A Bronze-Age Field System and Enclosure and Bronze-Age and Roman Burials at Monks Farm, Grove

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SUMMARY

Five areas were excavated by Oxford Archaeology at Monks Farm, on the northern edge of Grove, near Wantage. The excavation revealed the north-eastern side and entrance of a middle Bronze-Age enclosure. A pit associated with the entrance contained a structured deposit consisting of a large Deverel-Rimbury pottery vessel. Other pits in the vicinity of the enclosure also contained middle Bronze-Age pottery. A field system of similar date was identified by gullies and ditches across the site, and a trackway on a north-west to south-east alignment and a waterhole also formed part of this area. The smaller excavated areas revealed a group of burials. Two cremation burials were radiocarbon dated to the middle Bronze-Age period. Another cremation was radiocarbon dated to the middle Roman period, and a single inhumation burial to the latter part of the middle Roman period. A large boundary of late nineteenth-century date and an associated system of ditches was excavated and was dated by map regression.

THE SITE AND ITS ARCHAEOLOGICAL CONTEXT

Monks Farm in Grove is located within the Vale of the White Horse in the upper Thames valley. The underlying geology is Gault Formation–Mudstone. Grove is located *c.*6.5 kilometres north of the Ridgeway that runs along the top of the Downs escarpment and extends west and east through the North Wessex Downs and the Chilterns to a total length of 140 km. The site lies immediately to the north of Grove with the A338 running north to south along the eastern side of the site and the Letcombe Brook running north-east to south-west a short distance to the west. It is located in a single field centred on SU 4405 1906 on the north side of Grove and to the west of the A338, Station Road (Fig. 1). The site lies at 72 m Ordnance Datum. Prior to investigation, the area of the development consisted of rough unused farmland, prone to waterlogging for much of the year.

The opportunity to excavate the site came in 2013, when Oxford Archaeology (OA) was commissioned by CgMs Consulting to carry out an archaeological investigation there ahead of a proposed housing development. Although no geophysical survey was undertaken, the site was known to contain archaeological remains, having been subject of an archaeological evaluation carried out by Foundations Archaeology in 2001.[1] The evaluation recorded several

[1] 'Land at Monk's Farm, Grove: Archaeological Evaluation Report', unpublished report by Foundations Archaeology (2001).

Fig. 1. location.

shallow ditches of early Iron-Age date, as well as a large ditch in the west of the site, which contained fragments of potentially prehistoric pottery.

After OA completed the excavation reported here, and while post-excavation analysis was well advanced, an evaluation was carried out by OA immediately north of the site. This uncovered a ditch dated by pottery to the middle Iron Age, and further excavation has revealed additional Bronze-Age features, including a roundhouse.[2] These will be subject of a separate phase of analysis and reporting, but on preliminary consideration it is likely that these represent a continuation of contemporaneous features described in the current report. Late Bronze-Age to early Iron-Age ditches and other features were recorded west of nearby Bellinger's Garage, although these were only tentatively dated.[3]

Such discoveries fit within a wider pattern of prehistoric activity in the area. A field survey of a 14 sq km area between Drayton, Steventon and East Hanney north of the railway line (Fig. 1) and to the north-east of the site revealed a number of Bronze-Age sites in the southern part of the survey area, including an extensive field system and rectilinear enclosure. These are generally located on the higher ground on the second and third gravel terraces. The survey pointed to limited activity in the early Iron Age, but widespread evidence for middle Iron-Age settlement, though generally north of the area occupied in the Bronze Age.[4]

Roman-period features were recorded in the OA evaluation to the north, including ditches containing significant amounts of domestic waste, such as pottery. These point to an area of settlement there or close by, though away from the site reported on here, where Roman-period evidence is more limited.[5]

EXCAVATION METHODOLOGY

Five areas (Areas 1 to 5) were investigated, targeting archaeological remains identified during evaluation (Fig. 2), as agreed by Hugh Coddington, Archaeological Officer at Oxfordshire County Council. These areas totalled 0.7 hectares of the 4.38 hectares under development, representing a sample of 16 per cent. The designated areas were stripped by mechanical excavator down to significant archaeological remains. Ridge-and-furrow remains, once confirmed as such, were removed by machine.

DISCUSSION

Activity before the Middle Bronze Age

The only clear evidence for activity before the middle Bronze Age is provided by a small number of pieces of worked flint which probably derive from a wide range of periods. They include a possibly Upper Palaeolithic or Mesolithic blade core, a Mesolithic microburin, probably Neolithic axe-working flakes and a keeled core, and an end and side scraper that might be of late Neolithic/early Bronze-Age date. This early flint occurs in very small quantities and could all have been residual. It thus provides little more than an indication of limited activity in these periods. Although the middle Bronze-Age activity on the site appears, therefore, to have been established in an area which had not previously been a focus for activity, the question of possible antecedents for the middle Bronze-Age activity cannot

[2] 'Land at Williams Holdings, Grove, Oxfordshire', unpublished OA evaluation report (2015); personal communication from L. Webley.

[3] 'Land West of Bellinger's Garage, Grove, Oxfordshire', unpublished Wessex Archaeology evaluation report (2014).

[4] C.M. Hearne, 'Archaeological Evaluation in the Vale of the White Horse, near Abingdon, 1992–99', *Oxoniensia*, 65 (2000), pp. 7–9.

[5] Ibid.

Fig. 2. Plan of excavation areas.

be addressed with much certainty from the evidence at Monks Farm because of the limited extent of the excavations.

It is worth noting the presence of a radius which, based on its size, might derive from an aurochs. The bone was recovered from an otherwise undated pit. Aurochsen appear to have become extinct by the end of the second millennium BC, and whilst this bone might, therefore, have been contemporary with the middle Bronze-Age occupation, it is also possible that it derived from earlier activity.[6]

It is also worth noting the presence of a small number of features which stratigraphically preceded the middle Bronze-Age enclosure discussed below. These features consisted of four west-north-west to east-south-east aligned gullies as well as a further ditch (1430) and a pit (1426) in Area 5 (Fig. 4). None of these features contained any finds, and it is, therefore, unclear whether they were related to a first phase of middle Bronze-Age activity or were from a potentially unrelated earlier phase of activity. Three of the west-north-west to east-south-east aligned gullies lay parallel to each other, around 2 metres and 4 metres apart. The significance of this arrangement is unclear but it can be paralleled at Weir Bank Stud Farm, where, again, three parallel gullies, 4 metres apart, were found a short distance to the north of the middle Bronze-Age enclosures.[7] The ditches at Weir Bank Stud Farm, Bray (Berks.) were interpreted as marking a settlement boundary, but no explanation for the occurrence of three parallel ditches was offered.

[6] A.J. Legge, 'The Aurochs and Domestic Cattle', in T. O'Connor and N. Sykes (eds.), *Extinctions and Invasions: A Social History of British Fauna* (2010), pp. 26–35.

[7] I. Barnes and R.M.J. Cleal, 'Neolithic and Bronze Age Settlement at Weir Bank Stud Farm, