

# BRONZE AGE AND LATER ARCHAEOLOGY AT WICK LANE, NORTON FITZWARREN

MARY ALEXANDER AND NEIL ADAM

with contributions by Wendy Carruthers, Rowena Gale, Harriet Jacklin,  
E.R. McSloy, and Tim Young

## SUMMARY

Excavations in 2006 at Wick Lane, Norton Fitzwarren, exposed two cremation burials, both placed within partially surviving Collared Urns. Radiocarbon dates taken from plant remains and charcoal within one of the burials dated these to the Early Bronze Age (*c.* 1870–1600 cal BC). Former medieval field boundary ditches and a small number of pits dating from the 11th–14th centuries were also uncovered, with evidence for metalworking thought to relate to settlement nearby.

## INTRODUCTION

During September and October 2006 Cotswold Archaeology (CA) carried out an archaeological excavation at Wick Lane, Norton Fitzwarren, (centred on NGR: ST 1780 2668; Fig. 1). This was intended to investigate archaeological features encountered during a field evaluation carried out by Oxford Archaeology in 2005 (OA 2005). The work was undertaken at the request of Hyder Consulting Limited on behalf of Taunton Deane Borough Council in advance of the construction of a flood alleviation scheme. The work was funded by Barratt Homes Ltd.

The site was located in an arable field to the west of Montys Farm, around 2km to the north-

west of Norton Fitzwarren. It lies at *c.* 24m above Ordnance Datum (aOD), with a very gentle slope to the north-east towards Norton Brook. The underlying geology of the Mercia Mudstone Group (BGS 1974) was overlain by colluvium into which all the archaeological features were cut. As the overlying soils were also colluviated the boundary between the soils was often difficult to discern.

Isolated finds of worked flint dating from the Paleolithic and Bronze Age periods have been recorded within a 2km radius of the site while a Bronze Age hoard and occupation layers were found at Norton Hill to the east (Ellis 1989) where the Iron Age Norton Fitzwarren hillfort is located (Gray 1908) (Fig. 1). Finds of Romano-British pottery have been recorded in the Somerset Historic Environment Record (SHER) at Norton Bridge (ST 1880 2579; SHER 43398) 1.5km to the south-east of the site, and Roman greyware pottery was found at ST 183 266, some 100m east of the site (SHER 44483). Cropmarks, which are thought to delineate possible enclosures of the Iron Age and Romano-British periods, have been identified to the north of Norton Fitzwarren hillfort at ST 198 266 (SHER 43408). The closest of these, interpreted as a possible Roman marching camp was seen on aerial photographs at ST 181 259, 1km to the south-east of the current site (SHER 44161); however there are no known Roman roads in this area.



Fig. 1 Site location; scale 1:5000

Given the general background of archaeological remains in the area, when a planning application for a flood alleviation scheme was submitted Somerset County Council Archaeology Service required that a full evaluation be undertaken. This revealed an area of medieval settlement consisting of pits and ditches which produced pottery of 12th to 13th-century date along with evidence for crop-processing and metalworking. A small number of residual Roman sherds were recovered from later features and in the colluvium (OA 2005). In the light of these discoveries, and following the granting of planning permission, an area of 1.85ha was subsequently stripped for excavation to investigate these features further. Topsoil and subsoil from the excavation area was removed by a mechanical excavator under archaeological supervision. The archaeological features were sampled by hand excavation: discrete features were half-sectioned or fully excavated, and a minimum of 10% of all linear features was excavated. The cremation burials were fully excavated and sampled for environmental analysis. A bulk sample was also taken from fill 025 of Ditch D, in an attempt to recover dating evidence.

#### EXCAVATION RESULTS

Features dating to the Early Bronze Age and medieval periods and some undated features are discussed below. A series of modern field drains and a geotechnical trench were also found within the area of excavation but are not discussed within this report.

##### Early Bronze Age (c. 1870–1600 BC)

Two cremation burials were found c. 5m apart, in cut features (Fig. 2). Feature 016 was circular in plan and measured 0.62m in length, 0.64m wide and 0.23m in depth. Feature 023 was circular in plan, measured 0.6m in diameter, and was 0.16m deep. Each cut contained an almost complete pottery urn (Urns 015 and 022). Both of these vessels had been inverted and placed within a mixed deposit of soil and cremated human bone. The bone is assumed to have escaped from the vessel. Both vessels were filled with a mixture of soil and cremated bone (contexts 028 in Urn

015, and 031 in Urn 022). The upturned bases of both vessels had been removed at some point prior to the excavation, probably as a result of plough action. They were excavated and lifted complete with their fills, and the contents of the urns were micro-excavated in spits under laboratory conditions. Two samples were taken from context 028 within Urn 015 for radiocarbon dating. These two samples produced dates of 1780–1600 cal BC and 1950–1750 cal BC giving a combined date range of 1870–1600 cal BC (Warman, this report).

##### Medieval (11th–14th centuries)

Three ditches (Ditches A, B and C) contained medieval pottery of 11th to 14th-century date, and appeared to delineate part of a field system. Ditches A and C were parallel, 38m apart on a north-west/south-east alignment. Both ditches continued beyond the north-west limit of excavation. A third ditch (Ditch B) c. 19m long, aligned north-east/south-west was located between the two others. As well as sherds of medieval pottery, animal bone, slag and a single residual flint were recovered from the fills of these ditches. A shallow ovoid pit (018) lay within the area delimited by the three ditches. This was 1.34m in length, 1.1m in width and 0.18m deep, and contained 11th to 14th-century pottery, the redeposited bottom of a smithing hearth and other metal-working waste. The evaluation had revealed two adjoining pits (4305, 4308) in Trench 43. Pit 4308 contained late 11th to 14th-century pottery, fragments of metalworking slag and a residual Roman sherd. Although 4305 was undated, its fill also contained fragments of slag and was assumed to be of the same date (OA 2005).

Ditch D followed the same alignment as Ditch A and was cut by it. It contained a highly compact fill which was sampled and processed for finds retrieval but without positive results. A few cereal grains were recovered from the processed environmental sample, and the presence of hulled wheat indicates prehistoric activity, although possibly in a residual context. Given that Ditch D precedes Ditch A in the stratigraphic sequence, Ditch D must date to the medieval period or earlier.

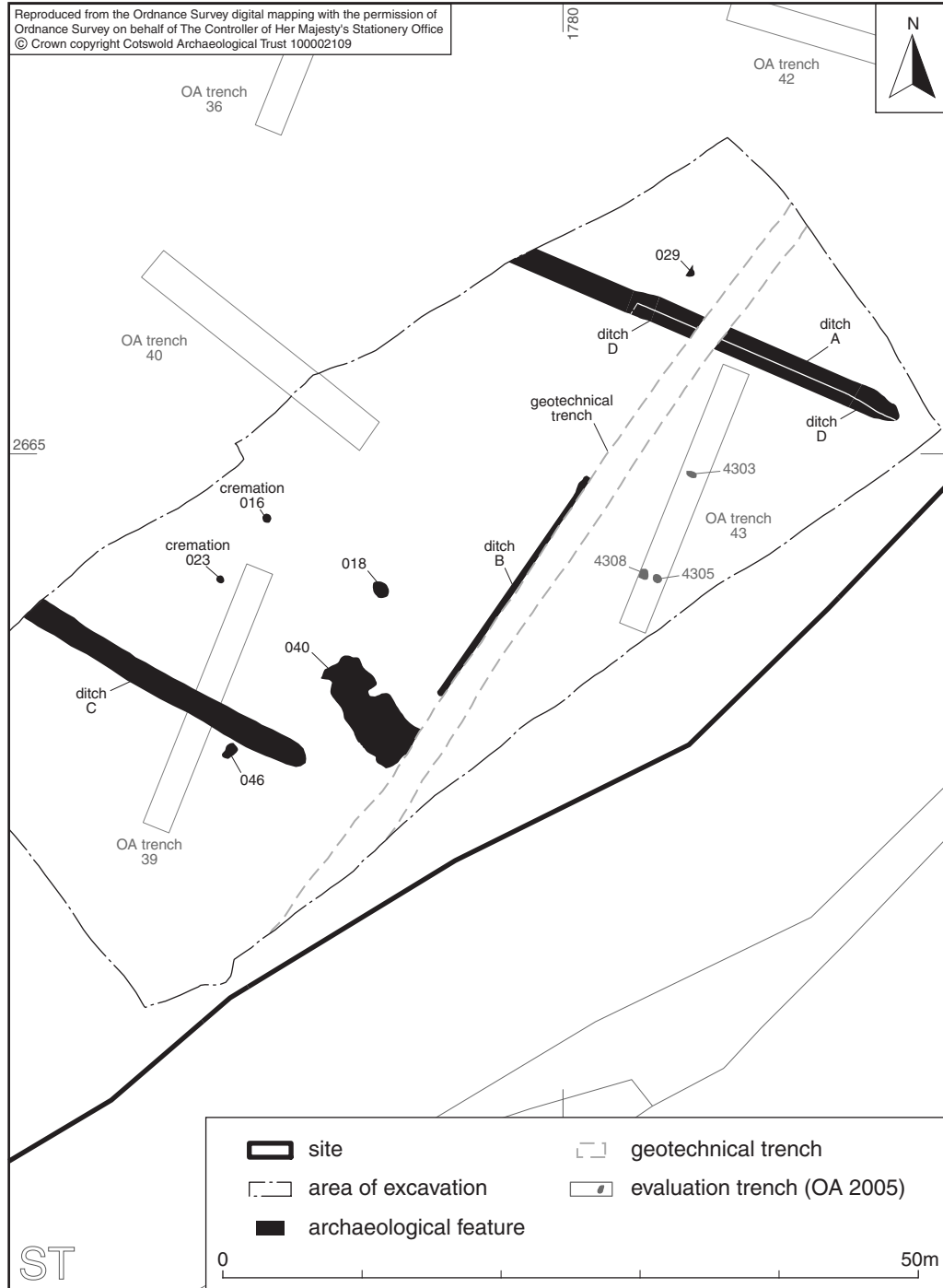


Fig. 2 Excavation area showing archaeological features; scale 1:500

### Undated

A circular pit (046) was located near to the terminal end of Ditch C. The cut was 1.2m in diameter and 0.41m deep. An irregularly shaped feature (040) lay between the terminus of Ditch B and Ditch C. It was c. 8m in length, 4m wide and 0.35m deep. The fill was a sterile yellow clay and the feature is assumed to be a borrow pit similar to the larger example identified in Trench 44 of the evaluation. To the north of Ditch A another irregularly shaped feature (029) c. 2m long and 0.6m wide had been truncated by a modern field drain. No finds were recovered from these features. An oval posthole 4303, 0.9m by 0.5m and 0.12m deep, containing charcoal flecking was also found in evaluation Trench 43.

### THE FINDS

#### Worked flint *E.R. McSloy*

A single broken primary flake of good quality and unpatinated grey-brown flint was recovered as a residual find in medieval Ditch B. The cortex is thick and unworn; characteristics suggesting an origin from a primary chalk or chalk soil. No dating can be advanced for this piece, though an Early Bronze Age date as that of the pottery cremation urns is possible.

#### Pottery *E.R. McSloy*

##### *The Bronze Age urns*

Urns 015 and 022 were lifted *en bloc* and their contents excavated and recorded in spits. The vessels, which were deposited inverted, were heavily truncated with only the rim zone surviving. Both vessels were heavily fragmented (55 and 30 sherds respectively) and further small sherds were recovered following processing of soil samples. The condition of both vessels was poor, the result both of truncation and the friable nature of the fabrics. In particular Urn 015 had suffered considerable surface loss, to the extent that the decorative scheme was unclear prior to conservation. Conservation treatment was undertaken to consolidate the vessel surfaces and clarify decoration.

### *Fabric*

Fabric 1: Early Bronze Age coarse grog. Grey-brown surface and internal margin and dark grey core and interior surfaces. Soft with smooth feel and irregular fracture. Common poor to moderately sorted (1–3mm) sub-rounded grog which is dark grey or brown.

Urn 015: Collared urn (Fig. 3, No. 1): Only the upper portion survived to a maximum of 80mm below the rim. The surviving portion rarely encompasses the full depth of the collar, although detached sherds preserve the lower part of the collar and a portion of the body. The rim of this vessel is slightly expanded externally, and with an internal and concave bevel, which is undecorated. The collar is straight and the junction with the body rounded, although this is poorly preserved and indistinct. An expansion to the lower part of the collar would appear to be an irregularity rather than a lug or handle. Decoration to the collar zone consists of repeated rows of deep-impressed round-toothed comb impressions, overlain at intervals by paired vertical combed impressions.

Urn 022: Collared urn(?) (Fig. 3, No. 2): The vessel survived to a depth of 90mm below the rim. There are no indications of a collar, although this may have been removed. The rim is expanded slightly externally, and features a shallow internal bevel with a double line of twisted cord. The upper part of the vessel (collar?) is slightly concave. Decoration consists of twisted cord motifs, which are sometimes indistinct. The scheme consists of two concentric lines to the area below the rim, and a series of open loops or horseshoe motifs below this.

### *Lipid analysis*

A sherd from each of the urns was submitted for lipid analyses by Lucija Šoberl and Richard P. Evershed, School of Chemistry, University of Bristol. Lipid analyses were performed using established protocols which are published in detail elsewhere (Evershed *et al.* 1990; Charters *et al.* 1993). A full report detailing the methodology and results of the analyses are available in the archive (Šoberl and Evershed 2010). The sample taken from Urn 015 displayed the presence of fatty acids that indicated the residues were derived from ruminant animal fat. The presence of dairy fats

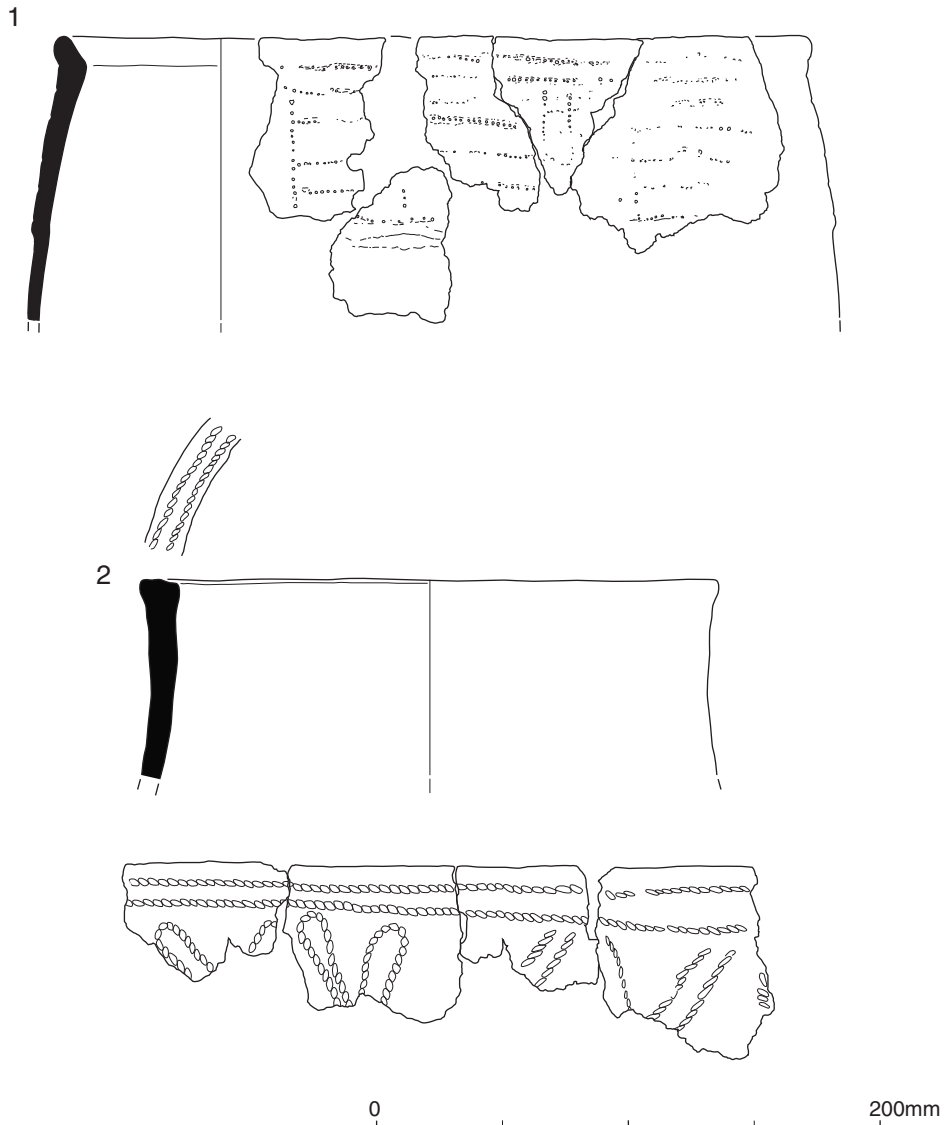


Fig. 3 Urns 15 (No. 1) and 22 (No. 2); scale 1:3

could indicate the processing of dairy products or use of butter for cooking within the urn. Although the poorer lipid preservation in Urn 022 limited interpretation, the lipids that were detected indicated that highly degraded animal fats were present. The difference in lipid preservation between Urns 015 and 022 could be attributed to

several factors – different use of pottery, varying post-depositional conditions or weathering. The results of the lipid residue analyses fit well within the previously studied British Bronze Age pottery, where the majority of preserved lipid residues have been identified as remnants of ruminant adipose and dairy fats (Copley *et al.* 2003).

### Discussion

A paired radiocarbon determination from material associated with Urn 015 returned a date in the range 1870–1600 cal BC (Warman, this report), which is comfortably within the range expected for the Collared Urn series (Longworth 1984). Due to the level of truncation classification according to Longworth's scheme is not possible, although the simple rim, repeated decorative motifs and absence of decoration below the collar are traits associated with his secondary series (*ibid.*, fig. 78). The use of 'point-toothed' comb (*ibid.*, 8) seen with Urn 015, would appear to be less common than impressed cord, and the design replicates a scheme common with cord-decorated vessels.

No material suitable for radiocarbon dating was recovered in association with Urn 022, which is unfortunate as its incompleteness precludes confident classification. Although unusual, parallels for the decorative motifs, if not the exact scheme, are to be found among the Collared Urn series (Longworth's Motif M: horseshoes, loops and rings). The proximity of the two vessels and the similarities in depth and manner of deposition might encourage broadly similar dating.

Longworth noted only six finds of Collared Urn from Somerset in his corpus (*ibid.*, 264–5), although further examples have since come to light, for example from Broadleaze Farm, Yeovil (Mepham 2005). Beaker coarsewares as well as corded Early to Middle Bronze Age (Trevisker-related) pottery are known from Norton Fitzwarren hillfort (Woodward 1989; Gray 1908) and there is some overlap between fabrics recorded at the hillfort site and those described here (Woodward 1989, 41–2). Some consideration was given to Urn 022 belonging to a 'later Early Bronze Age' urn tradition (biconical or Trevisker-related) of the

kind seen at Norton Fitzwarren hillfort as well as Brean (Woodward 1990, 123–33) and Cannington (ApSimon 2000, 285–6), however a date and tradition similar to Collared Urn vessel 015 would seem more likely.

### Medieval pottery

A small assemblage of medieval pottery was recovered from seven deposits (Table 1), primarily consisting of the fill 017 of pit 018 and ditches A and B (fills 012, 017 and 043). The condition of material is fairly good, with little obvious abrasion and average sherd weight relatively high at 9.2g.

All material is probably of local origin, with most identified fabrics equating to types previously described from Taunton (Burrow 1988, 117–18). On this basis, a broad 11th to 14th-century dating is favoured for this material. Two sherds from deposit 032 occurred in a fabric unlike material previously described, and are characterised by coarse argillaceous and iron oxide inclusions. A broadly similar medieval date is supposed.

With the exception of sherds in a glazed (South Somerset) jug fabric from topsoil deposit 001, the medieval pottery comprises coarse, cooking pot-type fabrics. Rim forms, all occurring examples of which are everted, differ in detail and include externally expanded, flattened and grooved (lid-seated) types. All probably derive from cooking pots (jars), of rounded form. Evidence for use as cooking vessels occurred from deposit 006, Ditch B, in the form of base and body sherds with thick, burnt food residues. A single small sherd in fabric 2.2 from deposit 006 features combed arc decoration.

TABLE 1: MEDIEVAL POTTERY BY CONTEXT, QUANTITIES SHOWN AS SHERD COUNT:WEIGHT (G)

Fabric*	Description	Us.	topsoil	006	013	017	032	043	Total
-	Coarse clay pellet/iron oxide						2:50		2:50
-	South Somerset. glazed	2:42							2:42
2.1	Coarse quartz with flint/chert		2:13	24:176	1:12			1:32	28:233
2.2	Limestone with coarse quartz			8:52					8:52
2.3	Sandy, fine		1:1						1:1
3.1	Grey sandy with coarse quartz					2:20			2:20
<b>Total</b>		<b>2:42</b>	<b>3:13</b>	<b>32:228</b>	<b>1:12</b>	<b>2:20</b>	<b>2:50</b>	<b>1:32</b>	<b>43:398</b>

\*Fabric codes as for Fore Street, Taunton (Burrow 1988)

**Metallurgical residues** *Tim Young*

This small assemblage comprised seven pieces of residue, totalling 1kg, including a single smithing hearth cake. The remainder of the assemblage comprised two other fragments from smithing hearth cakes, two slag fragments which are probably also smithing slags and two pieces of non-diagnostic lining slags. The archaeometallurgical residues were evaluated by brief visual inspection and the use of a lower-powered binocular microscope. A full report is available in the archive.

