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Late Neolithic pits and an Early Bronze Age cremation cemetery at Middleton Chase, Banbury Lane, Middleton Cheney

by

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with contributions by Alistair Barclay, Leslie Bode, Liz James, Tania Kausmally, Peter Northover, James Rackham, Jim Rylatt and Gaynor Western

Summary

In 2012 an excavation was undertaken in advance of housing development to the south of Banbury Lane, Middleton Cheney, following the discovery of two pits containing Late Neolithic grooved ware pottery during the evaluation. Further definitive evidence of Neolithic activity was not located, but three Early Bronze Age cremation burials lay in the vicinity of the Neolithic features. Two cremation burials were unurned and unaccompanied by grave goods; the third was interred in an inverted collared urn, which also contained a ceramic spoon and a bronze awl. An Early Bronze Age circular post-built structure was located south-east of the cremations. The date of the Neolithic and Bronze Age features has been confirmed by radiocarbon dating. More recent features comprised a Roman field boundary ditch and postholes, remnants of medieval ridge-and-furrow cultivation strips, and a post-medieval inclosure ditch.

Introduction

In 2012 Archaeological Services and Consultancy (ASC) undertook open-area excavation of a site at Banbury Lane, Middleton Cheney (Fig 1: NGR SP 4968 4235). The excavation followed an evaluation (Cuthbert 2012b), and was required as a condition of planning permission for a residential development. It was undertaken in accordance with written schemes of investigation (Cuthbert 2012 a & c) approved by Northamptonshire County Council's Assistant Archaeological Advisor. The results of the excavation were described in a summary report (Cuthbert 2012d), and proposals for publication of the results were approved by the Archaeological Advisor. The investigations were commissioned and funded by the developers, Bovis Homes.

In the absence of a permanent repository for archaeological archives in Northamptonshire, and following the closure of ASC in March 2014, the project archive has been lodged with MOLA Northampton until a suitable archive becomes available. Copies of the project reports can be accessed at the Northamptonshire Historic Environment Record (HER), and online through the Archaeology Data Service (ADS). This report has been completed by Bancroft Heritage Services.

Acknowledgments

The authors wish to thank Bovis Homes for commissioning and funding the investigations at Middleton Cheney. The project was monitored by Liz Mordue, Northamptonshire County Council's Assistant Archaeological Advisor, on behalf of the local planning authority. The project was managed for ASC by Alastair Hancock. The excavation was led by Martin Cuthbert, assisted by Zoe Clarke, Mo Muldowney, Gareth Shane and Chris Swain of ASC, and staff sub-contracted from Albion Archaeology.

Preparation of this paper was commenced for ASC by Martin Cuthbert, and completed by Bob Zeepvat of Bancroft Heritage Services. The authors are grateful to the various specialist contributors: Alistair Barclay and Liz James of Wessex Archaeology (finds reporting and illustration); Tania Kausmally and Gaynor Western of Ossafreelance (cremations); Peter Northover of the Oxford Materials Characterisation Service (analysis of the awl); Leslie Bode and James Rackham of the Environmental Archaeological Consultancy (environmental and animal bone), and Queens University, Belfast (radiocarbon dates). James Rackham would like to thank Gareth Shane, Trude Maynard and Angela Bain for sample processing.

Location and Description

The excavation site lies to the immediate north-west of the village of Middleton Cheney, *c*.3km east of the river Cherwell (Fig 1). It is bounded to the north by Banbury Lane, and covers a roughly trapezoidal area of c.3.6ha. The land slopes gently from 148m OD on its north side to approximately 142m OD to the south and south-west. The natural soils of the area belong to the Banbury association, described as well-drained brashy loamy over clayey soils: the underlying geology is Jurassic Marlstone (Soil Survey 1983, 544; BGS 1982). Prior to development the site was arable land, set to grass.

Archaeological Background

The scale and extent of later prehistoric activity in the Cherwell valley area of south-west Northamptonshire is poorly understood, largely owing to the prevalence

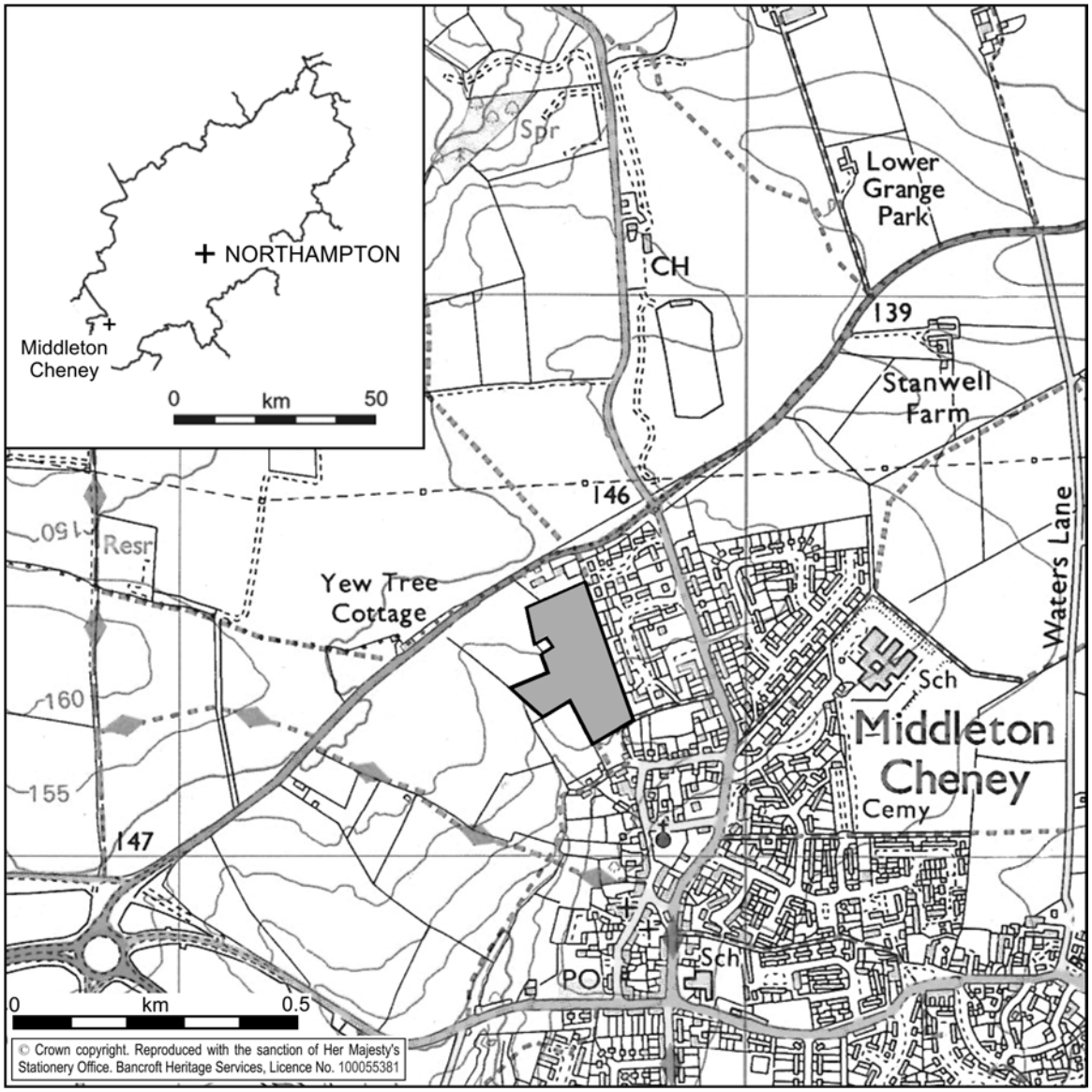


Fig 1: Site location

of permanent pasture in this area, and to lower development pressures. Cropmarks comprising probable prehistoric enclosures are recorded *c*.300m south-west of the excavation site (RCHME 1982, 101: HER: ENN3254) and *c*.300m to the north (HER: ENN104471). Neither site has been subject to detailed investigation.

During the Roman period it is likely that the Cherwell formed the boundary between the tribal territories (*civitates*) of the *Catuvellauni* and the *Dobunni* (Farley 2010, 75). The area in which the excavation site is located was apparently predominantly rural: the nearest known settlement to Middleton Cheney is the small town at Kings Sutton, *c*.6km to the south. Excavations at Thenford, 2.5km to the east, revealed a Roman villa and evidence of Iron Age occupation (Scott 1993, 142).

The village of Middleton Cheney was probably established during the Anglo Saxon period. The development site lies to the north-west of the historic core of the village, and almost certainly formed part of the open field system of the parish. Ridge and furrow cultivation strips can be seen on the site on aerial photographs taken by the RAF in 1945, but have since been levelled.

The Excavation

The site evaluation, comprising detailed magnetometry and trial trenching, revealed two pits containing Late Neolithic grooved ware pottery at the north-west end of the development site, and four undated shallow pits or postholes to the west of this (Fig 2). Near the centre of the site were an undated posthole and a shallow gully. The evaluation also produced medieval, post-medieval and modern agricultural features.

Based on the excavation results, two areas were identified for excavation: Area 1 of 4083m^2 and Area 2 of 4387m^2 (Fig 2). Topsoil and overburden were removed mechanically, under archaeological supervision: subsequent excavation

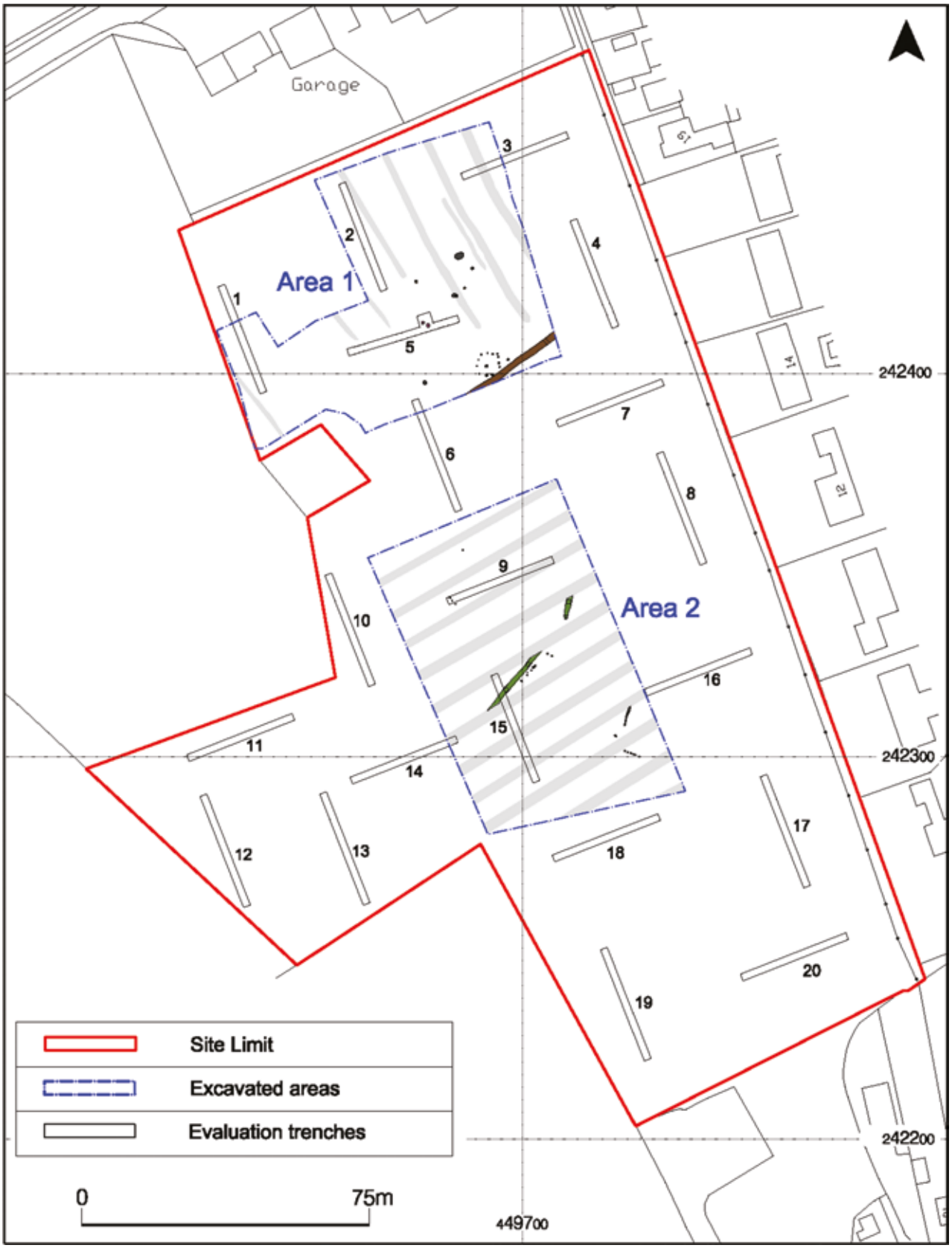


Fig 2: General site plan

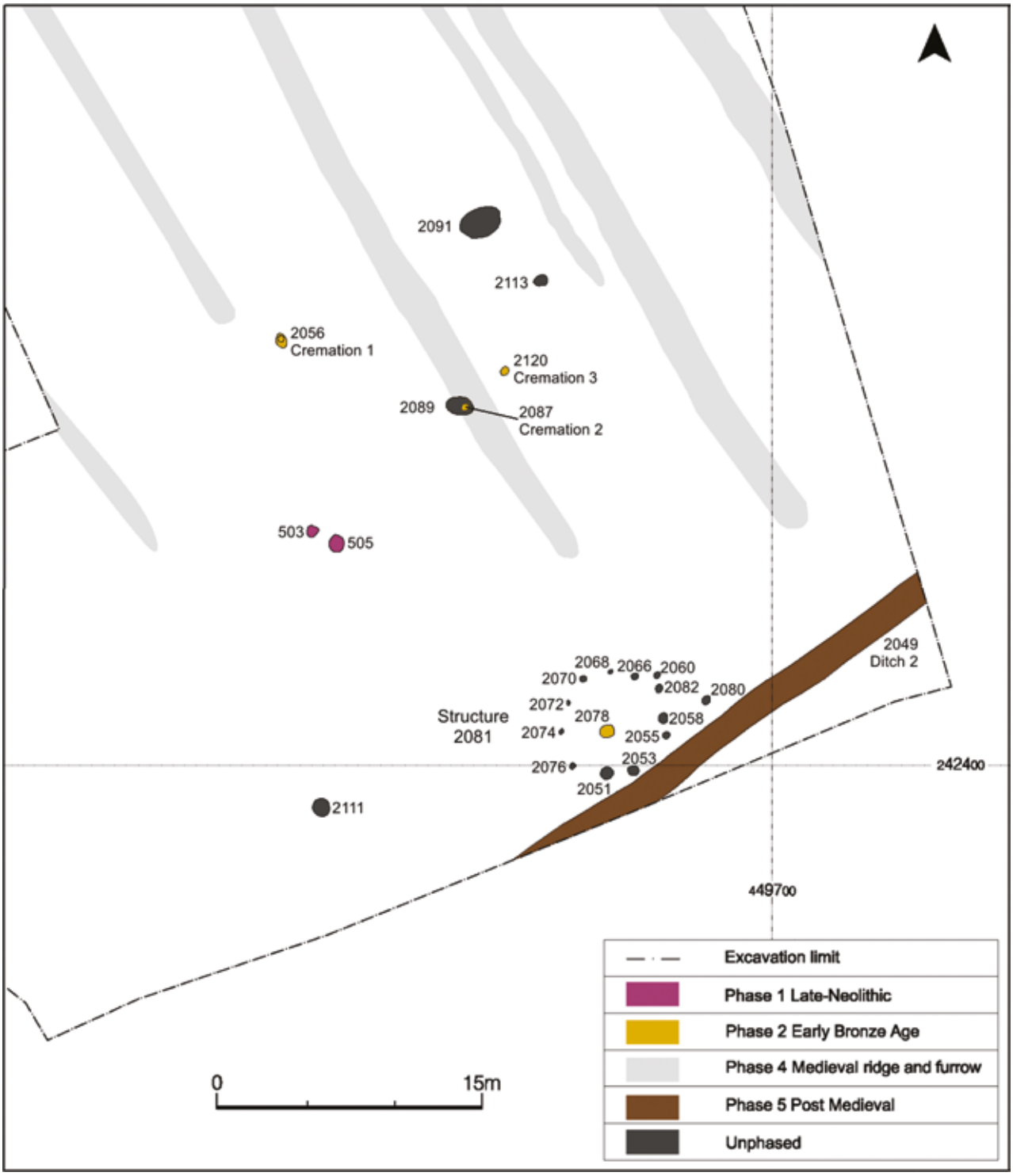


Fig 3: Area 1, showing Neolithic pits and Bronze Age cremation burials

was by hand. The stratigraphy of both areas was similar, comprising modern ploughsoil up to 0.2m deep, overlying an earlier horizon of mid-reddish-brown clayey silt up to 0.4m deep, possibly a former ploughsoil, which in turn overlay the natural geology, comprising orange-brown silty clay with occasional areas of cornbrash.

Five phases of activity were identified, of which the first two were the most significant, representing probable occupation in the Late Neolithic and burials in the Early Bronze Age, and possibly also related activities in the latter. More recent activity in the Roman, medieval and post-medieval periods (Phases 3–5) all appears to have been agricultural in nature.

Late Neolithic pits (2900–2400BC)

This phase of activity was represented by two pits, 503 and 505, south of the centre of Area 1 (Fig 3). The smaller pit, 503, was sub-oval in plan with a shallow concave profile. Its silty fill (504) contained four sherds of Durrington Walls-style Grooved Ware pottery (see below) and three small flint flakes. The larger pit, 505, was sub-circular with near-vertical sides breaking sharply to a flat base. It measured 0.9m across and 0.32m deep (Fig 4). From the fills, 506 and 507, over 200 sherds of Grooved Ware were recovered, coming from at least eight vessels, and an assemblage of flint included an exhausted core, nine flakes and two pieces of irregular waste, three tiny trimming flakes and two chips. Unworked fire-cracked flint pebbles were also present.

Fig 4: Pit 505, looking north-east

The Grooved Ware pottery
by Alistair J Barclay

Pit 503, fill 504, and pit 505, fill 506, produced an assemblage of Durrington Walls-style Grooved Ware comprising a minimum of eight vessels (212 sherds, weighing 3.14kg). The vessels are fragmentary and in various states of completeness, with 67% of the sherds by weight from the most complete vessel (Fig 6.1).

Charred food residue adhering to a sherd assigned to Vessel 2 (Fig 5), has given a radiocarbon date of 2680–2470 cal BC (95% confidence, 4050±40 BP, UBA-21486) (Table 7). This date is consistent with other radiocarbon dates from southern England, and with the author's suggested date range of 2850 to 2400 cal BC for the currency of southern Grooved Ware (Barclay, in prep). Hamilton (*in* Hamilton & Whittle 1999, 114) suggests that this type of Grooved Ware should be late within the typological sequence, and that argument is supported by this date. In southern England it is estimated that Grooved Ware replaced the use of Peterborough-style pottery in the early 29th century BC and was then in use for between

Fig 5: Grooved Ware sherd from Vessel 2, with internal charred food residue

400 to 500 years until the 25th or early 24th century BC, when Beaker pottery was introduced (Barclay, in prep; Barclay 2011, 52–3; Barclay & Marshall 2011, 180; see also Garwood 1999).

Fabrics

1. Soft soapy fabric with sparse lenticular voids (up to 6mm) from dissolved and fragmentary shell platelets and rare angular or sub-rectangular grog (2-3mm, occasionally large 10mm).
2. Soft fabric with a hackly fracture. Sparse or rare grog (2-3mm, occasionally large 10mm) and rare shell voids (up to 4mm).

The fabrics contain two principal inclusions, shell fragments and grog. In Fabric 1 shell inclusions are predominant, and in Fabric 2 grog is more common. As the shell is leached, it is impossible to say whether this is fossil derived, although from the thickness of the platelet voids this is likely to be the case. The grog varies from angular/sub-rectangular to sub-rounded inclusions to more convincing sub-rectangular fragments with recognisable flat surfaces. At least the latter are likely to represent broken pottery: other fragments could represent clay or pottery that has been ground or pounded to make temper.

Catalogue of illustrated pottery

All the illustrated sherds are from the fill 506 of pit 505 (Fig 6)

1. Refitting sherds from a large open jar with pinched vertical cordons, which are linked at the rim (165

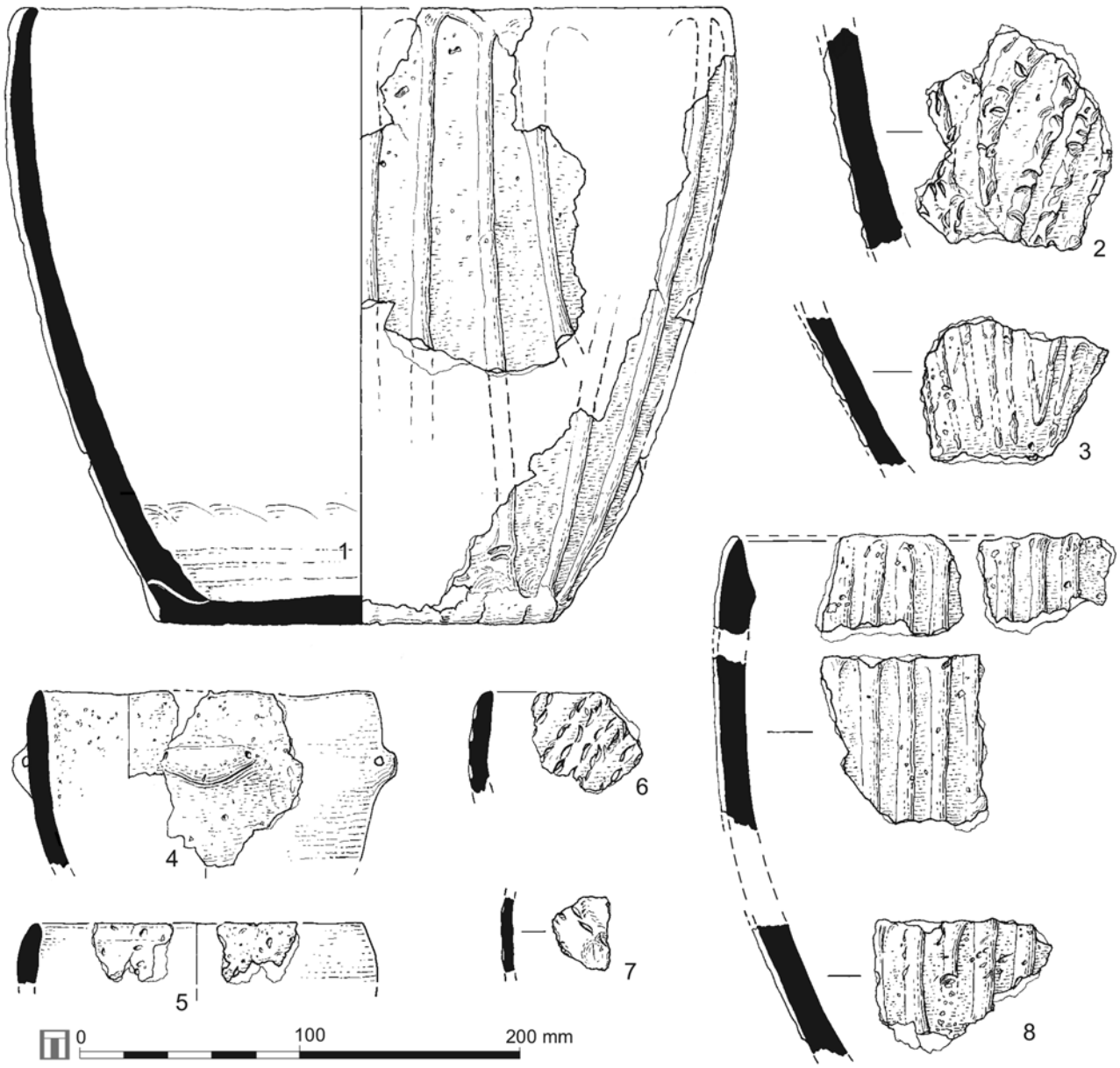


Fig 6: Grooved Ware pottery from pits 503 & 505

sherds, 2108g). The rim is flat and simple and the whole vessel is undecorated. Fabric 1. Colour: light reddish-brown surfaces with a non-oxidised grey core. Condition: average.

2. Five sherds (168g) from near the base of a jar. Vertical applied cordons are decorated with impressed finger-tip. Fabric 2. Colour: exterior surface reddish-brown, core and interior black. Condition: average. Charred cooking residue on interior surface.
3. A sherd (81g) from near the base of a possible jar or bowl. Fine closely-spaced applied vertical cordons. Fabric 2. Colour: light reddish-brown exterior surface and black core and interior surface. Condition: average. Smoothed inner surface. Charred cooking residue on interior surface.
4. Refitting sherds (17 sherds, 326g) from the upper part of a small plain lugged jar. Rim is simple and pointed. Lug is typically horizontal and perforated. Refitting base sherds may be from this or a similar sized vessel. Fabric 1. Colour: light reddish-brown exterior surface and a black core and inner surface. Condition: average. Some sherds have traces of charred cooking residue.
5. Two refitting rim sherds (10g), incurving and pointed. Fabric 1. Colour: exterior greyish-brown, core and interior grey. Condition: worn.
6. A simple pointed rim and two body sherds (33g), possibly from the same vessel. Two sherds (one illustrated) are decorated with oblique finger-tip pinched and impressed cordons. Fabric 1. Colour: light reddish-brown surfaces and dark grey core. Condition: average.
7. Two sherds with aplastic finger-nail impressions (one illustrated: possible ‘false’ rim) and six plain sherds

from one or more similar vessels (8 sherds, 37g). Fabric 2. Colour: grey to reddish-brown surfaces with a grey core. Condition: average to abraded.

8. Eight sherds (338g: four illustrated) from a large jar with bevelled rim. Plain cordons are tightly spaced and their tops protrude above the height of the rim tip. Fabric 1. Colour: light reddish-brown surfaces with an unoxidised grey core. Condition: average.

In addition, there are 121 abraded fragments (43g) that are likely to derive from the above vessels, and three sherds (56g) that come from layer 504. The latter are abraded, thick-walled with traces of vertical cordons and are probably from Vessel 1.

Forms and decoration

The assemblage contains a series of jar forms in a range of sizes including what could be communal cooking and storage pots (Fig 6.1, 3 and 8) and perhaps individual serving vessels (Fig 6, 4–7). Given the range of vessels it is possible that they represent a 'household' group. Charred residue from cooking was present on the interior of Vessels 2 and 4. Vessels 1–3 and 8 can all be classed as coarse jars. These vessels also show the variation in applied cordons that can occur within this substyle. With Vessel 1 the cordons are linked near the rim, whilst those of Vessel 8 are closely spaced and protrude beyond the rim to give a crenulated or scalloped profile: both are rare features. Two vessels have rusticated decoration in the form of finger-tip impressed and pinched oblique cordons (Fig 6, 6) and aplastic finger-nail impressions (Fig 6, 7). The occurrence of finger-tip/nail decoration on a minority of vessels has been noted at West Kennet (Hamilton 1997, 115).

Manufacture

The vessels are all hand-built and open fired, and are constructed out of broad rings or straps of clay. Vessels have generally broken along or close to the joins of horizontal rings/straps of clay. The base of Vessel 1 has detached to show a tongue-in-groove-type bond. Cordons have been made by either pinching the clay, as on Vessels 1 and 8, or by adding strips of clay, Vessels 2 and 3.

Discussion

This small assemblage of eight vessels is characterised by a range of jars, vessels with applied vertical cordons, and vessels without or with limited decoration. The forms sit within the Durrington Walls style, as defined by Wainwright and Longworth (1971, 240). This style of Grooved Ware can include entirely plain vessels (without cordons), cordoned vessels with limited decoration but in which grooving is absent, and vessels with grooved or incised decoration. Assemblages including individual pit groups can include plain, cordoned or grooved vessels. The significance of these distinctive groupings is uncertain, although it has been noted that the quality of flintwork may increase in association with more elaborately decorated vessels (Barclay 1999, 15).

The Middleton Cheney pit group falls within the style of plain cordoned jars that lacks grooved decoration. This type of pottery is known from pit groups in the Upper Thames Valley, for example Yarnton near Oxford (Barclay & Edwards 2016), Abingdon Common (Balkwill 1978) and Barton Court Farm, Abingdon (Barclay 1999, 12 and fig 2.1–3). Contemporary with these pit deposits are a group of henges in the Upper Thames valley, although few of these monuments are directly associated with deposits of Grooved Ware. In Wessex the henge enclosure site of Durrington Walls has an assemblage that includes groups of grooved decorated vessels, and others that are plain and more like those from Middleton Cheney (see Longworth 1971: P26, P30-P46). However, at Mount Pleasant, Dorset (Longworth 1979, P42-P80) and the Kennet Enclosures, Wiltshire (Hamilton 1997, figs 63–68) the pottery is nearly all plain.

It has long been recognised that the use of Grooved Ware corresponds with clusters of monuments such as henges and timber circles and/or pit sites that form intra-regional groupings, for example the Oxford area of the Upper Thames Valley or the Avebury area of the Kennet Valley. However, in other areas both monuments and pit sites appear more isolated, as is the case for Central England (see Longworth & Cleal 1999, and papers in Cleal & MacSween 1999), with only two sites listed for Northamptonshire, four for Buckinghamshire and three for Warwickshire. The two Northamptonshire sites producing Grooved Ware listed by Cleal and MacSween (1999) were the timber structure and associated post-pit at the Briar Hill causewayed enclosure (Bamford 1985, 42–47 & 104) and the Neolithic funerary monument, Ring Ditch V, at Grendon (Gibson and McCormick 1985, 54). Editor's note: Grooved Ware has also been recovered from sites within the Raunds/Stanwick monument complex, but in small quantities and general highly fragmented, 13 sherds from at least six vessels (Tomalin 2011, 545–601).

In contrast, thirty sites are known for Oxfordshire, largely as a product of gravel extraction, although only one site, Manor Farm at Old Grimsbury, is located in North Oxfordshire. Significantly, this is less than 5km west of Middleton Cheney. Here, two pits produced a small assemblage of decorated Durrington Walls Grooved Ware (Barclay 1999, 360–2).

Early Bronze Age cremation burials and a post-built structure (2400-1500BC)

Three cremation burials, in pits 2056, 2087 and 2120, lay near the centre of Area 1, and a circular post-built structure, 2081, lay at the south end of that area (Fig 3).

The cremation burials

Pit 2056, containing Cremation burial 1, was *c.*0.8m across with a shallow bowl-like section, and had been severely truncated by medieval or later ploughing, so only the lowest 0.2m survived. The bones had been interred in an inverted collared urn which had been placed towards the north-west side of the pit (Fig 7). Truncation had removed the base and most of the body of the collared urn.

The pit fill (2063) also contained 25 burnt flake fragments and small pieces of irregular waste. Some of this material exhibited patches of bright, shiny thermal

Fig 7: Cremation deposit 1 (2056) during excavation, looking north-east

gloss, potentially related to specific environments or processes occurring within the funeral pyre. One of the pieces of burnt flint appears to be part of a shattered flake with secondary retouch.

Analysis of the cremated bone suggests that the individual in this cremation burial was a juvenile of 11–12½ years of age. The cremated bone has given a radiocarbon date of 1970–1740 cal BC (95% confidence, 3520±50 BP, UBA-21483) (Table 7). The burial was accompanied by grave goods (Fig 8), comprising a ceramic spoon (Fig 8) and a copper-alloy awl. The collared urn and accompanying grave goods are discussed in more detail below.

Fig 8: Ceramic spoon from Cremation deposit 1

Pit 2087, a circular feature c.0.3m across, with steep sides and a bowl-shaped base contained Cremation burial 2, which was unurned (Fig 9). As with Cremation burial 1, the pit fill had been truncated by agricultural activity, but most of the cremated bone deposit was recovered from the base of the pit. In this case, no grave goods were present. The individual in this cremation burial appears to have been a female, about 25 years of age. The cremated bone has given a radiocarbon date of 2040–1886 cal. BC for (95% confidence, 3610±30 BP UBA-21484) (Table 7).

The burial pit had cut through the fill of a much larger oval pit, 2089, with sloping sides and a flat base. The fill of pit 2089 contained no dateable finds.

Fig 9: Pits 2087 (Cremation 2) and 2089, looking north

A small steep-sided pit (2120), *c*.0.3m across, with an irregular base, contained Cremation burial 3, which was unurned and unaccompanied by grave goods (Fig 10). The concentration of bone revealed in section during excavation suggested that it may have been interred within an organic container such as a bag or bundle. The relatively small amount of cremated bone present in the pit fill prevented determination of the likely age and sex of the individual present. The cremated bone has given a radiocarbon date of 2064–1885 cal BC (95% confidence, 3620±45 BP, UBA-21485) (Table 7). Two pieces of burnt flint were recovered from the fill (2121), one of which was part of a shattered flake with secondary retouch.

Fig 10: Pit 2120 (Cremation 3), looking north

Structure 2081

This consisted of a group of fourteen postholes, adjacent to the southern edge of Area 1. Twelve of the postholes (2051, 2053, 2055, 2058, 2060, 2066, 2068, 2070, 2072, 2074, 2076, 2082) formed a circle 7m in diameter, with a central pit, 2078, and a single outlier, 2080, 2m to the east (Fig 11). No finds were recovered from any of the postholes.

Charcoal from the fill of pit 2078 has given a radiocarbon date of 1890–1660 cal BC (95% confidence, 3451±46 BP, UBA-21502) (Table 7). This places the pit and, by association, the surrounding ring of postholes, in the early Bronze Age, broadly contemporary with the latest of the three cremation burials.

Fig 11: Posthole Structure 2081, looking north

An Early Bronze Age grave group
by Alistair J Barclay

Collared Urn

The fragmentary remains of an inverted Collared Urn (SF3: 80+ sherds, 1.613 kg) were recovered from pit 2056 (Cremation 1). The vessel (Figs 7 and 12.1) was truncated and, although little survived below the shoulder, several fragments were almost certainly from the base, indicating that the urn was probably complete when buried.

The urn is of tripartite form with a simple upright collar, simple flattened rim and concave neck. Only the collar is decorated and this consists of all-over thick S-twisted cord impressions (made with Z-twisted cord) that form a continuous line with the impressions set 7mm apart and with the cord wound clockwise up to the top of the rim.

The urn is manufactured from a fabric containing moderate angular grog and some fossil coral. The latter may have been present in the clay matrix. Thin plate-like voids are likely to be from fossil shell. It is possible that this material occurred naturally within the clay. The vessel was made from rings of clay (up to 30mm wide) with diagonal bonds. It has been well-finished with smoothed surfaces. It was almost certainly fired in an open bonfire, giving it a slightly patchy reddish-brown colour. It has a typical oxidised outer margin and an unoxidised grey to black inner margin. The interior is fired to a yellowish-brown. There are no visible signs of wear or residue from use.

The urn has traits (tripartite form, simple upright rim, internal moulding) that would place it in Longworth's Primary Series (Kinnes & Longworth 1985, 20–21), although the decoration does not extend beyond the rim and is not arranged in a herringbone pattern. This could suggest that the vessel is not early within the typo-chronological sequence, as indicated by the radiocarbon date of 1970–1740 cal BC, obtained for the associated cremated bone.

Single-pointed awl

A small single-pointed awl (SF2) was 38.5mm long with a relatively long rounded shaft, 1.0–1.5mm diameter, and a short flattened tang , 2.5mm wide. The shaft broadens slightly at the start of the tang. The latter has a square section and tapers and flares slightly to a flattened tang. The tip of the point and part of the tang are missing. Nothing survives of the handle, although this is likely to have been made of either wood or bone. Of the three types of copper-alloy awl found with Collared Urns, Longworth notes the single-pointed awl with flattened tang as being the most common (Kinnes & Longworth 1985, 59).

