Northamptonshire Archaeology

An Early Bronze Age henge and a Middle Bronze Age ditch system at Priors Hall, Zone 3, Kirby Lane, Corby, Northamptonshire

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Andy Chapman and
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Report 12/63

April 2012

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OASIS REPORT FORM

PROJECT DETAILS	OASIS No. 123030	
Project title	An Early Bronze Age henge and a Middle Bronze Age ditch system at Priors Hall, Zone 3, Kirby Lane, Corby, Northamptonshire	
Short description	A henge monument, probably constructed in the Early Bronze Age, was near circular at 31.0-33.5m in diameter, with a broad U-shaped ditch and an entrance to the south-east. The former presence of an external bank was indicated by deposits of limestone that had come in from outside. To the south of the henge a small pit contained an assemblage of decorated and rusticated Beaker sherds, and fragments of hazelnut shell. There were a few shallow pits within the interior of the henge, and to the north-west the unurned cremation burial of a 6-8 year old child was accompanied by a jet bead. A Middle Bronze Age side-looped spearhead came from the upper fill of the henge ditch. An adjacent L-shaped ditch system has been dated to the Middle Bronze Age. The ditch produced red deer antler, part of a human femur and fragments from a cylindrical fired-clay loomweight.	
Project type	Excavation	
Previous work	Geophysical survey and Trenching (NA 2010)	
Future work	None	
Monument type and period	Early Bronze Age henge Middle Bronze Age ditch system	
Significant finds	EBA jet bead. MBA spearhead, Beaker pottery	
PROJECT LOCATION		
County	Northamptonshire	
Site address	Priors Hall, Kirby Lane, Corby	
Easting /Northing	SP 9185 9165	
Area	1.95ha	
Height OD	89-95m aOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology	
Project brief originator	Northamptonshire County Council Archaeologist Advisor	
Project Design originator	Northamptonshire Archaeology	
Director/Supervisor	Christopher Jones (NA)	
Project Manager	Mark Holmes (NA)	
Sponsor or funding body	Ramboll UK	
PROJECT DATE		
Start date	October 2011	
End date	November 2011	
ARCHIVES	Site Code: PHP11	Content (eg pottery, animal bone etc)
Physical		Pottery and loomweight, bone, cremated bone, Cu spearhead, jet bead,
Paper		Site records, photographs, drawings
Digital		Plans, Report, photographs
BIBLIOGRAPHY		
Title	An Early Bronze Age henge and a Middle Bronze Age ditch system at Priors Hall, Zone 3, Kirby Lane, Corby, Northamptonshire: October 2011	
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Contents

Tables

Figures

AN EARLY BRONZE AGE HENGE
AND A MIDDLE BRONZE AGE DITCH SYSTEM
AT PRIORS HALL, ZONE 3, KIRBY LANE, CORBY
NORTHAMPTONSHIRE
OCTOBER 2011

ABSTRACT

In October and November 2011 a prehistoric ring ditch and an adjacent ditch system, located by geophysical survey and previously investigated by trial trenching, were subject to open area excavation. The ring ditch has been shown to be a henge monument. A nearby pit contained an assemblage of decorated and rusticated Beaker sherds. Fragments of hazelnut shell from this pit have given the earliest radiocarbon date, 2140-1950 cal BC, indicating that the pit and perhaps the adjacent henge, were constructed in the Early Bronze Age, the final centuries of the 3rd millennium BC. The henge sits on high sloping ground, just below the watershed, overlooking the Willow Brook, which joins the River Nene to the east. The henge was near circular at 31.0-33.5m in diameter, with a broad U-shaped ditch and an entrance to the south-east. The former presence of an external bank was indicated by deposits of limestone that had come in from outside. There were a few shallow pits within the interior and to the north-west the unurned cremation burial of a 6-8 year old child was accompanied by a jet bead. This burial and a deposit of carbonised oak in the secondary fills of the ditch have given radiocarbon dates in the first half of the 2nd millennium BC, 1750-1620 cal BC, indicating that the burial was a later addition to the monument. A Middle Bronze Age side-looped spearhead also came from the fill of the henge ditch, showing the survival of the henge as a substantial earthwork. To the north of the henge there was an L-shaped ditch system, and a red deer antler tine has been radiocarbon dated to the Middle Bronze Age, 1190-1010 cal BC. The ditch also produced part of a human femur and fragments from a cylindrical fired-clay loomweight.

1 INTRODUCTION

In October 2011 Northamptonshire Archaeology was commissioned by Ramboll UK, acting for clients, to undertake an excavation on land at Priors Hall, Zone 3, Kirby Lane Deene, Corby (NGR SP 9185 9165, Fig 1). The area excavated, which lay towards the western end of the larger development area, related to the footprint of a proposed new building. This area took in a prehistoric ring ditch and an adjacent ditch system, which had been shown to be of possible Bronze Age date in previous trial trench evaluation (Jones 2011, trenches 57, 58 and 59).

The excavation was carried out according to a Written Scheme of Investigation (WSI) prepared by Northamptonshire Archaeology in October 2011, and monitoring of the fieldwork was by the Planning Archaeologists within Northamptonshire County Council and by George Kelly of Ramboll UK on behalf of the developer.

The site code PHP.11 was allocated to the project, to distinguish it from previous work. The fieldwork was carried out during October and November 2011. Christopher Jones was site supervisor, and he also prepared an initial draft for the excavation report, which has been revised, extended and completed by Andy Chapman.

2 BACKGROUND

2.1 The archaeological background

Previous fieldwork included a geophysical survey undertaken by GSB Prospection in 2004 (GSB 2004), which identified potential anomalies of archaeological origin across an extensive area, but with a concentration to the north, in Zone 3, including the ring ditch and the adjacent ditch system (Fig 1). This was followed by trial trenching and a strip, map and sample excavation in 2006 of a Late Iron Age industrial landscape within the mineral extraction area, Zone 2, to the south of the current area. Trial trenching, topsoil stripping and archaeological excavation in Zone 1, revealed more of the Late Iron Age industry as well as a Romano-British cemetery and boundary, and pits dating to the 6th century AD (Martin-Bacon 2010).

In 2010 and 2011 Northamptonshire Area carried out further geophysical surveys in Zone 3 and subsequent trial trenching located Roman stone buildings and enclosures and, to the west, the prehistoric henge and ditch system that was the subject of the current excavation (Jones 2011).

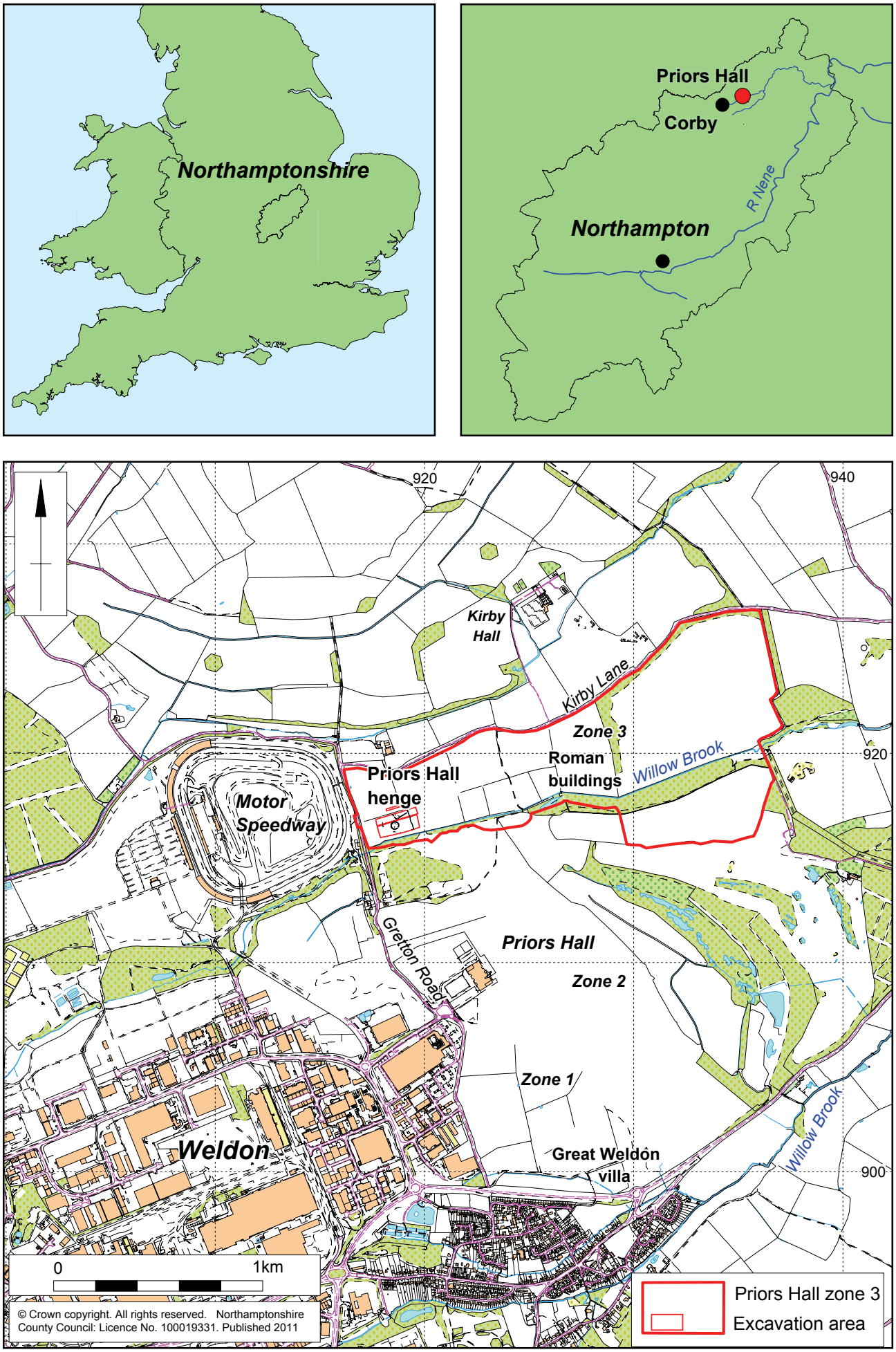
2.2 Topography and geology

The proposed development area, Zone 3, is situated 1km north of Weldon and 5km north-east of Corby, comprising 125ha of land distributed over eleven fields, bounded by Kirby Lane to the north, the Rockingham Motor Speedway to the west, and a dismantled minerals railway to the south.

The development site lies on a south-facing slope above the Willow Brook, between 95m and 89m aOD. The Willow Brook cuts back into the higher ground here, and to the west the land rises gradually to the watershed at around 110m aOD, before dropping much more sharply further west into the Welland valley.

The henge lies only 40m from the Willow Brook. Across the excavated area the ground level drops from 93.40m aOD to the north to 89.30m aOD to the south, at the Beaker pit. Across the width of the henge there is a fall of 1.5m, from 92.25m aOD to the north to 90.70m aOD along the southern arm of the ditch west of the entrance.

The underlying natural bedrock comprises a sequence of the Rutland Formation. Upper and Lower Lincolnshire Limestone and Grantham Formation mudstone are exposed as the ground slopes down towards the Willow Brook at the south of the area. The northern part of Zone 3 is overlain by Glacial Till whilst the area to the south of the Willow Brook comprises made ground from former quarrying (BGS 2009). Within the excavated area, the exposed geology was of boulder clay mixed with limestone and ironstone.



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Site location Fig 1

3 AIMS, OBJECTIVES AND METHODOLOGY

3.1 Aims and objectives

The aim of the archaeological investigation was to determine the location, extent, nature, date, and quality of archaeological deposits/features within the site.

The following objectives were stated:

- To record and characterise below ground deposits and the archaeological topography of the site;
- To create full and proper records of all observed archaeological material;
- To collect artefactual and ecofactual material as appropriate;
- To prepare a report/archive of the results of the archaeological work and any consequent analytical work;
- To take account of and inform local, regional and national research frameworks;
- To further understand the history and development of human activity at the site and its immediate environs.

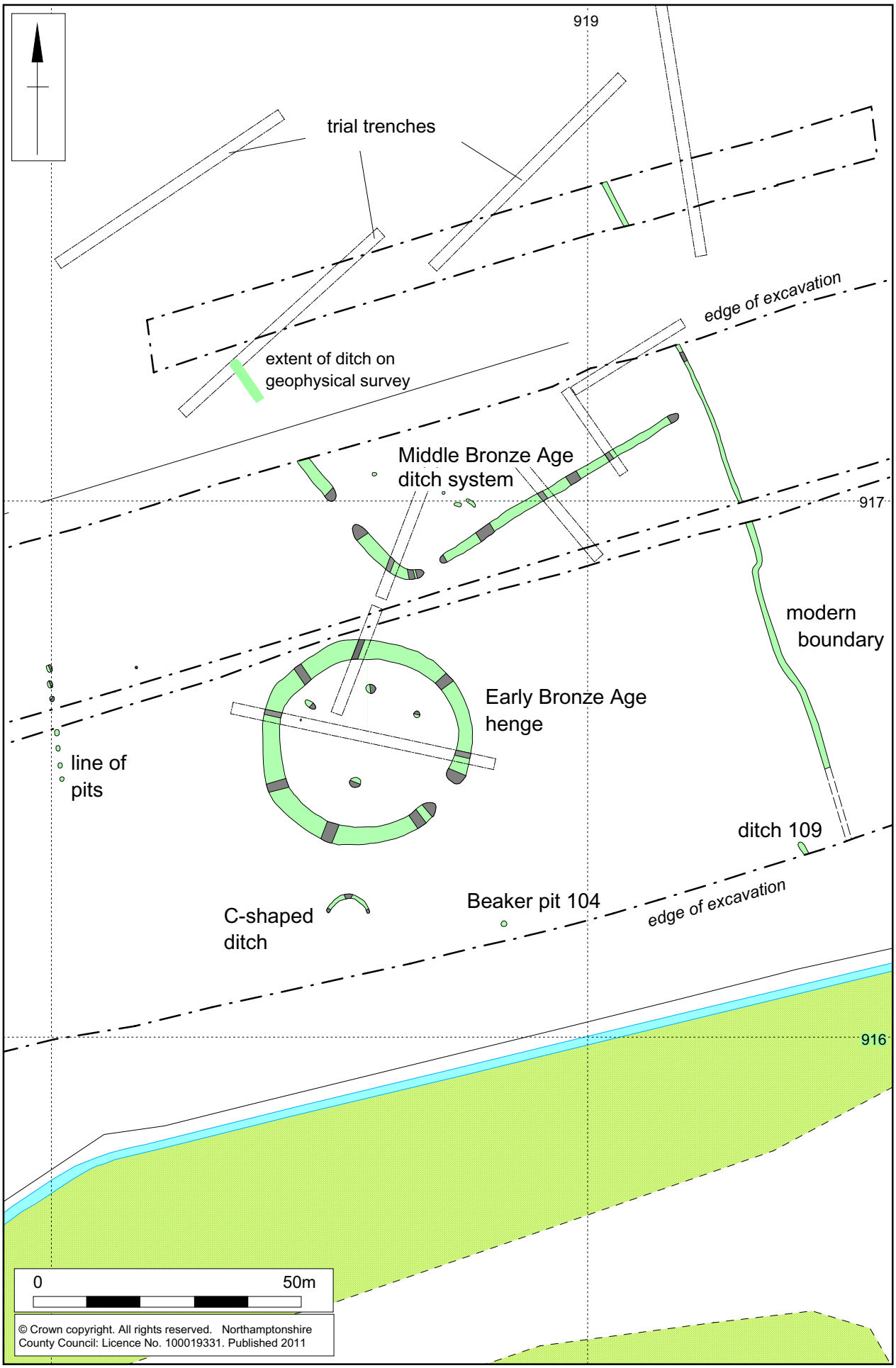
3.2 Methodology

The excavated area included the ring ditch, the adjacent ditch system and extensive area to the west and east. A narrow baulk containing a deer fence remained unexcavated, but otherwise the area was 203m long by 98m wide, an area of 1.81ha. In a separate field to the north, an elongated trench 140m long by 9m wide, 0.14ha, was excavated to determine whether the L-shaped ditch system continued northward beyond the extent recorded by geophysical survey. No evidence for a northward continuation was found (Fig 2). The total area excavated was 1.95ha.

