	0.11m	Mid grey-brown clay-loam (138)
139	0.30m	0.10m	Dark brown sandy loam (140)
141	0.47m	0.26m	Dark grey-brown clay-loam (142)
145	0.30m	0.12m	Dark brown sandy loam (146)
147	0.50m	0.05m	Grey-brown clay-loam (148)
164	0.40m	0.21m	Red-brown clay-loam (165)
166	0.20m	0.16m	Dark grey clay-loam (167)
168	0.30m	0.14m	Grey-brown clay-loam (169)
170	0.50m	0.29m	Mid grey-brown loamy sand (171)
219	0.55m	0.17m	Grey-brown silty silt (220)
265	0.25m	0.10m	Mid grey-brown sandy silt (266)
267	0.20m	0.14m	Mid grey-brown sandy silt (268)
291	0.32m	0.17m	Grey-brown sandy loam (292)
293	0.34m	0.15m	Mid brown sandy loam (294)
295	0.25m	0.24m	Mid brown sandy loam (296)

Table 4: Undated posthole, possible Iron Age

Pit 172 was similarly to posthole 112, and dated to the broad period of the middle Bronze Age to earliest Iron Age. It was located to the northeast of ditch 143 and to the south east of early Bronze Age pit 188 (Fig. 9). Pit 172 was sub-circular in plan, measuring 0.80m in diameter and 0.18m in depth (Fig. 10: S. 27). Fill (173) was mid grey-brown loamy sand containing approximately 40% of fine gravel and contained one pottery sherd made from a fabric with Middle Bronze Age origins that was also used for an earliest Iron Age (see 5.1) and eight fragments of animal bone (see 5.5). Presumably related to pit 172 was an undated posthole 170 (Table 4).

#### 4.4 Roman period

The Roman period was represented by two securely dated features. The more significant feature was ditch 143 (same as 420, 3/05, 4/05). It was 45m long, aligned northwest to south east, and was located 2m to northeast from ditch 110 (Figs. 4 & 9; Pl. 12). Ditch 143 was investigated during the all three stages of archaeological work. In total 13 slots each approximately 1m wide were excavated through the ditch. The profile was a U shape, between 0.50m to 1.60m wide and reaching a maximum depth of 0.26m (Fig. 10: S. 28-30). The single fill (144) (same as (421), (3/04), (4/04)) was mid brown sandy loam, containing 10-20% of small well rounded stones and pottery sherds of the latest Iron Age / early Roman in date (see 5.2). Ditch 143 overlaid posthole 166 and was truncated by pit 149=303.



Plate 12: Investigations of ditch 143 and ring ditch in progress, looking southeast

Pit 149=300 was sub-circular in plan, also visible as a cropmark (Fig. 3b), it measured 4.10m in diameter and was excavated down to 1.16m below present ground surface (Fig. 4, 9 & 10: 31-32). Four successive fills were recorded in section. The lowest fill (302) was 0.10m thick light yellow-brown clayey silt. It was overlaid by 0.48m thick grey-brown very silty gravel (301), followed by a fill (150)=(300) described as 0.36m thick grey-brown clay silt with occasional small well rounded stones. The uppermost fill (299) was 0.18m thick grey-brown loam, containing occasional large sub-angular stone. From pit 149 were recovered eleven Roman pottery sherds dating to the 3<sup>rd</sup>



century, and one iron nail (see 5.2 & 5.6). Pit 149 was truncated by the undated ditch 119 and gully 157.

A group of three undated postholes 204, 206, and 208 was located northeast of ditch 143, and thought to be associated to the Roman period (Fig. 4; Table 5).

Cut	Diameter	Depth	Fill
204	0.30m	0.08m	Mid brown sandy loam (205)
206	0.37m	0.18m	Mid brown sandy loam (207)
208	0.23m	0.06m	Mid brown sandy loam (209)

Table 5: Undated posthole, possible Roman

#### 4.5 Undated features

Apart from the above discussed undated features an additional 19 undated features (7 ditches and gullies, 8 pits and 4 postholes) were also investigated.

##### Linear features (Table 6)

Ditch 119 and gully 157 were located between ditches 110 and 143. Stratigraphically both features truncated the late Roman pit 149=303, and Iron Age postholes 164 and 166, and cremation burial 161 (Figs. 9 & 10: S. 31 & 33). Due to the stratigraphic relationships and alignment of both features, with follow the same pattern as earlier ditches, they may possibly be dated to the very late Roman or post Roman periods.

Linear features 238 and 244 located to the north of the excavation area (Fig. 4 & 3c), presumably represent post-medieval field boundaries. Linear ditch 253 located in the middle of the striped area (Fig. 4 & 3c), was identified as a field boundary seen on 1940s aerial photographs (Fig. 3a), and presumably early modern in date.

Two gullies 193 and 210 seem to represent early modern drainage. Gully 193 partially truncated the northeast edge of the ring ditch. Both gullies were approximately 7m long, and their continuation was not clearly visible across the entire investigated area (Fig. 4).

Context	Length	Width	Depth	Fill
119	17m	0.65m	0.24m	Mid grey sandy loam (120)
157	14m	0.30m	0.10m	Mid grey sandy loam (158)
193	6.70m	0.30m	0.20m	Mid brown sandy loam (194)
210	7m	0.33m	0.08m	Mid brown sandy silt (211)
238	26.30m	2.5m	0.10m	Mid grey-brown clayey silt (239)
244	28.25m	1.90m	0.21m	Mid brown silty sand (245)
253	22.50m	1.63m	0.18m	Mid red-brown sandy silt (254)

Table 6: Undated linear features

##### Pits (Table 7)

Pit 257 was located at the west edge of the development area (Fig. 4). It was filled by four fills (Fig. 10: S. 34; Pl. 13). From the uppermost fill (258) were recovered two animal bones (see 5.5). Below this was fill (259) that contained approximately 50% of

burnt material. A 100% sample of fill was taken; no burnt bone was present within it. Pit 257 was truncated by boundary ditch 253 and may possibly be of prehistoric date.



Plate 13: Half section of pit 257, looking northwest

A second significant pit 414 was partially exposed in one of the service trenches monitored during the watching brief. All three successive fills were aceramic. Pit 297 was located in the eastern part of the inner area of the ring ditch; it may be related with the construction of the ring ditch, predate it or more likely be much later in date (Fig 5).

The rest of the pits (Table 7) were scattered in the middle of the investigated area (Fig. 4) and may be related to the prehistoric and/or Roman period.

Cut	Diameter	Depth	Fill
240	0.70m	0.26m	Mid brown sandy silt (241)
246	0.80m	0.13m	Mid red-brown silty sand (247)
248	0.80m	0.25m	Mid yellow-brown sandy clay (205)
251	0.80m	0.13m	Mid red-brown silty sand (252)
347	1.10m	0.46m	Red-brown silty clay (348)
257	1.50m	0.57m	Red-brown sandy loam (258) Dark grey sandy silt + 50% burnt material (259) Light brown sandy loam (260) Red-brown sandy silt (261)
297	1.13m	0.12m	Dark red-brown sand (298)
414	2m	0.50m	Mid yellow-brown silty clay (415) Mid brown-grey silty clay (416) Mid grey-brown clayey loam (417)

Table 7: Undated pits

## Postholes (Table 8)

All the undated postholes were located in the middle of investigated area, apart from posthole 422 which was located to the southeast of area and recorded during the watching brief (Fig. 5). One indeterminate pottery sherd made of fabric broadly related to middle Bronze Age and earliest Iron Age (see 5.1) was recovered from posthole 236. The distribution of these postholes suggests that they were related with the pits, being located in the same area and therefore they may possibly be prehistoric and/or Roman in date.

Cut	Diameter	Depth	Fill
234	0.55m	0.14m	Mid red-brown silty sand (235)
236	0.32m	0.18m	Mid red-brown sandy silt (237)
255	0.40m	0.15m	Mid red-brown silty sand (256)
422	0.19m	0.20m	Mid red-brown silty clay (423)

Table 8: Undated postholes

## 4.6 Reliability of Results

The reliability of results is considered to be very good. The archaeological investigations took place in generally clement conditions with good light and visibility. On the whole there was good cooperation from the ground workers, site manager Lester Sillencer and construction manager Clive Wilkins during the all stages of archaeological field work. The archaeological investigation was monitored by Hugh Coddington (OHaNET) on behalf of West Oxfordshire District Council.

## 5 FINDS AND ENVIRONMENTAL REMAINS

### 5.1 Prehistoric Pottery by Frances Raymond, illustrations by Roy Entwistle

#### Introduction

The assemblage is dominated by Middle Bronze Age pottery (Table 9) derived principally from the ring ditch and one of the cremations (760 sherds, 5148g.). Although the sherds are in fresh condition they are fragmented and there are no complete or near complete vessels. Those with profiles that can be partly reconstructed include three Globular Urns and one Bucket Urn, while sherds from bucket-shaped and sub-biconical vessels are represented amongst the rest of the diagnostic material. The continued significance of the ring ditch into the Late Bronze Age is demonstrated by the fragmented remains of a Hook Rim Jar from its upper fill.

Date	No	%	Wt (g)	%
Late Neolithic to Early Bronze Age	6	0.6	47	0.8
Middle Bronze Age	794	81.5	5388	86.8
Middle to Late Bronze Age	18	1.8	50	0.8
Late Bronze Age	113	11.6	571	9.2
Earliest Iron Age	13	1.3	68	1.1
Iron Age	13	1.3	49	0.8
Indeterminate	18	1.9	32	0.5
<b>TOTALS</b>	<b>975</b>	<b>100.0</b>	<b>6205</b>	<b>100.0</b>

Table 9: Relative proportions of pottery by date

The earliest activity on the site is marked by part of a Long-Necked Beaker from one of the pits, with a later prehistoric presence being indicated by a low proportion of Iron Age pottery. The few sherds from this group with chronologically sensitive attributes are of Earliest Iron Age date.

The pottery was recorded by context following the guidelines of the Prehistoric Ceramics Research Group (PCRG 2010). Details of fabric, form, decoration, surface treatment and colour, wall thickness, fragmentation, condition and estimated vessel equivalents have been entered on a database and are available in the archive. The sherds were sorted into fabric groups with the aid of a binocular microscope at X20 magnification, while the descriptions were prepared using this and a higher magnification of X40. The alpha numeric fabric codes reflect the initial letters of the principal inclusion types along with contrasts in density and size.

Unless otherwise identified, the percentages given in the text are calculated by sherd weight. The vertical proportions of the Globular Urn profiles (all of which are incomplete) have been reconstructed partly using the anticipated dimensions of the vessel type.

### **Beaker and Early Bronze Age Pottery**

The earliest sherds (Table 9), all in fresh condition, are derived from at least one Beaker and a second vessel in a similar grog tempered ware with a currency encompassing Beakers and subsequent Early Bronze Age forms.

#### **Form and Decoration**

The Beaker sherds (five sherds, 42g.) are mostly from a single vessel deposited in pit 188 (four sherds, 39g.). Refitting rim and upper wall fragments are consistent with the profile of a Long-Necked Beaker (after Needham 2005, 195-196), decorated with two rows of discrete impressions created with an implement of uncertain type above an incised running chevron in lattice pattern (Fig. 11: P1). A small sherd in an identical fabric from the fill of one of the graves 269 is embellished with two rows of similar punctuated impressions and may be from the same vessel (not illustrated).

#### **Fabric and Surface Treatment**

The Beaker is made from a hard fabric (GS/1) with sparse, sub-rounded quartz sand (up to 0.5mm.), rare limestone (up to 4mm.) and fossil shell (up to 1mm.), which has been tempered with common evenly distributed grog (up to 3mm.). The exterior is reddish brown to brown and both surfaces are smoothed.

The other vessel is represented by a single undecorated wall fragment (5g.) with a smoothed reddish yellow exterior from the upper fill of the ring ditch (179). The fabric (G/1) is similar to that of the Beaker with common, evenly distributed grog tempering (up to 3mm.), but the absence of other inclusions points to the exploitation of a different clay source.

## Middle Bronze Age

### Character and Context of the Diagnostic Pottery

The assemblage includes the fragmented remains of three Globular Urns: one containing a cremation (Fig. 11: P2 from 161, (162)); one from the southernmost section of the ring ditch and the associated grave (Fig. 11: P3 from 178 and 190); and the third represented by a sherd scatter from the south-eastern quadrant of the ring ditch (Fig. 11: P4 from 174, 216, 397 and 409). The cremation urn is in fresh condition but has been fractured into 128 sherds (1421g.) by later disturbance, probably cultivation. A wall fragment (10g.) from a section to the north-east across the Roman ditch may be derived from this vessel (143 (144)). The absence of the rim and much of the upper walls suggests that it had been placed in pit 161 in an upright position. The vessel has a horizontally pierced, applied lug at its belly, which is likely to have been one of three or four (Fig. 11: P2). The tooled decoration is arranged in two zones divided by borders each composed of four horizontal lines. Nested chevrons form pendant and upright triangles in the lower zone, while the upper is embellished with filled and reserved triangles. The exterior is smoothed and predominantly brown with a few dark grey patches and the vessel is made from a fine flint tempered ware (Ware Group 1: F/1).

The second Globular Urn is represented by 53 sherds (386g.) from two of the horizons within one of the ring ditch sections (178), (179) and (182) and from the fill of the grave 190, (185)). The sherds are small (1-5cm. across) and are fresh to lightly abraded with few refits. One of these includes a cross-context join between rim fragments from two of the deposits (179) and (185), indicating that the Globular Urn was disturbed by the later burial and providing a *terminus ante quem* for the deposition of the vessel of 1461 to 1391 cal BC (2-sigma, 85.2%, SUERC-55956). Two undecorated wall fragments (16g.) from the upper fills of adjacent ring ditch sections 174 and 409, (175) and (351) might be from this vessel, and it is remotely possible that a rim (7g.) from an equivalent horizon from a cut to the north 104 is of similar derivation. The deeply impressed geometric decoration on the upper walls includes a probable row of reserved pendant triangles defined and bordered by lines (possibly upright triangles composed of nested chevrons), while there is a single deep oval dimple below the belly that might have been repeated at intervals (Fig. 11: P3). The exterior is brown to dark grey and has been smoothed with a layer of clay that has partly covered the inclusions, while the fabric incorporates a mixture of relatively fine quartz and quartzite (Ware Group 2: S/1).

Sherds from the remaining Globular Urn (96 sherds, 559g.) were distributed principally across five of the sections in the south-eastern quadrant of the ring ditch (174, 178, 216, 397 and 409). It is possible that small fragments from one of the cuts to the north may also be from this vessel (10 sherds, 22g. from 3/14). The more deeply stratified sherds were confined to (216 (218) (47 sherds, 331g.) and are in fresh condition, being larger than those from the overlying horizon (up to 8cm.). The fragments from other sections are from the upper fill of the ring ditch (3/10), (175), (179), (350) and (351) (59 sherds, 250g.) and are smaller (1-3cm) with some lightly to moderately abraded examples. The vessel has at least two and probably up to four circular, applied lugs set just above the belly (Fig. 11: P4). The predominantly dark grey exterior has been smoothed with a layer of clay partly covering the inclusions, while the fabric is a fine flint tempered ware (Ware Group 1: F/2).

The Globular Urn (Fig. 11: P4) was associated with fresh sherds from a small bucket-shaped vessel (Fig. 11: P5), with a dark grey partly smoothed exterior in a coarse quartz tempered fabric (Ware Group 2: Qsh/1). These are from two of the horizons in the one section (216 (217) and (218); 45 sherds, 360g.), while wall fragments from the upper fills of two other cuts might be from the same vessel (104 and 397 (105) and (350; two sherds, 28g.).

Evidence of profile is otherwise confined to a few small rim or shoulder fragments from the ring ditch. The 18 rim fragments (121g.; fragment sizes 1-4cm.) are from 11 vessels with one bevelled example likely to have been part of a sub-biconical form (Fig. 11: P6). There is even less evidence of the profile of the other vessels, most of which have simple unexpanded rims of the following types:

- R1*: one other bevelled and closed variety (not illustrated);
- R2*: three rounded closed types (not illustrated);
- R3*: three rounded upright forms (not illustrated);
- R4*: two flattened upright examples, one of which is decorated with two shallow tooled lines (Fig. 0, P7; other not illustrated); and
- R5*: one slightly expanded, flattened rim (not illustrated).

The two shoulder fragments (46g.) are from two sub-biconical vessels (Ware Group 4: Lsh/1 and sh/4) including one with a slight pinched cordon embellished with a fingertip row (not illustrated).

A few additional decorated sherds in similar shelly wares (Ware Group 4: sh/1 and sh/4; seven sherds, 99g.) are from the ring ditch, two of the posthole 112 and cremation pit 133 and ditch 119. Two fragments from a girth cordon with deep diagonal impressions from one of the cremations are likely to have been part of a Bucket Urn (Fig. 11: P8 from 133). The other decorated sherds include one with a pinched horizontal cordon, one with part of a fingertip row and two with single fingernail impressions (none illustrated).

### **Surface Treatment**

All of the sherds that are sufficiently well preserved have smoothed or partly smoothed surfaces (449 sherds, 4891g.), which in some cases exhibit fine striations from wiping. The inclusions on the exteriors of approximately 23% have been mainly or partly covered with a layer of clay (94 sherds, 1119g.). The diagnostic pottery with this more refined treatment includes two of the Globular Urns (Fig. 11: P2 & P3) and one of the Bucket Urns (Fig. 11: P8).

### **Fabric**

The pottery is made from 21 fabrics belonging to six broad ware groups defined by the predominant inclusion type/types, all of which are evenly distributed. Most are relatively hard with the exception of two coarse, soft fabrics in Ware Groups 2 and 4 (Qsh/1 and sh/4). Slightly under half of the sherds are in fine wares (48%, 327 sherds, 2554g.) with those of medium and coarse grade being represented in similar proportions (24%, 248, 1307g. and 28%, 206 sherds, 1511g.). Ninety-nine percent of sherds are made from flint or quartz/quartzite tempered wares or shelly fabrics (Table 10, Ware Groups 1, 2 and 4), with all inclusions being available locally. The flint could have been obtained from the Third Terrace Gravels of the Evenlode, although it

might equally have been derived from more distant sources. Both quartz and quartzite pebbles are present in the Northern Drift, while the range of calcareous inclusions occurs within various nearby Jurassic outcrops (BGS Witney Sheet 236).

*Ware Group 1 – Fabrics Tempered with Burnt Flint*

*F/1 and F/2:* fine with very common burnt flint (up to 1.5 or 2mm.)

*F/4:* medium grade with moderate burnt flint (up to 3mm.)

*F/5:* coarse with moderate burnt flint (up to 5mm.)

*Ware Group 2 – Fabrics with Quartz and Quartzite*

*S/1:* fine with abundant sub-rounded to angular quartz and quartzite (0.2-2mm.; rare piece up to 5mm.) and rare limestone or shell (up to 1.2mm.)

*S/2:* fine with moderate sub-rounded to angular quartz and quartzite (0.2-2mm.)

*Q/1:* coarse with moderate angular to sub-angular quartz (up to 5mm.)

*Qsh/1:* coarse with common angular quartz (up to 8mm) and sparse shell (up to 3mm.)

*Ware Group 3 – Sandy Fabric with Limestone, Quartz/Quartzite and Fossil Shell*

*LQSh/1:* coarse with moderate angular quartz sand (0.1-0.5mm.), sparse angular shelly limestone (up to 4mm.), sparse sub-angular quartz and quartzite (up to 4mm.), sparse fossil shell (up to 8mm.) and rare well-rounded clay pellets (up to 1.2mm.)

Fabric	No.	%	Wt. g.	%	EVE	Diagnostic Vessels/Sherds
<b>Ware Group 1</b>						
F/1	146	18.4	1493	27.7	1	P2
F/2	106	13.3	581	10.8	2	P4 and R1
F/4	22	2.8	108	2.0	1	R3
F/5	1	0.1	13	0.2	1	-
<b>Sub-total</b>	<b>275</b>	<b>34.6</b>	<b>2195</b>	<b>40.7</b>	<b>5</b>	
<b>Ware Group 2</b>						
S/1	57	7.2	417	7.7	2	P3 and R2
S/2	3	0.4	15	0.3	1	P7
Q/1	11	1.4	93	1.7	1	R3
Qsh/1	47	5.9	388	7.2	1	P5
<b>Sub-total</b>	<b>118</b>	<b>14.9</b>	<b>913</b>	<b>16.9</b>	<b>5</b>	
<b>Ware Group 3</b>						
LQSh/1	1	0.1	13	0.2	1	
<b>Ware Group 4</b>						
sh/3	5	0.6	9	0.2	1	-
sh/6	6	0.7	19	0.4	1	R2
sh/1	219	27.6	1161	21.6	3	R2, R4 and R5
sh/2	8	1.0	40	0.7	1	-
Csh/1	27	3.4	109	2.0	1	-
sh/4	91	11.5	591	11.0	2	P6, P8 and R3
Lsh/1	8	1.0	100	1.9	1	Sub-biconical vessel with fingertip row on cordon
Lsh/2	11	1.4	97	1.8	1	-
sh/5	8	1.0	105	1.9	1	-
<b>Sub-total</b>	<b>382</b>	<b>48.2</b>	<b>2228</b>	<b>41.5</b>	<b>12</b>	
<b>Ware Group 5</b>						
LOsh/1	1	0.1	1	0.1	1	-
<b>Ware Group 6</b>						
Lsh/3	2	0.3	18	0.3	1	-
<b>Indeterminate</b>						
Indet.	14	1.8	17	0.3	-	-
<b>TOTALS</b>	<b>794</b>	<b>100.0</b>	<b>5388</b>	<b>100.0</b>	<b>25</b>	

Table 10: Relative proportions of sherds by fabric

*Ware Group 4 – Shelly Wares*

*sh/3*: fine with moderate shell (0.0625-1mm.)

*sh/6*: fine with very common shell (0.1-2mm.)

*sh/1*: medium grade with common to very common fossil shell or voids (0.1-4mm.; rare piece up to 6mm.) and rare angular shelly limestone (up to 4mm.)

*sh/2*: medium grade with moderate to common shell (0.1-3mm.)

*Csh/1*: coarse with sparse angular crystalline calcite (0.1-1.5mm.), rare angular limestone (up to 5mm.) and very common fossil shell (0.1-5mm.; rare piece up to 8mm.)

*sh/4*: coarse with rare angular limestone (up to 2mm.) and very common fossil shell (0.1-7mm.; rare piece up to 10mm.)

*Lsh/1*: coarse with sparse angular shelly limestone (up to 5mm.) and common fossil shell (0.1-2mm.; rare piece up to 4mm.)

*Lsh/2*: coarse with rare grog (up to 0.5mm.), sparse angular shelly limestone (up to 10mm.), rare well-rounded quartz sand (0.1-1mm) and moderate fossil shell (0.1-0.2mm.)

*sh/5*: coarse with moderate shell (0.1-7mm.)

*Ware Group 5 – Fabric with Oolitic Limestone and Fossil Shell*

*LOsh/1*: fine ware with sparse angular oolitic limestone (up to 1.5mm.), rare ooliths (0.3-1mm.) and sparse shell (0.0625-1mm.)

*Ware Group 6 – Fabric with Limestone*

*Lsh/3*: fine with common angular limestone (0.1-2mm; rare piece up to 4mm.) and sparse fossil shell (0.1-1mm.)

**Distribution and Deposition**

The fragmented character of the ring ditch assemblage (614 sherds, 3714g.) points to an episode or episodes of subsequent disturbance, particularly in the upper fill where sherds from single vessels are in variable condition. The extent of this is illustrated by the scattering of fragments from one of the Globular Urns (Fig. 11: P4) across the south-eastern quadrant of the ring ditch (see “*Character and Context of the Diagnostic Pottery*”).

Although this disturbance has masked their original character, it is clear from the distribution that there was a focus of ceramic deposits on the south-eastern quadrant. Eighty-six percent of the ring ditch assemblage including the sherds from five of the illustrated vessels are from this zone (501 sherds, 3181g.; Fig. 11: P3-P7; 174, 178, 190, 216, 397 and 409). Those in the fill of the associated grave 190, (185)) include fragments from one of the Globular Urns derived from the ring ditch (Fig. 11: P3; 13 sherds, 64g; 178 (182) along with wall sherds in a shelly ware likely to have a similar origin (15 sherds, 70g.). It seems probable that these were incorporated in the backfill by accident rather than by design.

Much of the rest of the Middle Bronze Age pottery is from the one inurned cremation (161 (162); 146 sherds, 1434g.), with the majority of sherds being from the Globular Urn (Fig. 11: P2; 128 sherds, 1421g.). The deposit otherwise included lightly to moderately abraded wall fragments from three other vessels in shelly wares along with tiny pieces of ceramic that are too small for fabric identification.



Seven of the other cremations were associated with Middle Bronze Age sherds (20 sherds, 149g.), but it is not clear whether any of this pottery was selected as part of the funerary ritual. The largest group from 133 (seven sherds, 88g.) in exclusively fresh condition is from a Bucket Urn (Fig. 11: P8) and one other vessel in a similar shelly ware. The rest of the cremation pits and posthole produced a few wall sherds from one or two vessels (two to five sherds, 11-15g.) in fresh (from posthole 112) or variable condition (from cremation pit 135 and 230) or yielded single abraded wall fragments (1-6g.; from 114, 117 and 123), which could have been incorporated in the fills at a much later date.

The remaining pottery (13 sherds, 88g.) is from three of the ditches where the majority of sherds were associated with later ceramics (12 sherds, 83g. from 127 and 143). The single sherd from 119 is lightly abraded and may also be residual.

## **Middle to Late Bronze Age**

### **Pottery of Uncertain Phasing**

A small percentage of the pottery (Table 9) is made from a medium grade shelly ware with Middle Bronze Age origins that was also used for a Late Bronze Age vessel (Ware Group 4, sh/2). The sherds include two small rims that could be of either phase (R2 and R5; 2cm across) and are otherwise wall fragments, one of which has a pre-firing perforation. They are derived from the upper fill of the ring ditch; four of the cremation pits 114, 123 and 133, pesthole 112 and Roman ditch 143.

### **Late Bronze Age**

The Late Bronze Age sherds were confined to the upper fill of the ring ditch 104, (105) and 178, (179) and are from at least two vessels. One from the southernmost section is a short necked form with a high shoulder represented by a single everted rim sherd (not illustrated; Ware Group 4, sh/2). The other is a Hook-Rim Jar with a partly smoothed and vertically finger-smear exterior (Fig. 11: P9) made from a hard fabric comparable to those of Ware Group 1 (F/3), which is tempered with common burnt flint (0.1 to 4mm; rare piece up to 5mm.). All of the fragments from this vessel are in fresh condition and were concentrated in the southernmost section (178 (179); 82 sherds, 481g.). Wall sherds of an identical character from the northernmost cut are also likely to have been part of this jar (104; 31 sherds, 90g.). It is unclear whether the remains of the vessel had been placed in the upper part of the ring ditch, or whether the sherds were incorporated in its fill during subsequent phases of cultivation.

## **Pottery of Iron Age and Indeterminate Phasing**

### **Earliest Iron Age**

The few Earliest Iron Age sherds (Table 9) are from one of the ditches (151), two postholes (202 and 289) and two Roman features (143 and 303). Those from 151 are derived from four vessels (five sherds, 36g.) including two with short upright rims: one with opposed diagonal fingernail rows on its inner and outer lip (Fig. 11: P10) in a ware with Middle Bronze Age origins (Ware Group 2, S/1); and the second with two impressed parallel lines at the base of its neck (Fig. 11: P11) in a grog tempered fabric (Ware Group 11, GLSsh/1). The rim sherds were associated with part of an angled shoulder embellished with a deeply impressed triangular motif (Fig. 11: P12) made from a sandy ware (Ware Group 8, LSsh/2). The fourth vessel is represented by a

sandy wall fragment with quartzite (Ware Group 7, QSsh/2). The postholes each produced a single wall sherd in a similar fabric (Ware Group 7, QSsh/1), which in 289 was associated with a fine sandy fragment decorated with running chevrons composed of fingernail impressions above an impressed horizontal line (Fig. 11: P13; Ware Group 8, Ssh/2).

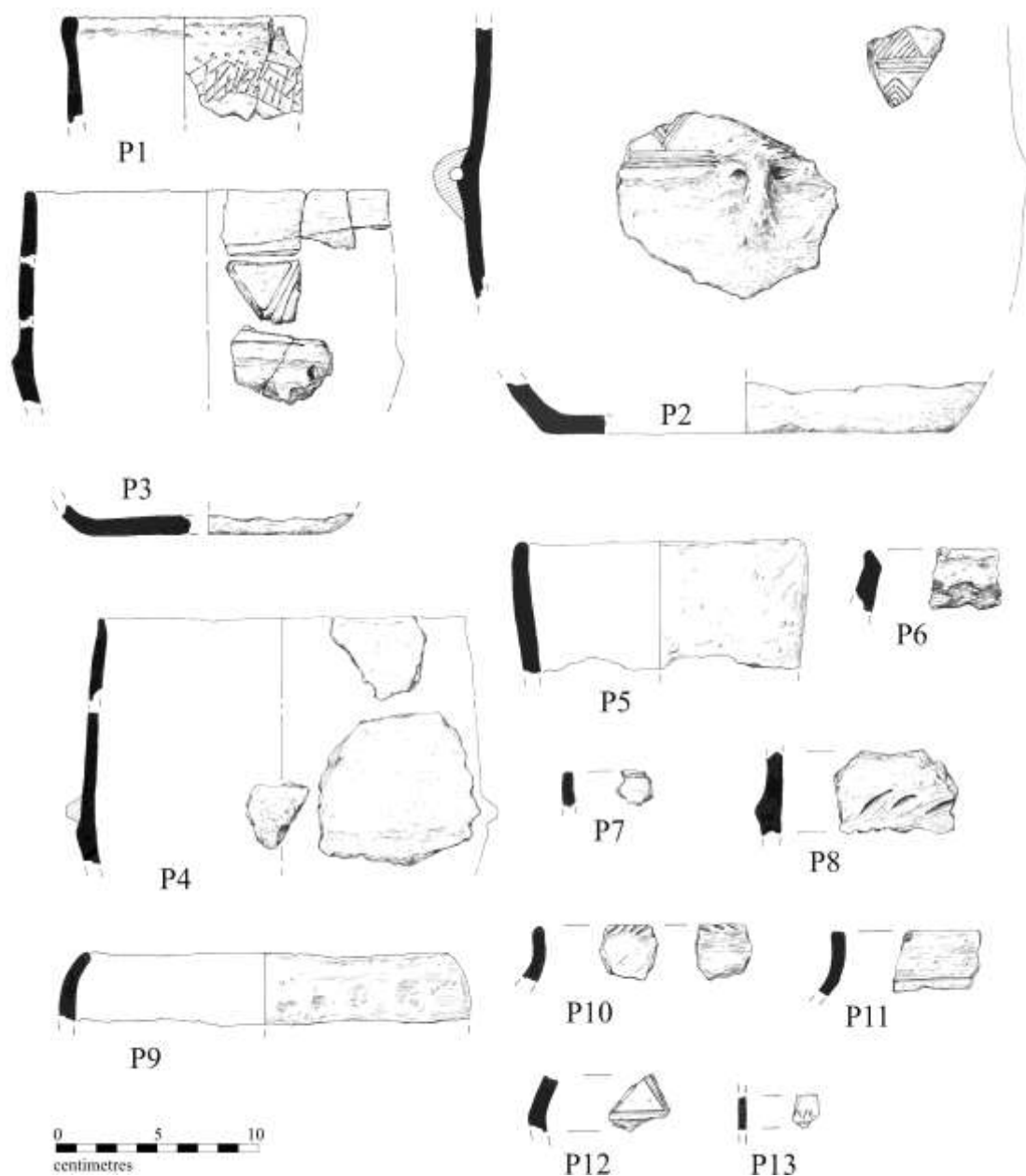


Figure 11: Bronze and Iron Age pottery

The residual sherds, both in the same ware (Ware Group 7, QSsh/1), include one upright rim which has been finger impressed to produce a cabled 'pie-crust' effect (not illustrated).

### Iron Age

The rest of the Iron Age assemblage (Table 9) incorporates only one diagnostic sherd from the Late Iron Age ditch 110: a short upright rim from an Earliest or Early Iron Age vessel with a high angled upper shoulder and possible traces of an external

burnished red surface coating (not illustrated). This is made from a fine sandy fabric with Earliest Iron Age origins and a longer history of use into the Iron Age (Ware Group 8, Ssh/2). Featureless wall and base fragments in this ware were present in the same ditch, another to the west and two postholes (110, 127, 159 and 202). Other Iron Age sherds in wares that cannot be phased more closely within the period (Ware Group 6, LSsh/1; Ware Group 9, FglS/1; and Ware Group 10, clGS/1) are from two of the postholes (155 and 159) and were residual within the subsoil one of the Roman ditches (143).

### **Indeterminate**

Half of the sherds of indeterminate phasing are made from the Ware Group 2 fabric with Middle Bronze Age origins that was also used for an Earliest Iron Age vessel (S/1). The rest are either too small for identification or are in wares that could similarly have been produced in more than one phase of prehistory (Ware Group 4, Ssh/3 and sh/7; and Ware Group 8, Ssh/1). Sherds of this kind are from one of the Iron Age ditches and the subsoil (127 and (102)) and were the only pottery from one of the cremations, two pits and a posthole (112, 149, 172 and 236).

### **Fabrics**

The Iron Age and indeterminate pottery is made from 12 fabrics including one with Middle Bronze Age origins (Ware Group 2, S/1), all of which are hard with evenly distributed inclusions. These belong to eight ware groups, six of which are of contrasting character to those of the earlier prehistoric assemblage. The glauconitic sandy ware (Ware Group 9), with proportions of glauconite consistent with an origin in the Gault Clay, is the only identifiable non-local fabric. The nearest outcrops are located some 15 to 22 kilometres to the south-south-east and south of Cassington in the Abingdon area and the Vale of the White Horse (BGS Abingdon and Henley-on-Thames Sheets 253 and 254).

#### *Ware Group 4 – Shelly Fabrics*

*sh/7*: fine ware with moderate shell (0.1-2mm.)

*Ssh/3*: medium grade ware with sparse sub-rounded quartz sand (up to 1mm.), rare angular limestone (up to 3mm.) and moderate fossil shell (0.1 to 4mm.).

#### *Ware Group 6 – Fine Ware with Limestone*

*LSsh/1*: ware incorporating moderate angular limestone (0.1-2mm.), sparse sub-rounded quartz sand (up to 0.5mm.) and sparse fossil shell (up to 1mm.)

#### *Ware Group 7 – Medium Grade Sandy Fabrics with Quartzite*

*QSsh/1*: ware with abundant angular quartz sand (<0.0625-1.2mm.), sparse angular quartzite (up to 3mm.) and sparse shell (0.2 to 3mm.).

*QSsh/2*: fabric with common angular quartz sand (<0.125-1mm.), moderate angular to rounded quartzite (up to 3mm.) and sparse shell (up to 1mm.)

#### *Ware Group 8 – Fine Sandy Wares*

*LSsh/2*: ware with rare rounded clay pellets (up to 2mm.), sparse angular limestone (up to 1.5mm.), rare rounded quartzite (up to 2mm.), common sub-angular quartz sand (<0.0625-0.4mm.) and sparse fossil shell (up to 1mm.)

*Ssh/1*: ware with common sub-angular quartz sand (0.25-0.5mm.), rare rounded quartzite (up to 2mm.) and sparse shell (up to 2mm.)

*Ssh/2*: fabric with common sub-rounded quartz sand (0.125-0.5mm.) and sparse shell (0.1-1mm.)

*Ware Group 9 – Fine Glauconitic Sandy Ware*

*FglS/1*: ware with sparse angular burnt flint (up to 2mm.), moderate well-rounded glauconite (altered to limonite; 0.0625-0.25) and abundant angular quartz sand (0.0625-0.25, rare grain up to 0.7mm.)

*Ware Group 10 – Medium Grade Fabric with Calcareous Inclusions, Grog and Sand*

*clGS/1*: ware with a sparse mixture of limestone and fossil shell partly surviving as angular voids (0.2 to 4mm.), sparse grog (up to 2mm.) and sparse sub-rounded quartz sand (up to 1mm.)

*Ware Group 11 – Fine Grog Tempered Ware*

*GLSsh/1*: fabric with common grog (0.1 to 2mm.), sparse angular limestone (up to 2mm. with a rare fragment up to 3mm.), rare rounded quartzite (up to 2mm.), sparse sub-rounded quartz sand (up to 0.5mm.) and sparse fossil shell (up to 2mm.)

## **Discussion**

The Long-Necked Beaker (Fig. 11: P1) is one of a diverse range of vessels from Cassington including others of broadly similar form with incised decoration (Clarke 1970, Figs. 977 and 995). The sub-style has a currency in funerary contexts between *c.* 2200 and 1700 cal. BC (Needham 2005, 195-196 and Table 5) and without absolute dates it is not possible to refine this any further. Incised ornamentation is common on Beakers in the Oxford region and in this case its crudely executed character compares with the roughly drawn nature of the designs on a handled Beaker from Gravelly Guy (Barclay 1995a, Fig. 48B) and on other Long-Necked vessels from Eynsham (Case 1956, Fig. 5, Oxon. 17) and Oxford (Edwards 2003, 189 and Fig. 5). The Oxford Beaker is associated with a date of 2450 to 2040 cal. BC (Edwards 2003, 189), demonstrating that an apparently careless decorative technique is not necessarily a late attribute.

The combination of punctuated impressions and incised motifs is unusual and although there are no precise parallels, the decoration is clearly drawn from an established Beaker repertoire circulating in Oxfordshire that may have had a recognisable regional signature (*cf.* Case 1993, 257). A jabbed zone is coupled, for example, with more complex comb impressed motifs, possibly pendant and upright triangles on one of the sherds from Pit 1 at City Farm (Case *et. al.* 1964/5, Fig. 22.10). Similarly the design structure is reminiscent of that on the upper part of a Long-Necked Beaker from Oxford, where two parallel comb impressed lines sit above a broad zone of filled and reserved bar chevrons (Clark 1970, Fig. 931).

According to Clarke's classification the running chevrons are a lattice filled variant of Motif 27, which is part of his Late Northern British Motif Group 3 (Clarke 1970, 426). A diagonally filled comb impressed version was used locally on a Long-Necked Beaker from Eynsham (Clarke 1970, Fig. 993), while lattice pattern infill of Southern British Motif Group 4 elements is common to several Long-Necked or handled vessels from both Cassington and Eynsham (Clarke 1970, Figs. 977, 981, 986, 995 and 1069).

The Middle Bronze Age pottery exhibits a range of attributes shared by other Upper Thames assemblages. Bucket-shaped and sub-biconical vessels are common in the region, while an increasing number of Globular Urns have been identified during more recent excavations. Even so there are still relatively few well-preserved examples and although those from Cassington are far from complete, they do provide a reasonable impression of vessel style. The cremation urn (Fig. 11: P2) is notably large with a significantly greater diameter than the two vessels from the ring ditch (Fig. 11: P3-P4), which are closer in size to the majority of the Globular Urns from Appleford Sidings (Barclay 2009, 60 and Fig. 25.10-11) and to single examples from Ring Ditch 20 at Standlake (Catling 1982, 98-99 and Fig. 58.26; misidentified as an Early Iron Age bowl), Wantage (Raymond 2009, P4) and Lambourn (Peake 1931, Fig. 16). All three of the Cassington vessels are weakly carinated at the belly and are more angular in profile than those from Appleford Sidings (Barclay 2009, Fig. 25), Wantage (Raymond 2009, P4) or Lambourn (Peake 1931, Fig. 16).