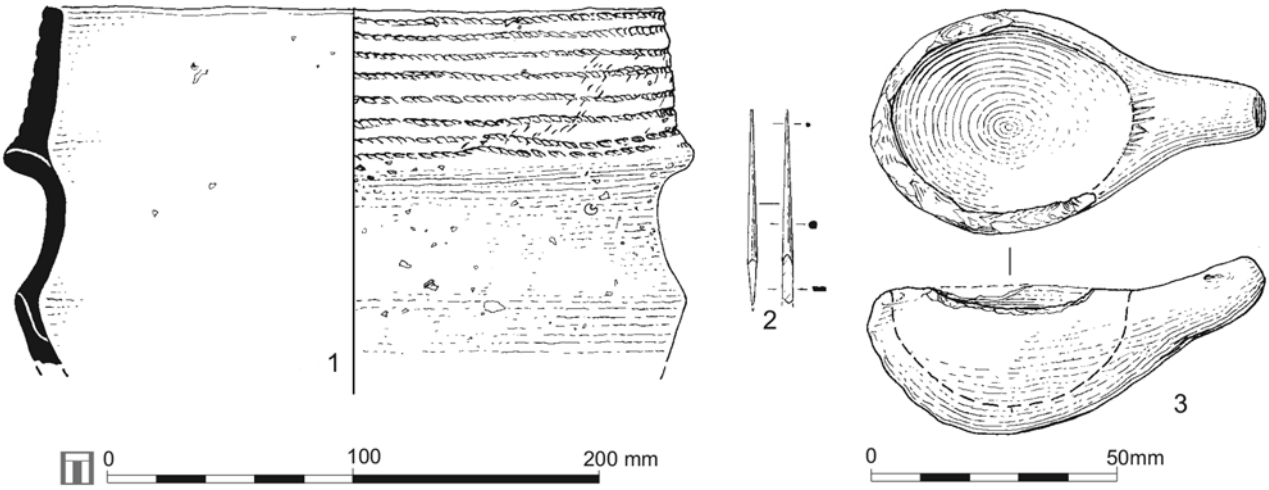


Fig 12: Cremation 1 grave goods: 1) Collared Urn *(scale 1:3);* 2) Awl and 3) Spoon *(scale 2:3)*

Ceramic spoon

A complete ceramic spoon (SF3: 80mm long, 44mm wide, 28mm deep, weighing 33g). The spoon (Figs 8 and 12, 3) has a simple neutral profile and is 'egg'-shaped, narrowing slightly towards the handle. The handle is set at a slight angle and is relatively short and cylindrical in profile (12mm diameter). It is sufficiently long to grip with a thumb and one or two finger-tips. Alternatively, it could have slotted into a longer sleeve-like handle of wood or bone. Polish on the handle could be from use.

The spoon is well-made, with smoothed surfaces. As the object is complete it is difficult to see what the fabric is, although it appears to be made from clay that is generally free of large inclusions. Where the surface is chipped, the fabric is clean, grey and only lightly oxidised, with some voids.

It has various signs of use, including multiple chips to the rim and polish on the handle. Positioned with the handle to the right the rim has slightly more damage at the front, suggesting that it may have been mostly used by a right-handed person. The pattern of damage is not homogeneous as the spoon tip has been ground into a bevel, suggesting that it has been used to scrape out food, whereas the sides are more chipped, perhaps indicating a different type of use. The spoon was examined with a view to residue analysis, but this was determined to be unfeasible.

Spoons are known from the Early Neolithic and also the Beaker/EBA period (Barclay 2008, 627; The Hassocks spoons: Curwen 1937, 101 and fig 19; and spoons from Nether Swell long cairn mound: Kinnes & Longworth 1985, 109), although they are generally quite rare throughout most of prehistory. However, no other ceramic spoons of this type and date are known from Britain, although a similar spoon was found associated with a Cordoned Urn and other vessels from Michelstown, Co Cork, Republic of Ireland, and much further afield from Southern France (Guilaine *et al* 2001, fig 7.1: found with Beaker plain ware). The only other find of comparable date is a scoop or spoon from Longstock, Hampshire, which was also found with a primary Collared Urn as part of a cremation burial (Manby 1995, 81–3 and fig 8.2). This object is larger than the spoon from Middleton Cheney: it is decorated with cord impressions and has a broad perforated handle. Damage, probably from use, is present on the rim. Manby (1995, 83) suggests that the Longstock scoop could be a skeuomorph of an object otherwise made out of leather. The near-absence of clay spoons probably indicates that most were made from organic materials. Spoons would have been useful cooking and serving utensils. It is highly likely that fragments of spoons would be hard to spot, and easily mistaken for small accessory vessels.

The cremated bone

by Tania Kausmally and Gaynor Weston

Methodology

Analysis was undertaken according to current professional guidelines (Brickley & McKinley 2004; English Heritage 2002). The material was analysed macroscopically and where necessary with the aid of a magnifying glass for identification purposes. It was then sorted into fractions (10mm, 5mm and 2mm), weighed, and the results were recorded on an Access database, a copy of which is contained in the project archive.

Quantification

Total weights of cremated bone present in each cremation burial are shown in Table 1. These suggest that a complete or almost complete individual may be present in each of Cremation burials 1 and 2, although the weights are at the lower end of the scale for those expected of complete individuals. The weight of bone recovered from Cremation burial 3 is more ambiguous, and may represent only the partial remains of an individual.

The highest quantity of bone was recovered from Cremation burial 1, initially suggesting that the container has perhaps prevented some depletion of material or that more fragments of bone were collected for such deposition. However, the difference in weight between the cremated bone of the urned and unurned burials overall is small, and it is difficult to assess the full impact of differences in post-depositional disturbance and taphonomic factors between the contexts. Variation in burnt bone weights may also be affected by the original size and weight of the skeleton prior to cremation.

Bone fragmentation

Table 1 summarises the results of the quantification of cremated bone by sieve fraction weight and percentage of total weight. For all three burials, most of the fragments were between 5 and 10mm long, with approximately equal proportions of larger and smaller fragments present in Cremations 1 and 3. Slightly more large fragments were present in Cremation burial 2. This may suggest some consistency in the cremation, retrieval and deposition processes undertaken. There is no evidence to suggest that the smaller deposit of bone in Cremation burial 3 underwent more handling and breakage than the two more substantial deposits. It is noteworthy that the unurned burial (Cremation burial 2) produced larger fragments in comparison to the urned remains in Cremation burial 1. This is in contrast to the observation that in archaeological contexts, urns generally protect the integrity of cremated bone fragments in the burial deposit (McKinley 1994a, 340).

Interestingly, a small number of fragments could be re-associated during the osteological analysis. This indicates that that some fragmentation occurred as part of post-depositional processes, and that some fragments would have been larger when they were originally deposited. It was observed at excavation that soil had infiltrated the urn in Cremation burial 1 and it appears, therefore, that taphonomic factors have directly caused further fragmentation of the bone after it was placed into the urn.

The maximum sizes of 59.6mm (Cremation burial 1), 73.9mm (Cremation burial 2) and 47.7mm (Cremation burial 3) are all consistent with the maximum fragment sizes recovered from the inverted collared urn cremation burial at Upton, Northamptonshire, where the maximum measurements of bone excavated from within the urn ranged from 53.0 – 64.5mm (Foard-Colby 2008, Foard-

Table 1: Quantification of cremated human bone

Pit (cremation burial) Size groups/weight		2056 (CB 1)	2087 (CB 2)	2120 (CB 3)
>10mm	weight (g) (%)	292.3 (24.7%)	347.3 (32.1%)	146.3 (19.8%)
>5mm	weight (g) (%)	661.6 (55.9%)	544.0 (50.3%)	407.3 (55.0%)
>2mm	weight (g) (%)	229.8 (19.4%)	159.2 (14.7%)	155.3 (21.0%)
Total weight of cremated bone (g)		1184.5	1080.3	740.6
Maximum bone fragment size (mm)		59.6	73.9	47.7
Average bone fragment size (mm)		10	10	5

Colby & Carlyle 2008). Soil had infiltrated this urn, as had occurred with the urn from Middleton Cheney, explaining the similarity of the fragment sizes. A pattern of bone deposition according to size was observed at Upton: larger bone fragments were found at the base of the urn, as was the case with the remains from the accessory urn at Finmere Quarry, Oxfordshire (Hart *et al* 2010, 100). Unfortunately, the base of the Middleton Cheney urn had been removed through ploughing. There was no evidence of any spatial patterning of the bone retrieved from the remainder of the urn, or in either of the two unurned burials.

Identification

All fragments were scanned to locate them to particular elements within the human skeleton. All specifically identified elements were categorised according to four areas of the body: skull, torso, upper limb and lower limb. Each category of bone was weighed and presented as a relative percentage of the total weight of all identified human fragments (Table 2).

In addition, bone elements were assessed according to a zonation of the skeleton. This allows more ambiguous fragments of bone, such as long bones, to be associated with an anatomically diagnostic body zone without requiring a specific identification of a bone element. The fragments from each zone were weighed and presented as a relative percentage of the total weight of bone recovered at the 5mm and above sieve fractions (Table 3). These percentages were then compared to the expected values from a complete skeleton (based on Krogman 1978, cited by Charlier *et al* 2008, 50):

Zone 1 – Torso: 20%
Zone 2 – Appendages: 55%
Zone 3a – Skull: 20%
Zone 3b – Extremities: 5%

Osteological analysis of the cremated bone confirmed that human remains were positively identified in all three burial contexts (Table 3). No repeated elements were present in any of the burial deposits, so each burial represents a minimum of only one individual.

Overall, only a small proportion of bone could be categorically identified and assigned to a particular element, as the majority of fragments were only 5-10mm in size. This was particularly evident in Cremation burial 3, where only 2.2% of the total bone present could be identified, compared to 11.8% from Cremation burial 1 and 10.0% from Cremation burial 2. It is interesting to note that Cremation burial 3 contains the fewest identifiable fragments when considering the fact that the pattern of bone fragmentation (see above) varies little from the other two burials. It is also pertinent that the urned burial (Cremation burial 1) contained more identifiable fragments.

From the zonation of bone elements (Table 3), it is apparent that those elements containing more cancellous or spongey bone, such as vertebrae, are under-represented in all contexts. This has been observed in cremation burials elsewhere (McKinley 1997; 2001; 2008). In contrast, it is clear that the appendages, consisting of the denser long bones of the arm and leg, are well represented. This pattern in skeletal representation is likely to be due to differentiation in preservation between the more fragile cancellous bone and robust long bones.

Table 2: Identification of the cremated human bone

Pit (Cremation burial) Skeletal elements	2056 (CB 1) Weight (g)	%	2056 (CB 2) Weight (g)	%	2056 (CB 3) Weight (g)	%
Identifiable bone	139.2		108.0		16.3	
Skull	53.8	38.6	31.0	28.7	2.5	14.4
Torso	73.7	52.9	22.7	21.0	12.0	69.0
Upper limb	8.4	6.1	34.9	32.3	0.1	0.6
Lower Limb	3.3	2.4	19.4	18.0	2.8	16.1
Minimum Number of Individuals	1		1		1	

Table 3: Zonation of cremated human bone fragments

Pit (Cremation burial) Body zones	2056 (CB 1) Weight (g)	%	2056 (CB 2) Weight (g)	%	2056 (CB 3) Weight (g)	%	Expected Value
Zone 1: Torso	82.1	8.6	24.9	2.8	25.5	4.6	~20%
Zone 2: Appendages	243.1	25.5	271.1	30.4	149.9	27.1	~55%
Zone 3a: Skull	89.8	9.4	99.8	11.2	40.1	7.2	~20%
Zone 3b: Extremities	28.1	2.9	16.6	1.9	4.5	0.8	~5%

A similar pattern in the zonation of fragments is seen in all three burials, suggesting that there were no preferential selection processes in bone retrieval or preservation between contexts according to skeletal zone. Fragment identification reveals, however, that there is some difference in the presence of specific elements when comparing the burials to each other.

As shown in Table 2, tooth roots and small bones of the feet and hands were present in both urned and unurned burials (Cremation burials 1 and 2) respectively, but these elements were comparably under-represented in the identified fragments from Cremation burial 3, as were identifiable cranial bone elements. This under representation accords with the general observation from the bone quantification that this burial represents only the partial remains of one individual. There were no elements present in Cremation burial 3 that were repeated in either Cremation burials 1 and 2, so there is no evidence to confirm that Cremation burial 3 represents an additional, third individual.

Very small complete elements, such as sesamoid bones, a distal toe phalanx and a lunate bone, all measuring 5-10mm, as well as fragments of larger bones, are present in all cremations. This corroborates the pattern of bone fragmentation and skeletal zonation observed, where no selection or deposition of particular sizes or types of bone was indicated in any of the burials.

