

MIDDLE BRONZE AGE CREMATION BURIALS AT COUNTSTHORPE, LEICESTERSHIRE

by Richard O'Neill

with contributions from:

Alistair J. Barclay and Jacqueline I. McKinley, and illustrations by Rob Goller

Two heavily truncated urned cremation burials, both radiocarbon dated to the early part of the Middle Bronze Age, were excavated during investigations carried out in advance of residential development on land off Leicester Road, Countesthorpe. The burials were made in grog-tempered Deverel-Rimbury style vessels and were located on a natural ridge which traversed the eastern extent of the site from north to south. Two further radiocarbon dates from two pits indicated a later phase of activity on the site in the Middle to Late Bronze Age. The absence of any definitive evidence for settlement on the site suggests this may have been a liminal area reserved for funerary and ritual activity.

In 2010, Wessex Archaeology was commissioned by CgMs Consulting to undertake an archaeological evaluation and subsequent mitigation excavation on land off Leicester Road, Countesthorpe, as a condition of planning permission for a housing development. The development site extended to 10.42ha located to the west of Leicester Road on the northern edge of Countesthorpe, at grid reference SP 5840 9605 (Fig. 1), and comprised two fields under pasture, sloping gently from approximately 92m above Ordnance Datum (aOD) at its western boundary to approximately 85m aOD at its north-eastern boundary. The western field contained surviving earthwork remains of ridge and furrow. The underlying geology of the area is Lower Lias (British Geological Survey 2001) and the drift geology is Boulder clay and Moranic Drift (British Geological Survey 1977).

ARCHAEOLOGICAL BACKGROUND

An archaeological desk-based assessment (CgMs Consulting Ltd 2008) identified limited prehistoric, Roman, Saxon and medieval findspots in the general vicinity of the site, including a Mesolithic serrated flint blade found at Station Road, Countesthorpe, approximately 550m south of the site (SMR MLE7374), along with an Early Bronze Age thumb-nail scraper (SMR MLE6256). A Late Bronze Age bronze spearhead is also recorded approximately 500m north-west of the site (SMR MLE6254).

The site lies at least 200m north of the surmised northern extent of the medieval village of Countesthorpe (SMR MLE9098), and is believed to have formed part of the village's open fields during the medieval period and to have remained in agricultural use since enclosure in 1766.

A geophysical survey (Stratascan 2009) of the site revealed the extensive remains of ridge and furrow, together with various anomalies of possible archaeological origin. A 2 per cent sample of the area of the site (1,280m²) was subsequently evaluated in 18 trenches (Fig. 1; Wessex Archaeology 2010a). The discovery of two urned cremation burials of probable Bronze Age date in two trenches at the south-east of the site prompted further archaeological mitigation, comprising machine strip and record of 2,500m² (50m × 50m) approximately centred on the two cremation burials (Fig. 1; Wessex Archaeology 2010b).

RESULTS

The earliest phase of activity was represented by the deposition of three grog-tempered Deverel-Rimbury style urns (Fig. 1), two of which contained cremated human remains. Calibrated radiocarbon dates indicate that the burials are broadly contemporary, dating to the early part of the Middle Bronze Age (Table 1; Fig. 2), consistent with the identification of the urns (Barclay, below).

The urns were all heavily truncated. The better preserved urn 1037 (Barclay, below, Urn 1; Fig. 3) had a base diameter of 140mm and survived to 55mm in height; it was upright and appeared to have been carefully deposited and set level on a bedding of stones and silt within a truncated cut 0.40m in diameter. Analysis of the cremated bone (McKinley, below; Table 2) indicates that this was probably the burial of a large robust adult (1039), possibly male. A second urn 1057 (Urn 2; Fig. 4), also upright, lay 0.45m to the immediate east of urn 1037. The urn had a diameter of 160mm and survived only to a height of 30mm. Analysis of the cremated bone (Table 2) suggests that the remains (1058) in grave 1057 represent the burial of a sub-adult/adult. The burial 1039 in urn 1037 is radiocarbon dated to 1500–1390 *cal BC* and burial 1058 in urn 1057 to 1500–1310 *cal BC* (Fig. 2). The base of a third possible urned burial 2019 (Urn 3) lay 13.2m to the south-east of the previous two urns in a small heavily truncated cut measuring 0.16m in diameter. Only fragments of the base of the vessel survived and no cremated bone was recovered from the redeposited natural fill of the cut.

No other features, such as a ring ditch, that could be directly associated with the vessels were identified. Several nearby pits and post-holes may be associated with the burials; however, no regular pattern of features was apparent, presumably due to the extreme truncation of the area as a result of agricultural cultivation from the medieval period onwards. Radiocarbon dates from two of these pit features 2006 and 2029 (Fig. 1) indicate a later phase of activity to the burials in the Middle to Late Bronze Age (Table 2; Fig 2). Pit 2006 (Fig. 1) was a large feature which appeared to have been re-cut with a post-pipe for a large upright timber post, which had probably decomposed *in situ*, and contained residual worked flint tools, diagnostic of the Late Mesolithic and Early Neolithic periods (*c.* 5000–3500 BC). A large broken and well worn quernstone (identified as Northampton Sand by Fiona Roe) with a smooth grinding surface was found at the base of the feature. The presence of small quantities of charred grain fragments typical of assemblages of both prehistoric/Roman (hulled wheat) and Saxon/medieval date (free threshing wheat) suggests the fill of the feature may have been contaminated by later intrusive

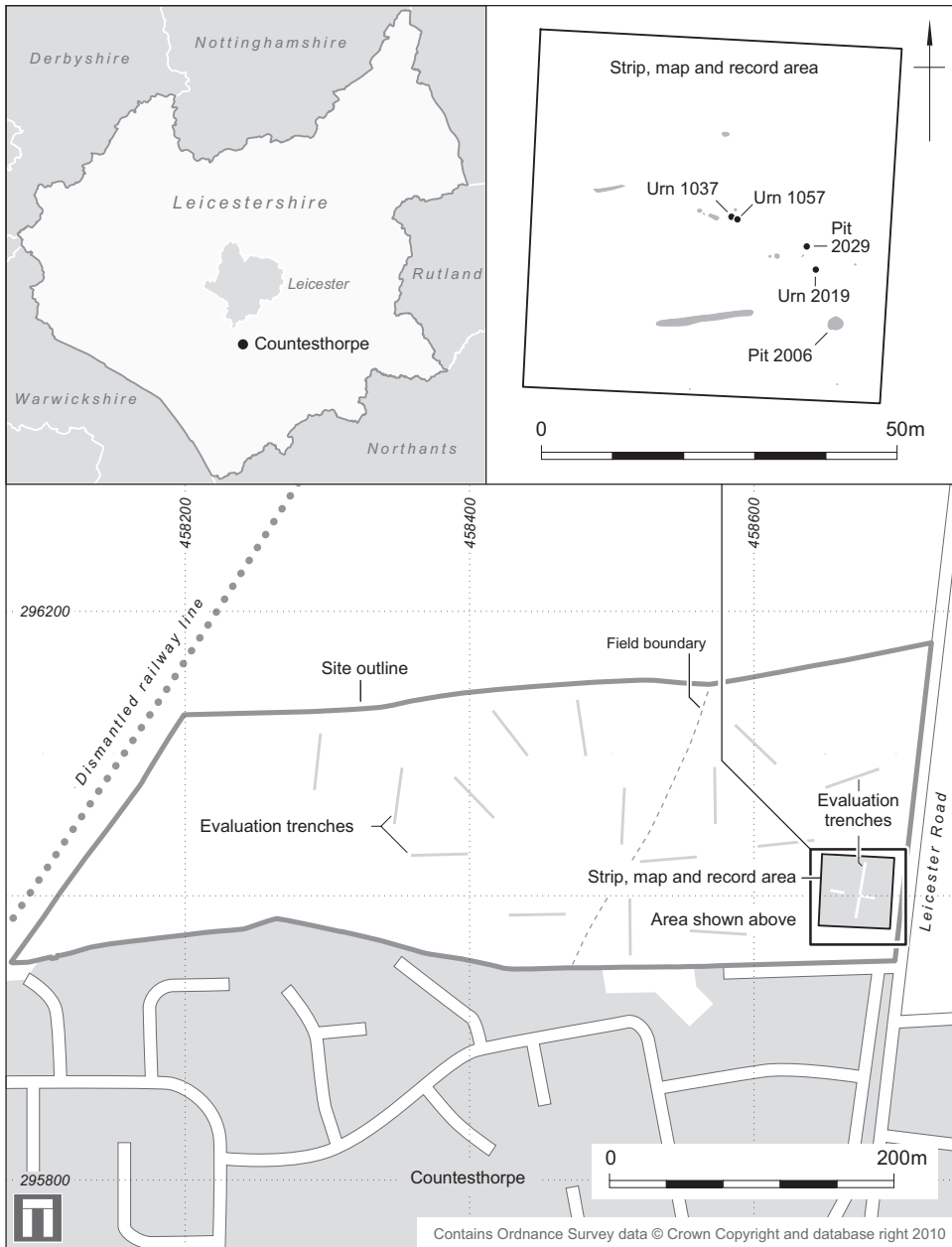


Fig. 1. Location of the site, archaeological works and urned cremation burials.

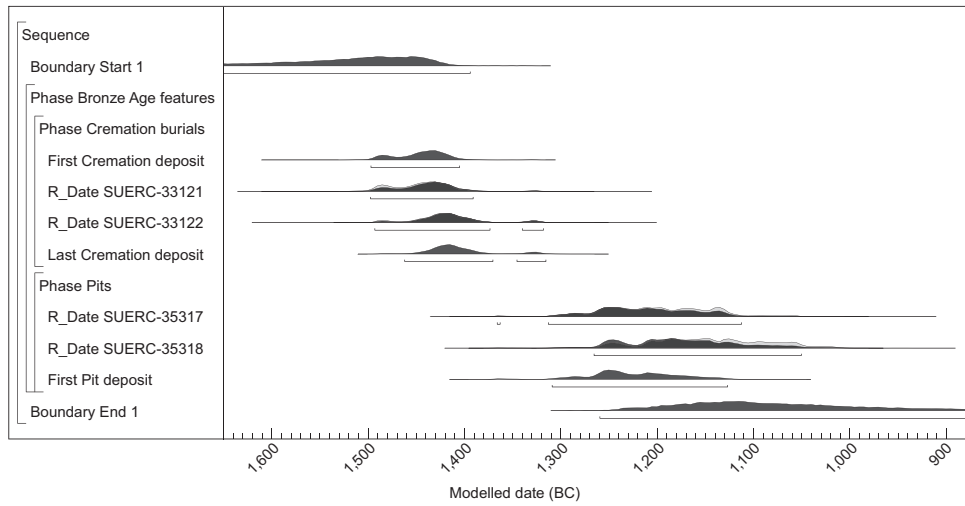


Fig. 2. Probability distribution for the two dates from cremated bone within vessels 1037 (SUERC-33321) and 1057 (SUERC-33322), and the two dates (SUERC-35317-8) from pits 2006 and 2029.



Fig. 3. Urned cremation burial 1037 (Object no. 1), facing east.



Fig. 4. Urned cremation burial 1057 (Object no. 2), facing south.

activity. A radiocarbon date of 1270–1040 *cal BC* was obtained on short-lived (*Pomoideae*) charcoal from deposit 2026 within the pit. A similar radiocarbon date of 1320–1050 *cal BC* was also obtained for short-lived charcoal (*Quercus* sp. roundwood) from deposit 2030 within shallow pit 2029.

The modelling of all four radiocarbon results from the site suggests two phases of activity within a period from the sixteenth century to the eleventh century *cal BC* separated by between 130 and 245 years (68% probability). This indicates that the burials belong to a much earlier phase of activity, probably within the sixteenth and fifteenth centuries *cal BC*.

THE MIDDLE BRONZE AGE CREMATION URNS

Alistair J. Barclay

The truncated remains of three grog-tempered urn bases were recovered. At most, the vessel walls survive to a height of 55mm. Urn 1 (1057: 20 sherds, 453g plus small fragments 45g from 1056, sample 15) is the most complete; it appears to have quite straight walls (thickness 11mm), perhaps suggestive of a straight-sided or bucket-shaped vessel, and a base diameter of *c.*140mm. Urn 2 (1037–8: 84 sherds, 893g plus small fragments 46g from 1039, sample 14) is more fragmentary and a coarser vessel in both wall thickness (17mm) and fabric. Urn 3 (2019: 11 sherds, 38g) is too incomplete to make any detailed comment, other than to state that it is

similar in fabric and size to Urn 1. Urns 1–2 appear to be ring built, have exterior slips, and are fired to a reddish-brown.

The base form of Urn 1, in particular, would certainly be consistent with other East Midlands Deverel-Rimbury pottery, as would the use of grog-temper (see Allen *et al.* 1987; Marsden 2000, 172). This observation is also in agreement with the two radiocarbon dates (Table 1) on cremated bone directly associated with Urns 1 and 2, and which fall within the early part of the Middle Bronze Age period.

THE CREMATED BONE

Jacqueline I. McKinley

Cremated bone from the remains of the two Middle Bronze Age urned burials was subject to analysis. No bone was recovered in association with the vessel base believed to represent the remains of a third burial. Osteological analysis followed the writer's standard procedure for the examination of cremated bone (McKinley 1994a, 5–6; 2004a). Age was assessed from the stage of skeletal development (Scheuer and Black 2000) and the general degree of age-related changes to the bone (Buikstra and Ubelaker 1994). Sex was ascertained from the sexually dimorphic traits of the skeleton (*ibid.*; Gejvall 1981).

A summary of the results is presented in Table 2. Both deposits had been substantially disturbed by medieval and later agricultural activity, resulting in only a 10–70mm depth of material (1058 and 1039 respectively) surviving *in situ*. Consequently, a substantial quantity of bone has probably been lost from burial 1058, and at least some bone is also likely to have been removed from grave 1036; it should, however, be noted that burial urns were often not used to capacity and the bone is frequently confined to the lower half vessels.

Given the levels of truncation observed it is feasible that further graves had existed in this area of the site, all traces of which had been eradicated. Singletons and small groups of burial remains are a common feature of the prehistoric landscape (e.g. Clay 2001, 17), and are likely to have been made in a liminal area, but close to the settlement from which the individuals derived.

The bone is slightly worn and chalky in appearance, and the deposits include little (1039) and no (1058) trabecular bone. Both observations are indicative of the detrimental effects of the burial environment (acidic clays sands/silts), exacerbated by the high level of disturbance in this instance. Trabecular bone is particularly vulnerable to loss in acidic soil conditions (McKinley 1997a, 245; Nielsen-Marsh *et al.* 2000), and its absence in these cases is undoubtedly due to taphonomic factors rather than deliberate de-selection.

The possible mandibular *ante mortem* tooth loss recorded in the adult ?male (1039) is inconclusive due to the small size and incompleteness of the bone fragment recovered. However, the one clear socket position observed in this labial body fragment (probably a molar) had no adjacent socket impressions and the loss of at least one tooth seems likely. Minor enthesophytes (uneven new bone formed at tendon/ligament insertions) along the marked dorsal muscle attachments of the femur suggest this robust ?male was commonly engaged in activities involving

Feature and context	Identification	Lab. code	$\delta^{13}\text{C}\text{‰}$	Determination BP	Calibration BC (2 sig. 95%)	Modelled result cal BC 95% probability
Urn 1037 (1039)	Proximal femur	SUERC-33321	-24	3,165±30	1500–1390	1500–1390
Urn 1057 (1058)	Long bone shaft probable humerus	SUERC-33322	-20.5	3,140±30	1520–1320	1500–1310
Pit 2029, context 2030, sample 10	Short-lived charcoal Identified as <i>Quercus</i> sp. round-wood 2–3 yrs old	SUERC-35317	-24.4	2,970±30	1320–1050	1320–1110
Pit 2006, context 2026, sample 9	Charcoal: Pomoideae	SUERC-35318	-26.1	2,935±30	1270–1040	1270–1050

Table 1. Radiocarbon dates calibrated following Bronk Ramsey (2001; 2009) and Reimer *et al.* (2009), quoted in the form recommended by Mook (1986).

Context	Cut	Bone weight (g)	Age/Sex	Pathology
1039	1036	303.8	adult c.25–40 yr. ?male	? <i>ante mortem</i> tooth loss; enthesophytes – femur shaft; morphological variation – wormian bones
1058		30.5	adult c.20–40 yr	

Table 2. Summary of human bone.

strenuous use of the thigh muscles. Wormian bones, small additional ossicles in the lambdoid suture of the skull, represent a frequently observed morphological variation. This is one of several traits, the heritability of which is open to question and which has been attributed to a possible developmental abnormality (Brothwell 1972, 92, 95–98).

Although the majority of the bone from both deposits is white, indicative of full oxidation (Holden *et al.* 1995a and b), a few fragments from all skeletal areas in the case of 1039 and from the lower limb in 1058 are slightly blue in colour, suggestive of incomplete oxidation. The variation is slight, generally affects only the inner surface of the bone, and a minority of the fragments of any one skeletal element are involved in each case. A variety of intrinsic and extrinsic factors may affect the efficiency of oxidation (McKinley 1994a, 76–8; 2004b, 293–5; 2008), and the minor variations seen in these cases are likely to reflect only an incidental shortfall in fuel affecting time/temperature towards the end of the cremation process. The size and evident robustness of the individual in burial 1039 may be related to the slightly greater involvement in this case (*ibid.*)

The obvious disturbance suffered by both deposits, with the resultant loss of an unknown quantity of bone, renders comment on the quantities apparently collected for burial of limited value. The weight of bone surviving within 1039 represents *c.*19 per cent of the average weight of bone expected from an adult cremation (McKinley 1993), and currently falls within the lower range of weights recovered from burials of this date (McKinley 1997b). However, at Coneygre Farm, Nottinghamshire and Pasture Lodge Farm, Lincolnshire (Allen *et al.* 1987), mean weights of only 327g and 481g were recorded (all ages, levels of disturbance and deposit types), and at Eaglestone Flat, Derbyshire, the mean weight recovered from the adult burials was 403.7g, increasing to only 485.6g for the ?undisturbed deposits (McKinley 1994b). Several of the individual burials from all three sites contained substantially larger quantities of bone, and it would be speculation to suggest whether those from Countesthorpe would have fallen close to the average or within those upper ranges.

The maximum fragment size recorded was only 40mm and the majority of the bone (49–53 per cent) was recovered from either the 10mm (1039) or 5mm (1058) sieve fractions. Most of the factors affecting the size of cremated bone fragments are exclusive of any deliberate human action other than that of cremation itself (McKinley 1994c). In both these cases the extensive damage to the deposits, both from the physical pressure and resulting changes to the overall burial environment, will have contributed to the increased levels of fragmentation mostly along the lines of dehydration fissures formed during cremation. There is no conclusive evidence here to suggest deliberate fragmentation of the bone prior to burial.

Elements from all four skeletal areas are represented within both deposits (57 per cent (1039) and 36 per cent (1038) by weight of the bone was identified to skeletal element). The commonly observed under-representation of axial skeletal elements (1–8 per cent all identified elements) was off-set by an over-representation of lower limb elements (54–64 per cent). Although this is probably largely the influence of taphonomic factors (see above), with preferential preservation of the thicker long

bone shafts, the marked preference of lower limb over upper limb and the generally easily identified skull fragments may suggest that more of these heavier lower limb elements lay towards the base of the truncated vessels.

No pyre goods or pyre debris was observed either within the burials or the grave fills. The absence of pyre debris corresponds with the findings from Coneygre and Pasture Lodge Farms (Allen *et al.* 1987), but contrasts with the graves containing both urned and unurned burials at Eaglestone Flat and elsewhere within the period (McKinley 1994b; 1997b), and could be indicative of the burials being made some distance from the pyre sites.

DISCUSSION

by Richard O'Neill

The urned cremation burials from the site at Countesthorpe, whilst incomplete and offering little in terms of demographic information, nevertheless provide a closely dated addition to the limited evidence for Middle Bronze Age activity in the East Midlands region. The resource assessment and research agenda for the East Midlands (Clay 2001) indicates that evidence for Middle Bronze Age activity is less common than for the Late Neolithic/Early Bronze Age, and that the Middle Bronze Age sees a gradual change from the use of barrows towards the introduction of flat cremation cemeteries such as those at Cossington (O'Brien 1976) and Eye Kettleby, Melton Mowbray (Finn 1998).

Archaeological deposits and features on the site were few in number and where identified were generally poorly preserved, having been truncated by medieval ridge and furrow cultivation and by more recent activity. Archaeological features were generally only identified on the medieval ridge tops and the main focus of survival was the south-eastern side of the site. The two urned cremation burials, both radiocarbon dated to the early part of the Middle Bronze Age, lay close together and were found, with the third Deverel-Rimbury style vessel, on a natural ridge which traversed the eastern extent of the site from north to south.

It is not clear from the excavated evidence whether the burials at Countesthorpe formed part of an isolated barrow group, were part of a wider cremation cemetery which had later been significantly disturbed, or represent isolated or singleton burials: it is possible that further graves may have existed in this part of the site, all traces of which had been removed by agricultural practices from the medieval period onwards. McKinley (above) notes that singletons and small groups of burials are likely to have been made in a liminal area, but close to the settlement from which the individuals derived, although the absence of pyre goods or pyre debris here could be indicative of the burials being made some distance from the pyre sites. Two further radiocarbon dates from two pits indicate a later phase of activity on the site in the Middle to Late Bronze Age. The absence of any definitive evidence for settlement on the site tends to confirm the impression that this may have been a liminal area reserved for funerary and ritual activity. Evidence for Bronze Age activity in the vicinity of the site is limited to find spots, and the location of any associated Middle Bronze Age settlement is, so far, elusive.

ARCHIVE

The complete site archive will be deposited in due course with Leicestershire Museums, under Accession Number X.A137.2010.

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BIBLIOGRAPHY

- Allen, C. S. M., Harman, M. and Wheeler, H., 1987 'Bronze Age cremation cemeteries in the East Midlands', *Proc. Prehist. Soc.* 53, 187–221.
- British Geological Survey, 1977 *Geological Survey. Ten Mile Map, South Sheet, Fourth Edition (Quaternary)*. British Geological Society.
- British Geological Survey, 2001 *Geological Survey. Ten Mile Map, South Sheet, Fourth Edition (Solid)*. British Geological Society.
- Bronk Ramsey, C., 2001 'Development of the radiocarbon calibration program OxCal', *Radiocarbon* 43, 355–63.
- Bronk Ramsey, C., 2009 'Bayesian Analysis of Radiocarbon Dates', *Radiocarbon* 51(1), 337–60.
- Brothwell, D. R., 1972 *Digging Up Bones*. London: British Museum (Nat. Hist.).
- Buikstra, J. E. and Ubelaker, D. H., 1994 *Standards for data collection from human skeletal remains*. Arkansas Archaeol. Survey Res. Ser. 44.
- CgMs., 2008 *Archaeological Desk Based Assessment; Land to the West of Leicester Road, Countesthorpe, Leicestershire*. Unpublished client report.
- CgMs., 2010 *Specification for Archaeological Evaluation; Leicester Road, Countesthorpe, Leicestershire*. Unpublished client report.
- Clay, P., 1999 'The Neolithic and Bronze Age of Leicestershire and Rutland', *Trans. Leics. Archaeol. and Hist. Soc.* 73, 1–18.
- Clay, P., 2001 *An Archaeological Resource Assessment and Research Agenda for the Neolithic and Early–Middle Bronze Age of the East Midlands, updated research agenda*: <http://www.le.ac.uk/ar/research/projects/eastmidsw/pdfs/emidnba.pdf>