Lugs are common on Globular Urns, with imperforate oval and circular forms (as Fig. 11: P4) occurring on Upper Thames vessels from Standlake (Catling 1982, Fig. 58.26), Wantage (Raymond 2009, two vessels including P4) and Lambourn (Peake 1931, Fig. 16). Horizontally perforated lugs (as on Fig. 0, P2) are set on the belly of a vessel also with geometric decoration from Appleford Sidings (Barclay 2009, Fig. 25.11) and are represented more frequently outside the region on some of the Type 1B forms of Central Wessex, as at Kimpton in Hampshire (Ellison 1981, Figs. 16 and 17) and on plain Lower Thames Valley Globulars from Yiewsley and Walton-on-Thames (Barrett 1973, 121 and Fig. 5.2). The triangular motifs on two of the Cassington vessels (Fig. 11: P2 and P3) have no precise parallels, although it is possible that three of the urns from Appleford Sidings may have been decorated with pendant triangles (Barclay 2009, 60 and Fig. 25.13-15). The design structure of zones defined by horizontal borders is a recurrent theme in the Upper Thames, as at Standlake (Catling 1982, Fig. 58.26), Appleford Sidings (Barclay 2009, Fig. 25.10-15, Fig. 26.17 and Fig. 26.19), Wantage (Raymond 2009, one vessel not illustrated) and Lambourn (Peake 1931, Fig. 16). Diagonally composed motifs and nested chevrons seem also to have been widespread, being represented at Yarnton (Barclay 1999, 35), Appleford Sidings (Barclay 2009, Fig. 25.10-15), Wantage (Raymond 2009, P4 and one other vessel) and Lambourn (Peake 1931, Fig. 16).

Vessels without geometric decoration (as Fig. 11: P4) are less common in the region. Examples include an unusually small Globular Urn from Appleford Sidings (Barclay 2009, Fig. 25.9) and two with applied cordons from Horcott near Fairford (Edwards 2009, Fig. 25: P22-23).

The selection of distinctive fabrics for Globular Urns, either tempered with grog, quartz/quartzite (as for Fig. 11: P3) or more commonly with flint (as for Fig. 11: P2 and P4) is typical of the region. Fine flint tempered wares were used for the vessels from Standlake (Catling 1982, 98-99 and Fig. 58.26), Radley (Cleal 2007, 209, P59), Appleford Sidings (Barclay 2009, 60-61, Fig. 25.9-15 and Fig. 26. 17-19), Berinsfield (Barclay 2010, Table A4:1) and Wantage (Raymond 2009, two vessels not illustrated) in Oxfordshire; and Horcott (Edwards 2009, 81-82) and Latton Lands (Timby 2004, 122 and Fig. 16.4) in Gloucestershire. Quartz and quartzite sometimes mixed with flint or grog has a similar association with Globular Urns (Barclay 2009, 60), as at Radley (Cleal 2007, 209, P6) and Drayton (Barclay 2003, 28), while examples from

Horcott (Edwards 2009, 81-82) and Cotswold Community (Brown and Mullin 2010, 11) are grog tempered. By contrast the shelly wares, which are prominent in the Middle Bronze Age assemblages of the region, seem to have been preferred for a wide variety of other forms including Bucket Urns (Case 1963, 29 and Fig. 10; Barclay 2009, 60; Edwards 2009, 82) and various sub-biconical vessels (O'Neil 1967, 30-32 and Fig. 3; Barclay 1995b), a trend which is supported by the Cassington assemblage. The patterns are complex, varying with the geology and almost certainly with local tradition. Where flint and quartzite were used for other vessel types, the Globular Urns are generally distinguished by a finer grade of tempering. At Cassington, for example, the quartz/quartzite in one of the Globular Urn fabrics (Fig. 11: P3) is considerably finer than in the ware selected for the bucket-shaped vessel (Fig. 11: P5). Similarly at Appleford Sidings the Globular Urn fabrics are fine, with the coarser flint being reserved for miniature vessels and Bucket Urns (Barclay 2009, 60-61). There are exceptions, as at Wantage, where a vessel decorated with nested chevrons and imperforate lugs was in the same medium grade flint tempered ware as one of the bucket urns (Raymond 2009, P2 and P4), although the other two Globular Urns from the same cremation cemetery were in more usual fine flinty fabrics.

At Cassington, as elsewhere, it is conceivable that the Ware Group 1 Globular Urns (Fig. 11: P2 and P4) are imports, but this is difficult to demonstrate since the flint could have been obtained locally (cf. Barclay 2009, 60-61). It is equally possible that the availability of different tempering materials allowed for the development of a tradition which used technology to emphasise the singular character of contrasting vessel styles.

The Late Bronze Age Hook-Rim Jar from the upper fill of the ring ditch (Fig. 11: P9) is a typical component of the Earliest Plain Ware assemblages of *c.* 1150 to 950 cal. BC including that from Eynsham (Barclay 2001, 131, Type V2). The flint tempered fabric used for this vessel is noteworthy for its rarity on Late Bronze Age sites in the Cassington area, as at Eynsham and Yarnton where such wares are very much in the minority (Barclay 2006, 74).

The few Earliest Iron sherds are typical of the pottery circulating in the region between *c.* 800 and 600/550 BC. Triangular motifs (Fig. 11: P12), for example, were used on one of the carinated bowls from Standlake (Catling 1982, 97 and Fig. 58.8), while chevrons (Fig. 11: P13) occur at the same site (Catling 1982, Fig. 58.7), on a carinated sherd from Appleford (Hinchliffe and Thomas 1980, Fig. 5.34), a tripartite bowl from Abingdon (Timby 2008, Fig. 31.4) and a fine vessel from Faringdon (Bryan, Brown and Barclay 2004, Fig. 26.21). The use of fingernail impressions rather than incision to produce the motif is unusual.

The assemblage demonstrates the continued production of fabrics tempered with quartz and quartzite (Ware Groups 2 and 7), which were prominent during the Late Bronze Age on sites in the eastern part of the Upper Thames valley as at Eynsham, Yarnton and Wallingford (Barclay 1999, 36; Barclay 2001, 130; and Barclay 2006, 74). The other wares including the shelly fabric with added grog (Ware Group 11) and the hard sandy fabrics (Ware Group 8) are consistent with some of the minority wares in circulation during the Earliest Iron Age and used on sites like Standlake (Catling 1982, 97) and Appleford (Hinchliffe and Thomas 1980, 20-24; De Roche and Lambrick 1980, 45-55).

## 5.2 Roman Pottery by Jane Timby

### Introduction

A small group of 21 sherds of pottery weighing 148.5 g dating to the latest Iron Age and Roman periods was recovered. This was accompanied by a single small lump of ceramic building material.

The pottery was recovered two ditches; 110 and 143 and a pit 303, with two finds from the evaluation trenches also relating to ditch 143.

Overall the assemblage is very poorly preserved. There is a single large basesherd weighing 90 g. The remaining group has an overall average sherd weight of just 2.9 g. In addition there is just a single rim-herd from the later prehistoric material and thus dating can only be approximate.

For the purposes of the assessment the assemblage was scanned to assess the likely chronology and quantified by sherd count and weight for each recorded context. The resulting data can be found in Table 11.

### Later Prehistoric

Some seven sherds have been provisionally dated to the later prehistoric period; two from ditch 110 and five from ditch 143. All the pieces appear to be in different fabrics.

The only featured sherd is a beaded rim jar from ditch 143 in a grog-tempered sandy ware. Typologically this would suggest a date in the later Iron Age or early Roman period. One body sherd from ditch 144 is decorated with two parallel horizontal lines.

Other fabrics include a black, glauconitic sandy ware; an iron-rich ware with finely crushed calcareous material; a grog and calcareous-tempered fabric and an iron-rich fabric with sparse quartzite.

It is difficult to know with such a small group comprising such tiny sherds whether they are contemporary.

### Roman

A total 13 sherds in the group are dated to the Roman period. This includes 11 pieces from pit 303; one sherd from the ditch 143 as found in the evaluation and probably another sherd from ditch 143.

The 11 sherds from pit 303 include one piece of Oxfordshire colour-coated ware still with a colour-coated surface and six sherds from an oxidised beaker which may have originally been colour-coated and belonging to Young (1977) type C22. The other sherds include two Oxfordshire grey sandy wares, a local black ware and a micaceous grey sandy ware. The colour-coated wares indicate a date from the mid-3<sup>rd</sup> century onwards for this feature.

The sherd from ditch 143 is a basesherd from a grey, handmade grog-tempered large jar. It is significantly larger than the other sherds and provisionally is more likely to be of Roman date rather than the late Iron Age. A small very thin-walled oxidised sherd from a wheel-made vessel of Roman date was recovered from 4/04=144.

### Undated

A single small sherd from ditch 110 with oxidised surfaces and a grey core and containing sparse ill-sorted quartz may be of post-Roman date.

### Ceramic building material (CBM)

A single abraded lump of CBM weighing 10 g was recovered from pit 303. Its association with the Roman pottery suggests it is likely to be of Roman origin.

### Potential and further work

This is quite a very small group of poorly preserved material which has very little further potential. It is possible that some of the sherds are residual or intrusive. No further work is recommended.

Cxt	Cut	Slot	Type	IA	Ro	no date	Tot No	Tot Wt	Date	Comment
111	110	10	ditch	1	0	0	1	1	IA	
111	110	10	ditch	0	0	1	1	2	uncertain	
111	110	10	ditch	1	0	0	1	2	IA	
144	143	12	ditch	1	0	0	1	10	IA	
144	143	12	ditch	1	0	0	1	3	IA	
144	143	64	ditch	0	1	0	1	90	Roman?	
144	143	11	ditch	1	0	0	1	4	LIA	
300	303		pit	0	11	0	11	33	240-400	cbm x1
3/04			ditch	1	0	0	1	2	IA	
4/04			ditch	1	1	0	2	1.5	Roman	
<b>Total</b>				<b>7</b>	<b>13</b>	<b>1</b>	<b>21</b>	<b>148.5</b>		

Tbale 11: Roman pottery

### 5.3 Lithics by David Gilbert

A total of seventeen struck flints were recovered during the excavation. Following Andrevsky (1998, 104) dorsal cortex is divided into four categories; the term primary flake refers to those with cortex covering 100% of the dorsal face while secondary flakes have cortex on between 50% to 99% of the dorsal face. Tertiary flakes have cortex on 1% to 49% of the dorsal face while flakes with no dorsal cortex are referred to as uncorticated.

One piece (SF 2) was a chocolate brown flint; the rest had a pale grey patina forming or were white. The majority displayed hard hammer techniques that suggests a late Neolithic-Bronze Age date. However, the presence of the three blades indicates a Late Mesolithic to early Neolithic element, although these are likely to be residual in



nature. The post-depositional damage to many of the pieces would also point to possible residuality within the assemblage.

Cxt	SF	Artefact	L (mm)	W (mm)	B (mm)	Notes
105		Tertiary Flake	31	25	4	Damaged
105		Core Fragment (?)	30	24	13	Damaged, signs of flake removal, 10g
105		Tertiary Flake	22	25	6	
105	1	Plano-convex Knife	37	29	8	
144		Scraper	25	23	7	Damaged in antiquity
175		Tertiary Flake	19	17	5	
179		Uncorticated Flake	39	25	10	
182		Uncorticated Flake	28	43	7	Proximal end missing
185		Blade	37	12	5	
185		Core Fragment (?)	40	28	12	Damaged, signs of flake removal, 16g
189	2	Blade	26	11	3	Proximal end missing
189		Uncorticated Flake	27	20	8	Damaged
189	3	Blade	32	16	3	Proximal end missing
231		Chip/fragment	15	12	6	
231		Thermal fractured				6g
233		Uncorticated Flake	45	18	9	Damaged
290		Tertiary Flake	25	30	11	Damaged

Table 12: Worked Flints

The presence of the two possible core fragments as well as the number of tertiary and uncorticated flakes may indicate that knapping was taking place close by, although the absence of primary and secondary flakes would indicate that core preparation had already taken place elsewhere.

#### 5.4 Human Remains *by Linzi Harvey*

##### Nature of Sample

Two complete burials, some disarticulated bone and a quantity of cremated human bone were recovered from the evaluation and subsequent excavation. Osteological analysis was undertaken on the human remains in order to ascertain basic demographic and health status information about the population. The excavated remains are prehistoric, assumed to be Bronze Age pending further tests and specialist artefact reports.

##### Methods

Inhumed (unburnt) skeletal remains were excavated by hand and bagged according to skeletal element and side. Skeletal remains were then washed in warm water with soft brushes in order to better assess age and sex related characteristics and observe pathological conditions if present. Remains were examined macroscopically in natural light, with x10 magnification where necessary. Skeletal and dental inventories were compiled for each individual and recorded onto paper record forms following both IFA and English Heritage standards and guidelines (Brickley & McKinley 2004 and Mays & Brickley *et al* 2004, respectively). Additional references were consulted as required.

Cremated remains were found in numerous features across the site. When encountered, features were excavated by hand with 100% of the deposit processed as an environmental sample. The analysis of the resulting material was undertaken in accordance with standard guidelines (McKinley 2004). The total weight of each cremation deposit was determined to the nearest gram and the minimum and maximum fragment size noted. Colour and appearance of the cremated bone was also recorded. The presence and weight of fragments from all skeletal areas (skull, axial skeleton, upper and lower limbs) was recorded. Each sample over 100g in weight was assessed for age, sex and pathology. Additional references were consulted as required.

## Results

For clarity, the results of the skeletal analysis are presented separately for the inhumed remains and cremated material. Cremated material is typically less informative than buried remains due to the high degree of fragmentation, warping and shrinkage exhibited by burnt bones. However, the appearance of cremated bone and the composition of cremation deposits can inform on pyre conditions, which is discussed further below – The Cremation Process.