Age and Sex

Observations of material present and any indicators of age and sex were noted. No fragments present were large enough to allow metric assessments to be undertaken, so any observations were based upon morphological features.

Cremation burial 1

Several elements present in this burial were unfused. These included vertebral bodies with unfused endplates, unfused epiphyses at the distal end of the radius and ulna, proximal radius, distal metacarpals, middle hand phalanges, distal metatarsals and iliac crest in addition to unfused metaphyses of unidentified long bone fragments. This indicates that the remains are those of a sub-adult. In addition, two teeth were in an incomplete state of development, allowing a more accurate estimation of age at death to be made. One first right maxillary premolar was present at the development stage A1/2, found at an age of 11.1–11.9 years (Smith 1991). Also present was the developing crown of an unsided mandibular third molar. This tooth was at development stage Cr3/4 – Crc, providing an age at death estimation of between 11.6 and 12.3 years (Smith 1991). Overall age at death was therefore estimated to be between 11 and 12.5 years.

The age assessment of these remains indicated that they represented a sub-adult individual. The sex of sub-adult remains cannot be assessed through observation of skeletal morphology, and can only be confirmed through DNA analysis. The sex of this individual was therefore unobservable.

Cremation burial 2

Although it was not possible to directly observe the state of fusion of the long bones, there was an absence of any unfused elements. The vertebral end plates were noted to be fused. This indicated that the remains represent an adult individual, over 25 years of age at death.

Morphological assessment of the supra-orbital margin and glabella profile suggested that this individual was possibly a female. The complete lunate bone present was observed to be small. Additionally, metric assessment of the vertical diameter of the humeral head provided a measurement of 40.4mm. This falls well within the range expected of females (34.5–45.0mm, mean = 41.8mm) observed by Gejvall (1969) in modern cremated remains. The range for males was 40.0–52.5mm with a mean of 44.4mm. It should be noted, however, that shrinkage of cremated bone can diminish the accuracy of metric sex assessment, with the result that some males can be miscategorised as females (Thompson 2002). However, the consistency of the observations made indicate that these remains are likely to be those of a female.

Cremation burial 3

Four fragments of unfused metaphyses or epiphyses were noted amongst the remains from this burial. Also present was an atlas (second cervical vertebra) with a fully fused os terminale, observed to fuse generally around the age of 12 years (Scheuer & Black 2004, 200). These remains could represent one older sub-adult aged between 12–18 years, or possibly one sub-adult and one adult. As the skeletal identification has shown, there are no repeated elements to confirm that more than one individual was present, so it is not possible to confirm or refute either possibility.

Only one fragment contained in this burial, the sciatic notch of the ilium, was a sexually dimorphic element. Unfortunately the fragment was not complete enough to make any observations regarding sex. Additionally, since sub-adult fragments cannot not be analysed for sex estimation, and it is unknown if this particular element was sub-adult or adult, no reliable observations could be made.

Pathology

Some microporosity and macroporosity was observed on the superior aspect of the humeral head from Cremation 1, representing degenerative joint disease. This disease is most common as a primary condition in older adults, but can occur in younger individuals secondary to trauma (Salter 1999). No pathology was recorded in Cremations burials 2 and 3.

The cremation process

Generally, the bone in all three cremations was observed to be white in colour, though a small amount of variation was noted. A few fragments were blue-grey in colour as a result of being incompletely oxidised during the cremation process. The results of the analysis of colour variation in the fragments of bone suggest that the vast majority of bone present in all three cremations was completely calcined or oxidised (Murray & Rose 1993). This suggests that the bone had been exposed to a temperature of at least 600° for a substantial period of time. It was noted that the bone fragments had become a brown-yellow colour due to staining by the local soil matrix.

Only a small amount of blue-grey colouration was observed: most of the elements affected belonged to the skull bones from Cremation burial 1. The elements affected were the denser areas of the skull, such as the petrous portion of temporal bone and occipital squame. The endocranial surfaces of the skull bones were most consistently affected. Also exhibiting blue-grey colouration in Cremation burial 1 were the endosteal areas of two rib fragments, and one zygapophyseal joint of a vertebra was a blue/black colour. Overall, the pattern of colouration suggests that the head was not exposed to the same temperature as the rest of the body, or at least to the same temperature for the same duration. This may suggest that the heat from the cremation may not disseminated equally around the body on the pyre, possibly due to natural factors such as wind direction, possibly because there was a structural shift in the pyre as it burned, or perhaps due to certain skeletal elements becoming disarticulated and moving away from the direct source of heat.

Fissuring, transverse and longitudinal cracking was present on the vast majority of the elements and changes were consistent across all three cremations. Long-bone fragments exhibited thumbnail, dendritic, longitudinal and transverse fissuring with some warping present. Epiphyses also exhibited some fracturing and fissuring. Cranial fragments exhibited warping with some concentric fissuring present. The presence of both transverse and longitudinal fissuring confirms that the bone has been cremated long enough for substantial amount of dehydration of the bone to occur, in concordance with the coloration of the bone. The bone could have been fleshed or de-fleshed, but was certainly fresh and rich in collagen at the time of cremation.

Pyre goods

by Tania Kausmally with Sylvia Warman

Pyre goods are those items that were placed on the pyre and have been deliberately included for interment along with the cremated human bone. It is most common for animal bone to be included with deposits of human bone (Wells 1960): it is generally perceived that these represent animal sacrifice or food offerings to the dead (McKinley 1994b, Bond 1994).

Observations regarding the identification, quantification and percentage of identifiable animal bone present were recorded (Table 4). Analysis was carried out macroscopically and under a high-power microscope (x10) where necessary.

Animal bone fragments were only identified from Cremation burial 1, where fifteen fragments of cremated animal bone are present (Tables 4 and 5). A number of fragments could be matched, making up a total of twelve bone portions. The bones weighed a total of 7.72g (0.15–1.87g) and measured 6.7–36.1mm. Many of the fragments could not be identified to specific elements as they were too small, with very limited morphological features present. Eleven (73.33%) of the fragments derive from long bones, with only three (20.00%) from the skull and one (6.67%) from the spinal column. Of the long bones, three fragments were identified as possible radius, one possible metapodial and one proximal epiphysis of a tibia. The elements represented were from both meat-rich areas of the animal and those of low food utility such as heads and feet (O'Connor 2000, 165).

Only three fragments could be identified to a possible species. Two of these elements were likely to be fragments of radius of either fox (*Vulpes vulpes*) or dog (*Canis domesticus*): one was the right radius of a smaller ungulate, such as sheep or goat (*Ovis* sp./*Capra* sp.). The remainder of the fragments were identified to the generic categories of either small- or medium-sized mammal. The 'medium mammal' fragments were 'sheep/goat sized'. Due to the difficulty in identifying remains it is therefore possible that the fragments identified as 'small mammal' could fall into the category of 'medium mammals' if the specific element was identified. Therefore, the minimum number of individuals remains at two, and the faunal bones are likely to represent one small carnivore and one small ungulate.

Fox and dog are commonly found on Early Bronze Age sites. Serjeantson (2011, 32) notes a frequency of approximately 28% for south-eastern England. The withers height for dogs during this period varied from 43-63cm (Serjeantson 2011, 31), the smaller sizes being consistent with foxes. Sheep/goat represent approximately 20% of the main domesticates (cattle, pig, sheep/goat) in the Neolithic and Early Bronze Age (*ibid*, 14). By the Early Bronze Age only few sites had faunal remains, but from these it appears that sheep was the dominant species over cattle and pig, which was almost non-existent (*ibid*, 67). Sheep were far more dominant than goat in the archaeological assemblages in southern Britain, and were approximately the size of Soay sheep (*ibid*, 29). Serjeantson (*ibid*) records the presence of sheep remains on 80.6% of Late Neolithic and Early Bronze Age sites in southern Britain.

Ageing information was present on one vertebral fragment, with a fully-fused epiphyseal ring suggesting an adult individual. The species was not identified but the fragment was sheep-sized. Sex could not be identified as no morphological features were present.

Table 4: Analysis of the faunal remains from pit 2056 (cremation burial 1)

Taxon	No. of frags	Element	Portion	Side	Max size (mm)	Weight (g)	Burning
Medium mammal	1	Skull	Petrous/ Temporal?	?	12	0.22	White
Medium mammal	1	Skull	Petrous/ Temporal?	?	9.4	0.15	White
Medium mammal	1	Skull	Petrous/ Temporal?	?	9.4	0.19	Grey
Medium mammal	1	Vertebra	Epiphysis	?	13.4	0.49	Grey
Medium mammal	2	Long bone	Shaft	?	17.5	0.36	White
Small Ungulate	1	Radius	Shaft	R?	22	1.38	Ivory
Fox/Dog	1	Radius	Shaft	?	16.8	0.91	Black/ white
Fox/Dog	1	Radius	Shaft	?	36.1	1.87	Ivory
Medium mammal	1	Tibia	Prox. epiph.	?	13.2	0.50	Black
Medium mammal	3	Metapodi-al?	Shaft	?	27.5	1.19	Ivory
Small mammal	1	Long bone	Shaft	?	11	0.31	Grey/ white
Small mammal	1	Long bone	Shaft	?	6.7	0.15	White

Table 5: Quantification of animal bone elements from pit 2056 by body zone

Bone portion	Weight (g)	No of Bones	%
Skull	0.56	3	20.00
Vertebrae	0.49	1	6.67
Long bone	6.67	11	73.33
Total	**7.72**	**15**	**100.0**

Information on cremation could be gained from the colour of the bone. This was highly variable, ranging between black, grey, ivory and white. The calcined (white/white-grey) state of the bones indicated burning above 450°-500°C (Lyman 1994, 389). The bone did not display any evidence of warping, but did show transverse and longitudinal cracking and splitting, suggesting that the bone was at least green or fleshed at the time of cremation (*ibid*, 387).

Butchery marks were present on two elements identified as possible radius of fox or dog (13.33%: 2/15). The elements had been crushed, causing distortion and hindering positive identification, though the fragments appeared to be from the same element (or type of element). One fragment measured 16.8mm and had been severed at both ends, the cut surface showing bevelled edges to both posterior and anterior, and a series of fine lines on the surface cut either by a saw or by a knife cutting the bone in a forwards and backwards movement to create the series of striae. The margin of the cut surface displayed a series of transverse knife marks appearing as 'slip marks' created in the process of cutting the bone. A flange of bone was present around the inner cortex of the shaft, suggesting that the cut was not quite complete, and that after severing with a blade from either side of the bone, the shaft was snapped into two halves, leaving a hinge of bone remaining in the centre. The anterior portion of the bone had a series of three diagonal knife marks running along the shaft, as well as a series of finer shorter knife marks appearing in random directions.

The second bone measured 36.1mm and had one severed surface and one modern break. The cut surface had a similar bevelled edge both to the posterior and anterior aspects. A series of knife marks were present along the margin of the cut surface, again most likely representing 'slip marks' in the cutting process.

Shaft cut marks on the radius are commonly noted in butchering processes, this type of diagonal marks on the anterior aspect of the radius being associated with filleting or skinning (Binford 1981, 133, type RCP-6). Binford (*ibid*, 133) notes that bone may have been subject to further cutting to reduce the size of the bone to fit into cooking vessels. However, the identification of fox/dog in association with cut marks on the bone is relatively uncommon in archaeological assemblages (Hambleton 2008, 37). Knife marks on these mammals, although indistinguishable from cuts of skinning for cooking purposes, are more likely to be associated with skinning for fur, as foxes were commonly hunted for their pelts (Allen *et al* 2004, 91), and even dogs were subjected to this treatment (Nieuwof 2012, 113). Hambleton (2008, 85) noted that fox was one of the wild animals most frequently found partially articulated, suggesting that they may have been utilised in a different manner than typical "food species". Nieuwof (2012, 118) also noted that dog was treated in a similar manner to humans in a burial context in terms of location, suggesting a close association between humans and dogs. In this context, post-mortem modification could well have served ritual purposes (*ibid*, 113).

Pyre debris

The presence and type of pyre debris is analysed in order to ascertain the nature of pyre technology and can be used to provide an insight into the type of deposit. Recent experimental reconstruction of pyre sites has determined that distinct features and types of debris can be left by former pyre sites, and in particular that the use of different materials alters the type and form of deposit (Marshall 2005).