The overburden comprising topsoil and thin subsoil, to a combined depth of up to 0.50m, were removed using a tracked mechanical digger fitted with a toothless ditching bucket. The topsoil was stacked separately from the subsoil and other deposits. The area was cleaned by hand sufficiently to enable the identification of features. The excavated area and spoil heaps were scanned visually and with a metal detector to ensure maximum finds retrieval. A programme of bulk environmental soil sampling was undertaken.

All deposits were given individual context numbers and recording followed standard Northamptonshire Archaeology procedures. Deposits were described on pro-forma context sheets to include details of the context, its relationships, interpretation and a checklist of associated finds. The excavated area was planned at a scale of 1:100. Sections of the sequence of deposits in each section were drawn at a scale of 1:10 and related to Ordnance Datum.

After all the hand excavation and recording had been completed, the unexcavated lengths of the henge ditch and the adjacent ditch system were fully excavated by machine under archaeological observation: this led to the recovery of the Bronze Age spearhead from the henge ditch.



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General site plan Fig 2

4 THE EXCAVATED EVIDENCE

4.1 Summary of site chronology and radiocarbon dating

The chronology of the site has been determined by the character of the excavated features and the finds recovered from them (Table 1), supported by four radiocarbon dates (Table 2). This has provided a firm foundation for interpreting the two major features.

Table 1: Summary of site chronology

Period	Activity
Early Bronze Age	Construction of henge
	Beaker pit (2140-1950 cal BC)
	C-shaped ditch?
	Line of pits?
	Silting of henge ditch (1930-1750 cal BC)
	Cremation burial within henge (1750-1620 cal BC)
Middle Bronze Age	L-shaped ditch system (1190-1010 cal BC)
	deposition of spearhead in henge ditch
	Henge entrance refurbished?
	Boundary ditch 109?
Post-medieval	Animal disturbance of henge ditch at entrance
	Linear boundary ditch 51

The ring ditch has been shown to fall within the group of Late Neolithic/Early Bronze Age circular earthworks known traditionally as henge monuments, while accepting that this term has been widely used and abused for monuments of diverse dates, forms and sizes. The Priors Hall henge would fall within the classic Type 1 henge group; being over 20m in diameter and possessing a single ditch, single entrance and single external bank, (Darvill, T, 1989, English Heritage Monument Class Description).

The available radiocarbon dates suggest a probable origin in the late 3rd millennium BC. This Early Bronze Age rather than Late Neolithic date is in keeping with recent research, which is tending to show that while such features as the stone and timber circles enclosed by some henge monuments are likely to date to the Late Neolithic, the earthworks themselves are often later additions: Early Bronze Age enclosing of existing monuments. Other simple and smaller earthworks, like the Priors Hall henge are also more likely to be purely of Early Bronze Age origin (*Henges – A Late Neolithic Conundrum*, Oxford University Continuing Education conference, March 2012).

The actual date of construction for the henge has not been established, as there is no material available from primary ditch fills, and a date can only be inferred from related features. The earliest radiocarbon date is from hazelnut shells in the nearby Beaker pit, which falls in the late 3rd millennium BC, 2140-1950 cal BC (Table 2). On the basis that the Beaker pit seems most likely to have been excavated at or sometime after the construction of the henge, this provides a *terminus ante quem* for construction.

Radiocarbon dates from the internal cremation burial and from a length of carbonised oak in the secondary ditch fills indicate usage of the henge for burial in the second quarter of the 2nd millennium BC, 1750-1620 cal BC. The carbonised oak in the henge ditch may have come from the pyre of the excavated burial or some other lost cremation burial.

The earthwork monument was still standing beyond this date, as a Middle Bronze Age spearhead was recovered from the ditch fills, and a Middle Bronze Age L-shaped ditch system was sited immediately adjacent to the henge with the corner of the L lying closest to the henge. The function of this ditch system is unclear. There was no surviving continuation to the north, and ditches of similar depth to the extant ditch could not have been lost to truncation in this area. Either the other half of a rectangular enclosure had been defined by shallow and insubstantial features or by a bank or hedge, or the ditch system was only ever an L-shape.

Asymmetrical ditch fills suggest that a bank had been thrown up on the northern up slope side of the ditch. The later date of this earthwork is indicated by the presence of fragments of a cylindrical fired-clay loomweight in the fills, and a date at the end of the Middle Bronze Age, 1190-1010 cal BC, was provided by radiocarbon dating of an antler tine from the ditch. A length of human femur was also recovered from this ditch.

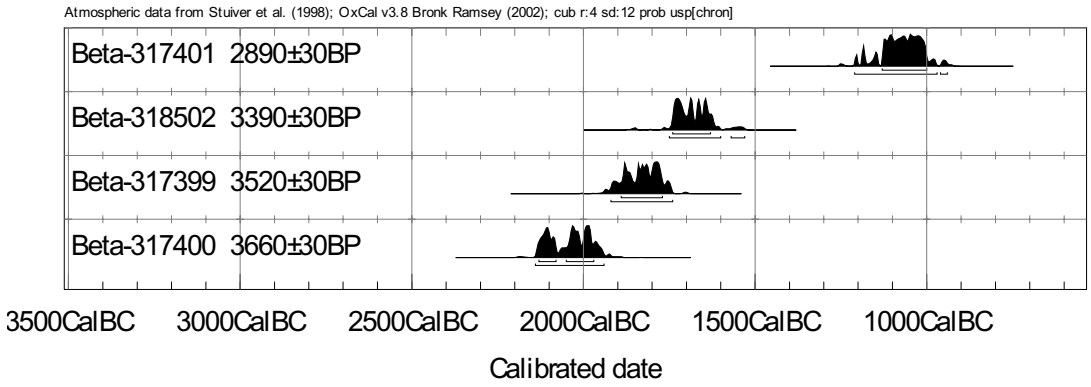
A number of other aspects of the site archaeology cannot be placed within this chronology as they produced no datable artefacts. A C-shaped ditch to the south of the henge may have enclosed a small mound, 8m in diameter, which seems most likely to have been a secondary monument probably constructed at some later point in the Early Bronze Age. Similarly, the short line of shallow pits to the west of the henge may also be an ancillary feature added at some later date.

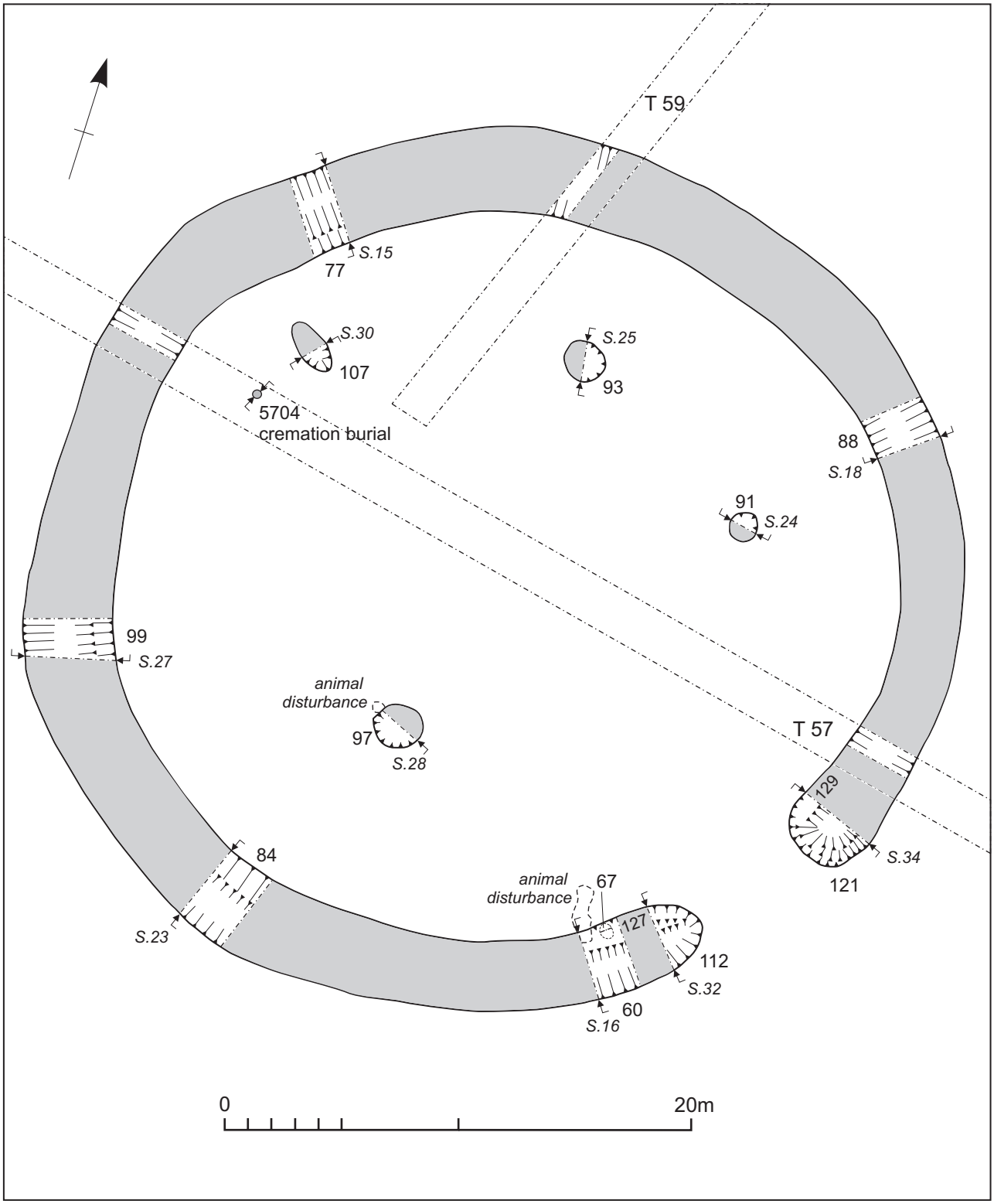
Whilst the western terminal at the entrance to the henge had been heavily disturbed by animal burrows, both terminals appeared to have a ledge along the inner edge of the ditch that seemed to be the result of a cut slot that was added when the ditch was near fully silted. This hints at some refurbishment of the entrance area perhaps occurring in the Middle Bronze Age and associated with use of the L-shaped ditch system. Also, against the southernmost limit of excavation there was a short length of ditch that did not appear to be a recent boundary. This too may be associated with later respect for the henge earthwork, and it was perhaps contemporary with the L-shaped ditch system.

Table 2: The radiocarbon determinations

Laboratory & Sample No.	Context	Sample Details (weight)	C13/C12	Conventional Radiocarbon Age BP	Cal BC Intercept 68% confidence **95% confidence**
Beta-317400 PHP11/106	Fill 104 Beaker pit 106	Hazelnut shell (0.4g)	-23.2	3660+/-30	2030 2120-2090/2040-10 & 2000-1980 **2140-1950**
Beta-317399 PHP11/102	Fill 102 Henge ditch 99	Charcoal Quercus (oak) Heartwood (1.0g)	-23.5	3520+/-30	1880 1890-70/1840-10 & 1800-1780 **1930-1750**
Beta-318502 PHP11/5703	Secondary Cremation burial	Cremated Human bone (25g)	-21.1	3390+/- 30	1690 1740-10/1700-1660/1650-40 **1750-1620**
Beta-317401 PHP11/5805	Fill 5805 MBA ditch 5808	Antler (6.2g)	-21.4	2890+/-30	1050 1120-1010 **1190-80/1160-40 & 1130-1010**

Laboratory: Beta Analytic, Miami, Florida, USA
Calibration: INTCAL04 Radiocarbon Age Calibration


Atmospheric data from Stuiver et al. (1998); OxCal v3.8 Bronk Ramsey (2002); cub r:4 sd:12 prob usp[chron]
Beta-317401 2890±30BP
Beta-318502 3390±30BP
Beta-317399 3520±30BP
Beta-317400 3660±30BP
3500CalBC
3000CalBC
2500CalBC
2000CalBC
1500CalBC
1000CalBC
Calibrated date



Scale 1:250

The Priors Hall henge Fig 3

4.2 The Priors Hall henge

The henge lay on ground sloping down to the south, towards the nearby Willow Brook, with a drop of 1.5m across the width of the henge. The enclosing ditch was near circular with internal dimensions of 31.0m north-west to south-east, not quite in line with the entrance, and 33.5m south-west to north-east, to give a slightly oval plan form (Figs 3 and 4). The entrance causeway was 5.2m wide, facing 10° north of south-east by Ordnance Survey grid.

Seven sections were hand-excavated across the ditch, in addition to the three sections excavated during the trial trench evaluation. The sections have a total length of 15m, forming 15% of the total circuit of *c* 105m.

The henge, looking north-west through the entrance Fig 4

The ditch

The ditch was 2.7m to 3.7m wide, with an eroded U-shaped profile with the sides running smoothly into a broad slightly concave base, around 1.0m wide (Figs 5-13). The ditch was at its widest around the western half of the circuit, where there was a long sequence of deposition with the edges eroded back over time to a shallow angle. At both terminals and along the eastern side the ditch was narrower, 2.7m wide, and steep sided, and therefore probably closer to the original U-shaped profile. This would suggest that the initial silting had been more rapid, protecting the edges from erosion. The significance of the differential silting around the circuit will be considered in more detail below. The ditch was consistently 1.2-1.3m deep, although either side of the entrance it was a little shallower, at 0.85m and 1.10m deep.

To enable comparisons between the sections, some drawn and photographed sections are depicted reversed so that those to the west and north are all viewed with the exterior to the left (Figs 5-9) and those to the east show the exterior to the right. The sequence of silting recorded on site has also been revised by reference to the photographic evidence to provide a more complex and consistent interpretation of the silting processes.

The entrance terminals

The two ditch terminals had a distinctive pattern of filling. At the western terminal, 112, the ditch was only 0.85m deep, the shallowest part of the circuit (Figs 5-7, S.32 & S.16). Against the southern, external side of the ditch there was a clear sequence of deposits. In a hollow at the base of the ditch there was a scatter of limestone fragments, measuring up to 0.15m, beneath a deposit of orange-brown sand, 113.

Above this there was a second episode in which small quantities of limestone came into the ditch from outside, 116. After the accumulation of brown clayey secondary silts there was a third episode, 117, with limestone coming in from the outside. Concurrently, the silting against the northern, inner edge of the ditch appears to have comprised orange-brown to brown sand to clayey sand virtually devoid of stone inclusions, although these deposits had also been disturbed by rabbit burrowing. The upper fill of the ditch, 118, was of mid-brown sand containing few stones.

Along the northern side of the ditch there was also a distinct ledge at a depth of 0.35m below ground level (Figs 3 and 6). The section shows a V-shaped slot, 127, 0.64m wide by 0.35m deep, with a fill, 126, of dark brown sand (Fig 5, S.32). This was described on site as animal disturbance, but the continuation of the ledge into the adjacent length of ditch and the presence of a similar ledge at the eastern terminal, see below, suggest that this was a feature of the entrance terminals that occurred at the end of the sequence of ditch silting.

The section to the west of the terminal, ditch 60 (Fig 3; Fig 5, S.16 & Fig 7), showed a broadly similar pattern of silting, with a secondary fill, 62, of dark red-brown sand associated with small quantities of limestone coming in from the outside in one or more episodes, and an upper secondary fill 63, largely devoid of stones. This section of ditch had also been disturbed by rabbit burrowing, which was traced from the surface, where it intersected the section, curving down through the secondary fill. A partially excavated pit cutting the ledge on the northern side of the ditch (Fig 3, 67), had a similar fill, which also contained some dog bone. This feature and the associated dog bone must therefore be regarded as most probably of recent date and related to the animal burrowing. As already indicated, the shallow ledge, 127, along the inner edge of the ditch continued into this ditch length, but was not present in Section 16 as a result of the animal burrowing. This indicates that the feature extended more than 5m westward from the ditch terminal.

The eastern ditch terminal, 121, was 1.1m deep and showed a similar sequence of deposition (Fig 10, S. 34 and Fig 11). In this terminal, a substantial primary fill, 122, of orange-brown sandy devoid of stones had accumulated before a quantity of limestone fragments in a matrix of orange-brown to brown sandy clay, 123, came in from outside, perhaps in two episodes, while the accumulation of silts against the inner edge of the ditch was free of stones. The upper secondary fill, 124, was of orange-brown sandy clay, with few stone inclusions. The final fill, 125, of brown sandy clay could not be distinguished from the fill, 128, of a shallow ledge along northern, inner edge of the ditch. This feature was 0.8m wide by 0.12m deep, with a broad flat bottom.

The asymmetrical ditch fills at the terminals, with small quantities of limestone coming in from outside, probably relate to the presence of an external bank that contained limestone, perhaps with the larger limestone forming a revetment to a largely earthen core. However, as will be seen below, these quantities of stone are small compared with the material entering the ditch on the western and northern sides, indicating that different processes were at work for several metres to either side of the entrance. One possibility is that at the entrance the bank was close to the ditch but was better built and therefore less likely to collapse and erode into the ditch, with the accumulation in the ditches largely deriving from erosion of the ditch sides. Another explanation might be that there was a wider berm between the ditch and bank at the entrance, as depicted on the reconstructed plan (Fig 30), so that less material from the eroding bank reached the ditch.

The cutting of a shallow slot along the inner edges of both ditch terminals for at least 5m on either side was not clearly defined in excavation, especially to the west where the ditch fills had suffered as a result of recent rabbit burrowing. The feature may have been up to 0.8m wide and survived up to 0.35m deep, apparently with steep sides and

a flat bottom. It would seem likely that this related to a refurbishment of the entrance at a time when the ditch was no more than the shallow hollow, but while the bank may have still formed a substantial and prominent earthwork. This could be associated with the creation of the nearby Middle Bronze Age ditch system. The postulated shape of the feature would be consistent with the provision of a slot to hold upright timbers, which could have provided a formal facade flanking the entrance to the then ancient earthwork enclosure, but there was no surviving evidence to support this suggestion.

Ditch fills and an external bank

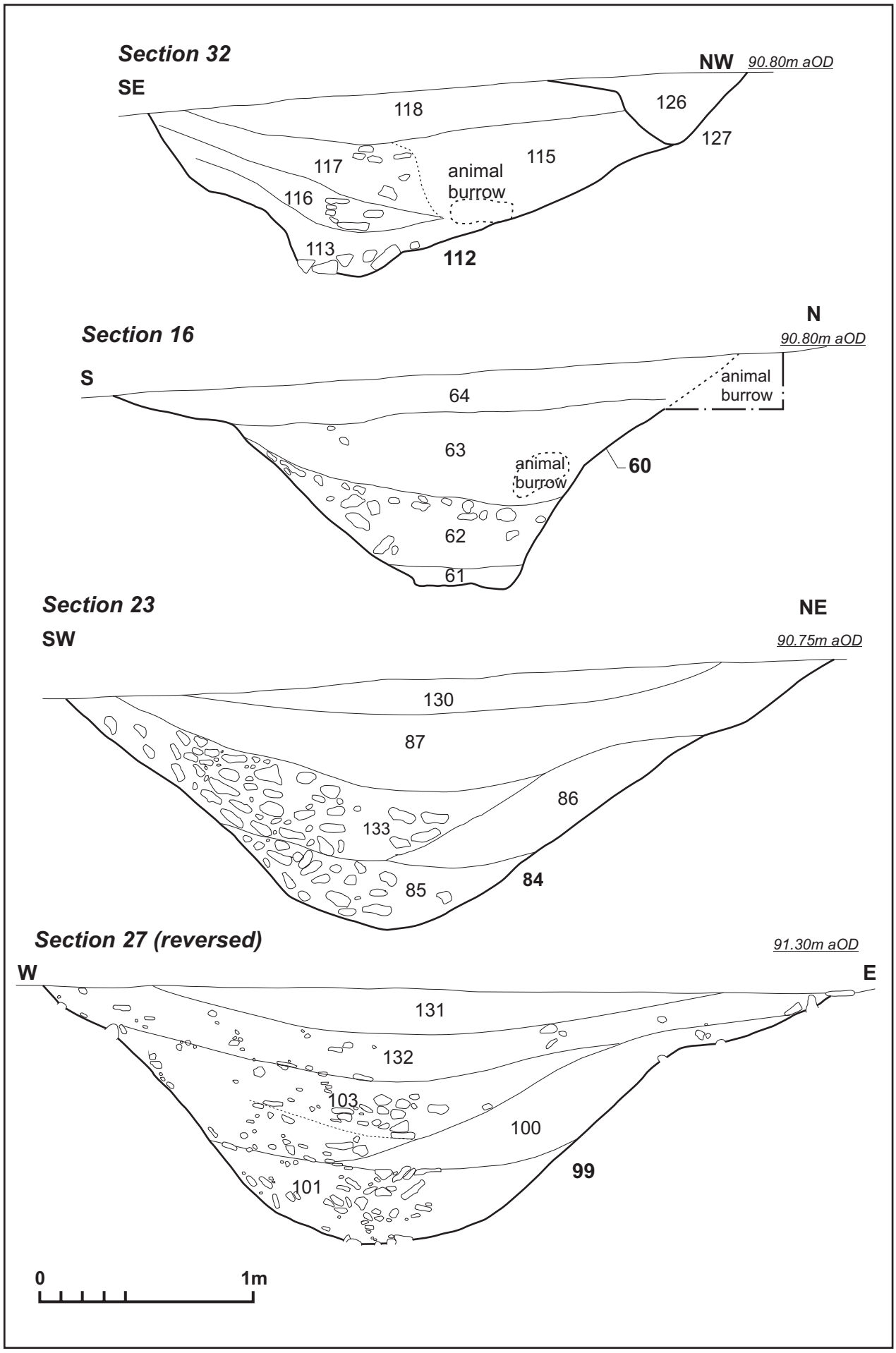
Around the western and northern sides of the monument, the ditch had a broad eroded profile (ditch segments 84, 99 and 77). There was also a consistent pattern of ditch silting with two major phases in which limestone came in from outside the henge (Figs 5, 8 & 9; S.23 & S.27: Figs 10 & 13, S.15). In the recorded evidence, primary silting was not defined. However, the photographic record suggests that a thin layer of primary silt, lighter in colour and containing less stones than the secondary fill, had probably accumulated to a depth of up to 0.1m. The secondary fill accumulated to a depth of 0.3-0.5m and comprised a mass of limestone fragments measuring up to 0.20m (layers 85, 101 and 78).

This event occurred quite early in the life of the monument, and it can be interpreted as the collapse of the inner edge of an external bank, possibly a stone revetment, which was steep and, apparently, unstable around much of the circuit. From the inner edge of the ditch there was continual erosion of the ditch sides comprising orange-brown sandy clays containing only sparse small stones (layers 86, 100 and 79), with these silts probably interleaving with the stone accumulations in a more complex fashion than depicted in the drawn sections. After a period of stability, all three western and northern ditch sections show a second phase with further quantities of limestone coming into the ditch (layers 133, 103 and 80) to a total depth of up to 0.4m. Distinct trails of larger stones within these deposits suggest that there were at least two episodes of possible sudden bank collapse within the broader pattern of the silt and stone deposition. The quantity of stone deposited would again suggest either the collapse of a steep-sided stone revetment situated close to the ditch or even deliberate slighting, with stone cast into the ditch.

The upper and final ditch fills, 0.4-0.6m deep, were of orange-brown to brown sandy clays, containing only sparse small stones, and denote an extended period of slow silting. The recovery of a Middle Bronze Age speardhead from the south-western part of the circuit would suggest that this phase spanned several centuries, although the spearhead was recovered during the machine excavation of the ditch fills and the exact nature of its deposition is therefore unclear.

The ditch to the east

The single section on the eastern part of the circuit, ditch segment 88, shows a unique pattern of silting (Fig 10, S.18 and Fig 12). The narrow and steep-sided profile is probably the closest to the original ditch profile. Erosion of the sides must have occurred quite rapidly leading to an accumulation of orange-brown sandy clays, 89, that protected the lower edge from further erosion. Thereafter, there was a slow accumulation of brown to light grey-brown silty clay containing some small lumps of ironstone and limestone, but providing a marked contrast to the other excavated sections. The preservation of the steeper edges would suggest that the entire process of silting occurred more rapidly, and if this material had come in from an adjacent bank then it was a bank that contained far fewer stones. One possibility is that the adjacent length of bank was earthen, with the lack of a internal stone revetment resulting in more rapid silting of the adjacent ditch. In this context it might be relevant to note that the grey soils at the base of layer 90 might derive from decayed turf (Fig 10, S.18 & Fig 12).