## MNI

The assemblage represents a minimum of 9 individuals (Table 13), including adults and sub-adults (See Appendices 1, 2 and 3). Both inhumations (SK1 and SK2) were near complete, whilst other individuals are represented by small amounts of unburnt material (a disarticulated and fragmentary mandible from context 212, for example) or varying amounts of cremated material. The MNI should be thought of as a conservative estimate of the number of individuals represented across the site however, with the number of individuals originally deposited at the site (in whole or part) much higher.

	MNI
Inhumations or unburnt/disarticulated remains	4
Cremated human bone	5
<b>TOTAL</b>	<b>9</b>

Table 13: Minimum Number of Individuals

## Inhumations

Two individuals were excavated as single and near complete burials. It was noted during post-excavation processing that bones from an additional individual were excavated with SK. 1. This was indeed the case, with a handful of sub-adult bones (SK. 3) found mixed in with the adult remains. These remains did not appear to represent a complete sub-adult however, consisting of 10 small rib fragments, two fragments of cervical vertebrae, several hand and foot phalanges and a single deciduous upper central incisor. Based on the tooth, this individual would have been between 4 and 6 years old at death. As these remains were found during the processing of SK1, it is not known how they related to SK1 or the burial context, or if they are from the same individual – although no elements were obviously repeated.

## Burial position and preservation

SK. 1 was found buried at the base of the ring ditch, in a flexed position, her head and upper body collapsed between her legs (Pl. 7). The tightly constrained burial position suggests a ‘seated burial’, achieved by placing the seated individual, with their knees

on their chest upright in the pit, with subsequent decomposition allowing the skull to fall into the cavity left by the thorax. It is possible the individual was bound into position prior to deposition. Fragments of animal bone were also found in the backfill of the burial pit, although no grave goods were found. Preservation was assessed on a three-point scale with '1' indicating excellent bone surface with no erosion, '2' indicating fair preservation with some loss of detail and '3' representing poorly preserved and damaged bone. SK. 1 was moderately preserved, scoring 2-3 on this scale.

SK. 2 was also recovered from the ring ditch. She was found flexed, lying on her left side with her right arm across her abdomen and her left arm flexed, hand by the side of her head (Pl. 6). This crouched burial position is typical of Neolithic and Bronze Age funerary practices in early England (Taylor 2001). No grave goods were observed and no other bones, human or animal were recovered with her skeleton. Preservation was generally very good, with SK. 2 scoring 1-2 on the scale described above.

The seated burial position of SK. 1 is noteworthy as very few examples of this position have been found in the UK (Knusel 2014, personal communication). A seated burial was found during excavations at the Iron Age site of Garton and Wetwang Slacks, East Riding (Brewster 1980) and a more local example (although excavated in the 19<sup>th</sup> century) from Sarsden, 20 miles north-west of Cassington where 'Lord Ducie found two skeletons, each in a little chamber in a sitting position...' (Salzman 1939). This was considered to be early Bronze Age in date. Examples from the Middle East have been published, including a sitting burial from an early Epipalaeolithic site in Jordan (Richter *et al* 2010). Suffice to say, the burial position is unusual and few examples have been published to date.

### **Sex**

Estimation of sex was only considered appropriate for the adult sample and was based on macroscopic observation of key skeletal landmarks in the cranium/mandible and pelvis. Metrical data was also taken to aid sex identification, including femur and humeral head diameters.

Both complete skeletons were small, gracile individuals with the majority of skeletal features observable consistent with them being female. Metric values of the long bones were consistently at or below typical female values.

### **Age**

Age at death estimation was based on a number of commonly used aging techniques. The adult sample was aged using epiphyseal fusion data (Schwartz 1995), age-related changes of the pubic symphysis and the auricular surfaces of the ilium (Buikstra & Ubelaker 1994, Schwartz 1995) and dental attrition (Brothwell 1981) where appropriate. The age of the sub-adult and neonatal sample was determined using epiphyseal fusion data and dental development (Moorrees *et al* 1963ab).

SK. 1 was between 25 to 32 years old at death, based on the recent fusion of the first and second sacral vertebrae and an auricular surface composite score of 7 (Buckberry & Chamberlain 2002). SK. 2 was probably older, aged between 30 and 45 years old at

death. This estimate is based on auricular surface composite score of 13 (Buckberry & Chamberlain 2002) and a stage five pubic symphysis (Suchey & Brooks 2000).

### Stature

Stature was determined using the maximum lengths of complete long bones and formulae developed by Trotter (1970). Stature could only be determined for the two complete inhumations, since these were the only individuals with complete long bones present.

SK. 1 was found to be around 162cm (5'4") tall, whilst SK2 was shorter at around 158cm (5'2"). Both of these stature estimates are lower than the modern UK average of 164.4cm (5'5") for an adult woman, but around Neolithic and Bronze Age female average heights of 157cm and 161cm respectively (Roberts & Cox 2003:396).

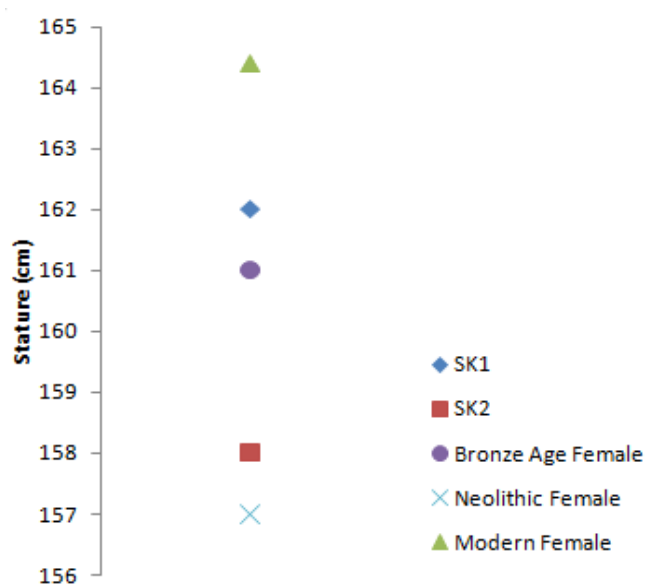


Figure 12: Stature of SK. 1 and SK. 2 cf average Neolithic, Bronze Age and modern female statures

### Pathology and trauma

Pathological changes were recorded using guidelines set out by the British Association of Biological Anthropologists and Osteologists (Roberts & Connell 2004). Basic pathological information was obtained from Roberts & Cox (2003) and Aufderheide & Rodríguez-Martin (1998), with additional references as required.

Despite the paucity of material, a number of pathological conditions were observed in the assemblage. These included a possible case of healed porotic hyperostosis in a small area of the left parietal of SK. 1 (Pl. 14). Porotic hyperostosis is usually associated with iron deficiency anaemia (Goodman & Martin 2002: 27) or maternal Vitamin B12 deficiency (Walker *et al* 2009: 119) and is evidenced by small dimples in the outer surface of the cranium.



Plate 14: Parietal fragment from SK. 1, showing small dimples in the outer table indicative of porotic hyperostosis

SK. 1 also had two ankylosed toes, with abnormal fusion of the intermediate and distal phalanges (Pl. 15). Ankylosis can occur for a number of reasons, including trauma, infection and degenerative joint disease. The foot phalanges are particularly susceptible to trauma related ankylosis, since damage to the extremities is a common occurrence in humans (e.g. stubbing toes or dropping objects on them from height).



Plate 15: Ankylosed toe, SK. 1. Scale 2cm.



Plate 16: Possible healed fracture of the right distal ulna, SK. 2. Scale bar 5cm

SK. 2 had a possible healed fracture of the right ulna, with slight displacement, thickening and osteophytic action around 5cm along the shaft from the distal articulation (Pl. 16). The corresponding radius was not affected. Isolated ulna

fractures are not common, but can be caused by direct trauma when ‘the forearm is used to block an assault to the head and neck’ (Dymond 1984: 408), although it is possible that accidental, rather than interpersonal violence was the cause of the injury.

SK. 2 also had some signs of degenerative spinal disease in the form of osteophytic lipping of the anterior bodies of some lumbar and thoracic vertebrae. This kind of degeneration is often termed osteoarthritis in modern populations (although it is only mildly expressed in SK. 2) and is commensurate with her older age

### **Dental**

The recording of dental pathology, where dental remains were present, covered five pathological changes: dental caries (cavities), dental abscesses, calculus deposits, periodontal disease and hypoplastic defects. Each observation was recorded by tooth or tooth position.

A total of 53 teeth were recovered between SK. 1 and SK. 2. SK. 2 had fewer teeth left *in situ*, with seven lost post-mortem, versus two missing teeth in SK1. A single tooth was lost antemortem, the lower right first molar in SK. 2. There were a total of five dental caries, the majority of which (and the most severe) were observed in SK. 2 (Pl. 17). Both individuals also had dental abscesses. In the case of SK. 2, the abscess was associated with the severe dental caries in the left side of the mandible (Pl. 17). Low levels of dental calculus were noted in SK. 1, associated with anterior dental crowding. Periodontal disease was noted in both individuals, again particularly associated with the cavities exhibited by SK. 2. There were no instances of dental enamel hypoplasia in either SK. 1 or SK. 2.



Plate 17: Left mandibular dentition showing dental caries, abscess and periodontal disease in SK. 2

### **Disarticulated material**

Some disarticulated bone was recovered from Cassington, including an adult mandible from (212) and a proximal tibia shaft fragment from (350). The mandible was in three parts which fit together, and was in generally good condition. However just two teeth were found *in situ*, the rest lost post-mortem. The tibia fragment was less well preserved with loss of surface detail in the articular region. The disarticulated material was too incomplete to age or sex. No pathologies were observed. Given the close proximity of these adult bone fragments - which were both

from the top fill of the ring ditch - it is impossible to say whether they represent different individuals.

### **Cremated bone and other fragmentary material**

All cremated material was weighed and scanned for fragments diagnostic of age, sex and pathology. The vast majority of samples retrieved contained small amounts of cremated bone (less than 100g in weight). Some of the samples were undiagnostic as to species, either consistent with human or designated as animal bone (see Appendix 2). The material recovered from sample <12> appears to be very small charcoal or burnt wood fragments. It is likely that these small amounts of cremated human bone form cenotaph deposits or redeposited cremation related deposits (McKinley 2004: 10) rather than complete cremation burials.

Only four cremation deposits weighed more than 100g and were thus subjected to a more detailed level of analysis. They varied from 297g to 1044g. These are described in Appendix 3. The weight of bone recovered from an adult cremation can range roughly between 1000 and 3600g (McKinley 2000: 404). It is possible that less than 50% of the bone remaining after a cremation was included in subsequent collection and burial (McKinley 2000: 408), so smaller amounts of cremated material can be consistent with an individual burial.

<b>Sample no.</b>	<b>Context</b>	<b>Weight (g)</b>
<20>	(3/06)	1044
<5>	(122)	372
<9>	(134)	297
<18>	(231)	945

Table 14: Samples with more than 100g of cremated bone

All cremation deposits outlined in Table contained identifiable bone fragments from the skull, axial body and upper and lower limbs. No elements were found to be repeated in any sample. The Minimum Number of Individuals was determined on the weight of the deposit and consistency within the sample regarding age and the robusticity or gracility of the fragments.

### **The cremation process**

Much of the cremated bone from Cassington was mottled in appearance, ranging from well fired and white to blue-grey and black. The material from 3/06 was notable for containing very few black fragments in comparison with the other larger samples, which had numerous fragments that were darker coloured and charred in appearance. Experimental work to determine the effect of time and temperature of the colour of cremated bone has shown that a simplistic relationship between bone colour and pyre temperature is erroneous (Walker *et al* 2008), although there is a general correlation between higher temperatures and a higher proportion of white oxidised bone in the sample.

It is likely that the pyres used at Cassington reached the higher temperatures (over 600°C and possibly upwards of 1000°C) required for oxidisation of bone, but some parts of the body may not have been subjected to the same heat, with the charred fragments reflecting a lower temperature of around 300°C. The identifiable fragments did not show consistent patterning to suggest particular body parts (e.g. extremities

such as the hands and feet) fell consistently outside of the hottest part of the pyre however, with phalanges represented by both well fired and charred examples in the same sample. Factors such as body fat coverage can also influence the subsequent burning of bone, with bones covered in dense soft tissue not cremating as fully as bones without (McKinley 2000: 405), although observations in modern crematoria have shown that a fatter body tends to burn better than a thinner one (Mays 1998: 220) at least initially.

Modern cremations usually take between 1 – 1.5 hours to complete (McKinley 2000: 404) but cremation that takes place outside these tightly controlled environments (in which oxygen levels can be increased, for example) can take much longer, upwards of three hours depending on wind, precipitation and the quantity/quality of fuel available.

Fragment size was variable between samples, with the smaller, lighter samples generally containing small individual fragments (less than 25mm across). The larger samples contained fragments ranging between 1 to 83mm. On average (combining all samples over 100g in weight) there were similar weights of the two larger fractions recovered, 42% for the greater than 10mm and 40% for the 5-10mm, with the smallest amount of material retrieved from the less than 5mm fraction (18%), see Figure 13. As with most cremation deposits, it is likely that excavation and flotation have increased the fragmentation of the samples, resulting in more fragments recovered in the smaller fractions.