For Cremation burial 1, charcoal was recorded as being 'frequently' present in the fill of the urn (2063), and abundant charcoal was observed in the flot from environmental sampling. The fill of the pit 2064 contained only a small amount of charcoal. Both contexts contained only a few fragments of possible fuel ash slag. Charcoal was also observed as 'frequent' within the fill of the pit containing Cremation burial 2, and most of the bone and charcoal was recovered from the pit base. Abundant charcoal was noted in the flot of the environmental sample from Cremation burial 3.

Pyre debris is consistently present in all three burials in the same contexts as the burnt bone. It appears that the funerary rituals undertaken did not require that all the pyre debris was deposited separately, a practice observed elsewhere in Bronze Age burials (McKinley 2008). The deliberate inclusion of pyre debris in the fill of Bronze Age cremation graves has been interpreted as indicating the proximity of the burial location to the site of the pyre, even if there is no direct evidence of a pyre site (*ibid*.). However, given the portability of cremated remains in containers, only substantial amounts of pyre debris found uncontained within pits or features may suggest close proximity of the pyre site. Even so, this does not rule out the possibility of pyre debris also having been placed in an organic container and carried some distance.

Similar sites in the locality of Middleton Cheney exhibit a range of behaviours with regard to pyre debris deposition. No debris was found within the fill of the Collared Urn cremation burial at Upton, Northampton (Foard-Colby 2008, Foard-Colby & Carlyle 2008), despite the fact that the urn contained the almost complete remains of one adult individual. At Finmere Quarry Buckinghamshire, no charcoal was observed in the urned cremation burial, within either the pit or the urn. However, a charcoal-rich fill containing a very small quantity of human bone was discovered in a pit. Within six metres of these cremation pits, three pits containing charcoal-rich deposits without burnt bone were also excavated and dated to the same period as the urns (Hart *et al* 2010, 106). The bone deposits here were small and described as 'token' (*ibid*, 100).

At Weldon, Northamptonshire, there was evidence of burning *in situ* (Jackson 1974). Six Bronze Age cremation burials were found either in shallow pits or depressions or associated with dark ashy patches. One pit was 0.70m in diameter and had sides heat-reddened to a depth of 70mm, with the subsoil beneath the ashes also showed traces of reddening, which suggested the deposit was in situ and that this had been the site of the fire, possibly a *bustum*-style cremation pit (Dodwell 2012, 141–149). Similarly, the excavation of a Bronze Age barrow at Earl's Barton, Northamptonshire revealed a rectangular burnt surface, fire-reddened with a scatter of charcoal and a burnt plank or log, located under the centre of the barrow (Jackson 1984, 9).

At Middleton Cheney there was neither any evidence of pyre debris being dumped in nearby pits, nor of a pyre site. The significant quantities of pyre debris present along with the deposits of human bone suggest that there was a less thorough sorting of bone from debris than found at Upton. Evidence for burning *in situ* is rare, as pyre sites are vulnerable to later disturbance and truncation (McKinley 2001), so little inference can be made from the lack of evidence found at Middleton Cheney. However, the lack of evidence for substantial quantities of debris in other dumps or pits, as at Finmere Quarry, might suggest that the site of the cremation pyre was outside of the area of excavation, and that the cremated remains had been transported to this specially selected spot for burial.

Conclusion

Cremation burial 1 was associated with the remains of a sub-adult individual aged between 11 and 12.5 years, whereas unurned Cremation burial 2 contained the remains of an adult, likely to be a female and at least 25 years of age at death. This individual exhibited degenerative joint disease of the shoulder. Unurned Cremation burial 3 represented the partial remains of a minimum of one individual, with some sub-adult bone fragments being present. The nature of this deposit of burnt bone is more ambiguous than the other burials, both of which contained sufficient amounts of bone to represent a complete body. It has not been possible to ascertain if the fragments from Cremation burial 3 are associated with one, or possibly even both, of the other burials, or represent the partial remains of a third individual.

Analysis of the identified human bone elements and fragmentation patterns revealed some interesting observations regarding recovery techniques and deposition. Given that bone fragments upon handling and processing as well as post-deposition, it was clear from the consistency in the size of fragments between burials that each deposit of bone had received similar post-mortem treatment. The pattern of zonation of elements also suggested that there was no evidence of preferential selection of elements from particular areas of the body or fragment sizes between the deposits, both for complete and partial individuals. Nonetheless, it was interesting to note that there were higher quantities of identifiable elements in the deposits of complete individuals. This may indicate that Cremation 3 represented the remnants of a selection procedure based perhaps in part upon the recognition of elements. However, there may also be other unknown factors contributing to the composition of the bone deposits, such as pyre management techniques or disarticulation of elements during the cremation process. All three burials contained complete small bones and an abundance of charcoal mixed in with the cremated bone deposits, indicative of a collection method involving sweeping the remains together, rather than hand-picking from the pyre debris. Most of the bone was cremated to at least 600° for a substantial period of time to complete the

oxidation process, the exception being denser parts of the skull of Cremation 1. Post-deposition preservation of the bone was very similar for all three burials, irrespective of the mode of burial. Any preservation effects that may have been afforded by the provision of the urn in Cremation 1 were negated by the subsequent disturbance by ploughing and infiltration of soil into the container. The younger age of the individual in combination with these taphonomic effects resulted in a reduced maximum fragment size and less bone being present than in Cremation 2.

Only Cremation burial 1 contained animal remains as pyre goods. These consisted of the skeletal remains of a small carnivore, probably fox or dog, as well as a small ungulate, such as a sheep or goat. The modified fragments of fox or dog represent the discarded lower limb portions, likely to be a by-product of skinning for pelt preparation. The modified fragments do not confirm whether the deceased was wearing the pelt at the time of cremation, but it is clear that the fragments of fox/dog were of ritual significance in this funerary context, whether as a totemic type of offering or associated with an item of personal adornment for the deceased or the bereaved. Small ungulates such as sheep are frequently recorded in Bronze Age cremation deposits and, though these fragments exhibited no sign of butchery, they could either represent a food offering or remnants of a funerary feast.

Roman and post-Roman ditches (43BC–*c*.AD900)

Two unconnected lengths of ditch (Ditches 1 and 3), truncated by medieval furrows, were located in the centre of Area 2 (Fig 13). Both had U-shaped profiles, 1.2m wide and 0.2m deep. Ditch 1 was aligned south-west to north-east: Ditch 3, 12m to the north-west, could have been a continuation of the same feature. Fourteen highly abraded sherds from sandy coarseware vessels of Roman date were recovered from the single fill (2125) of Ditch 1: no dateable finds were present in Ditch 3.

Parallel to Ditch 1 on its southern side was Posthole Group 2156, comprising a line of six postholes (2126, 2128, 2130, 2132, 2134, 2136), with two outlying postholes (2138, 2140) to the north-east. No dateable finds were recovered from these features, though their relationship to Ditch 1 suggests contemporaneity. It seems likely that they represent a fence line running alongside the ditch.

Medieval fields (*c*.900–1500)

Traces of ridge-and-furrow ploughing were present in both excavation areas. In Area 1, regular, broadly-spaced furrows were aligned north-west to south-east, and in Area 2 slightly narrower, regularly spaced furrows ran north-east to south-west. No dating evidence was recovered from the furrows, but their spacing and alignment show that they belong to two separate furlongs of a medieval open-field system.

Post-medieval ditch (*c*.1500–1900)

Post-medieval activity comprised a single ditch (Ditch 2) located in the south-east corner of Area 1 (Fig 3). This feature, which was aligned north-east to south-west, had a V-shaped profile c.1.6m wide and 0.56m deep, with a single fill throughout. No dating evidence was recovered from this feature but its location, following the headland between the two medieval furlongs described above, may suggest that it is related to post-medieval inclosure activity.

Unphased

A number of pits and postholes contained no dateable finds.

In Area 1 (Fig 3) pits 2091 and 2113 were located to the north of the cremations. Towards the south end of the excavated area, an isolated pit 2111 was found to the west of Structure 2081.

In Area 2 (Fig 13) an isolated posthole 2145 was identified towards the northern limit of excavation. Its fill contained 20 fragments (42g) of amorphous reddish-brown fired clay, possibly derived from an object (eg. loomweight) or a structure (eg. oven), but no dateable finds. Twelve metres south of posthole 2145 was a group of three postholes 903, 2153 and 2154. Although no dateable finds were recovered, the fill of 2154 contained a few fragments of reddish-brown fired clay, similar to that found in 2145.

Near the south-eastern corner of Area 2 a line of postholes (Posthole Group 2183) was 4.5m long, and consisted of seven postholes: 2160, 2162, 2164, 2166, 2167, 2169 and 2171. It probably formed part of a structure or fence line. To the north of this were an isolated pit, 2173, and an irregular shallow gully, 2177/2179, neither of which contained any dateable finds.

Other finds and environmental evidence

The worked flint
by Jim Rylatt

Sixty-two pieces of struck flint (160g) and four fragments of unworked burnt flint (182g) were recovered. One artefact has morphological attributes that are broadly indicative of the lithic industries practiced during the Late Mesolithic and Early Neolithic. However, most of the pieces with diagnostic techno-typological attributes are indicative of Late Neolithic and Early Bronze Age activity.

Methodology

All the artefacts were physically examined and the attributes of each piece were recorded and compiled to form a digital archive. Macroscopic analysis determined position in the reduction sequence and any observable characteristics of the reduction technology, together with an assessment of the functional potential of the different elements of the assemblage. The catalogue also records

Fig 13: Area 2, showing Roman and unphased features

the presence of patination, cortex, and whether any piece has been burnt. Metrical data was recorded for complete flakes, and each piece was weighed. Selected artefacts were examined with a hand-lens (x6) to determine whether there was any evidence for localised modifications indicative of use.

Raw material

The quality and colour of the flint varies across the assemblage, with various hues of grey opaque flint being most common (25 pieces). Three unworked burnt pebble fragments and six pieces of struck flint have surviving areas of cortical surface. The cortex is generally creamy to mid-brown in colour and has a solid matrix, but variations in its thickness and the condition of the surface suggest that raw materials were possibly obtained from more than one source.

Seven of the above nine pieces have thin, pitted and abraded cortical surfaces, some also having recorticated, thermally-fractured surfaces. These characteristics are broadly indicative of raw materials obtained from deposits created by high-energy fluvial environments, such as fluvio-glacial sheet deposits or river gravels. Suitable superficial geological deposits have not, as yet, been identified within the immediate environs of the site (BGS 1982). It is therefore possible that this element of the assemblage could have been obtained from gravel terraces flanking the river Cherwell, 2.8km to the west of the site, or from its tributaries, such as the Farthinghoe Stream, situated a little over 2.5km to the south.

In contrast, two pieces have cortex that is up to 6mm thick and has a relatively smooth and unabraded surface. These are attributes of the irregular nodules that erode from surface exposures of chalk, and can also be obtained from Clay-with-Flints deposits and Head deposits derived from chalk strata. There is no obvious source for this material in the locality, the nearest chalk formations lying 50km south-east of the site. While it is possible that some unabraded nodules form a minor component of secondary deposits in the region, it is also feasible that some flint raw materials were obtained from both the chalkland landscapes and the extensive gravel terraces flanking the Thames, and were transported overland or up the Cherwell by boat.

Condition

Most of the artefacts are in an unrolled, fresh condition, but five pieces have some damage to the margins. Four were recovered from closed primary contexts, suggesting that this damage represents minimal forms of utilisation or incidental damage prior to deposition. Only two pieces have any patination, both having a slight milky discolouration on areas of the flake surfaces. One is a miniscule flint chip recovered from one of the soil samples and could, therefore, be natural in origin. The other is the only artefact with morphological affinities associated with Mesolithic and Early Neolithic industries. As such, it is possible that the inception of surface patination is an indicator of the greater antiquity of this artefact.

Burning

A flake recovered from pit 505 has identifiable structural changes associated with the burning of flint (Purdy & Brooks 1971). The fill (506) also contained four fragments of unworked burnt flint, three of which refit to form one surface of a pebble derived from a secondary deposit. The presence of a fire-cracked flint pebble provides a strong indication that at least some of the flint raw materials were obtained locally. They possibly formed a minor component of sandstone pebble beds that provided the majority of the burnt stone recovered from fill (506).