Scale 1:25

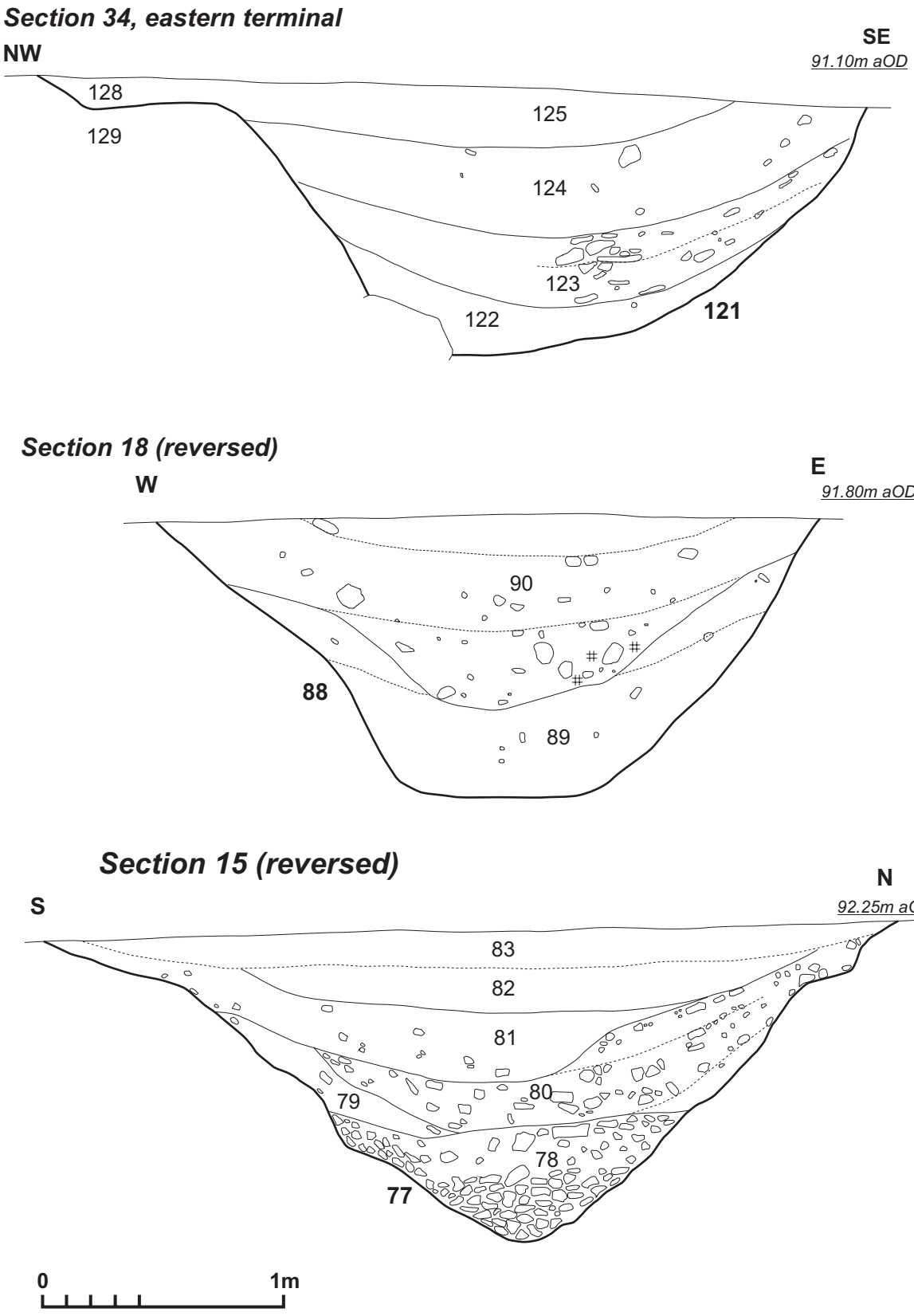
Henge ditch sections, west side Fig 5

Henge ditch segment 112, Section 32, with ditch 60 in the background Fig 6

Henge ditch segment 60, Section 16 Fig 7

Henge ditch segment 84, Section 23 Fig 8

Henge ditch segment 99, Section 27 (reversed) Fig 9



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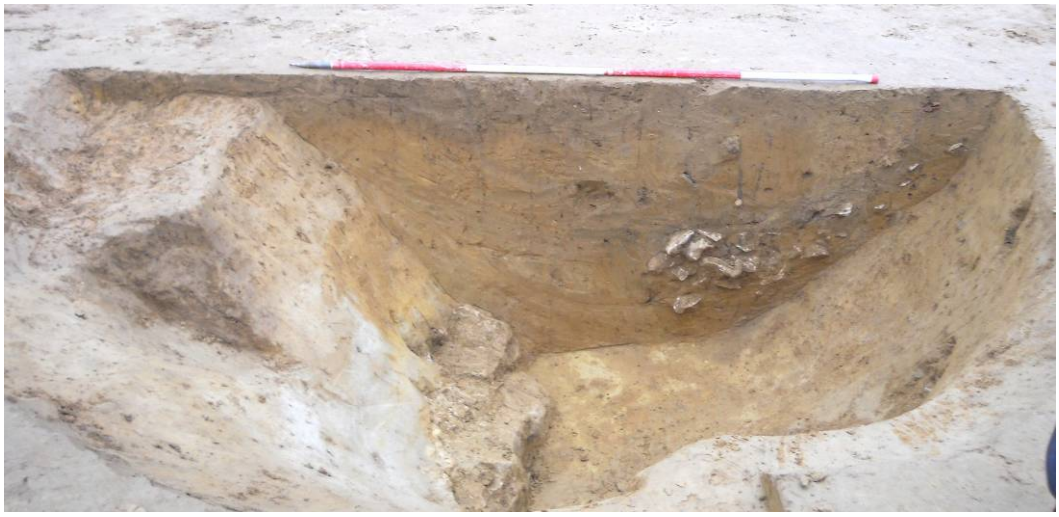
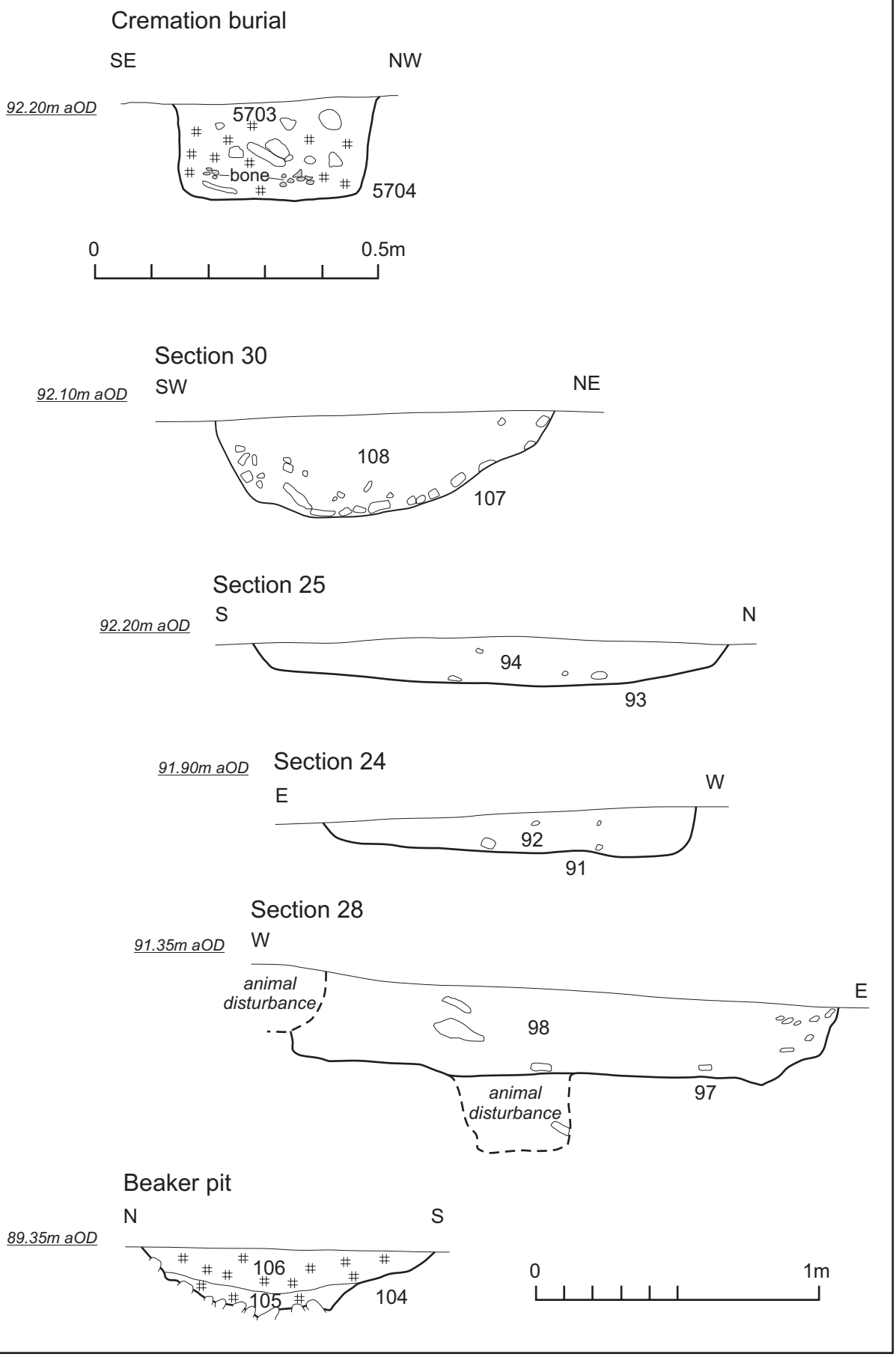
Henge ditch sections, east side Fig 10



Henge ditch segment 121, Section 34 Fig 11

Henge ditch segment 88, Section 18 (reversed) Fig 12

Henge ditch segment 77, Section 15 (reversed) Fig 13



Sections of cremation burial, internal pits and Beaker pit Fig 14

The cremation burial

This feature was excavated in the evaluation, trial trench 57 (Jones 2011). The cremation burial in pit 5704 had been deposited on the north-western side of the interior, not quite diametrically opposite the entrance and lying 3.5m from the edge of the ditch (Fig 3).

The burial had been deposited in a circular, steep-sided pit, 0.35m in diameter by 0.18m deep (Fig 14). The bone deposit, which contained large pieces of bones within a matrix of blackened soil from the pyre, lay in the bottom of the pit (Fig 15). A total of 407g of bone was recovered and as this had come from a child only 6-7 years old at death, it is likely that virtually all of the cremated remains had been collected for burial, along with some pyre debris. A total of 2g of charcoal was recovered and this has been identified as largely oak heartwood, which was commonly used as a fuel for Bronze Age pyres. The upper fill of the pit was of further dark soils containing pyre debris and a few small stones. Within the bone deposit there was a biconical, lathe-turned jet bead (Fig 27).

The bone from this burial has given a radiocarbon date in the second quarter of the 2nd millennium BC (1750-1620 cal BC, 95% confidence, 3390+/-30 BP, Beta-318502).

The cremation burial, showing *in situ* bone deposit in pit 5704 Fig 15

Other internal features

The interior of the henge was hand cleaned and four shallow pits were located (Fig 3). The features to the north all lay towards the ditch, with pits 93 and 91, 4.7m and 5.7m from the edge of the ditch. The three pits were also 11.5m and 10.0m apart. If more features had been located in similar positions it would have been possible to postulate the former presence of an internal ring of pits, but to the south only a single pit, 97, was identified and this lay midway between the ditch and the centre of the henge.

Three of the pits 93, 91 and 97 were cut features of similar form, circular with steep sides and flat bottoms, 1.7, 1.3 and 1.9m in diameter and 0.17-0.30m deep (Fig 14: S.25, S.24 & S.28). The fills of pits 93 and 91 were similar, comprising grey-brown sandy clay with sparse small pieces of limestone. The fill of pit 97 was of dark brown sand containing occasional small pieces of limestone and sparse charcoal flecks, but this feature had also been disturbed by probable rabbit burrowing at its western end, through parts of the fill and into the natural beneath. Pit 107 was oval, 2.4m long by

1.2m wide, with a bowl-shaped profile, 0.35m deep. The fill of red-brown sandy clay contained small pieces of limestone (Fig 14, S.30). The irregular shape and the nature of the fill, which is similar to parts of the natural, may suggest that this feature was of natural origin. None of the four pits produced any finds or animal bone.

4.3 A C-shaped ditch

Nine metres to the south of the henge, there was an arc of gully, up to 0.80m wide by 0.30m deep, with a bowl-shaped profile. No dating evidence was recovered from the fill of red-brown clayey sand, which contained occasional small fragments of limestone, and there were no other nearby features.

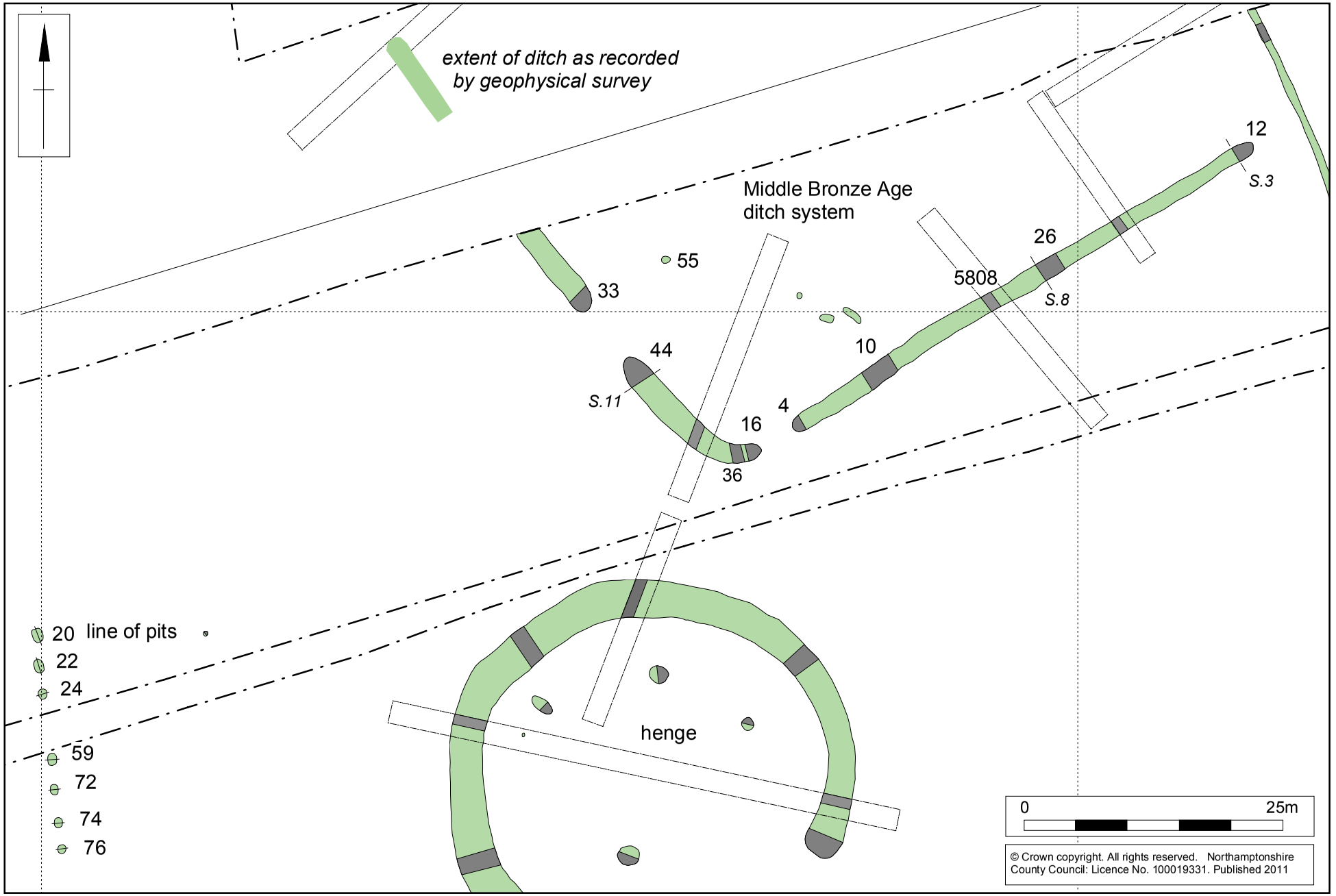
The C-shaped arc formed just under a half, 42%, of a circle with a projected diameter of *c* 8m, and may perhaps have partially surrounded the upslope side of a small mound set just outside the henge.

4.4 The Beaker pit

Pit 104, which lay 23m south-east of the henge (Fig 2), was circular with a shallow bowl-shaped profile, up to 1.30m diameter by 0.25m deep (Figs 14 & 16). A primary fill of brown clay sand, 105, was overlain by dark grey clay sand with charcoal and very occasional limestone fragments (106). This pit, which was fully excavated, produced a small assemblage of Beaker pottery that comprised small numbers of sherds from some six or seven vessels, including both fine decorated Beakers and thicker-walled rusticated Beakers (Fig 26). There were also six flint flakes, probable knapping debris but coming from more than one nodule. Eleven pieces of carbonised hazelnut shell, weighing 0.4g, may have been from only one or two hazelnuts.

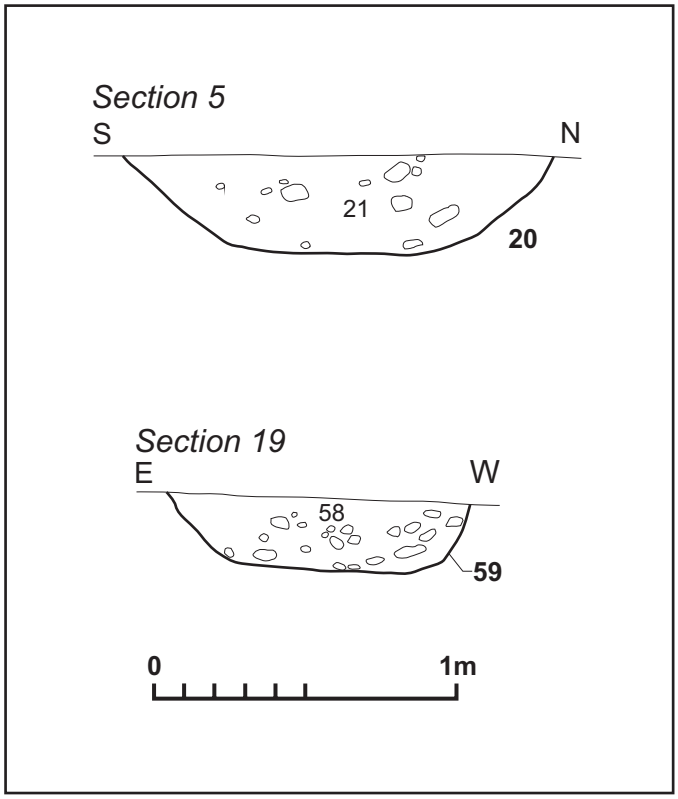
The hazelnut shell has given a radiocarbon date in the late 2nd millennium BC (2140-1950 cal BC, 95% confidence, 3660+/-30 BP, Beta-317400), the earliest date from the site.

Beaker pit 104, looking east Fig 16



Scale 1:500

The Middle Bronze Age ditch system and the line of pits Fig 17



Sections of pits in the line of pits Fig18

4.5 The line of pits

Thirty-eight metres to the west of the henge there was a line of circular pits, aligned near north-south. The line extended for 22m, with seven pits fully excavated and an eighth probably lying beneath the unexcavated baulk, with an average spacing of 3.0m centre to centre (Fig 17, pits 20, 22, 24, 59, 72, 74 & 76).

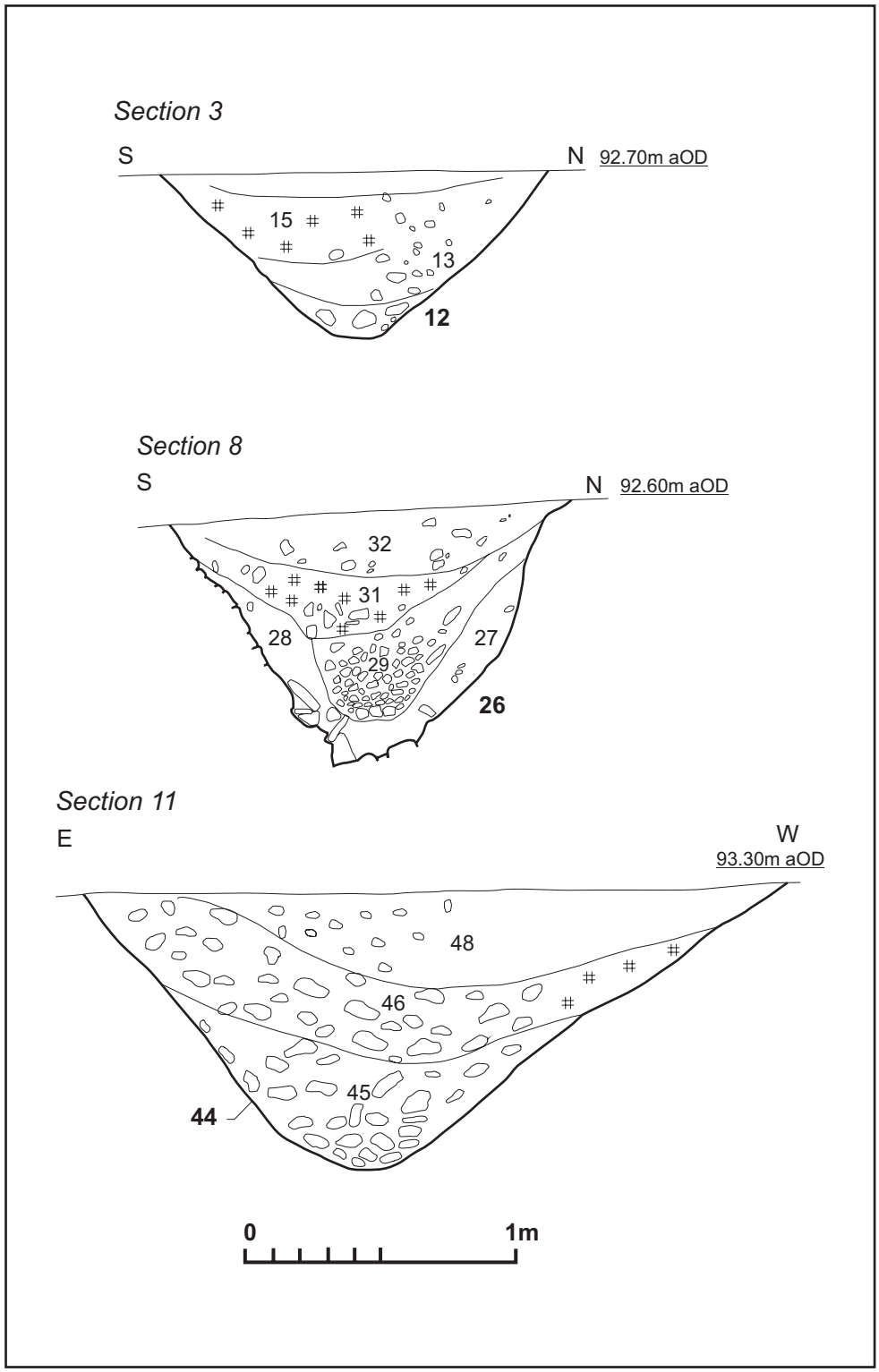
The pits were all either circular or slightly elongated along the line, and of similar size. The two northernmost pits were the largest, at 1.40 long by 1.10m wide, while the others were typically 1.15-1.25m long by 0.90-1.15m wide. The southernmost pit, 76, was the smallest, at 0.80m diameter. They all had moderately steep sides and flat bottoms, and the depths similarly decreased from the north, 0.35m, to the south, 0.10m (Fig 18, S.5 and S.19: Figs 19, 20 & 21). The pit fills were of orange-brown sandy clay with occasional limestone inclusions. The fills of pits 20, 22 and 24 also contained a few small rounded pellets of fired clay and pit 22 also produced a little charcoal; but no other material was recovered.

There was no surviving evidence that these pits might have held timber posts, to form a near north-south post alignment, but while the diameters would have been sufficient to hold substantial tree trunks, the shallow depths would have provided little support for uprights of any great height.

Pits 59, 72, 74 and 76 in the line of pits, looking south Fig 19

Pit 20, looking west Fig 20

Pit 59, looking south Fig 21



Sections of Middle Bronze Age ditch system Fig 22

4.6 The Middle Bronze Age ditch system

To the north of the henge there was an L-shaped ditch system (Fig 17). The two arms were set at a little over a right angle, 95°, with the rounded corner lying 12m to the north of the henge ditch, and perhaps only a few metres to the north of the then extant external bank. There can be no doubt that this later feature was deliberately positioned adjacent to the earthwork of the henge.

The eastern arm, aligned to the north-east, was 59m long, comprising a single length of ditch, 52m long, with an opening 3.5m wide to the immediate east of the southern corner. The western arm, aligned to the north-west, was around 52m long, with its northern limit defined by geophysical survey. It comprised at least two lengths of ditch, with a 6m wide opening on the western arm, and the southern length, which was 18m long, encompassed the curving corner.

To the east the ditch was at its narrowest, at 1.4m wide, with a V-shaped profile, 0.55m deep, while to the west it was both broader and deeper, at up to 2.6m wide by 0.80m deep. However, sections on all three lengths showed a similar sequence of silting (Figs 22-25). The highly asymmetrical nature of the fills was initially interpreted as indicating the presence of a recut, with the absence of stones from the recut contrasting with the stony earlier fills. However, the interleaving of the stony and non-stony fills is similar to the pattern seen in the henge ditch, and has been interpreted as indicating the presence of a bank containing much limestone set on the northern side of the ditch and eroding back into it.

At the eastern terminal, ditch 12, there was a basal fill containing limestone (Fig 22, S. 3), although the photographs indicate that the ditch was not quite fully excavated here (Fig 23). The secondary fill, 13, comprised orange-brown sandy clay, with quantities of small limestone pieces coming in from the north and accumulating against the northern side of the ditch. The upper secondary fill, 15, was a distinctive layer of grey-brown silty clay, with charcoal flecking and containing a few fragments from a cylindrical clay loomweight as well as animal bone. To the west, ditch 26, showed a similar sequence, to the terminal, but there was a more substantial deposit of small limestone pieces, 29, which had come in from the north (Fig 22, S.8 and Fig 24). This deposit also contained some cattle bone, part of a dog cranium and part of a human femur.

Further to the west, the ditch fills produced further bone, including fragments of a red deer antler in ditch 5808 (excavated in the evaluation), which provided the sample for radiocarbon dating, and further animal bone from both cattle and sheep from ditch 10. A red deer antler tine came from the terminal at the corner, ditch 16, and there were a few sherds of pottery from the primary fill 45, in ditch 44 on the western arm. At this point the ditch was at its broadest and deepest (Fig 22, S.11 and Fig 25). There was an accumulation of limestone in the base of the ditch, 45, and above this the secondary fill contained a similar density of limestone, 46, but with stone-free light grey-brown sandy clay against the western edge of the ditch. The sequence is most clear in the upper secondary fill, with stone-free light brown sandy clays accumulating to the west and interleaving with small pieces of limestone in a similar matrix coming in from the east. From ditch 33 there was part of a perforated bone needle (Fig 28).

Within the arms of the L-shaped ditch system there was a small circular pit, 55, 0.3m in diameter by 0.17m deep (Fig 17). The lower fill, 56, was dark orange-brown silty clay but the upper fill, 57, was fine black silt that contained several small pieces of burnt bone, from 3-10mm long, all with worn and rounded edges, with a total weight of 1g. It is impossible to determine whether this is animal or human bone, but the white to light grey colour does indicate that it had been burnt at a high temperature. Other, more irregular features to the south-east of pit 55 were probably tree holes.

The presence of the cylindrical loomweight is consistent with the radiocarbon date from the antler in placing the L-shaped ditch system in the Middle Bronze Age (1190-1010 cal BC, 95% confidence, 2890+/-30 BP, Beta-317401), perhaps a little over 1000 years later than the adjacent henge, although the henge appeared to have still formed a prominent and recognisable earthwork at the time.

Middle Bronze Age ditch, eastern terminal, 12, looking west Fig 23

The evidence from the L-shaped ditch system indicates that a bank containing much limestone had lain along the northern edge of the L-shaped ditch, but given the depth of the surviving ditch, it is clear that there were never further sides of similar form to create a fully enclosed space.

Associated human activity in the area is shown by the presence of animal bone, including cattle, sheep, dog and red deer antler, as well as a little pottery, fragments of clay loomweight and a bone needle, all scattered at a low density along the length of the ditch and often occurring in a distinctive grey-brown layer. This material could all be seen as a low level of disposal of domestic waste. However, there was also part of a single human femur from the ditch and a small pit within the arms of the ditch contained a very small quantity of burnt bone, although not necessarily a human cremation burial. These latter elements may be in keeping with the presence of the nearby henge as special deposits at a place of significance, and it is possible that the slots cut into the largely silted henge ditches at either side of the entrance may have

been a contemporary refurbishment of the henge itself to form a further element of this Middle Bronze Age monument complex.

Middle Bronze Age ditch, 26, looking west Fig 24

Middle Bronze Age ditch, 44, looking south-east Fig 25

4.7 Other archaeological features

At the extreme south-east of the excavated area there was the terminal of an isolated linear ditch 109, aligned north-south (Fig 2). A length of 2,5m ran into the site, and the ditch was 1.27m wide by 0.45m deep. A primary fill of medium brown sandy clay 110 was overlain by dark brown to black mixed sandy clay 111, which contained a mass of charcoal, mainly from Maloideae family (apple and pear) with some hazel. A single flint flake was recovered from fill 110.

It is tentatively suggested that this may be a further feature of Middle Bronze Age date, but its extent, date and nature are unknown.

4.8 Post-medieval boundary ditch

A linear ditch, 51, 0.70m wide by up 0.03m deep, with a bowl-shaped profile, crossed all three excavation areas on a near north-south alignment, lying towards the eastern end of the excavated area. Some modern glass was recovered from the fill of brown sandy clay, containing a little limestone, some burnt.

5 THE FINDS by Andy Chapman

5.1 The worked flint

There is a small group of 14 flints, with five from the fills of the henge ditch, six from the Beaker pit 104, two from the line of pits to the west of the henge ditch and one from the linear ditch [109] to the east of the henge ditch (Table 3). In addition, there were six worked flints from the evaluation, including one from the henge ditch, one from a probable tree hole within the henge ditch and three from the ditched enclosure (Wolframm-Murray 2011).

The raw material is typically grey-black vitreous flint, with a pale brown cortex, but there are also a few pieces in opaque grey, often granular flint, and three have a pale white to blue-grey or brown surface patination.

Table 3: The worked flint

Fill/feature (SF)	Type	Comments
21/20 line of pits	Flake	
21/20 line of pits	Flake	burnt
87/84 henge ditch	Flake	
87/84 henge ditch	Flake	Misc retouch
103/99 henge ditch	Scraper	Thumbnail (18x20mm)
103/99 henge ditch	Scraper	End, unfinished (49mm long)
103/99 henge ditch	Flake	patinated
106/104 pit (Beaker)	Flake	
106/104 pit (Beaker)	Flake	
106/104 pit (Beaker)	Flake	
106/104 pit (Beaker)	Flake	
106/104 pit (Beaker)	Flake	
106/104 pit (Beaker)	Flake	patinated
110/109 linear ditch	Flake	patinated
Evaluation		
Trench 44, (4416)	Flake	
5707/5711 henge ditch	Flake	
5705/5706 pit (tree hole)	Flake	
5805/5808 MBA ditch	Flake	utilised
5912/5918 MBA ditch	Scraper	End/side
5912/5918 MBA ditch	Blade	Soft-hammer struck, patinated (Early Neolithic?)

The assemblage is dominated by flakes, all small, often squat and hard hammer struck. The five flints from the fills of the henge ditch include three of the four implements from the site. A squat flake from ditch segment [84] has fine retouch along one edge, and was probably used as a cutting flake. From ditch segment [99] there is a thumbnail scraper, 18mm wide by 20mm long, and an unfinished end scraper, 49m long by 20m wide.

The small group from the Beaker pit 104 comprises six flakes that appear to be knapping debris. However, the flakes are not from a single act of knapping as they come from at least four different sources: two are in grey vitreous flint, two are dark grey and granular, one light grey and one is in a pale grey-white patinated flint. They vary from 19mm to 30mm long.

The flints from the evaluation are broadly comparable, and include three pieces from the Middle Bronze Age enclosure. A small end scraper, 35mm long by up to 22m wide, has abrupt retouch on the scraper end while the curving side has been retouched to form a cutting edge, creating a small composite tool. There is also a broad oval flake, up to 300mm wide, with edge damage from utilisation around much of the circumference, and a small blade, 25mm long by 9mm wide, soft-hammer struck, with light blue patinated surfaces; the only piece that might date to the earlier Neolithic.

This is an undistinguished group of flint. The general nature of the flakes, typically hard hammer struck and often squat and irregular, and the small thumbnail scraper and the composite end scraper, cutting edge, are characteristic of Late Neolithic/Early Bronze Age assemblages, with only the single blade perhaps dating to the earlier Neolithic.

5.2 The prehistoric pottery

There is a single sherd from the henge ditch and small group of Beaker sherds from pit 104, and an even smaller group, four sherds from the Middle Bronze Age ditch system.

The henge

In the evaluation, a single small pottery sherd recovered from the fill of the henge ditch contained grog, which in Northamptonshire occurs in vessels dating to either the Early Bronze Age or the Late Iron Age.

Beaker pottery from pit 104

The material from pit 104 comprises 22 sherds, weighing 100g, and numerous small crumbs weighing a further 18g. The fabric is typically slightly sandy, containing sparse small quartz grains, although some sherds contain sparse small voids, perhaps deriving from leached finely crushed shell. They typically have a grey-black core, and either a grey-black inner surface and an oxidised external surface or both surfaces are oxidised. The surface colours vary from pale orange though orange to dark red-brown.

From the thickness, colour and decoration it can be suggested that there are sherds from perhaps seven different vessels. Six of these are represented by between one and three sherds, while the other vessel comprises some 10 sherds of similar appearance, but too fragmentary to be certain that they do derive from just a single vessel.

There are sherds from four decorated Beakers, 5-7mm thick. They all have lines of incised decoration, including interrupted lines. The sherds are too fragmentary to reconstruct the decorative patterns, although in one instance there is a filled triangle (Fig 26, right).

There are single sherds, 6-7mm thick, from two rusticated Beakers, one decorated with closely-spaced fingertip impressions, where pads of clay have been dragged out of the surface, and the other with a pattern of stabbed incisions (Fig 26, left). The larger group of sherds, up to 8mm thick, are also from one or more rusticated Beakers, with remnants of fingernail and probably deep fingertip impressions surviving (not illustrated).

Rusticated (left) and decorated Beaker sherds (right) from pit 104 (Scale 20mm) Fig 26

Middle Bronze Age pottery

There are four sherds, weighing 18g, from the fill 45 of ditch section 44 of the Middle Bronze Age ditch system. They are quite different to the Beaker material. There are two sherds in a hard fabric containing sparse finely-crushed shell, and one containing more frequent shell inclusions. They all have grey-black cores and inner surfaces and dark brown outer surfaces, and are plain body sherds. A few sherds of pottery from the enclosure ditches were also recovered in the evaluation, and these too are in fabrics containing shell. These sherds possess no clear diagnostic features, and it is the cylindrical loomweight, dating to the Middle Bronze Age to Late Bronze Age/Early Iron Age (see below), that provides the only diagnostic find from this ditch system.

5.3 Other finds

The jet bead

Within the deposit of cremated human bone in pit 5704 within the henge, excavated in the evaluation, there was a complete and well-preserved, biconical, lathe-turned jet bead (Fig 27). It is 7-11mm in diameter and I7mm wide. The drilled perforation is 5mm in diameter. The perforation and the surfaces of the bead are worn smooth, with rounded edges. The surface of the bead is decorated with multiple closely-spaced fine grooves, which may once have contained some material of a contrasting colour to provide a contrasting decorative effect.

Biconical beads in jet or shale are not uncommon in association with burials of the Early Bronze Age, and there are several examples in jet/shale, amber, stone and bone from Wessex in the collection of Devizes Museum (Annable and Simpson 1964, Catalogue numbers: 196, 250-252, 310, 338, 390-1 & 498), including an example with gold wire set within a series of grooves (Catalogue number 196).

The jet bead from cremation burial [5704] (11mm diameter) Fig 27

The bone needle

The perforated end of a bone needle was recovered from the fill 35 of ditch segment 33 of the Middle Bronze Age ditch system (Fig 28). It is blackened through scorching, rather than burning, and is 25mm long, but has lost over half its length and was perhaps 50-60m long. It is 5-7mm in diameter, with a drilled perforation 2mm in diameter. The end is obliquely chamfered, and this flattened surface runs into a flattened surface running the length of the object.

Bone needles have a long history, beginning in the Palaeolithic, and they are not uncommon in Late Neolithic/Early Bronze Age contexts, and are a frequent find with Early Bronze Age cremation burials.

The bone needle from Middle Bronze Age ditch 33 (Scale 10mm) Fig 28

A Middle Bronze Age spearhead

A bronze side-looped spearhead of the Middle Bronze Age was recovered from the fill of the henge ditch, near segment 84 on the south-western side during the machine excavation of the ditch fills.

The spearhead is 113mm long and survives up to 22mm wide, although the thin edges of the blade are damaged (Fig 29). It has a central rib that runs smoothly into the tubular socket, which has a maximum internal diameter of 11mm. The side loops are high, nearer to the blade than the socket, which is a feature of later spearheads, and the casting metal has not been removed from the loops.

An example of similar size, also with the casting metal still filling the side loops, was recovered in association with the post alignment at Flag Fen, Peterborough, and is dated to 1200-1000 BC (Coombs 1992, 506 & fig 2, 4). More broadly, side-looped spearheads are dated to the Middle Bronze Age, spanning perhaps 1400-1000 BC, but published dates vary considerably. Given the date of 1190-1010 cal BC for the antler from the L-shaped ditch system, it may be suggested that the same date range may well be applicable to this spearhead.

The Middle Bronze Age spearhead (Scale 50mm) Fig 29

The loomweight

From the fill 15 of Middle Bronze Age ditch 12, there is 60g of fired clay. Three joining fragments come from the circumference of a cylindrical clay loomweight, *c* 110mm diameter, with the identification confirmed by the survival of a remnant of the longitudinal perforation. Cylindrical loomweights were in use from the Middle Bronze Age to the Late Bronze Age/Early Iron Age (Chapman 2012).

The fired clay

From two of the line of pits 24 and 20 lying to the west of the henge ditch, there are small rounded pellets of fired clay, weighing 4g and 1g respectively, and a similarly small quantity came from a soil sample taken from pit 22.

There is a further rounded pellet of fired clay from pit 55, within the Middle Bronze Age ditch system.

6 ANIMAL BONE AND ENVIRONMENTAL EVIDENCE

6.1 Cremated human bone by Sarah Inskip

A total of 407g of cremated bone came from the cremation burial, 5704, within the henge. The bone is the remains of a 6-8 year old child, with the bone weight and the skeletal elements present indicating that most of the body was recovered, while the white colouration of the bone suggests a well oxygenated, high temperature pyre.

Osteological methodology

The aim of the osteological analysis was to provide a detailed description of the cremated bone, with the identification of skeletal elements to assess the number of individuals represented, level of fragmentation and age. Trends in the cremation process and pyre technology were recorded by examining bone colour.

The cremated deposit was examined following the guidelines produced by the Institute for Archaeology (Brickley and McKinley 2004) and English Heritage (Mays, Brickley and Dodwell 2004). Sex cannot be estimated in juvenile individuals and non-metrics are also not recorded as they are not fully formed in juvenile remains.

Results

The bone was received washed and dried. It was weighed to the nearest 0.1g before being passed through 10mm, 5mm and 2mm sieves, with each sieved fraction recorded and weighed (Table 4).

Table 4: Quantity of human bone in each sieve section

Sieve size	10mm	5mm	2mm	<2mm	Total
Bone weight (g)	142	189	71	5	407

Trotter and Hixon (1973) demonstrate that a complete cremated juvenile will produce around 0.5kg of bone. With 407g excavated, it appears that the remains represent a fairly complete individual.

The bone was sorted into elemental groups; skull, upper and lower long bones, axial skeleton, hands/feet and unidentifiable, as it was difficult to identify the origin of some long bone fragments due to the small size. Each elemental group was weighed (Table 5).

Table 5: Weight of anatomical groups

Anatomical group	Weight (g)
Skull	105
Axial	16
Upper limb	41
Lower limb	82
Hands and feet	4
Long bone	38
Unidentified	121

McKinley (1997, 69) suggests that the number of skeletally distinguishable elements is related to the level of fragmentation; the bigger the fragments, the more that can usually be identified (Table 4). As there is a large quantity in the 10mm and 5mm fractions, it is not surprising that over 70% of the remains were identifiable to at least element type (Table 5). The largest fragment is 63.2mm long.

The weights of the elemental groups demonstrate that greater quantities of skull and long bones have survived over the axial skeleton. This is not unusual given that the skull and long bones have thicker cortical bone than those of the axial skeleton. In particular, the skull has many identifiable landmarks which can make even the smallest fragments identifiable. It is thought that vertebral bodies and bones with high trabecular bone content such as epiphyses and os coxae will disintegrate easily (McKinley 1998). As such they make up large portions of the unidentifiable elements or are lost completely. This was thought to have occurred at Westhampnett (McKinley 1997) and Ardleigh (Mays 1996). As such, the high quantities of skull and long bones identified here is not unusual for Bronze Age cremated deposits.

Number of individuals
No skeletal elements were duplicated indicating that the bones are the remains of a single person (Table 6).

Table 6: Identified human skeletal elements

Skull	Axial	Upper limb	Lower limb	Hands and feet
L and R temporal	Ribs	Clavicle	L and R Femur	3 proximal phalanges
Frontal, Sphenoid & Occipital	Vertebrae	L and R Radius	L and R Tibia	2 distal phalanges
L and R Parietal	Axis	Ulna	Fibula	1 intermediate phalanges
Maxilla and R maxilla	L and R Scapula	Humerus		3 metacarpals
L and R mandible	Os coxae			2 metatarsals
Adult & Deciduous teeth				

Age
The presence of unfused long bones (humerus, tibia, femur, metacarpals) indicates that the individual was immature. Furthermore, Scheuer and Black indicate that an unfused proximal tibia and proximal humerus would place the child under 13 years (2000, 413 and 285). The small size of the bones suggests that the individual was probably younger than this. At least 15 teeth from the adult and deciduous dentitions were present in the deposit. An unerupted/unworn upper central incisor one with a complete crown places the individual above 5 years. The presence of complete roots on a deciduous molar suggests an age below 8 years. Incomplete permanent molar 1 roots indicate an age below 8 years. Complete second molar tooth crowns without tooth roots suggest and individual between 6-7 years.

Accordingly, taking into consideration the applicability of the Ubelaker chart to a Bronze Age population, the age for the individual is estimated at 6-8 years.

Pyre conditions
Bone colour in each elemental group varied very little. In fact nearly all bones were white/cream in colour. The skull was white/cream endocranially and ectocranially. Long bones were also uniformly white/cream on the endosteal and periosteal surfaces. The only exception was the left radius, which was grey: this may suggest that the bone had slipped into a cooler area of the pyre, and/or was not as exposed as long as other areas of the skeleton.

The uniformity in the white/cream colour suggests a well oxygenated pyre that reached temperatures in excess of 650˚C (Mays 2010, 322). A predominately white/cream

assemblage is a common finding for cremated material in the Bronze Age, eg Ardleigh, Essex (Mays 1996) and Westhampnett, West Sussex (McKinley 1997).

6.2 Other human bone by Laszlo Lichtenstein

During the analysis of the animal bone, 11 fragments, weighing 108g, from the shaft of a human femur, were identified within the animal bone assemblage from the fill 29 of Middle Bronze Age ditch 26, which also included cattle bone and two fragments from a dog skull.

6.3 The animal bone by Laszlo Lichtenstein

There is a total of 135 (NISP, 669g) hand-collected and sieved animal bone elements and fragments recovered from the fills of the henge ditch and the fills of the Middle Bronze Age ditch system. Following cleaning and drying, all fragments were recorded and analysed, using standard zooarchaeological methods, to determine the taxa present, state of preservation and its potential to provide evidence on the function and economy of the site.

Methodology

The animal bone was identified using Northamptonshire Archaeology's and the author's vertebrate reference collection, and further guidelines from Schmid (1972), Driesch (1979), Sisson & Grossman (1953) and Feher (1990). Due to anatomical similarities between sheep and goat the criteria set out by J. Boessneck (1964) were used to separate the two species. Ageing data and tooth eruption and wear were categorised according to Hillson (2005).

The following were recorded for each bone: species, anatomical element, fragmentation, side, fusion, cut- and animal teeth marks (where applicable).

Bones that could not be identified to species were, where possible, categorised according to the relative size of the animal represented (large ungulate size: cattle or horse sized, small ungulate size: pig or sheep/goat). The presence of large and medium vertebrae and ribs was recorded for each context, and these were identified to species and counted.

The teeth and a restricted suite of parts of the postcranial skeleton were recorded and used in counts. All fragments were recorded.

Results

Employing standard zooarchaeological methodological procedures 115 specimens (81.4% of the total NISP) were identified to taxa and parts of anatomy, representing four mammalian species: *Bos* (cattle); *Ovicaprid* (sheep or goat), *Cervus* (red deer) and *Canis* (dog) (Table 7). The majority of bones came from cattle (32.7%) and sheep/goat (5.5%). No horse, pig, avian, fish or amphibian bones were recovered.

The distribution by monument shows that the henge ditch produced cattle bone and little else. There is some dog bone from near the western terminal, but this occurs in deposits disturbed by rabbit burrows.

The Middle Bronze Age ditch system was also dominated by cattle, but included a range of other species; sheep, dog and deer (as antler) in small quantities, along with some human bone.

Table 7: Species present in the animal bone assemblage by fragment count (including the teeth)

Species/taxa	Total		Henge		MBA ditches	
	No.	%	No.	%	No.	%
Bos taurus L. (cattle)	44	32.7	20	27.3	24	38.7
Ovis aries L. (sheep)	1	0.9	--	--	1	1.6
Ovicaprid (sheep/goat) (Ovis aries or Capra hircus	6	4.6	--	--	6	9.7
Cervus elaphus (red deer)	2	1.5	--	--	2	3.2
Canis familiaris L. (dog)	4	3.0	2	2.7	2	3.2
Large ungulate size	46	33.5	28	38.3	18	29.0
Small ungulate size	7	5.2	3	4.1	4	6.5
Unidentificated	25	18.6	20	27.3	5	8.1
Total	**135**		**73**		**62**	

Taphonomy

The bone from the site was generally poorly preserved, with the bone surfaces severely abraded and distorted by acidic soils. Certainly the high degree of surface erosion exhibited by these bones suggests that they may have been exposed on the surface for some time before burial. Bone fragmentation was high with the majority (71.1%) being less than 50mm in size (Table 8). No complete long bones were recorded, because the proximal and the distal ends were damaged. Taphonomic factors affecting the material were recorded, including gnawed and recently broken bones. More than 50% showed signs of fresh breaks.

Evidence of burning was observed on bone from fill 63 of henge ditch 60. Canid gnawing was seen on one large ungulate sized animal humerus from the fill 9 of Middle Bronze Age ditch 10, which is a relatively low frequency. No evidence for butchery or bone working was noted.

Table 8: Size of the animal bone (excluding teeth)

Size (mm)	No.	%
<20	35	26.1%
20-50	74	55.2%
50-100	21	15.7%
100-150	4	3%
Total	**134**	**100%**

Ageing

Little ageing data was available because of the cattle tooth wear and eruption. The tooth (in context 9) indicates a juvenile beast.

Table 9: Minimum Number of Individuals (MNI) in the animal bone assemblage

Common name	MNI
Cattle	1
Sheep/Goat	1
Red deer	1
Dog	1

Discussion

There was only a small amount of poorly preserved animal bone, and little can be said of the animal husbandry and economy in the Early or Middle Bronze Age. The fragmentation was very high and many bones had been broken recently, but 42.7% of the assemblage could be identified to species. The assemblage is dominated by cattle 32.7% and there are lower numbers of sheep/goat at 5.5% sheep and a little dog and

red deer, as antler. None of the hand-collected and sieved bones show evidence for butchery or pathological condition. Evidence for burning was seen on three bones (little more than 2% of the total NISP), suggesting that this was not a preferred method of disposal.

The bones associated with the henge are almost exclusively cattle, while a more mixed assemblage of cattle and sheep came from the Middle Bronze Age ditch system. Red deer was represented in the Middle Bronze Age ditch by antler fragments, which could have come from shed antler, a material commonly used for tool making (Grant 1984, 525), although evidence for antler working was not noted on these fragments.

Dog gnawing was present on only one bone from the Middle Bronze Age ditch system, although more evidence could have been obscured by the heavy surface abrasion. The evidence for gnawing supports the skeletal evidence for the presence of dogs contemporary with the Middle Bronze Age ditch system, although the dog bone related to the henge ditch could derive from modern rabbit burrowing.

Catalogue of animal bone

The henge ditch
Fill 63, ditch 60 (15g)
Fragment of corpus vertebrae, broken. Animal species unidentifiable. 9g
Large ungulate size animal, 4 diaphysis fragments of long bone. 3g
Small ungulate size animal, 3 fragments of radius. All of them burned! 2g
6 unidentifiable bone fragments. 1g

Fill 78, ditch 77 (71g)
Bos, 5 fragments of processus cornus, horn corn. 21g
Bos, 3 distal epiphysis fragments of humerus, sinister, broken. 50g

Fill 80, ditch 77 (28g)
Large ungulate size animal, 11 diaphysis fragments of long bone. 25g
Large ungulate size animal, 5 unidentifiable bone fragments. 3g
Fill 87, ditch 84 (49g)
Bos, 12 diaphysis fragments of radius, broken. 45g
8 unidentifiable bone fragments. 4g

Fill 117, ditch 112 67g
Large ungulate size animal, 13 fragments of humerus. 67g
Small ungulate sized animal – sheep/goat, sus
Large ungulate sized animal – cattle or horse

Fill 68, pit/animal disturbance 67, henge ditch 60 (2g)
Canis, fragment of fibula, dexter, broken. 1g
Canis, metacarpus I, dexter. 1g

The Middle Bronze Age ditch system
Fill 9, ditch 10 (150g)
Bos, fragment of molar, juvenilis, broken. 9g
Bos, 9 fragments of metatarsus, diaphysis and proximal epiphysis, sinister, broken. 68g
Ovis, broken humerus, diaphysis and distal end, sinister. 15g
Ovis/capra, diaphysis fragment of tibia, sinister. 7g
Ovis/capra, diaphysis fragment of tibia, sinister. 4g
Ovis/capra, 4 diaphysis fragments of radius. 8g
Large ungulatte size animal, 5 fragments of humerus, epiphysis and diaphysis. Animal teeth mark on 1 fragment! 33g

Large ungulate size animal, 3 fragments of cranium, os parietale. 5g
Small ungulatte size animal, diaphysis fragment of long bone. 1g

Fill 15, ditch 12 (54g)
Bos, 6 diaphysis fragments of metapodium bones, broken. 35g
Bos, 4 epiphysis fragments of metapodium bones, broken. 10g
Large ungulate size animal, fragment of flat bone. 9g

Fill 17, ditch 16 (18g)
Cervus, 2 fragments of tine, broken. 18g

Fill 29, ditch 26 (173g)
Bos, fragment of metacarpus, broken. 17g
Canis, 2 fragments of cranium, os parietale. 7g
Large ungulate size animal, diaphysis fragment of radius. 27g
Large ungulate size animal, 8 diaphysis fragments of long bone. 13g
Small ungulate size animal, 3 fragments of corpus costae. 1g
(Human bone, 11 fragments of one femur, diaphysis. 108g)

Fill 45, ditch 44 (9g)
Bos, 2 diaphysis fragments of metacarpus, broken. 9g
Fill 45, Sample 2, ditch 44 (33g)
Bos, fragment of cranium, occipital condyle. 32g
5 unidentifiable bone fragments. 1g

6.4 The charred plant macrofossils by Val Fryer

Nine bulk soil samples for the retrieval of the plant macrofossil assemblages were taken from fills of the henge ditch, the Middle Bronze ditch system and other boundary ditches, and from a small number of discrete features.

The samples were bulk floated by Northamptonshire Archaeology and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x16 and the plant macrofossils and other remains were noted (Tables 10 & 11). Nomenclature within the table follows Stace (1997). All plant remains were charred. Modern fibrous roots were abundant within most assemblages and intrusive seeds and arthropod remains were also noted.

Results

The principal component of all nine assemblages was charcoal/charred wood, most of which was very fragmentary. Some of the charcoal, particularly Sample 4 from the henge ditch 99 and Sample 5 from ditch 109 had a very flaked appearance typical of material heated to very high temperatures during combustion.

Other plant macrofossils were relatively scarce. An indeterminate cereal grain, fragments of hazel (*Corylus avellana*) nutshell, possible hawthorn (*Crataegus* sp.) fruit stones and goosegrass (*Galium aparine*) seeds were noted within five of the assemblages studied.

Small pieces of bone, some of which were burnt/calcined, were recorded within six assemblages.

Sample 7 from henge ditch 84 and sample 2 from Middle Bronze Age ditch 44, both contained small assemblages of terrestrial mollusc shells, with a range of species principally found within shaded, damp habitats (not tabulated). However, as most specimens were extremely well preserved, it was thought most likely that all were later contaminants within the features from which the samples were taken.

Conclusions

Although the assemblages are very limited in composition, they are largely typical of many samples of Late Neolithic and Bronze Age date, being principally composed of charcoal/charred wood, with only a very low density of other remains.

Although cereals are recorded, albeit in the form of a single, poorly preserved grain, a continued reliance on locally gathered foodstuffs is implied by the hazelnut shell fragments from the Beaker pit and hawthorn fruit stones from the Middle Bronze Age ditch and ditch 109. Although the larger assemblages may be derived from refuse which was deliberately deposited within the pit and ditch fills, it is suggested that the remaining material is probably indicative of scattered or wind-dispersed detritus, some or all of which was accidentally incorporated within the feature fills.

As none of the assemblages contain a sufficient density of material for quantification (ie 100+ specimens), no further analysis has been attempted.

Table 10: Charred plant remains from the henge ditch and the Beaker pit [104]

Sample	**8**	**7**	**4**	**9**	**6**
Context	**61**	**85**	**102**	**90**	**106**
Feature	**60**	**84**	**99**	**88**	**104**
Feature type		**Henge ditch**			**Beaker pit**
Plant macrofossils					
Cereal indet. (grain)	--	--	--	--	--
Corylus avellana L.	--	--	--	x	xx
Crataegus monogyna Jaqu.(hawthorn)	--	--	--	--	--
Galium aparine L.	--	--	--	--	--
Charcoal <2mm	xxxx	x	xxxx	xxxx	xxxx
Charcoal >2mm	xx	x	xxxx	x	xxxx
Charcoal >5mm	x	--	x	--	--
Charred root/stem	--	--	--	--	--
Indet.buds	--	--	--	--	--
Indet.fruit/nut fragments	--	--	--	--	--
Indet.seed/ grain fragments	--	x	--	--	--
Indet.thorn (Prunus type)	--	--	--	--	--
Other remains					
Black porous 'cokey' material	x	--	--	--	--
Black tarry material	--	--	--	--	--
Bone	x	xb	--	xb	xb
Burnt/fired clay	--	--	--	--	x
Small mammal or amphibian bones	xpmc	--	--	--	--
Sample volume (litres)	40	40	40	40	40
Volume of flot (litres)	<0.1	<0.1	0.4	<0.1	0.3
% flot sorted	100%	100%	25%	100%	50%

Table 11: Charred plant remains from other features

Sample	**2**	**3**	**1**	**5**
Context	**45**	**57**	**23**	**111**
Feature	**44**	**55**	**22**	**109**
Feature type	**MBA ditch**	**Pit within MBA ditch**	**Pit in line of pits**	**South-east ditch**
Plant macrofossils				
Cereal indet. (grain)	--	--	x	--
Corylus avellana L.	x	--	x	x
Crataegus monogyna Jaqu. (hawthorn)	xcf	--	--	xcf
Galium aparine L.	x	--	--	
Charcoal <2mm	xxxx	xxx	xx	xxxx
Charcoal >2mm	xx	x	xx	xxx
Charcoal >5mm	x	--	x	
Charred root/stem	--	--	--	xx
Indet.buds	--	--	--	x
Indet.fruit/nut fragments	--	--	x	
Indet.seed/ grain fragments	x	--	--	x
Indet.thorn (Prunus type)	--	--	--	x
Other remains				
Black porous 'cokey' material	--	x	--	--
Black tarry material		x	x	--
Bone	x	xb		--
Burnt/fired clay	x	--	x	--
Small mammal or amphibian bones	xpmc	--	--	--
Sample volume (litres)	40	40	40	40
Volume of flot (litres)	<0.1	<0.1	<0.1	0.3
% flot sorted	100%	100%	100%	50%

Key to table
x = 1 – 10 specimens xx = 11 – 50 specimens xxx = 51 – 100 specimens
xxxx = 100+ specimens
cf = compare b = burnt pmc = possible modern contaminant

6.5 Wood species identification by Imogen van Bergen-Poole

Charcoal from four contexts was submitted for identification to give an indication of the range of taxa present, type of wood and suitability for radiocarbon dating.

Material and methods

The charcoal fragments within each sample were all relatively large in radial diameter (>3 mm and up to 15 mm) although sample sub-fragments and dust were present in the bag presumably having originated from the larger fragments. Preservation was relatively good with some fragments exhibiting well-preserved anatomy and good reflectivity whilst others showed evidence of distorted anatomy (eg “exploded” rays) and homogenised cell walls usually coupled with high reflectivity.

From each sample, unless the number of fragments dictated otherwise, a random selection of up to 100 fragments were studied to determine the taxonomic identity, the state of preservation and whether any material was suitable for radiocarbon dating. Charcoal fragments were prepared using standard methods (Gale and Cutler 2000). Anatomical structures were examined using reflected light on an Olympus BX41 compound microscope with magnifications up to x400.

Material was identified with the aid of relevant literature (eg Schweingruber 1990, 226pp; Gale and Cutler 2000) whenever necessary. It must be noted that wood anatomy alone is often not enough to secure identification to individual species and thus the samples have been identified to generic level only (especially when more than one native species exists in the British flora) unless only one native species exists in the British flora. When possible the maturity of the wood; whether the specimen is of heartwood or roundwood, was assessed.

Fragments from each sample were grouped according to taxon and samples considered suitable for radiocarbon dating (short-lived taxa or fragments representing short-lived twig material or sap wood from long-lived taxa) were identified and isolated.

Results

Table 12 provides a summary and quantification of the taxonomic finds. The majority of the wood is considered to be mature, probably originating from a relatively large diameter axis such as a trunk or branch material. Fragments providing evidence of being heartwood (Hw) or roundwood (Rw) are recorded in Table 12. None of the fragments showed significant rounding which would indicate having been subject to a high degree of weathering or abrasion.

Discussion

Henge ditch, context 102, ditch segment 99,

This sample comprised a single length of carbonised tree branch deposited in a ditch on top of primary fill with 5.5g of larger pieces submitted for species analysis. All wood fragments in the sample supplied were large (>3mm radial diameter) and characteristically dark black in colour. Splinters of these fragments were also present. The material was highly reflective with many fragments showing distorted anatomy. This suggests that the wood was heated to a relatively high temperature (>800^{o}C cf. Braadbaart and Poole, 2008). The fragments probably originated from large diameter trunk or branch material. Although the material is described as being from one tree branch, species identification shows the presence of two taxa, with oak (*Quercus*) forming at least 70% of the sample alongside rare fragments of possible Maloideae (apple/pear) wood.

Cremation burial within henge, context 5703
This sample was the total quantity recovered in association with a deposit of cremated human bone. The fragments were of small radial diameter (~3mm in diameter) with the majority (>45%) identified as oak (*Quercus*). Oak heartwood is known for its high calorific value and was commonly used as a fuel for Bronze Age pyres.

Beaker pit 104, context 106
This sample comprised 9g of larger pieces of charcoal. Six distinct taxa could be recognised: oak (*Quercus*), hazel (*Corylus*), possible birch (*Betula*), possible elm (*Ulmus*), Maloideae and alder (*Alnus*). Oak was the most abundant fragment type (>55%). The fragments showed no signs of either anatomical distortion or very high reflectivity suggesting that they were subject to temperatures of 400-600^{o}C (cf Braadbaart and Poole, 2008).

South-eastern ditch 109, context 111
This sample comprised 3.5g of larger pieces of charcoal as a subsample from a larger assemblage. Two distinct taxa were recognised, namely Maloideae and hazel (*Corylus*) with Maloideae being the most abundant (46%). Within the Maloideae, roundwood was identified. A further fragment of roundwood complete with pith was too small for taxonomic determination.

Table 12: Quantification of the taxonomic identity of the charcoal

Family	**Subfamily/ *Genus* (Common name)**	**Henge ditch 99 Fill 102**	**Cremation Burial 5703**	**Beaker pit 104 Fill 106**	**Ditch 109 Fill 111**
	Submitted Sample	5.5g	2.0g (total)	9g	3.5g
Betulaceae	*Alnus* sp (Alder)	--	--	1	--
	Betula sp. (Birch)	--	--	1?	--
	Corylus avellana (hazel)	--	--	2	5
Fagaceae	*Quercus* sp. (oak)	70 h'wood 22	46 h'wood 21	55 h'wood 20	--
Rosaceae	Maloideae (apple/pear)	1?	--	2	35 11 twig
Ulmaceae	*Ulmus* sp. (elm)	--	--	1?	--
Unidentified		14 2 twig	14	26	

7 DISCUSSION

7.1 The prehistoric landscape and the henge

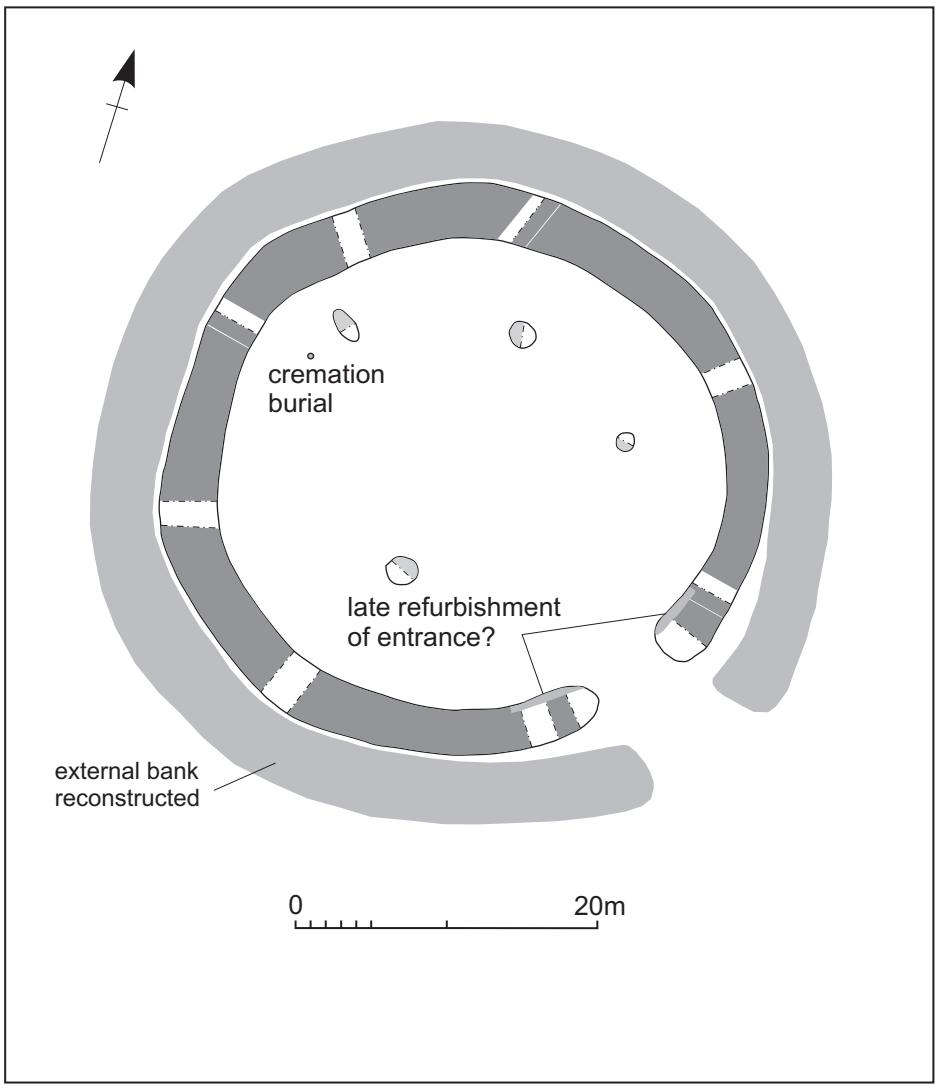
Having used the term henge throughout this report, it may be noted that Alex Gibson has called for the abandonment of the term because it has been so abused and misused to cover what are in fact a diverse range of circular monument types spanning the Middle Neolithic to Early Bronze Age (Gibson pers com at *Henges – A Late Neolithic Conundrum*, Oxford University Continuing Education conference, March 2012). However, the term has been retained in this instance as the Priors Hall henge does meet the principal criteria in terms of shape and size, and the possession of a single entrance and an external bank (Harding 2003).

The Priors Hall henge lay on a south-facing slope above the Willow Brook, with the land to the west rising gradually to the watershed at around 110m aOD. The henge was, therefore, sited adjacent to a water course on the upper reaches of the Willow Brook, which meanders eastward to its confluence with the River Nene near Elton. A close association with water is suggested for many henges, although others claim this is mere coincidence given the number of watercourses in England (pers com various contributors at *Henges – A Late Neolithic Conundrum*, Oxford University Continuing Education conference, March 2012).

There are very few confirmed henges in Northamptonshire. The possible henge at Elton, on the Northamptonshire/Cambridgeshire border has already been mentioned (French 1994). This enclosure was a small polygonal ring ditch, 14.40-16.25m in diameter, with two phases of use, in each of which there was a narrow entrance (French 1994). The interpretation of this feature is uncertain, and as it seems to date to the Middle Neolithic or earlier, it may be closer to the group of Neolithic oval barrows (Darvill 1988, English Heritage Monument Class Description). In the Raunds area, there is the Cotton "henge", comprising a small inner ring, with no apparent entrance, 20m in diameter, and an outer ring 70m in diameter (Harding and Healy 2007, 117-123). This has been only partially investigated and is of uncertain date, and does not fit within the normally accepted range of characteristics for henges. There may also be a henge, *c*60m in diameter with an entrance to the south-east, at the centre of the Dallington causewayed enclosure, on the outskirts of Northampton (RCHME 1985, 30-34 & fig 2).

The Priors Hall henge may, therefore, be the single such excavated monument in Northamptonshire that fits within the standard definition of a henge in terms of size and form, including evidence from the asymmetrical ditch fills that it had an external bank (Fig 30). The differential filling at the terminals has been interpreted as perhaps suggesting that the berm between bank and ditch was broader at the entrance, perhaps to enhance the apparent size of the monument for those entering the central area.

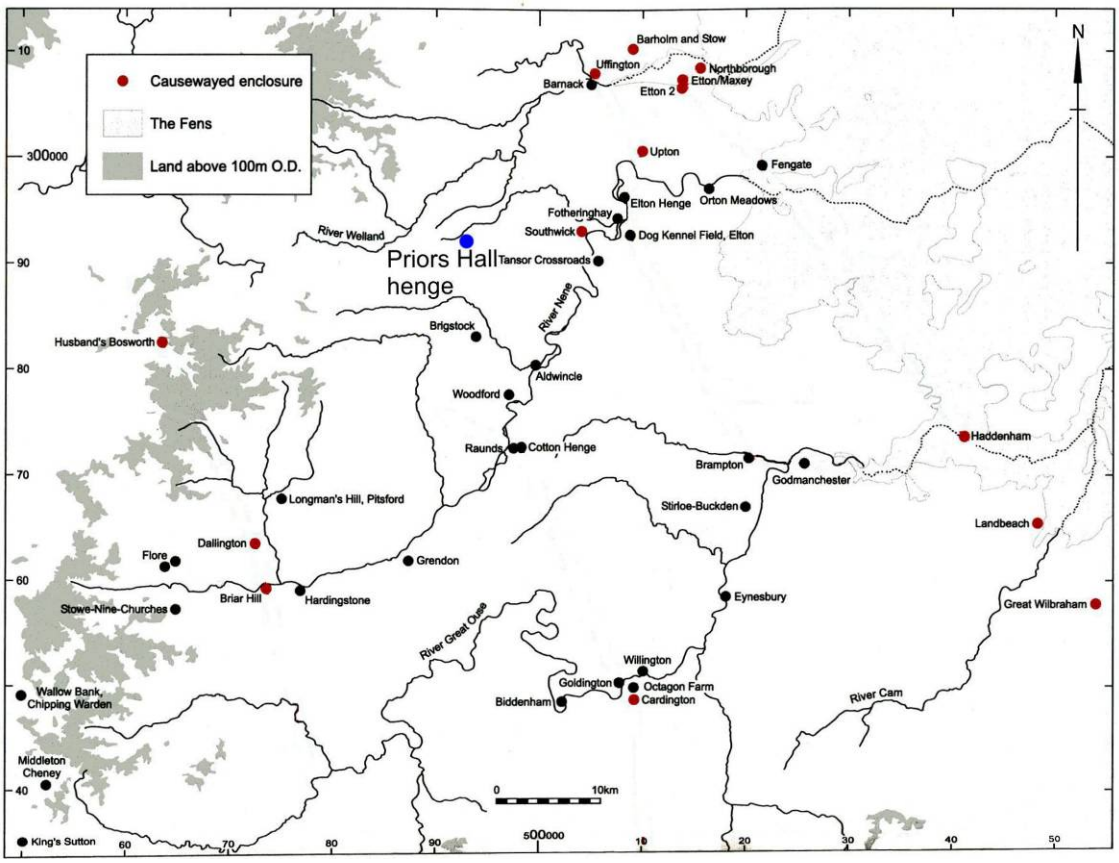
While henge monuments have been regarded as monuments of the later Neolithic that continued into the Early Bronze Age, the evidence from the Priors Hall henge would suggest an origin and use spanning the Early Bronze Age, as is increasingly being suggested for other henges (pers com various contributors at *Henges – A Late Neolithic Conundrum*, Oxford University Continuing Education conference, March 2012).



Priors Hall henge with the bank reconstructed Fig 30

Around the confluence of the Willow Brook with the Nene there are known Neolithic and Bronze Age sites at Elton, including a possible henge (French 1991 & 1994); a little to the south-east of the confluence there is a circular Neolithic mortuary enclosure at Tansor, which was respected into the Early Bronze Age (Chapman 1997); and to the west and south of the confluence there is the Southwick causewayed enclosure of Early Neolithic origin but also with respect probably running into the Early Bronze Age (see Fig 31, from Harding and Healy 2007, fig 5.13). The Priors Hall henge may therefore have a relationship to a series of earlier and contemporary monuments the cluster around the confluence with the Nene.

There are also at least four ring ditches, possibly Bronze Age round barrows, close to the Willow Brook between Priors Hall and Elton (Harding and Healy 2007, fig 5.15). To the south of Weldon a number of early Bronze Age inhumations and cremation burials, associated with Collared Urns, which may have lain beneath a lost stone cairn, were excavated in 1970 (Jackson 1974).



Priors Hall henge in relation to the distribution of Neolithic sites in Northamptonshire and adjacent counties Fig 31
(after Harding and Healy 2007, fig 5.13)

7.2 The Middle Bronze Age ditch system and other features

The henge appears to have been the focus for a diverse range of activities, which cannot all be dated, but which are all likely to have clustered around the henge.

To the south there was a single pit containing small numbers of sherds from several different Beaker vessels, both fine decorated Beakers and the thicker-walled rusticated Beakers. Few such pit groups have been published in Northamptonshire, but pits with similar contents have been found in neighbouring counties (Garrow 2006), including Cambridgeshire (Chapman *et al* 2005 and Burrow and Mudd 2010). The selection of

small numbers of sherds from multiple vessels has been seen as the burial of token pieces of domestic material as earth rituals perhaps designed to ensure the fecundity of the earth and her resources (Gibson in Chapman *et al* 2005, 11).

The arc of gully to the south of the henge may have been the site of a small ancillary mound or cairn, now lost. To the west there was a line of eight pits spanning 22m on a near north-south alignment, which was perhaps a line of broad if not very tall posts.

The Middle Bronze Age ditch system has no obvious parallel, but the positioning of the L-shaped ditch with the angle within a few metres of what would have been the outer edge of the standing bank surrounding the henge, illustrates that this was no accidental coincidence. The possible refurbishment of the entrance to the henge happened late in the ditch silting, and it may be that the interior was brought back into use at this time, with the deposition, either accidental or deliberate, of the bronze spearhead in the henge ditch associated with this reuse. The material in the ditch is diverse, comprising a mixed animal bone assemblage, a bone needle and fragments from a cylindrical loomweight. However, within this almost mundane domestic assemblage there was part of a human femur, and a small truncated pit within the L-shaped area may have been the remnant of a cremation burial. While this bone is not necessarily human, the degree of burning suggests that it was not merely cooking debris.

The site has therefore provided evidence that respect for a henge constructed in the later 3rd millennium BC continued or was renewed over 1000 years later, near the end of the 2nd millennium BC.

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