*Results*

The materials, which were found in the topsoil and the fills of cut features, include residues which are certainly from blacksmithing. Several of the slag pieces show indications that they were produced in a hearth burning charcoal.

The principal piece is the smithing hearth cake from 017, the fill of pit 018 which weighed 954g, but was estimated to be about 95% complete, so the original smithing hearth cake would have weighed *c.* 1kg.

*Interpretation*

Material such as this indicates a low background of metallurgical activity, such as would be typical in a medieval settlement. The technology implied by the smithing hearth cake is appropriate for the medieval period and is likely to be the product of fairly heavy smithing work, rather than bloomsmithing. The weight of the smithing hearth cake is consistent with that of other excavated examples of medieval date, for instance smithing hearth cakes from Deansway, Worcester (11–15th centuries) (McDonnell and Swiss 2004), and from Burton Dassett (14th–15th centuries) (McDonnell 1992).

## ENVIRONMENTAL EVIDENCE

**Radiocarbon dating** *Sylvia Warman*

Two samples of plant material and charcoal from spit 2 within Urn 015 were submitted for radiocarbon dating at the University of Waikato Radiocarbon Dating Laboratory (2009). There were no environmental remains associated with

Urn 022 suitable for radiocarbon dating. Both the samples from Urn 015 were successfully dated using the AMS method. The uncalibrated dates are conventional radiocarbon ages (Stuiver and Polach 1977). Simple calibrations have been calculated using the calibration curve of Reimer *et al.* (2004) and the computer program OxCal 3.10, Bronk Ramsey (2005). Ranges are derived from the probability method (Stuiver and Reimer 1993).

The sample from a sloe stone (Wk 23034) gave an uncalibrated date of 3399± 35 years BP; which was calibrated to 1780–1600 cal BC (at 92.9% probability). The charcoal produced an uncalibrated date of 3528 ± 35 BP (Wk 23035) which gave a calibrated date of 1950–1750 cal BC (at 95.4% confidence). The combined radiocarbon dates provide a date range for Urn 015 of 1870–1600 cal BC (calculated using the R-Combine function in OxCal 3.10).

**Human remains** *Harriet Jacklin*

The two Early Bronze Age urned cremation burials lay within grave cuts, and cremated material was recovered from within and around the cinerary urns, which were inverted and truncated.

*Methodology*

The contents of the urns were excavated in spits and the cremated remains were then divided into groups based on fragment size: 2<5mm fragments; 5<10mm fragments, and 10+mm fragments to aid analysis. The methods for analysis of the cremated material were adapted to the condition of the material which was far more fragmented and reduced in quantity than an average inhumation, due to the cremation process. All fragments of the cremation burials were inspected in detail to establish an approximate age and sex of the individual, but the most reliable indicators were absent and only an approximate age and possible sex can be given. The cremated bones were analysed for degree of survival and for indicators of the temperature and other aspects of the cremation process. Pathological analysis was also undertaken. References used during analysis include: Bass 1995; Buikstra and Ubelaker 1994; Brickley and McKinley 2004; Brothwell 1981; McKinley 1994a; 2000a; 2000b; McKinley and Bond 2001; and McKinley and Roberts 1993. All



fusion data within this report is based on Scheuer and Black 2000.

### *Results*

Urn 015, context 028 contained 637g of human bone. The cremated remains have been tentatively aged to 25–50 years (young to middle adult) based on cranial, rib and long bone size and the fusion of the cervical annular rim. The cranial sutures were visible although they were fully fused. There was macroporosity affecting the superior surface of the upper cervical centrum fragment and porosity affecting the distal end of an intermediate foot phalanx. The sex of the remains has been classed as indeterminate due to the lack of available and reliable sex indicators. Both the left and right supra-orbital margins were present and given a score of 4 equating to 'possible male' (Buikstra and Ubelaker 1994), but this is not enough for a reliable sex estimate. The soil surrounding Urn 015, context 014 of cut 016 also contained 32g of human bone consisting of cranial and long bone fragments. All the cremated material appears to belong to the same individual.

Urn 022, context 031 contained 884g of human bone. The cremated remains have been tentatively aged to 21–50 years (young to middle adult) based on cranial, rib and long bone size and the presence of permanent molar/premolar dental roots. The left supra-orbital margin was present and was given a score of 4/5 equating to 'possible male/male' (Buikstra and Ubelaker 1994) but again, this is not enough for a reliable sex estimate and the sex of the remains has been classed as indeterminate. The soil surrounding Urn 022, context 021 of cut 023 also contained 62g of human bone and consisted of cranial and long bone fragments. All the cremated material appears to be from a single individual.

The fragmentation of cremated remains can indicate the degree of burning that was used to cremate the individual, and whether secondary burning took place. Smaller bones (such as fingers and toes) or thinner bones such as scapulae and pelvis (ilium) are often underrepresented due to the nature of burning which warps bone considerably. The majority of the identifiable skeletal elements represented within both cremation burials were the long bones and the cranium, which take longer to burn than other skeletal elements. The small quantity of the smaller skeletal elements such as the hands, feet and ribs is expected as these

elements take a shorter amount of time to reduce effectively.

The total weight of the cremated bone: 669g (from Urn 015 and the pit fill) and 946g (from Urn 022 and the pit fill) represent but a fraction of the skeletal material. McKinley (2000, 408) suggests that after cremation often less than 50% of the remaining skeletal material is gathered from the pyre cremation and included in the cremation burial and, of that only 30–50% may be identifiable to a specific skeletal element. The weight of both cremation burials is comparable to that recovered from other archaeological sites indicating that the majority of the body was recovered, and any damage done by modern disturbance is unlikely to have affected the outcome of the analysis.

The colour of the cremated remains reflects the degree of oxidisation (temperature) to which the bones were submitted. The majority of the cremated material within both cremation burials reached a temperature of > c. 600° C (full oxidisation) and there was no discernable difference in temperature between different skeletal elements. There was no evidence of areas of burning indicative of a pyre technology at the excavation site, although only a small area was excavated.

### **Charcoal from the Early Bronze Age cremation burials Rowena Gale**

Charcoal was collected from within and around cremation urns 015 and 022 and from the backfill of the pits containing the urns (the latter as environmental samples). Species identification was undertaken on eight samples, mainly associated with Urn 015. Charcoal was extremely sparse within and around Urn 022 and no further work was possible, although a single environmental sample from the pit is included here.

Bulk soil samples were processed by flotation and sieving using 1mm and 0.5mm meshes, the resulting flots and residues were scanned under low magnification and the charcoal separated from plant macrofossils. The samples usually consisted of small fragments, some of which were poorly preserved and partially vitrified. None of the fragments was large enough to include intact segments of roundwood. Charcoal fragments measuring >2mm in radial cross-section were considered for species identification.

The samples were prepared using standard methods (Gale and Cutler 2000). The anatomical structures were examined using incident light on a Nikon Labophot-2 compound microscope at magnifications up to x400 and matched to prepared reference slides of modern wood.

### Results

The taxa identified are presented in Table 2. Classification follows that of *Flora Europaea* (Tutin *et al.* 1964–80). The anatomical structure of the charcoal was consistent with the following taxa or groups of taxa:

Fagaceae. *Quercus* sp., oak

Rosaceae. Subfamily Pomoideae, which includes *Crataegus* sp., hawthorn; *Malus* sp., apple; *Pyrus* sp., pear; *Sorbus* sp., rowan, service tree and whitebeam. These taxa are anatomically similar; one or more taxa may be represented in the charcoal.

Urn 015. Charcoal from within the urn was quite sparse with full identification mainly of hawthorn/*Sorbus* group (Pomoideae) and some *cf.* oak (*Quercus* sp.) (the latter in very poor condition). A similar ratio of the hawthorn group and oak was present in charcoal from soil around the urn, whereas charcoal from soil overlying the urn only included the hawthorn group. Environmental samples 1–4 from the backfill of the pit consisted mostly of the hawthorn/*Sorbus* group (Pomoideae) although two fragments from

sample 3 were provisionally identified as oak (*Quercus* sp.).

Urn 022. Excavation of the urn fill 031 produced scant charcoal identified as oak (*Quercus* sp.) (both heartwood and sapwood); oak was identified from the backfill of the pit and a small quantity of oak heartwood from sample 8.

### Discussion

Charcoal deposited within the urns almost certainly originates from the remains of pyre fuel scooped up with the cremated bone, and thus provides evidence of the composition and structure of the pyres. That from Urn 015 appears to have consisted predominantly of the hawthorn/*Sorbus* group (Pomoideae) although there was some use of oak (*Quercus* sp.). The similarity of this material to that recovered from contexts around the urn, and from the backfill of the pit containing the urn, suggests pyre debris as a common origin for all the samples examined. The frequency of the hawthorn group, especially when compared to the small amount of oak present, is interesting but in view of the general paucity of material it is not possible to base a secure interpretation on these results. Given the large amount of fuel that would have been required to construct the pyre (*c.* one ton of wood is required to cremate an adult body – see McKinley 1994b), the use of large billets of wood from substantial trees would have been considerably more practical in terms of time spent

TABLE 2: CHARCOAL FROM THE CREMATIONS

Sample	Context	Description	Pomoideae	<i>Quercus</i>
<i>Urn 15</i>				
-	14	Earth from top of urn	18	-
-	14	Earth from around urn	27	6h
-	28	Fill of urn, spit 2	38	<i>cf.</i> 4
<i>Environmental samples</i>				
1	14	Backfill of pit containing cremation urn 15	21	-
2			51	-
3			39	<i>cf.</i> 2
4			18	-
8	21	Backfill of pit containing cremation urn 22	-	5h

Key. h = heartwood *cf.*=uncertain identification

The number of fragments identified is indicated numerically

gathering fuel and building the structure and would have given greater support to the body than wood from small trees or scrub such as hawthorn. In addition, wider branchwood or cordwood would have provided a longer-lasting heat source. The pyre debris may also incorporate the remains of funerary furniture and grave goods. The evidence available suggests that the cremation may have taken place in a sparsely wooded area, perhaps one in which previously cleared land had been recolonised by scrub such as hawthorn and blackthorn (the last species indicated by the presence of the sloe stone; see Curruthers, this report), with few larger woodland trees present.

Charcoal associated with Urn 022 was exceedingly sparse. Although oak was the only species named from the material available, this was insufficient to provide conclusive evidence of the specific use of single species for ritual/funerary purposes.

Evidence from Bronze Age cemetery sites in some parts of Britain suggests that the specific selection of a single species (usually oak) was practised for particular or significant cremations. Although this ancient funerary custom is still not fully understood, there appears to be some correlation between sex, gender and/or status (Smith 2002). Examples of such are recorded at Brackmills Link Road, Northampton (Gale 2003); Westhampnett Bypass, West Sussex (Gale 2008); Gayhurst Barrow Cemetery, Buckinghamshire (Gale 2007a); Yeovilton, Somerset (Gale 2005), and Lodge Farm, St Osyth, Essex (Gale 2007b). There is insufficient evidence, however, to suggest that similar practices were observed at the cremations at Wick Lane and the gender of the cremated individuals is not known. The remains of further cremation burial deposits of similar date have been recently found in Somerset at Broadleaze Farm, near Yeovil and Maundown, near Wiveliscombe (excavated by Context One Archaeological Services), but comparable data on associated pyre fuel debris are not currently available.

#### **Charred plant remains Wendy Carruthers**

A total of 23 environmental samples was taken. One of these was from Ditch D; the remainder was from the two cremation burials (Urns 015 and 022). The soil around the cremation urns was removed on site as several environmental samples.

Samples from around the urns and Ditch D ranged from 10 litres to 18 litres (Table 3). The entire fills of the two burial urns were micro-excavated in a series of spits comprising c. 1 litre of soil each. All spits and samples were fully processed for the recovery of environmental remains, using standard methods of floatation. A sieve mesh of 250 microns was used to retain the flots and a mesh of 1mm was used to hold the residues. Full sorting and identification was carried out by the author using an Olympus SZX7 stereoscopic microscope. A summary of the results is presented in Table 3; spits and samples with negative results are not included in the table. Nomenclature and habitat information follows Stace (1997).

#### *Results*

Charred plant remains were scarce and poorly preserved. Hazelnut shell fragments (*Corylus avellana*) were the most frequent items found, but these were all very small fragments with some surface erosion and mineral impregnation. The few cereal grains and weed seeds were also fragmented and eroded. The implications of this in relation to the contexts are discussed below. Modern fat hen (*Chenopodium album*) seeds were frequent in most of the samples and silt contamination of the flots was common. From the poor state of preservation of the charred plant remains it is clear no modern charred material had moved down to the archaeological levels.

#### Urn 015

Samples were taken from five spits within Urn 015, from the 'earth around the urn' and from the backfill of the pit containing the urn. Five bags of unspecified flots from the fill of the cremation urn were also examined. Hazelnut shell fragments (*Corylus avellana*) were the most widespread charred remains, being present in low concentrations in the fill of the urn (one spit; one fragment), the earth surrounding the urn (five fragments) and three of the samples from the cremation burial pit backfill (four fragments in total). An oat or chess grain (*Avena/Bromus* sp.) was recovered from backfill sample 3, but poor preservation meant that it was not possible to say whether this represented weed contamination or a crop plant. Other identifiable remains included four fragments of weed seeds, consisting of two cleavers fragments (*Galium aparine* and *Galium* sp.) in spits 2 and 5 inside the urn, and two black

TABLE 3: CHARRED PLANT REMAINS

Taxa	Cremation 16							Cremation 23					Ditch D		
	Urn 15 spit			backfill sample				Urn 22 spit		sample			backfill sample		cont.25 sample
	2	5	around urn	1	2	3	4	3	6	7	9	10	5	7	9
<i>Triticum aestivum/spelta</i> (bread/spelt-type wheat grain)	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-
<i>Triticum dicoccum/spelta</i> (emmer/spelt grain)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
<i>Triticum</i> sp. (wheat grain)	-	-	3	-	-	-	-	-	-	-	-	-	-	-	cf.2
<i>Avena</i> sp.(wild/cultivated oat grain)	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
<i>Avena/Bromus</i> sp. (oat/chess grain)	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Indeterminate cereals	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-
<i>Corylus avellana</i> L. (hazelnut shell frag.) HSW	1	-	5	1	2	-	1	1	-	-	1	1	6	1	-
<i>Agrostemma githago</i> L. (corn cockle seed) A	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
<i>Fallopia convolvulus</i> (L.) A.Love (black bindweed embryos) CD	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
<i>Galium aparine</i> L. (cleavers nutlet) CDSH	-	1	1	-	-	-	-	-	-	1	-	-	-	-	-
<i>Galium</i> sp. (nutlet frag.)	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
<i>Bromus sect. Bromus</i> (chess caryopsis) AD	-	-	cf.1	-	-	-	-	-	-	-	-	-	-	-	-
<i>Poaceae</i> (small seeded grass caryopsis) CDG	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
<b>TOTAL</b>	<b>2</b>	<b>1</b>	<b>25</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>6</b>	<b>1</b>	<b>3</b>
<b>sample volume (litres)</b>	<b>1</b>	<b>1</b>	<b>18</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>10</b>

HABITAT PREFERENCE KEY: A=arable; C=cultivated; D=disturbed; G=grassland; H=hedgerow; S=scrub; W=woodland; cf.=uncertain identification

bindweed embryos (*Fallopia convolvulus*) in sample 3 from outside the urn. These species are both common weeds of cultivated and disturbed soils.

The most diverse sample from the site came from the soil around Urn 015. Three plump but elongated wheat grains were present in a reasonable enough state of preservation to suggest that they might have been an aestivoid spelt wheat grain (*Triticum aestivum/spelta*-type), ie a spelt grain that is plump like bread wheat, but not rounded enough to be bread wheat. Because of the poor state of preservation and lack of chaff fragments from the site, this identification must remain tentative. Three other possible wheat grains (cf. *Triticum* sp.) and four poor oat grains (*Avena* sp.) were also present in this sample. A cleavers seeds and a fragment of corn cockle seed (*Agrostemma githago*) were the only weed remains found. The implications of finding corn cockle in an Early Bronze Age context are discussed below.

#### Urn 022

The flots from six spits inside Urn 022, 'earth surrounding the urn', from the backfill of pit 023, and five bags of unspecified 'spitted pot fill' were examined. Hazelnut shell fragments were recovered from the top and bottom urn spits (spits 3 and 9, one small fragment in each), two of the pit backfill samples (seven small fragments) and a fragment from the unspecified urn fill samples. A similar range of weed seeds to Urn 015 (cleavers and a grass seed (small seeded Poaceae)) was present inside Urn 022.

#### Ditch D

The 10 litre soil sample from this feature produced one emmer/spelt grain (*Triticum dicoccum/spelta*) and two poorer grains that were probably wheat (cf. *Triticum* sp.).

#### *Interpretation of the results*

Although relatively few remains were recovered, the amount of soil processed was not large and the poor state of preservation suggested that some material may have been lost over time. Cereal chaff from hulled wheats, however, is fairly robust so the complete absence of chaff was probably a genuine feature of the assemblages, rather than due to taphonomic processes. This suggestion is supported by the presence of only large, heavy weed seeds such as cleavers and black bindweed

(although the weeds could have been introduced with the fire wood, see below). Such seeds often remain with the grain after it has been processed because they are of a similar size and weight to cereal grains, so do not get winnowed or sieved out of the crop. The evidence suggests, therefore, that crop processing was not occurring locally, and that where grain was being brought onto the site, it was in the form of fully processed grain rather than in partially processed spikelet form. This is a common feature of ritual sites, and probably results from the burning of prepared food offerings on the cremation pyres. Hazelnuts, however, appear to have been transported still in their shells. The kernels of hazelnuts are oily and they do not survive charring well (Caruthers 2000), so it is difficult to know whether the widespread presence of small shell fragments represents feasting at the site, with food waste being thrown on the pyre, or the burning of whole nuts as offerings. The high degree of fragmentation of the nutshells is probably a result of the remains being redeposited from the pyre site, along with the cremated bone and charcoal.

The cereals present in the cremation burial samples included oats and an unusual form of spelt or bread-type wheat. Oats are not often found in such early contexts, although Early Bronze Age oats were found at Llanilar, Ceredigion (Caseldine 2000) and have been recovered from Neolithic sites in Scotland such as Balbridie (Fairweather and Ralston 1993). They are usually associated with poor, acidic soils and poor climatic conditions, ie high rainfall. The presence of oats in both of these cremation burials links them together to some extent in terms of time and culture. In fact, the close similarities between the charred plant assemblages from the two cremation burials suggest that they were probably contemporary.

The wheat grains were mostly too poorly preserved to identify them further than 'wheat', although three grains from the soil around Urn 015 appeared to be a plump form of spelt wheat, being too oblong to be bread wheat but more rounded than most hulled wheats. So-called 'aestivoid' (bread wheat-like) spelt is sometimes found amongst hulled wheat assemblages. Whilst bread wheat has been recovered in small quantities from Neolithic deposits onwards (particularly in ritual contexts), hulled wheats appear to have been the main cereals grown for human consumption at this time, in particular emmer wheat (*Triticum dicoccum*). Spelt wheat is found from the Middle

Bronze Age onwards, particularly on large settlement sites such as at Perry Oaks, Heathrow (Carruthers 2006). The wheat identifications at Wick Lane must remain uncertain until better preserved charred material is recovered.

The weeds cleavers (*Galium aparine*), black bindweed (*Fallopia convolvulus*) and grass (Poaceae) were fairly typical of the early prehistoric period, apart from corn cockle (*Agrostemma githago*). This latter species is usually associated with Iron Age, Roman and later assemblages in the British Isles. However, it has been recovered from a few Early Bronze Age sites on the continent, such as a Bell Beaker site in Hungary (Gyulai 2003). This site also produced oats. Ecological information is difficult to extract from these taxa as they all grow in a variety of soils, and in a range of waste places and cultivated land. Cleavers is a scrambling plant and black bindweed is a twining plant, so both could have been introduced amongst firewood and tinder rather than as arable weeds. Grass seeds could have been charred on the pyre ground surface, or amongst tinder.

The distribution of the food remains (ie hazelnut shell and cereal grains) and their state of preservation suggests that rather than being burnt separately and carefully placed with the cremation, the food had been burnt with the corpse and had been swept up with the burnt bone fragments, charcoal and silt, and been placed in the pits in a rather mixed deposit. Although none of the grain was recovered from inside the urns this could be due to chance, since the quantities of soil from within the pots was much smaller than that around the pots. Hazelnut shell was present both inside and outside the urns.

Ditch D produced just a few wheat grains, including hulled wheat (emmer/spelt; *Triticum dicoccum/spelta*).

#### DISCUSSION *Harriet Jacklin and Mary Alexander*

The cremation burials have both been dated to the Early Bronze Age through pottery identification and radiocarbon dating. Both urns are classified as part of Collared Urn series and their date has been confirmed through radiocarbon dating of charred environmental remains within Urn 015 (1870–1600 cal BC). The urns were found to be inverted and partially damaged by modern

disturbance, which accounts for human bone being found in the surrounding fill. Both cremation burials were found close to the north-western limit of the excavation area and situated near to one another, c. 5m apart. No finds or pyre goods were found associated with the remains, and there was no evidence for an overlying mound. Due to the small area of land fully investigated it is impossible to draw conclusions about any possible spatial groupings; the cremation burials could be an isolated find, or part of a wider distribution of cremation burials, not yet found, although a lack of prehistoric evidence from the evaluation trenches close to the excavated site is indicative of their isolation from contemporary activity. Insufficient diagnostic bone survived to be certain of the sex of the individuals, although there are indications that both may be male.

The inverted position of the urns within the pits is a feature of the burial that has been noted elsewhere, most recently at Broadleaze Farm, near Yeovil (Mephram 2005). Lipid analysis undertaken on residues within the Wick Lane urns indicates that both were used for cooking; the better preservation of Urn 015 allowed the lipids to be identified as residues from processing of dairy products or the use of butter in cooking. This evidence, and the charred remains of hazelnut and fully processed cereals within the pit fills, suggests feasting formed part of the funerary ritual. The similarity in the nature of the environmental remains from Urn 015 and Urn 022 indicates similar burial rites and raises the possibility of a shared ritual. The presence of hulled wheat within the fill of the undated Ditch D may indicate a prehistoric date for this feature, although it is equally possible that this tiny quantity was redeposited. Although the undated features (Ditch D, pit 046 and posthole 4303) are more likely to belong with the medieval features (below), it is not impossible that these features are contemporary with the burial urns.

Pollard and Healy (2007) suggest that the tradition of single burial (inhumations and cremations) is intimately linked to the widespread appearance of round barrows and round cairns at the beginning of the Bronze Age. However not all individual burials were marked with a barrow and evidence from Dorset, Wiltshire and Gloucestershire suggests urned and unurned cremation burials were often located to the south and east of barrows, many of which date to the Early to Middle Bronze Age (Fitzpatrick 2007).

This practice has also been recorded at Elburton, Plymouth, where three Early Bronze Age urned cremation burials were thought to be associated with a large barrow located nearby (Watts and Quinnell 2001). The urns were classified as a horseshoe-handled Biconical Urn, a Trevisker Style 1 vessel and a Collared Urn similar to the Wick Lane urns. Within Somerset two examples of isolated urned cremation burials have been recently excavated at Broadleaze Farm (Mephram 2005) and Maundown (Kayt Matthews, pers. comm.). Although the lack of evidence for an overlying mound at Wick Lane may be attributed to truncation, neither burial appears to represent a secondary burial into an earlier barrow mound, as both burials were found at the same depth and shared general characteristics indicating contemporary burial. Given this, it would appear more likely that a mound was absent. The most notable site of Bronze Age date within the area is Norton Fitzwarren hillfort, where pottery suggests activity spanning the period in which the Wick Lane burials took place (Ellis 1989), but this site lies at a distance of almost 2km. No burial mounds or cairns are recorded locally to the site.

Collared Urns are believed to be relatively rare in Somerset, with little evidence of the tradition found to date; the more recent discovery at Broadleaze Farm (Mephram 2005), together with those listed by Longworth (1984) gives a total of seven. Other Early Bronze Age burials within the region tend to be inhumations, and Pollard and Healy (2007) argue that the general sequence for Early Bronze Age burial rites in South West England is a transition from inhumation to cremation burial, but suggest that the situation is undoubtedly more complex and may vary from region to region.

The medieval ditches may have delineated a small field or paddock, Ditch A recutting an earlier ditch (Ditch D) of medieval or earlier date on the same alignment. The pits with contemporary dating were found within the area defined by Ditches A/D and C, and the pottery from these features indicates a broad date range for this activity between the 11th and 14th centuries, although other than the recut of Ditch A/D there is little to suggest that the activity here is not comparatively short-lived. Both Ditches A and C continue beyond the limit of the excavation, but were not picked up in the evaluation trenches to the north-west, and therefore may not extend much further. The pottery assemblage, composed

predominantly of cooking pots in local fabrics, reflects normal domestic use and the size and condition of the sherds suggests the material derives from nearby settlement with rapid deposition within the cut features. The metal-smithing evidence is also typical of medieval rural activity. No other dated features were found in the other evaluation trenches, or in an evaluation immediately to the south (Young 2002). Medieval pottery found in the colluvium suggests a focus for the medieval activity may have lain to the east of the investigated area.

#### ACKNOWLEDGEMENTS

Cotswold Archaeology is grateful to Barratt Homes Ltd for funding the excavation and this report and to Jim Hunter, Project Manager, Hyder Consulting Ltd. Thanks are due to Steve Membro of Somerset County Council who monitored the site and commented on the post-excavation report. Fieldwork was directed by Neil Adam and the fieldwork and post-excavation programme was managed by Mary Alexander. Peter Moore and Lorna Gray prepared the illustrations. Thanks go to Kayt Matthews of Context One Archaeological Solutions for information on recent excavations at Maundown. The authors are grateful to Martin Watts for comments on an earlier draft of this article. Conservation of the urns was undertaken at the Oxford Museum by Sarah Morton. The finds and archive will be deposited with Taunton Museum under accession number TTNCM 128/2006.

#### REFERENCES

- ApSimon, A.M., 2000. 'The Neolithic, Bronze Age and Iron Age pottery', in P. Rahtz, S. Hirst, and S.M. Wright, *Cannington Cemetery*, Britannia Mono 17, 282–90.
- Aston, M., and Burrow, I. (eds), 1982. *The Archaeology of Somerset: a Review to 1500AD*, Taunton.
- Bass, W., 1995. *Human Osteology: A Laboratory and Field Manual* Special Publication 2. Columbia, Missouri Archaeological Society.
- Bell, M., 1990. *Brean Down: Excavations 1983–1987* London.
- BGS, 1974. Sheet 295 Taunton and the surrounding area.

- Brickley, M., and McKinley, J.I. (eds), 2004. *Guidelines to the Standards for Recording Human Remains*, BABAO/IFA Paper 7.
- Burgess, C., 1986. 'Urnes of no small variety: collared urns reviewed', *Proc Prehist Soc* 52, 339–51.
- Burrow, C., 1988. 'Pottery report', in I. Burrow, 'Excavations at 5–8 Fore Street, Taunton, 1979' *SANH* 132, 114–31.
- Brothwell, D.R., 1981. *Digging up Bones*, Oxford.
- Buikstra, J.E., and Ubelaker, D.H. (eds) 1994. *Standards for Data Collection from Human Skeletal Remains* Arkansas Archaeol Survey Res Ser 44.
- Carruthers, W.J., 2000. 'The charred hazelnut shell and other plant remains', in S. Mithen, *Hunter-gatherer Landscape Archaeology. The Southern Hebrides Mesolithic Project 1988-98. Vol 2: Archaeological fieldwork on Colonsay, computer modeling, experimental archaeology, and final interpretations*, McDonald Inst Mono, 407–415.
- Carruthers, W.J., 2006. CD-Rom 9. 'Waterlogged plant remains', in L. Brown, J. Lewis and A. Smith (eds) *Landscape Evolution in the Middle Thames Valley. Heathrow Terminal 5 Excavations Volume 1, Perry Oaks*. Framework Archaeology Mono 1.
- Caseldine, A.C., 2000. 'The Neolithic environment; Early Bronze Age plant remains', in C.S. Briggs (ed.), 'A Neolithic and early Bronze Age settlement and burial complex at Llanilar, Ceredigion', *Archaeol Cambrensis* 146 (for 1997), 24–5; 30–1.
- Chapman, A., 2007. 'A Bronze Age barrow cemetery and later boundaries, pit alignments and enclosures at Gayhurst Quarry, Newport Pagnell, Buckinghamshire. Reconstructing the burial rite of an Early Bronze Age lord', *Rec Buckinghamshire* 47 Part 2 for 2007.
- Charters, S., Evershed, R.P., Goad, L.J., Leyden, A., Blinkhorn, P.W., Denham V., 1993. 'Quantification and distribution of lipid in archaeological ceramics: implications for sampling potsherds for organic residue analysis and the classification of vessel use', *Archaeometry* 35, 211–23.
- Copley, M.S., Berstan, R., Dudd, S.N., Docherty, G., Mukherjee, A.J., Straker, V., Payne, S. and Evershed, R.P., 2003. 'Direct chemical evidence for widespread dairying in prehistoric Britain', *Proc Nat Academy Sciences* 100, 1524–9.
- Dalwood, H., and Edwards, R., 2004. *Excavations at Deansway, Worcester, 1988–89: Romano-British small town to late medieval city*, CBA Res Rep 139, York.
- Ellis, P., 1989. 'Norton Fitzwarren Hillfort: a report on the excavations by Nancy and Philip Langmaid between 1968 and 1971', *SANH* 133, 1–74.
- Ellison, A., 1982. 'Bronze Age societies 2000–650 BC', in Aston and Burrow 1982, 43–51.
- Evershed, R.P., Heron, C., and Goad, L.J. 1990. 'Analysis of organic residues of archaeological origin by high-temperature gas-chromatography and gas-chromatography mass- spectrometry', *Analyst* 115, 1339–42.
- Fairweather, A.D., and Ralston, I.B.M., 1993. 'The Neolithic timber hall at Balbridie, Grampian region, Scotland: the building, the date, the plant macrofossils', *Antiquity*, 67, (255) 313–23.
- Fitzpatrick, A., 2007. 'Later Bronze Age and Iron Age' in Webster 2007, 117–44.
- Gale, R., 2003. 'Charcoal from Brackmills Link Road, Northampton', in A. Chapman, 'Three Bronze Age burial sites in Northamptonshire', *Northamptonshire Archaeol*, 31, 12.
- , 2005. 'Charcoal', in L. Lovell, 'Excavations of a Romano-British farmstead at RNAS Yeovilton', *SANH*, 7–70, 47–49.
- , 2007a. 'Charcoal', in M. Germany, 'Neolithic and Bronze Age monuments and Middle Iron Age settlement at Lodge Farm, St Osyth, Essex'. *E Anglian Archaeol* 117, 85–90.
- , 2007b. *Gayhurst Barrow Cemetery, Buckinghamshire: Charcoal from a Bronze Age cremation*, unpub report for Northamptonshire Archaeology
- , 2008. 'Charcoal (Neolithic and Bronze Age)', in A.P. Fitzpatrick, A.B. Powell and M.J. Allen, *Archaeological Excavations on the Route of the A27 Westhampnett Bypass, West Sussex, 1992*, Vol 1: Late Upper Palaeolithic–Anglo-Saxon, Wessex Archaeology Report 21, 111.
- Gale, R., and Cutler, D., 2000. *Plants in Archaeology*, Royal Botanic Gardens, Kew.
- Gray, H.S., 1908. 'Excavations at Norton Camp, near Taunton', *SANH* 54, 131–43.
- Gyulai, F., 2003. 'Archaeobotanical remains and environment of Bell Beaker Csepel-group' in J. Czebreszuk and M. Szymt (eds) *The Northeast Frontier of the Bell Beakers- Proceedings of the symposium held at the Adam Mickiewicz*



- University, Poznań (Poland), May 26-29 2002, BAR Internat. Ser. 1155. Oxford, 277–282.
- Longworth, I., 1984. *Collared Urns of the Bronze Age in Great Britain and Ireland*, Cambridge
- Lyman, R.L., 1994. *Vertebrate Taphonomy*, Cambridge Manuals in Archaeology, Cambridge.
- McDonnell, J.G., 1992. *The Identification and Analysis of the Slags from Burton Dasset, Warwickshire*, Ancient Monuments Lab Rep, 46/92.
- McDonnell, J.G., and Swiss, A., 2004. 'Ironworking residues', in Dalwood and Edwards 2004, 368–78.
- McKinley, J.L., 1993. 'Bone fragment size and weights of bone from modern British cremations and their implications for the interpretation of archaeological cremations', *Int J Osteoarchaeol* 3, 283–7.
- , 1994a. 'Bone fragment size in British cremation burials and its implications for pyre technology and ritual', *J Archaeol Sci* 21.3, 339–42.
- , 1994b. *The Anglo-Saxon cemetery at Spong Hill, North Elmham. Part VIII: The cremations*, E Anglian Archaeol Rep, 69, 78–120.
- , 2000a. 'Putting cremated bone into context', in S. Roskams (ed) *Interpreting Stratigraphy; Site Evaluation, Recording Procedures and Stratigraphic Analysis*, BAR (International Series) 910, 135–40.
- , 2000b. 'The analysis of cremated bone', in M. Cox and S. Mays (eds) *Human Osteology*, London, 403–21.
- McKinley, J.L., and Bond, J.M., 2001. 'Cremated bone', in D.R. Brothwell and A.M. Pollard (eds) *Handbook of Archaeological Sciences*, Chichester, 281–92.
- McKinley, J.L., and Roberts, C.A., 1993. *Excavation and Post-Excavation Treatment of Cremated and Inhumed Human Remains* IFA Technical Paper No 13.
- Mephram, L., 2005. 'Broadleaze Farm, Yeovil, Somerset: pottery assessment report', unpub report for Context One, ref 59720.6.
- OA, 2005. *Land at Wick Lane, Norton Fitzwarren, Somerset*, TTCM 220/205 Archaeological Evaluation Report client report.
- Ortner, D.J., 2003. *Identification of Pathological Conditions in Human Skeletal Remains*, 2nd edn, Smithsonian Institution, Museum of Natural History.
- Pollard, J., and Healy, F., 2007. 'Neolithic and Early Bronze Age', in Webster 2007, 75–102.
- Scheuer, L., and Black, S., 2000. *Developmental Juvenile Osteology*, London.
- Smith, W., 2002. *A Review of Archaeological Wood analyses in Southern England*, English Heritage Centre for Archaeology Lab Rep No 75.
- Šoberl, L., and Evershed, R.P., 2010. *Organic Residue Analysis of early Bronze Age pottery from Norton Fitzwarren, Somerset*, Organic Chemistry Unit Univ Bristol, unpub client report.
- Stace, C., 1997. *New Flora of the British Isles*, (2nd edn), Cambridge.
- Watts, A.M., and Quinnell, H., 2001. 'A Bronze Age cemetery at Elburton, Plymouth', *Proc. Devon Archaeol Soc* 59, 11–43.
- Webster, C.J., 2007. *The Archaeology of South West England: South West Archaeological Research Framework; Resource Assessment and Research Agenda*, Taunton.
- Woodward, A., 1990. 'The Bronze Age pottery', in Bell 1990, 121–45.
- , 1989. 'The prehistoric pottery', in Ellis 1989, 39–53.
- Young, A.C., 2002. *Site of a proposed flood alleviation scheme, Wick Lane, Norton Fitzwarren, Somerset: site specific evaluation*, unpub client report, Avon Archaeological Unit.