Burnt flint was also recovered from the fills of two pits that contained human cremations. Pit 2056 contained an Early Bronze Age cremation urn, the fill of which (2063) incorporated 25 burnt flake fragments and small pieces of irregular waste. This material includes 20 pieces with patches of bright, shiny thermal gloss. The latter is a relatively unusual characteristic of burnt flint, probably associated with silica dissolution at temperatures above 300°C (Clemente-Conte 1997). As such, its formation relates potentially to specific environments or processes occurring within the funeral pyre. A further two pieces of burnt flint were recovered from the fill (2121) of pit 2120, also associated with cremated human bone.

Composition of the assemblage

One flake recovered from pit fill (506) preserves the scars of four narrow blade-like removals, together with smaller removals that probably result from core maintenance. These attributes suggest Mesolithic and Early Neolithic core reduction strategies, implying that this is a residual artefact.

The remainder of this small collection of worked flint has morphological characteristics indicative of Late Neolithic and Early Bronze Age industries. A number of the pieces are products of carefully controlled reduction, but it is also apparent that they were produced by freehand hard hammer percussion. As such, there is little evidence of deliberate platform edge preparation, a degree of variation in the depth of the platform remnant, and some crushing caused by the impact of the hammerstone. While the prominence of the bulbs of percussion varies greatly, it is notable that there is a low incidence of irregular terminations (hinged and stepped distal ends).

Nearly one-third of the assemblage was recovered from pit 505. This material comprises two scrapers, an exhausted core, nine flakes (including the potentially residual Mesolithic or Early Neolithic piece described above) and two pieces of irregular waste; in addition, three tiny trimming flakes and two chips were recovered from a soil sample. Both scrapers have careful retouch around the distal end, but more perfunctory modification of one lateral edge. The core has been methodically worked until it was reduced to a thin, flake-like sliver weighing only 13.4g. It was probably supported on an anvil during the final stages of reduction, thereby facilitating the removal of thin, almost invasive flakes, the durability and usefulness of which is questionable.

One of the pieces of burnt flint recovered from the interior of the Early Bronze Age cremation urn (2063) appears to be part of a shattered flake with secondary retouch. Another comparable flake fragment formed part of cremation burial (2121).

Discussion

The assemblage includes a single flake that may have been discarded during a brief, transient visit in the Late Mesolithic or Early Neolithic; centuries, if not millennia, before the creation of the pit in which it was found. The remainder of this small collection of struck and burnt flint is broadly characteristic of lithic technologies employed during the Late Neolithic and Early Bronze Age (early 3rd millennium cal BC to mid-2nd millennium cal BC).

The only complete pieces with secondary retouch are the two scrapers recovered from pit 505. These utilitarian implements are not chronologically diagnostic, as they are generally the most common tool-type found in Neolithic and Bronze Age assemblages. However, the lithic material from pit 505 was found in direct association with quantities of Grooved Ware pottery, providing a more precise date range of *c*.2900–2400 cal BC.

Characterisation of Late Neolithic activity is constrained by the small size of the lithic assemblage recovered from Area 1. However, it is notable that material of this date is predominantly found in superficial deposits, suggesting that it was generally deposited onto contemporary ground surfaces (Healy 1993). Consequently, the virtual absence of worked flint from the topsoil, subsoil and other superficial deposits at Middleton Cheney is unusual when considering assemblages of this date. It appears likely that there was no sustained activity or occupation on the site during the Late Neolithic, implying that any visits may have been episodic, relatively brief and focussed upon a specific range of activities that resulted in the digging and filling of a number of pits. Overall, the character and quantity of the struck flint recovered from these pits is broadly consistent with lithic assemblages retrieved from clusters of Grooved Ware pits elsewhere in Britain (eg. Brassil & Gibson 1999). While the recovery of an exhausted core, two pieces of irregular waste and some debitage indicates that there was at least one episode of core reduction on the site during the Late Neolithic, the low incidence of worked flint, combined with the inclusion of two tools, raises the possibility that this material was selected from a larger resource. Consequently, it is possible that the cultural material in the Neolithic pits could represent the residues of deliberately structured deposits, in turn implying that the activities centred on the pits may have had an overtly ritual dimension.

The twenty-five pieces of burnt flint recovered from Cremation burial 1 are fragmentary flakes, or chips of more indeterminate character, which could have disintegrated within the funeral pyre or have been broken during their collection and placement within the urn. Although the initial character of this material remains uncertain, it is probably derived from a series of pyre deposits that included both flakes and tools, the latter represented by one piece with small invasive flake scars that extend from a surviving edge. Similarly, a burnt flake fragment from Cremation 3 has a series of small invasive flake scars along one margin, suggesting that it formed part of an implement with an acute edge, such as a knife or arrowhead.

Table 6: Composition of the lithic assemblage

Context	End & side scraper	Core	Flake	Irregular waste	Unworked burnt flint	Totals
500	–	–	2	–	–	2
504 (pit 503)	–	–	2	1	–	3
506 (pit 505)	2	1	12	4	4	23
2063 (CB1)	–	–	10	15	–	25
2064 (CB1)	–	–	1	1	–	2
2090	–	–	–	1	–	1
2121 (CB3)	–	–	1	1	–	2
2145	–	–	2	1	–	3
2147	–	–	1	–	–	1
2155	–	–	1	–	–	1
2158	–	–	1	–	–	1
U/S	–	–	1	–	–	1
Totals	**2**	**1**	**34**	**24**	**4**	**65**

Environmental evidence
by Leslie Bode and James Rackham

Three bulk soil samples were taken from the evaluation, and thirty-six from the excavation. All but three were processed by ASC, and the flots and residues of twenty-eight were submitted to the Environmental Archaeology Consultancy for further processing and assessment.

Methodology

The samples were processed in the following manner by ASC. Samples 1, 2, 19 and 21 were cremation-related: these were initially dry sieved, after which the remaining soil/material was wet-sieved as below. Sample volume and weight was measured prior to processing. Samples were washed in a 'Siraf' tank using a flotation sieve with a 0.5mm mesh and an internal wet-sieve of 1mm mesh for the residue. Both residues and floats were dried and the weight of the residues recorded. A total of 672.1 litres of soil weighing 709.4kg was processed in this manner.

The residues were sorted by eye, and environmental and archaeological finds picked out, recorded and bagged independently. A magnet was run through the residues in order to recover magnetised material such as hammerscale and prill. The presence of environmental finds (ie. snails, charcoal, carbonised seeds, bones etc) was noted, and their abundance and species diversity recorded on the assessment sheets.

The samples were then sent to the Environmental Archaeology Consultancy, where the residues were re-floated to ensure the efficient recovery of charred material. The dry volume of the first and second flots was measured, and the volume and weight of the residues recorded. Again, a magnet was run through the residues in order to recover any further magnetised material such as hammerscale and prill. The residues were then discarded.

The first and second flots along with the magnetic components provided were studied under a low power binocular microscope. The presence of environmental

finds (*ie.* snails, charcoal, carbonised seeds, bones etc) was noted and their identification, abundance and species diversity recorded. The flots and finds from the sorted residues constitute the material archive of the sample.

Results

The bulk of the samples washed down to a residue of iron-rich concreted sediment. Archaeological finds from the material provided were limited. All the samples produced a magnetic component: however, only insignificant traces of hammerscale and spheroidal hammerscale were recorded in a few samples, and could reflect contamination. The high concentrations of magnetic material in the cremations and in Posthole 2145 suggest burning: the mineral element of the soil becomes magnetized under such conditions. This suggests that ash from the pyres as well as bones were placed in the cremation pits. A relatively high magnetic component in Posthole 2145 may derive from crumbled fired earth. Structure 2081 was the most heavily sampled feature on site, but very few finds were recovered; a little burnt bone, possible slag, fired earth and two small sherds of pottery.

The charred plant remains

The frequency of charred plant remains was extremely low in all samples from both the evaluation and excavation phases. Charcoal was present in all samples at a low frequency with the exception of samples from Cremation 2, Posthole 2145 and pit 2078, which presented notable concentrations of charcoal.

Charred grain and seeds are extremely rare, with a few samples producing single grains or chaff fragments including Triticum sp./indeterminate cereal type. A single cf. *Triticum dicoccum* glume base, a processing by-product, was found in Posthole 2145. A low number of small unidentifiable burned masses were identified. Modern uncharred seeds and rootlets are more common in almost all samples at a low frequency.

Discussion

The only environmental find from the two late Neolithic pits, 503 and 505, was a single poorly preserved grain of wheat, Triticum sp. and a little charcoal.

The four soil samples from the Early Bronze Age cremation burials pits were equally devoid of material. Cremation 3 produced a little more charcoal (22ml) than the Neolithic samples, but no charred cereals were present and the very few charred weed seeds were only found in this sample and were poorly preserved seeds of Poaceae, grasses.

The Roman and post-Roman samples were no better with very little charcoal and only a single poorly-preserved grain of wheat, Triticum sp.

Due to the low levels of charred plant material throughout most of the samples from Structure 2081, no concrete suggestions can be made regarding the use of this circular structure. A few poorly preserved wheat, Triticum sp., grains were found in four of the fourteen samples, charcoal concentrations were very small in all samples except in pit 2078, where the size of the charred flot was 7ml, still a very small component from a 30 litre sample. This sample could indicate a closer proximity to a hearth than the other postholes. However, no charred plant/seed remains were found in it, although a few small unidentifiable burned 'masses' were present.

The unphased sample from pit 2091 produced only a very small assemblage of fragmented charcoal. Posthole 2145 produced the richest sample from the site with abundant charcoal, a single wheat grain and a single glume base of Triticum dicoccum. The presence of this glume wheat suggests that the posthole is Roman or prehistoric in date, although more probably prehistoric. Posthole 2160 (Group 2183) produced a little charcoal and a single poorly preserved grain of wheat, Triticum sp.

The very small charred first flots from the samples suggested that the samples should be floated a second time to ensure the recovery of as much of the charred component as possible. The second flots produced only three charred cereal grains, none of which could be identified to species, although this represented 33% of the total recovered charred cereal grains. The process of re-floating the residues did aid in the extraction of charcoal from the samples as well as these few charred grains that might have been missed with a single flotation.

Radiocarbon dates

Samples from the Grooved Ware pits, the cremation burials and a posthole of a posthole structure were submitted for radiocarbon dating to define the site chronology (Table 7).

Discussion and Conclusions

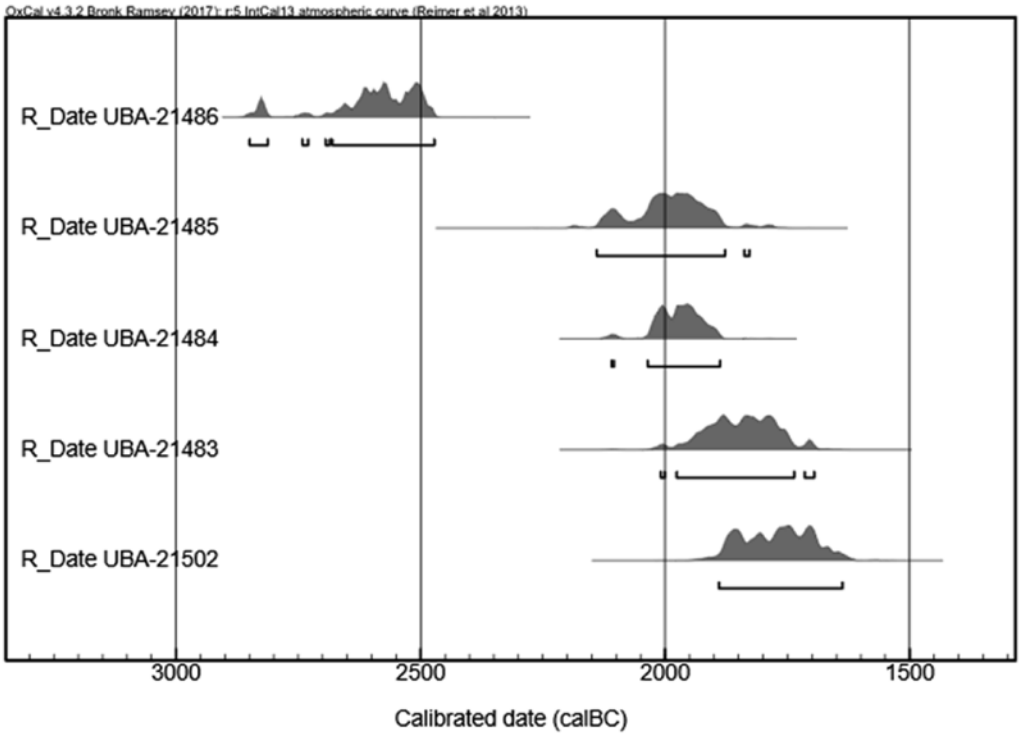
Apart from a single residual flint flake, probably of Late Mesolithic or Early Neolithic date, the earliest evidence of human activity at Middleton Cheney comprised two pits containing the remains of at least eight Neolithic Grooved Ware pottery vessels, along with a small assemblage of contemporary worked flint and a single poorly preserved grain of wheat. A radiocarbon date of 2680–2470 cal BC (Table 7) was obtained from food residue present on one of the pottery sherds. The character of these deposits suggests habitation in the near vicinity, though no other trace of this was found during the investigations.