- Finn, N., 1998 *Melton Mowbray, Eye Kettleby, Leicester Road (SK 731 180)*, in R. Buckley 1998, 'Archaeology in Leicestershire and Rutland 1997', *Trans Leics. Archaeol. and Hist. Soc.* 72(178), 156–95.
- Gejvall, N. G., 1981 *Determination of burnt bones from Prehistoric graves* OSSA LETTERS 2, 1–13.
- Holden, J. L., Phakley, P. P. and Clement, J. G., 1995a 'Scanning electron microscope observations of incinerated human femoral bone: a case study', *Forensic Science International* 74, 17–28.
- Holden, J. L., Phakley, P. P. and Clement, J. G., 1995b 'Scanning electron microscope observations of heat-treated human bone', *Forensic Science International* 74, 29–45.
- Marsden, P., 2000 *The Prehistoric Pottery (170–86)*, in B. M. Charles, A. Parkinson and S. Foreman, 'A Bronze Age Ditch and Iron Age Settlement at Elms Farm, Humberstone, Leicester'. *Trans. Leics. Archaeol. and Hist. Soc.* 74, 113–220.
- McKinley, J. I., 1993 'Bone fragment size and weights of bone from modern British cremations and its implications for the interpretation of archaeological cremations', *International J. Osteoarchaeology* 3, 283–7.
- McKinley, J. I., 1994a 'The Anglo-Saxon cemetery at Spong Hill, North Elmham Part VIII: The Cremations', *Gressenhall: East Anglian Archaeology* 69.
- McKinley, J. I., 1994b 'Cremation Burials' 335–40, in J. Barnatt 'Excavation of a Bronze Age unenclosed cemetery, cairns, and field boundaries at Eaglestone Flat, Cubar, Derbyshire, 1984, 1989–1990', *Proc. Prehist. Soc.* 60, 287–370.
- McKinley, J. I., 1994c 'Bone fragment size in British cremation burials and its implications for pyre technology and ritual', *J. Archaeol. Sci.* 21, 339–42.
- McKinley, J. I., 1997a 'The cremated human bone from burial and cremation-related contexts', in A. P. Fitzpatrick, *Archaeological Excavations on the Route of the A27 Westhampnett Bypass, West Sussex, 1992 Volume 2*. Salisbury: Wessex Archaeology Report 12, 55–72.
- McKinley, J. I., 1997b 'Bronze Age 'Barrows' and the Funerary Rites and Rituals of Cremation', *Proc. Prehist. Soc.* 63, 129–45.
- McKinley, J. I., 2004a 'Compiling a skeletal inventory: cremated human bone', in M. Brickley and J. I. McKinley (eds) *Guidelines to the Standards for Recording Human Remains*. British Association for Biological Anthropology and Osteoarchaeology and Institute for Archaeologists, 14–17.
- McKinley, J. I., 2004b 'The human remains and aspects of pyre technology and cremation rituals', in H. E. M. Cool, *The Roman Cemetery at Brougham Cumbria: Excavations 1966–67*. London: Britannia Monograph 21, 283–309.
- McKinley, J. I., 2008 'In the heat of the pyre: efficiency of oxidation in Romano-British cremations – did it really matter?', in C. W. Schmidt and S. Symes (eds) *Beyond Recognition: the analysis of burned human remains*. Oxford: Elsevier, 163–84.
- Mook, W. G., 1986 'Business Meeting: recommendations/resolutions adopted by the twelfth international radiocarbon conference', *Radiocarbon* 28, 799.

- Nielsen-Marsh, C., Gernaey, A., Turner-Walker, G., Hedges, R., Pike, A. and Collins, M., 2000 'The chemical degradation of bone', in M. Cox and S. Mays (eds) *Human Osteology in Archaeology and Forensic Science*. London: GMM, 439–54.
- O'Brien, C. F., 1976 *Excavation at Cossington – an interim note*, in A. D. McWhirr, 'Archaeology in Leicestershire and Rutland 1976', *Trans. Leics. Archaeol. and Hist. Soc.* 51 (56–7), 56–63.
- Reimer, P. J. *et al.*, 2009 'IntCal09 and Marine09 radiocarbon age calibration curves, 0–50,000 years cal BP', *Radiocarbon* 51(4), 1111–50.
- Scheuer, L. and Black, S., 2000 *Developmental Juvenile Osteology*. London: Academic Press.
- Soil Survey of England and Wales, 1983 *Soils of England and Wales, Sheet 4, Eastern England*.
- Stratascan, 2009 *Geophysical Survey Report; Countesthorpe*. Unpublished client report.
- Wessex Archaeology, 2010a *Leicester Road, Countesthorpe, Leicestershire; Assessment Report*. Unpublished client report WA 75391.02.
- Wessex Archaeology, 2010b *Leicester Road, Countesthorpe, Leicestershire; Written Scheme of Investigation for Archaeological Mitigation*. Unpublished client report WA 75391.01.