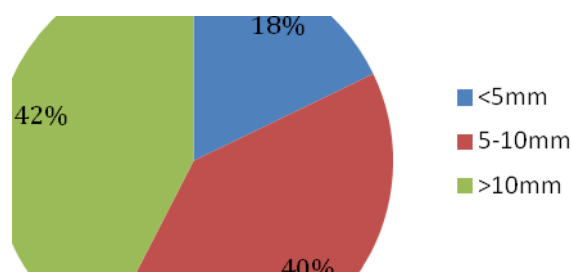


Figure 13: Pie chart showing average percentages of different factions (samples, <5>, <9>, <18> and <20>)

### Age and Sex

Age estimation could only be based on the presence of adult tooth roots and larger sized skeletal elements. There were no clearly sub-adult bones found in the cremated material. Some adult tooth crowns were retrieved from samples <20> and <5>. The preservation of such complete crowns only tends to happen when the adult crown is positioned, unerupted, in the protective bone of the jaw (Mays 1998: 214). However, in both samples, the complete crowns are the only elements that point to a younger individual. For instance, in sample <5> a well preserved fragment of adult axis vertebrae was recovered and large fragments of thick walled long bone were



recovered from both samples. Therefore, tentative adult age estimations have been given to all four larger samples (Table 15, also see Appendix 3) although it is possible that more than one individual is actually present, mixed in with the majority of another.

Sample no.	Context	Age
<20>	(3/06)	?Adult
<5>	(122)	?Adult
<9>	(134)	?
<18>	(231)	Adult

Table 15: Age estimation, cremated material

Sex could not be determined for the cremated material as no sexually diagnostic material was recovered. It is possible that the very gracile nature of the remains from sample <9> might indicate a female individual, but this is not possible to confirm.

### Pathology

One possible hypoplastic defect was found in a permanent canine crown in material from context 3/06 (Pl. 18). Dental enamel hypoplasias are usually associated with periods of ill health or malnutrition in developing individuals (Hillson 1996: 291) and may indicate such a period in the early development of this individual. No other pathologies were noted, which is not surprising given the altered nature of the material (Mays 1998: 215).



Plate 18: Dental enamel hypoplasia in cremated material from 3/06. Scale bar 1cm

### Discussion

The mixing of burial traditions such as inhumation and cremation are a common feature of prehistoric funerary sites (Roberts & Cox 2003: 55, 74). The deposition of frequent small amounts of cremated material has been seen as an act of remembrance or legitimising personal ties to landscape, in both the Neolithic and Bronze Age where 'contemporary involvement with agriculture' and land boundaries (Taylor 2001: 35) may have influenced funerary practice. Previous excavations of prehistoric sites in Cassington have found similar small amounts of cremated bone in post-hole and pit

deposits (Atkinson 1946, Clough 2005), indicating that this kind of ritual deposition of cremated material was being undertaken across this area, probably for some time.

The two complete inhumations found buried within the ring ditch itself appear to be ordinary women, one in her twenties, the other in her late thirties or early forties. Although the sample is too small to provide a great deal of information about the wider lives of the population using the site, some pathological conditions were observed that would have affected the lives of those individuals. There were instances of possible childhood nutritional deficiencies evidenced by porotic hyperostosis, ankylosis of some small toe bones, a healed fracture of the forearm, mild spinal joint disease in SK. 2 and dental problems, relating primarily to dental cavities and abscesses in both individuals. Some disarticulated remains were also recovered, including a handful of sub-adult bones (SK. 3) found with SK. 1, indicating some post-mortem manipulation or movement of remains across the site.

The most notable feature of the assemblage from Cassington is not the bones themselves however, but rather the burial position of SK. 1. The apparent seated burial of SK. 1 is of interest because it is relatively unusual in the UK. The upright, constricted and collapsed in appearance is indicative of a method of prehistoric funerary treatment not commonly observed. With this well documented discovery at Cassington, it is hoped that this burial practice will eventually become better understood regionally and nationally.

### **Recommendations**

Due to the well-preserved nature of much of the cremated material and the unusual burial position of SK1, it is recommended that the Cassington assemblage is retained and deposited at the appropriate museum to encourage further research on the remains. It is very likely that more remains would be recovered from the site should further excavation be undertaken to the north-west of the excavated area and the rest of the ring ditch be revealed.

### **5.5 Animal Remains by Claire Ingrem**

This report considers the animal remains recovered during the investigations. The investigations revealed deposits dating from the Late Neolithic through to the Roman period; the major feature discovered was an Early Bronze Age ring ditch whose upper fills are Middle/Late Bronze Age in date and these produced most of the animal bone. Two Middle Bronze Age graves and several cremation burials of Middle to Late Bronze Age date also produced small samples of animal bone. Other features include a Late Neolithic/ Early Bronze Age pit and linear ditches, postholes and pits of Iron Age and Roman date.

### **Methods**

The animal bone was identified and recorded during 2015 with the aid of the authors' personal reference collection. All fragments greater than 10mm were recorded to species or size category to produce a basic fragment count of the Number of Identified Specimens (NISP). All anatomical elements were identified to species where possible with the exception of ribs and vertebrae which were assigned to size categories. Fragments categorised as large mammal are likely to belong to horse or cattle and those in the medium mammal category to sheep/goat or pig. Mandibles and limb

bones were recorded using the zonal method developed by Serjeantson (1996) to allow the calculation of the minimum number of elements (MNE) and the minimum number of individuals (MNI); this is based on the most numerous zone of a single element taking into account side. The presence of gnawing, burning and butchery together with the agent responsible was recorded.

Measurements were taken according to the conventions of von den Driesch (1976). The fusion stage of post-cranial bones was recorded and age ranges estimated according to Getty (1975). A selected suite of elements was used to differentiate between sheep and goat during recording according to the methods of Boessneck (1969) and Payne (1985). These were the distal humerus, proximal radius, metapodials, astragalus, calcaneum and deciduous fourth premolar. No elements belonging to sheep or goat were positively identified therefore the ovicaprids remains are referred to as sheep/goat.

### Data

A total of 296 fragments of animal bone were recovered by hand collection of which 23% (n= 68) are identifiable (Table 16i). The majority came from Middle/Late Bronze Age deposits and a smaller sample was recovered from Late Neolithic/Early Bronze Age contexts; the remaining nine specimens are of broader or uncertain date. Overall cattle is the most numerous species although sheep/goat, pig and several other species including horse, dog, fox (*Vulpes vulpes*), badger (*Meles meles*) and red deer (*Cervus elaphus*) are present.

	LN/EBA	MBA-LBA	MBA-LIA	MBA-LR	?EBA	?MBA	?prehistoric	u/s	Total
Horse		1	1						2
Cattle		26		1	1	1			29
cf. cattle	5	1							6
Sheep/goat	5	3	1	1				1	11
Pig	2	10							12
Dog		1							1
<i>Vulpes vulpes</i>		1				1			2
<i>Meles meles</i>		1			1				2
<i>Cervus elaphus</i>	2								2
cf cervid		1							1
Large mammal	3	57	1	5	1	4	1		72
Medium mammal	5	9	2	1		1			18
Small mammal	1	5		1					7
Unidentifiable	13	99	6		8	4	1		131
Total	36	215	11	9	11	11	2	1	296
Total identifiable	14	45	2	2	2	2		1	68
% identifiable	39	21	18	22	18	18		100	23

Table 16i: Taxa representation according to date (NISP) – hand collected

	LN/EBA	MBA-LBA	Total
Pig	1	1	2
Rodent	2	1	3
Amphibian		7	7
<i>Cyprinid</i>		1	1
Unidentifiable	7		7
Total	10	10	20
Total identifiable	3	10	13
% identifiable	30	100	65

Table 16ii Taxa representation according to date (NISP)  
– sieved samples

Sieved samples recovered from Late Neolithic/Early Bronze and Middle/Late Bronze deposits produced an additional 13 specimens (Table 16ii). Pig and cyprinid fish are both present but most belong to amphibians and rodents and probably represent natural casualties so will not be discussed further.

#### Late Neolithic/Early Bronze Age

Fourteen identifiable specimens were recovered by hand collection and a further three pieces came from the sieved samples. Five specimens belonging to sheep/goat, three to pig and two to red deer; in addition five fragments of horn core probably belong to cattle. (Table 16i & ii).

The sheep/goat bones are mostly from the hind limb (femur, tibia and metatarsals) although a metacarpal is also present (Table 17i). Pig is represented by a lower premolar, a fibula and a metacarpal. A proximal femur belonging to a sheep/goat has an unfused epiphysis so derives from a sub-adult animal.

	cf. cattle	Sheep/goat	Pig	<i>Cervus elaphus</i>	Large mammal	Medium mammal
Antler				2		
Horn core	5					
Lower premolar			1			
Mandible					1	
Femur		1				
Tibia		1				
Fibula			1			
Metacarpal		1	1			
Metapodial					1	
Metatarsal		2				
Limb bone fragment						5
Total	5	5	3	2	2	5

Table 17i: Anatomical representation of major taxa (NISP) – Late Neolithic/Early Bronze Age

The two red deer specimens are antler points but it is uncertain whether they were naturally shed or derive from animals obtained by hunting. Both pieces display chop marks around their circumferences (Pl. 19 & 20).



Plate 19: Red deer antler with chop marks



Plate 20: Red deer antler with chop marks

The majority of the material came from a single pit context (189) and a few pieces were recovered from the ring ditch (context 3/12) during the evaluation (Tables 20 & appendix 2)

### **Middle/Late Bronze Age**

A total of 45 identifiable specimens were recovered by hand from Middle/Late Bronze Age deposits and a further 10 pieces came from the sieved samples (Table 16i & ii). Cattle are the most numerous taxa according to NISP followed by pig; the calculation of MNI supports this with a minimum of two cattle, one sheep/goat and one pig represented. Horse, dog, fox and badger are also present.

Cattle are represented by elements from most parts of the skeleton – head, major limbs and feet (Table 17ii). Similarly, the small pig assemblage contains elements from most parts of the carcass. A radius, tibia and metatarsal are the only sheep/goat remains. Horse and dog are represented by single mandibles whilst fox and badger are both represented by a tibia. A partial lower pharyngeal belongs to a cyprinid fish and may have been deposited at the site by a non-human piscivore such as an otter (*Lutra lutra*).

	Cattle	Sheep/goat	Pig	Large mammal	Medium mammal
Horn core	1				
Frontal	1				
Zygomatic	1				
Incisor			2		
Upper molar	2				
Lower premolar			1		
Mandible			1		
Humerus	3				
Radius	4	1	1	1	1
Ulna				1	
Pelvis	1			2	
Femur	2			1	
Tibia		1			1
Astragalus			1		
Calcaneus	3				
Metacarpal	1				
Metapodial	1		1	1	1
Metatarsal	2	1			
1st phalanx	3				
2nd phalanx	1				
Rib				3	
Skull fargament				6	
Limb bone fragment				6	2
Rib fragment				8	2
Vertebra fragment				2	
<b>Total</b>	26	3	7	31	7

Table 17ii: Anatomical representation of major taxa (NISP)  
– Middle/Late Bronze Age

A few cattle bones provide ageing data including two unfused 1<sup>st</sup> phalanges indicating that at least one cow/steer died before reaching 24 months (Table 18). A pig radius has an unfused proximal epiphysis so derives from an animal that died during its first year.

Approximate age of fusion	Element	Fused	Unfused
7-10 months	Pelvis	1	
12-15 months	Radius,p	3	
15-18 months	Phalanx II	1	
20-24 months	Phalanx I	1	2
24-30 months	Metacarpal		1
24-30 months	Metapodial		1

Table 18: Epiphyseal fusion data of cattle bones recovered from Middle/Late Bronze Age deposits (NISP)

Two bones possess cut marks: a cattle calcaneus and a pig astragalus (Table 19; Pl. 21 & 22). Six cattle bones display gnaw marks.

	Gnawed	Butchered	
		cut	chop
LN/EBA			2
MBA-LBA	6	2	
MBA or EIA		1	
<b>Total</b>	6	3	2

Table 19: Incidence of taphonomy



Plate 21: Cattle calcaneus with cut marks

The majority of the animal bone was recovered from contexts associated with the ring ditch (Table 20) particularly contexts 179, 218 and 304 (Appendix 1) although the grave fill (context 185) produced the largest number of bones from a single deposit including five belonging to cattle and the fish bone.

A few bones provide metrical data and these are given in Appendix 2.



Plate 22: Pig astragalus with cut marks

	Pit	Ring ditch	Total
cf. cattle	5		5
Sheep/goat	4	1	5
Pig	3		3
<i>Cervus elaphus</i>	2		2
Rodent	2		2
Large mammal	2	1	3
Medium mammal	3	2	5
Small mammal	1		1
<b>Total</b>	22	4	26

Table 20i: Taxa representation according to feature type (NISP) – Late Neolithic/Early Bronze Age

	Crementation urn	Grave	Ring ditch	Total
Horse			1	1
Cattle		5	21	26
cf. cattle			1	1
Sheep/goat			3	3
Pig			7	7
Dog			1	1
<i>Vulpes vulpes</i>			1	1
<i>Meles meles</i>			1	1
cf cervid			1	1
Rodent		1		1
Amphibian		7		7
<i>Cyprinid</i>		1		1
cf. Human			2	2



Large mammal	1	14	41	56
Medium mammal			8	8
Small mammal			5	5
<b>Total</b>	1	28	93	122

Table 20ii: Taxa representation according to feature type (NISP) – Middle/Late Bronze Age

*Miscellaneous deposits (Late Bronze Age – Roman)*

Nine specimens came from deposits of broad or uncertain but are not discussed further although they are listed in Table 16i for information purposes.