By the Early Bronze Age the site appears to have continued in use, though for a different purpose. Activity at this time is represented by a group of three cremation burials: a juvenile of 11–12½ years, interred in an inverted Collared Urn, along with a ceramic spoon and a copper-alloy awl and bones of a small dog or a fox and probably a sheep as well; an unurned adult female of about 25 years and another unurned cremation, of undetermined age and sex, of which only part had survived. In the near vicinity of the cremation burials, a circular post-built structure may also belong to this period. Radiocarbon dates obtained for the cremation burials places them broadly within the 21st to 19th centuries BC, the earliest being Cremation burial

Table 7: Radiocarbon dates

Laboratory reference	**Context**	**Sample**	**Conventional Radiocarbon Age BP**	Cal BC *68% confidence* **95% confidence**
UBA-21486	Vessel 5 Pit 505	Charred food residue	4050 ± 40	*2630 (40%) 2550* *2540 (27%) 2490* **2680–2470 (86%)**
UBA-21485	Pit 2120 Cremation burial 3	Cremated bone	3620 **±** 50	*2111 (2%) 2104* *2036 (66%) 1906* **2140–1880**
UBA-21484	Pit 2087 Cremation burial 2	Cremated bone	3610 ± 30	*2020 (23%) 1990* *1984 (45%) 1930* **2040–1890**
UBA-21483	Pit 2056 Cremation burial 1	Cremated bone	3520 ± 50	1910–1770 **1980–1740 (92%)**
UBA-21502	2078 Structure 2081	Charcoal	3450 ± 50	*1880 (16%) 1840* *1820 (9%) 1800* *1780 (43%) 1690* **1890–1660**

Laboratory: UBA=Queens University, Belfast, UK
Calibration: Intcal13. Plot: OxCal 4.3.2



3 (2060–1890 cal BC) and the most recent Cremation burial 1 (1970–1740 cal BC). The cremations burials are discussed in detail below.

Based on the date obtained for the central posthole (1890–1660 cal BC), the posthole structure could be contemporary with or slightly more recent than the cremations. Excavation of its constituent postholes produced no evidence for its function, though its central posthole contained some charcoal, suggestive of a fire in the vicinity. Given the absence of domestic refuse occupation seems unlikely: ritual use has also been suggested because of its proximity to the cremations, though no parallels could be found to shed any light on what the nature of any ritual use might be.

After the Early Bronze Age, evidence for activity on the site is slight, relating to agricultural use from the Roman period onwards. It is therefore apparent that the significance of the site is in the evidence of prehistoric activity, summarised above. While certain aspects of this, such as the pottery and grave goods, have already been discussed in detail, others, notably the relationship of the discoveries at Middleton Cheney to surrounding prehistoric

landscapes and the significance of the cremations within regional and wider contexts, are addressed below.

The cremation burials in context
by Tania Kausmally and Gaynor Weston

Cremation was practised as a funerary rite throughout the Bronze Age, predominantly in the early and middle Bronze Age periods (McKinley 2001). A shift in funerary practices occurred during the transitional period from the Neolithic to the Early Bronze Age, reflected by the diversity of burial practices in Oxfordshire (Bradley 2014), Northamptonshire (Chapman 1999) and Buckinghamshire (Bradley 2014) at this time. In general, there was a change from communal burials of commingled remains associated with large monuments, towards more individual, inhumation and cremated bone burials in round barrows and flat cemeteries, though these are often situated near to Neolithic monuments. Early Bronze Age burials have been excavated at Radley Barrow Hills, Devil's Quoit complex, Yarnton, Gravelly Guy, Stanton Harcourt and Dorchester in Oxfordshire. Grave goods are recorded as present at several of these sites, indicating an increase in the use of wild animals for such items in the Early Bronze Age (Bradley 2014). Species included red deer, roe deer, boar and eagle at Radley Barrow Hills. More exotic goods have also been discovered, such as amber, shale, jet, faience, copper neck rings and awls, polished flints, antler picks and antler combs. There has been some evidence for biers and coffins from Beaker burials in the area. Although traditionally regarded as a Bronze Age practice, some cremation burials from Oxfordshire have been dated to the Early Neolithic period, and radiocarbon dating is crucial to accurately identify the age of many cremated bone deposits (*ibid*).

In Northamptonshire, similarly dated changes in funerary customs are seen, with disarticulated and articulated inhumation burials dating to the Neolithic associated with mortuary enclosures at Aldwincle, Grendon and Tansor. In addition, Neolithic monuments at Briar Hill, Dallington, Southwick and Redlands Farm, Stanwick, continued to form a focus for funerary activity into the Early Bronze Age, although at this time, barrow and flat cemeteries also appear, such as at Cowthick near Weldon, Ashton Roman Town and Warmington (Chapman 1999 and Parry *et al* 2012). Three large Middle Bronze Age cremation cemeteries are recorded in Northamptonshire at Briar Hill, Chapel Brampton and Kelmarsh, containing at least 27, 28 and 21 cremated bone burials respectively (Bamford 1985 and Chapman 1999). Inhumation and cremation burials are often discovered from the same sites. At Aldwincle, two Bronze Age inhumation burials of male adults were excavated from barrows with a large number of grave goods, including arrowheads, a scraper, a spatula, a boar's tusk and a grindstone. Both individuals had been interred in coffins. One of the skeletons was in a disarticulated state and partially burned. Two cremated bone burials were also discovered and were poorly oxidised (Jackson 1976). Similarly at Weldon, Northamptonshire, both inhumation and cremation burials were discovered, three of the six cremation burials being accompanied by collared urns, two of which were accessory vessels (Jackson 1974). Some sites, such as at Weldon, reveal evidence of burning *in situ* and suggest interment of cremated bone at the site of the cremation ceremony. The excavation of a Bronze Age barrow at Earls Barton, Northamptonshire also revealed that the mound covered the original pyre site, with two radiocarbon dates spanning 1630–1310 cal BC (Jackson 194 and Jackson 2010, 63–64 & 173).

A cremation burial in a collared urn and an unurned deposit of cremated bone was inserted into a barrow mound containing two inhumations in plank-lined chambers at Gayhurst Quarry, Buckinghamshire (Chapman 2007 and Bradley 2014), indicating that here also, cremation chronologically followed inhumation as a funerary practice. Although as the sequence at Gayhurst was: inhumation, cremation, inhumation, cremation and cremation, there was evidently a transition period in which both practices were current. In Milton Keynes, several ring-ditches have been excavated revealing the remains of cremated individuals. At Warren Farm, a cremation burial was discovered containing the remains of female between 15–20 years of age and of a neonate. The remains of a second, cremated neonate was located outside of the ring-ditch (*ibid*.). One cremated individual aged between 8–16 years old was found east of the river Ouzel, dating to 1690–1310 cal BC, and the Cotton Valley ring-ditch was found to enclose two cremation burials placed in inverted collared urns, thought to date to 1980–1210 cal BC (*ibid*). The vast majority of evidence for funerary practice in Buckinghamshire during the Neolithic and Early Bronze Age period, however, is from inhumation burials. No evidence for burning *in situ* has been reported.

Evidence of pyre technology from this period suggests that large timbers, usually oak, were used to construct the frame of the pyre with brushwood infills of cherry, sloe and alder (McKinley 2001). In some cases during this period, such as at Earl's Barton, mounds were constructed over the collapsed pyre containing the human remains, whereas in others remains were collected and interred. Re-deposited pyre debris that has been recovered from ring-ditch fills, such as at Twyford Down, Winchester, where the line of tipping indicated that the interior area of the ring may have been used as a pyre site (*ibid*.). Pyre debris has also been noted to have been deliberately deposited in small pits as well as in the backfill of cremation burials. Mound burial was also common during the Bronze Age and was an important means of creating monuments to the dead for the living in the surrounding landscape. Their substance, form and location would have important symbolic significance and would have formed part of the structured understanding of the environment and people's place in it (Tilley 1994). Thus, the construction of a barrow would have represented a significant social investment by a population. It has been observed that many Bronze Age funerary landscapes would have been relatively open pasture lands (Parker-Pearson 1999), and that colours and undoubtedly other properties of purposefully selected materials may have played an important role in the construction of barrows and their contextual 'viewscape', such as that at Upton Pyne 284b in East Devon (Owoc 2006). Here, a Bronze Age mound

containing the remains of at least three infants had been capped with orange clay subsoil. McKinley (2001) notes that the primary burials within mounds are frequently those of adult females and infants, possibly denoting the practice of matrilocal residence at this time, a pattern also detected in Buckinghamshire by Green (1974, cited by Bradley 2014).

In contrast, cremation burials are also found in flat cemeteries or in small groups, such as those at Middleton Cheney, and these have been noted in both Oxfordshire and Northamptonshire. Due to the lack of over-ground demarcation, these are usually found unexpectedly and it is more difficult to understand these types of deposits due to their comparative rarity and seemingly sporadic discovery. A number of these burials show similarities and appear to be located outside of ring ditches, such as at Finmere Quarry (Bradley 2014). It is interesting to note the parallels between the small group at Middleton Cheney and Finmere Quarry, where a small cluster of pits were noted in close proximity. Nonetheless, the cremation pits contained only token bone deposits, and the neighbouring pits contained pyre-rich deposits at Finmere Quarry. At Middleton Cheney, much more bone was present and there were no pits containing only pyre debris. The mode of deposition for burial within an inverted collared urn at Middleton Cheney (Cremation burial 1) was very similar to that at Upton, Northamptonshire. Here, the urn contained similarly complete remains but no pyre debris, unlike at Middleton Cheney where abundant charcoal was recovered from all three burials. The evidence suggests that the sorting and dumping of pyre debris at all these sites was undertaken using different approaches, and that localised differences are present in cremation and burial practices.

Also of note at Middleton Cheney is the presence of the urn, copper awl and ceramic spoon, all provided for the sub-adult burial as funerary goods, as well as the modified dog/fox and small ungulate elements representing pyre goods. No similar finds were present in the burial of the adult or deposit of incomplete remains. Similarly at Finmere Quarry, the two collared urns were associated with sub-adult remains. The few cremated bone burials reported in Buckinghamshire also appear to consist of young individuals and sub-adults. This seemingly special treatment of young and sub-adult remains in at least some flat cemeteries in central England may be in keeping with some observations made of cremated bone burials in barrows of the Bronze Age. However, the remains contained in an urn at Upton were adult (although no pyre or funerary goods were deposited), so rituals were clearly localised in form.

Editor's note: In discussing the Neolithic and Bronze Age in Northamptonshire, the major monument complex within the Raunds Area Project (Harding & Healy 2007 and 2011) forms a significant group of material in addition to the sites referenced in this discussion.

The site in context

As has already been noted in the introductory section of this report, the scale and extent of later prehistoric activity in the Cherwell valley is poorly understood. A glance at the relevant chapters of the current regional resource assessments covering this area (Clay 2006; Bradley 2014) reveals no significant sites of Neolithic or Early Bronze Age date in south-west Northamptonshire or north-west Oxfordshire. In the former, contemporary activity is abundantly recorded in the Nene valley 40km to the north-east, and in Oxfordshire in the Thames valley, 30km to the south. The site at Middleton Cheney is therefore significant, as it reveals that there was activity in the area in the Late Neolithic and Early Bronze Age.

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