### **Discussion and interpretation**

Evidence for the exploitation of domestic animals is usual in assemblages from the Neolithic period onwards and by the Early Bronze Age secondary products (milk, wool, traction) appear to have become increasingly important in the economy (Bökönyi, 1974; Sherratt, 1981). Animal bone assemblages from Bronze Age deposits are relatively scarce in Britain although large samples have been recovered from a few sites including a Middle Bronze Age midden at Grimes Graves, Norfolk (Legge, 1992), Late Bronze Age deposits at Runnymede Bridge, Surrey (Done, 1991; Serjeantson, 1996), Early and Middle Bronze Age (Unit 5b & 6) structures at Brean Down, Somerset (Levitan, 1990) and a Late Bronze Age/Iron Age midden at Llanmaes in the Vale of Glamorgan (Madgwick, 2011). Small assemblages are more numerous and these have been recovered from various sites such as Caldicot on the Severn Estuary (McCormick, 1997), Down Farm, Wilts (Legge, 1991), Winnall Down, Hampshire (Maltby, 1985), Spratsgate Lane, Somerford Keynes (Ingrem, n.d.) and Peterstone (Ingrem, 2013) although in some cases few fragments are identifiable.

The Late Neolithic/Early Bronze Age assemblage from Cassington is also small so cannot provide reliable data on which to base interpretations concerning subsistence or cultural practices. Whilst it is almost certain that domestic sheep/goat, pigs and probably cattle were exploited for meat, the red deer antler could have been naturally shed and collected rather than removed from one or more carcasses obtained by hunting. Both pieces of antler have been worked although the purpose for which they were intended is unclear. Antler was clearly valued as a raw material for making a variety of artefacts and tools during the Neolithic and Early Bronze Age periods when they are generally assumed to have been the principal implement for digging ditches and postholes (Serjeantson, 1995).

The Middle/Late Bronze Age assemblage is larger but still relatively small and consequently any interpretations based on the data must be treated with extreme caution. However, the assemblage is clearly dominated by the major domestic animals cattle, pig and caprines but their relative abundance is less certain. Fragment counts suggest that cattle were the most numerous taxon but this might represent the restricted range of features excavated at the site and the fact that the majority of the assemblage came from the ring ditch. The effects that differential deposition can have on taxa representation are well known (Maltby, 1985) since the tendency to slaughter large animals such as cattle on the outskirts of settlements results in primary waste

being deposited in ditches whereas the meat from caprines and pigs is more likely to be spit roasted whole with the resulting waste disposed of in more centrally placed pits. In addition, preservation conditions are generally poorer in ditches than they are in enclosed deposits such as pits and hence bones belonging to smaller animals are less likely to survive.

Previous investigations at Yarnton and Cassington revealed evidence for continuous human habitation on the floodplain and the higher second gravel terrace from the Neolithic period onwards. The samples of animal bone recovered during this work are fairly small but Bronze Age material was recovered from a variety of features associated with domestic and funerary activities and this similarly suggests that cattle were more frequent than caprines or pig (Mulville, *pers comm*). Here, the effects of differential deposition are clearly visible with a higher frequency of cattle compared with caprines recovered from ditch and gravel surface deposits whereas caprines outnumber cattle in the pits. Pig remains are generally scarce in all types of deposits and in this respect the assemblage contrasts with that currently being reported on.

Cattle are the dominant taxa at some other Bronze Age sites including Grimes Graves (Legge, 1992) and Peterstone (Ingrem, n.d). However, a predominance of cattle is by no means ubiquitous during this period since sheep/goat outnumber cattle at Runnymede Bridge (Done, 1991; Serjeantson, 1996) and Brean Down (Levitan, 1990). At the latter, there is considerable spatial variation in taxa representation particularly within and around the structures which again highlights the problems caused by differential deposition. Cattle would have been better suited to the environmental condition of the flood plain at Cassington than caprines but the relatively high frequency of caprines in the pits at Yarnton suggests they were also raised locally. Pigs tend to be quite common at sites of Neolithic and Late Bronze Age date which Serjeantson (1996: 219) suggests might be due to dietary preference and the availability of suitable forage. Pigs are omnivorous and in the wild their diet includes a wide range of plant foods including stems, nuts and roots as well as insect larvae, worms, eggs and amphibians so it is likely that suitable forage would have been available in the locality perhaps supplemented with domestic food waste.

Despite the small samples, the range of elements present suggests that whole carcasses belonging to cattle, pig and most probably sheep/goat were originally present and brought in on the hoof having been raised in proximity to the site. Ageing data is extremely scarce and as a result it has not been possible to construct mortality profiles but it is clear that some beef and pork came from immature animals and these were probably raised solely to provide good quality meat. As was normal practice during prehistory, cut marks visible on tarsal bones suggest that carcasses were disarticulated by cutting through the soft tissue surrounding the joints.

Horse remains become increasingly common from the Early Bronze Age and by the Late Bronze Age they are present in most assemblages from Southern Britain including Caldicot and Grimes Graves; at the latter the absence of mandibles led to the suggestion that they were feral animals captured and killed away from the settlement (Legge, 1982). Horses were present at Cassington but there is no evidence to suggest they were eaten.

The presence of dog is attested at most of the Bronze Age sites discussed in this report with the highest incidence of dog and fox seen at Caldicot where a near complete skeleton of a large dog was scattered over an area of about one metre and a calcaneus had knife marks suggestive of skinning. Dog remains are scarce at Cassington as was the case at Grimes Graves and Runnymede Bridge although their presence is also attested by gnaw marks so clearly some bone waste was available to them. Dogs would have been kept for hunting, guarding and perhaps as companion animals although feral dogs probably also lived in the vicinity in order to take advantage of the rich picking on offer at human settlements.

The pelts of wild animals including those belonging to foxes and badgers would have been valued and so hunting might account for their presence although it possible that bones derived from natural fatalities became accidentally incorporated in the deposits. Several cattle bones came from a grave along with the rodent, amphibian and fish bones, however this deposit contained residual pottery and so the true origin of these remains is also uncertain.

## Conclusion

The assemblages of animal bone recovered from the Late Neolithic/Early Bronze Age and Middle/Late Bronze Age deposits at Cassington are small and derive from a restricted range of features. As a result the remains are unable to provide detailed information concerning animal husbandry or cultural practices although it is almost certain that the majority of the meat eaten came from domestic animals (cattle, sheep and pigs) with horses and dogs kept primarily for other purposes. Antler would have been a valuable source of raw material but it is uncertain if in this case, it was obtained by hunting or by collecting naturally shed antlers.

## 5.6 Miscellaneous finds

During the excavation five miscellaneous finds were recovered. The group compressed of one fragment of clay tobacco pipe stem, one fragment of daub, one iron nail, five fragments of an unknown copper alloy object and seven fragments of metalworking slag. The date of the finds varies from middle Bronze Age to the Post-medieval period. For more details see Table 21.

Context	Identity	Material	Completeness	Length	Width	Thickness	Weight	Date
(101)	Clay tobacco pipe	Fired clay	Fragment of stem	37mm	9mm	7mm	3g	Post-medieval
(162)	Slag	Uncertain	7 fragments	7-13mm	5-9mm	3-7mm	<1g	Middle Bronze Age
(179) SF 4	Unknown	Cu-alloy	5 fragments	c. 1mm	<1mm	<1mm	<1g	Late Bronze Age
(231)	Daub	Fired clay	1 fragment	32mm	22mm	7mm	3g	Middle Bronze Age
(300)	Nail	Iron	Incomplete	43mm	6mm	5mm	4g	Late Roman

Table 21: Miscellaneous finds

## 5.7 Palaeo-environmental Remains

Following the published guidelines specified in the WSI, twenty bulk soil samples of between 10 to 80 litres were taken from 19 selected contexts. The majority of the context represent fills of cremation burials; however fills of significant pits, skeletal

burials, postholes and the ring ditch were taken as well. All samples were floated, and prepared for further analysis. However, apart of osteological and ceramic material recovered from samples no further analyse has been carried out.

## 6 DISCUSSION

The archaeological investigations at Yarnton Road in Cassington were successful and met the aims as laid out in the WSI. The main scope of excavation was focussed on the ring ditch and surrounding area, where the highest concentration of archaeological features was situated. Dating evidence revealed human activities within the development area from the early Bronze Age up to the present day.

During the Bronze Age period the site was primarily used as a burial ground, although there is the possibility of some short-term settlement activity at the beginning of the early Bronze Age, associated with the Beaker culture.

The Beaker activity within the development area was represented by pit 188 and postholes possibly associated with this pit. The character of the features and finds recovered from pit 188 suggest domestic or short-term, task-specific activities, rather than ritual activities, typical for the early Bronze Age in the region (Hey & Robinson 2011, 315). However, according to Hey and Robinson (*ibid.*) domestic activity sites are usually located away from ceremonial monuments. Only one example where a Beaker pit was found within a barrow cemetery is known from Barrow Hills in Radley (*ibid.* 316). The pit 2181 at Barrow Hills shows a lot of similarities with the pit excavated in Cassington; it was located to the southwest of an Oval Barrow dated in Neolithic period (Barclay & Halpin 1999, 66-67, 320). The Beaker pit 188 seems to predate the ring ditch or perhaps is related to its construction.

The major feature investigated during the excavation was the ring ditch dating to the early Bronze Age. As has been noted above, the ring ditch was part of a wider barrow cemetery formed of at least three barrows (see 1.3). The investigated ring ditch was located in the centre of this barrow cemetery. A smaller ring ditch measuring approximately 20m in diameter is located 137m to the northeast and a slightly larger one (*c.* 26m in diameter) is located 123m to the southwest of the excavation (Fig. 14). In terms of the alignment of these ring ditches / barrows, some similarities are observable with the distribution of barrows at the monument complex at Barrow Hills, Radley (Barclay & Halpin 1999, 2, Fig. 1.2) and elsewhere. In general the barrow cemetery at Cassington is situated on the second gravel terrace overseeing flood plains to the east-southeast. Based on morphology of the terrain, this ring ditch / barrow was located on higher ground within the gravel terrace, as was the ring ditch located to the northeast (Fig. 3b,c).

Although part of the centre of the inner area of the ring ditch was exposed during the excavation, a primary burial was not present within the investigated area. The absence of a primary burial might suggests that primary burial contained cremated remains of the deceased and these were destroyed by intensive ploughing, or it was not located directly in the centre of barrow. This could be supported by the fact that bi-ritual funerary practices during the early Bronze Age were common (Garwood & Barclay 2011, 403) and there is numerous examples of primary cremation burials e.g. barrows

1, 2, 4, 14 and 16 at Barrow Hills in Radley (Barclay & Halpin 1999, 312-313, Fig. 9.11). It is also possible the primary burial was higher in the mound and lost to ploughing and erosion.

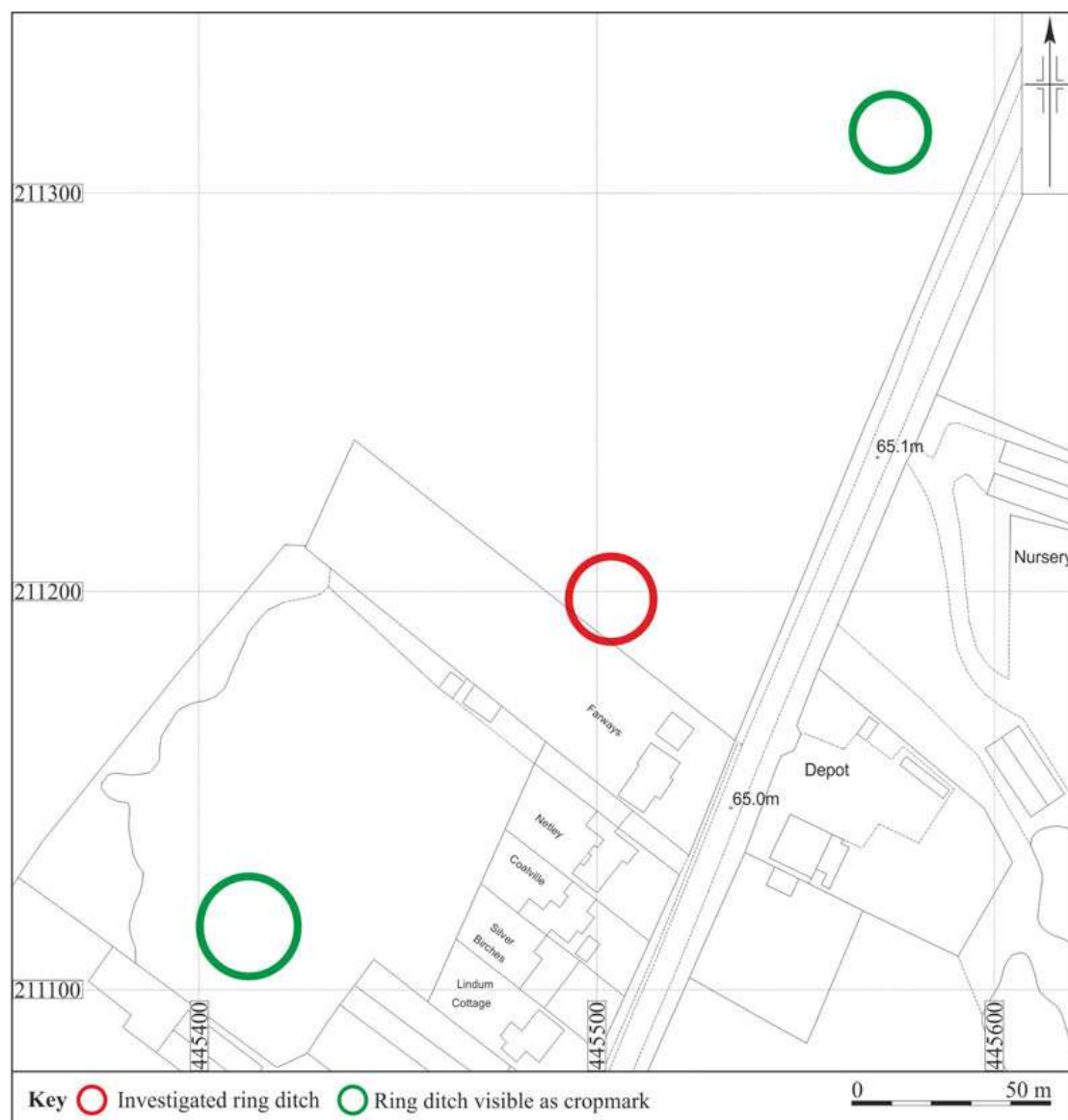


Figure 14: Barrow cemetery at Yarnton Road, Cassington

The barrow mound did not survive as a visible earthwork until the present day, however numerous layers of eroded material mainly on the inner sides of the ring ditch suggested its existence, and presumably was of a bowl shape. The barrow survived during the Iron Age although some silting of the ditch was evident from the Iron Age ditch cutting part of the fill.

During the course of the middle Bronze Age, this Cassington barrow cemetery was in use as burial ground for inhumation and cremation burials; several were recorded during the excavation. There is limited evidence for the reshaping of the monument and none for the construction of new monuments. This trend is recorded across the country, and it is one of the most significant characteristics of the later prehistory (Lambrick, & Robinson 2009, 294).

In the earlier phase of middle Bronze Age the ring ditch was partially silted and two satellite inhumation burials 190 and 269 were inserted in to its lower fills. Both burials contained well preserved remains of adult females. Inhumation burials within the ring ditch during this period are not exceptional, e.g. two burials in a ring ditch were discovered at Mount Farm near Dorchester-on-Thames (Lambrick & Robinson 2009, 296-297). Here grave 269 had typical funereally practices, however in the grave 190 was discovered SK. 1 in very unusual seated position originally facing the centre of the ring ditch and dated to 1391 cal BC. As has been noted above, very few examples of this kind of burials have been found in the UK (see 5.4). The seated burial itself was the most significant discovery made during the excavation and undoubtedly it needs to be analysed within the wider context of British and European Bronze Age funerary practices as part of a separate study.

The latter part of the middle Bronze Age was represented by cremation burial activities within the excavation area. In total eleven cremation burials were investigated. Eight cremation burials (106, 117, 121, 123, 133, 135, 161, and 3/08) were located to the east of the ring ditch, one cremation burial 230 was discovered in the centre of ring ditch and two on its edge (114 and 176). In the cases of cremation burials, stratigraphic relationships were well established and the majority of burials were truncated by later features which fit well with dating established on ceramic grounds. Only in the case of burial 161 were cremated remains placed in a Globular Urn; unfortunately this burial was disturbed by a later ditch. Four of the cremation burials (3/08, 121, 133, and 230) contained more significant amounts of human remains than the rest of the burials; this disproportion is also related to the size of the cremation pits. The smaller and shallower cremation pits, presumably originally were cut slightly higher up and were disturbed by intensive ploughing in historic periods.

During the same period the ring ditch was gradually silting up. From the uppermost fill of the ring ditch a large assemblage of pottery and animal bones was recovered. The majority of this was dated to the middle Bronze Age, apart from fragments of one vessel dated to the late Bronze Age (see 5.1). Animal bones represented a range of domestic animals in particular cattle, sheep/goat and pig (see 5.5). From the middle Bronze Age deposit of the ring ditch disarticulated human bones (mandible and fragment tibia) were recovered; whether these bones represent a disturbed inhumation burial in vicinity of ring ditch is uncertain. All finds recovered from the upper fills of the ring ditch seem to be related with funereally activity carried out during the middle Bronze Age with some extending to the late Bronze Age.

From the beginning of the Iron Age onwards the site was mainly incorporated in a wider agricultural landscape well documented in the region, especially to the east where a gravel extraction pit between Cassington and Yarnton was investigated during the 1990s as part of the Yarnton-Cassington Archaeological Project carried by Oxford Archaeology (Hey, Booth & Timby 2011).

The early Iron Age activity is represented by two ditches (151 and 127) and clusters of postholes spaced southeast from the ring ditch that may possibly represent short-term settlement activity or activity related with stockbreeding. The incoherent character of the clusters of posthole does not allow identification of any structures. The ditch 110 dated to the late Iron Age represents a field boundary presumably of a wider field system within the area.

A linear ditch 143 was dated to the beginning of Roman period. This ran parallel to ditch 110, and presumably reflects changes in land ownership and/or reorganisation of field structures during this transition period. The late Roman period was represented by large solitary pit 149=303, which contained a very small assemblage of finds for its size. The function of this pit is slightly ambiguous; however it may possible represent a gravel extraction pit.

The majority of undated features investigated during the excavation were highly likely to be related with prehistoric and/or Roman activities within the development area, although there are some indications of agricultural activities in the post Roman period (ditch 119 and gully 157).

Three parallel linear ditches located at north and middle of the excavation area represent post-medieval and modern field boundaries. The field boundary 253 was in use as late as the middle of the 20<sup>th</sup> century and is clearly visible on aerial photograph from 1940s.

## 7 ARCHIVE

### Archive Contents

The archive consists of the following:

#### Paper record

The project brief  
Written scheme of investigation  
The project report  
The primary site record

#### Physical record

Finds

The archive currently is maintained by John Moore Heritage Services and will be transferred to the Oxfordshire County Museum Services under accessional number 2013.147.

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**Appendix 1 – Summary table inhumations**

<b>Skeleton no.</b>	<b>Context</b>	<b>Preservation</b>	<b>Completeness</b>	<b>Age</b>	<b>Sex</b>	<b>Stature</b>	<b>Pathology and trauma</b>	<b>Extra individual?</b>	<b>Notes.</b>	<b>MNI</b>
SK1	185	Poor (2/3)	80%: missing parts of thorax, patellae and some hand/foot bones.	25 – 32 years	Female	162cm (5'4")	Dental (mild calculus, one dental abscess and single cavity), possible small amount healed porotic hyperostosis left parietal and two ankylosed toes (intermediate and distal phalanges).	Yes.	Sub-adult remains mixed in with adult material, represent at least one individual <7 years of age	2
SK2	269	Good (1/2)	90%: missing lower part of sacrum, one vertebrae and some hand/foot bones	30 – 45 years	Female	158cm (5'2")	Dental (four cavities, onedental abscess), mild osteophytic lipping in thoracic and lumbar vertebrae and possible healed fracture of the right ulna.	No.	-	1
-	212	Good (1)	<5%: Only mandible remains	Adult (18+ years)	-	-	None.	No.	Three fragments of mandible (fit together). Two teeth in situ, others lost post-mortem.	1
-	350	Poor (3)	<5%: Only tibia fragment remains	Adult (18+ years)	-	-	None.	No.	Fragment of proximal left tibia including articulation.	
									<b>TOTAL MNI</b>	<b>4</b>

**Appendix 2 – Summary table cremated and fragmentary bone**

Sample	Context	Total weight (g)	Frag. size (mm)	Human	Animal	Indet.	Colour/appearance	Notes	MNI
1	107	2	4 – 20	✓			White/black few brown (unburnt)	Consistent with human	-
3	118	44	1 – 25	✓			White/black	Skull and misc. long bone fragments	-
5*	122	372	1 – 41	✓			White, blue-grey and black	Identifiable fragments from skull, axial, upper and lower limbs.	1
6	124	23	1 – 30	✓			White/black few brown (unburnt)	Consistent with human	-
7	115	1	1 – 11			✓	White/black few brown (unburnt)	-	-
9*	134	297	1 – 30	✓			White, blue-grey and black	Identifiable fragments from skull, axial, upper and lower limbs.	1
10	136	100	1 – 25	✓			White, grey and black	Cranial and tooth crown fragments including upper premolar and lower premolar and molar.	1
11	162	40	1 – 25	✓			Mottled white/black	Partial unworn (?upper) canine tooth. Possible urned burial.	-
12	105	<1g	<1mm			✓	Black	May be charcoal fragments, not bone.	-
13	189	19	4 – 50		✓		Mostly unburnt aside from few small white fragments	Animal bone ?pig	-
14	189	50	4 – 40		✓		Mostly unburnt aside from few small white fragments	Animal bone ?pig ?sheep	-
17	259	2	2 – 11		✓		White/black	Poss. animal	-
18*	231	945	1 – 45	✓			White, blue-grey, very few black and few small unburnt	Identifiable fragments from skull, axial, upper and lower limbs.	1
19	270	1	4 – 12		✓		White/black	Poss. animal	-
-	113	2	25 – 40		✓		Brown (unburnt)	Animal bone	-
-	154	7	15 – 30	✓			Black	Cranial fragments, charred.	-
-	212	5	40	✓			Brown (unburnt)	Fragment of mandibular ramus	-



16	177	2	10	✓			White/black	Consistent with human	-
-*	3/06	1044	1 – 83	✓			White, blue-grey and very few black	Identifiable fragments from skull, axial, upper and lower limbs.	1
-	Unstrat	15	1 – 15	✓	✓		White, grey and black	Human and animal bone mix	-
<b>TOTAL MNI</b>									<b>5</b>

\* - Indicates cremation deposit selected for further analysis, Appendix 3.

**Appendix 3 – Selected cremated bone analysis**

Sample	Context	Weight (g)				Age	Sex	Identifiable fragments (g)				Notes	Pathology?
		Fragment size (mm)			Total weight			S	A	U	L		
		<5	5 – 10	>10									
-	3/06	135	411	498	1044	?Adult	-	38	13	75	50	Small skull fragments including 15 tooth root fragments and 2 complete crowns (canine and poss. Upper 3 <sup>rd</sup> molar), small pelvis and rib shaft fragments, upper limb long bone fragments plus 3 proximal and 2 distal hand phalanges, lower limb long bone fragments plus proximal phalange fragment and small calcaneus fragment.	Possible dental enamel hypoplasia on canine crown fragment.
5	122	214	89	69	372	?Adult	-	21	12	48	10	Skull fragments including fragment of zygomatic and mandible, 3 tooth root and molar and canine crown fragments, fragment of axis vertebrae with dens intact, upper limb long bone fragments plus 1 distal hand phalange, lower limb long bone fragments plus intermediate phalange.	None observed.
9	134	12	165	120	297	?	?Female	31	2	9	9	Skull fragments including very small and gracile temporal-mandibular joint and tooth root frags, lateral part of right clavicle and upper and lower long bone fragments.	None observed.
18	231	113	391	441	945	Adult	-	68	19	37	92	Skull fragments including occipital & parietal, 1 fragment mandible and 40 tooth root fragments representing all tooth types and few shattered tooth enamel sherds, rib shaft and abraded vertebral body, upper limb long bone fragments plus 1 proximal, 4 intermediate and 4 distal hand phalanges and 1	None observed.

												partial pisiform, ?left femur head fragment, distal femur and proximal tibia frags and 1 distal foot phalange.	
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**Note: S = Skull, A = Axial, U = Upper limb, L = Lower limb.**

**Appendix 4 – Taxa representation according to context (NISP)**

**i) Late Neolithic/Early Bronze Age**

	Context		Total
	189	3/12	
cf. cattle	5		5
Sheep/goat	4	1	5
Pig	3		3
<i>Cervus elaphus</i>	2		2
Rodent	2		2
Large mammal	2	1	3
Medium mammal	3	2	5
Small mammal	1		1
<b>Total</b>	22	4	26

**ii) Middle/Late Bronze Age**

	105	162	175	179	182	185	217	218	243	263	304	305	349	350	351	3/10	Total
Horse				1													1
Cattle	2		1	4	1	5		4	1	1	5	1	1				26
cf. cattle											1						1
Sheep/goat	2		1														3
Pig	1			6													7
Dog														1			1
<i>Vulpes vulpes</i>								1									1
<i>Meles meles</i>								1									1
<i>cf cervid</i>					1												1
Rodent						1											1
Amphibian						7											7
<i>Cyprinid</i>						1											1
cf. Human										2							2
Large mammal	1	1	6	11	6	14	1	3		1	6			1	5		56
Medium mammal				2	1		1		1					1	1	1	8
Small mammal								5									5
<b>Total</b>	<b>6</b>	<b>1</b>	<b>8</b>	<b>24</b>	<b>9</b>	<b>28</b>	<b>2</b>	<b>14</b>	<b>2</b>	<b>4</b>	<b>12</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>6</b>	<b>1</b>	<b>122</b>

**Appendix 5 – Metrical data**

Date	Taxa	Element	Measurement				
			<i>GL</i>	<i>GLM</i>			
MBA or EIA	Pig	Astragalus	37.1	36			
			<i>GL</i>	<i>Bp</i>	<i>Dp</i>	<i>SD</i>	<i>Bd</i>
MBA- EIA	Horse	Metacarpal	188.5	41.4	26.5	26.6	39.2
			<i>Bp</i>	<i>Bfp</i>	<i>SD</i>	<i>Bd</i>	<i>Bfd</i>
MBA	Cattle	Radius		64.2			
MBA-LBA	Cattle	Radius	70.6	65	39.3		
LR	Cattle	Radius				83.1	64.4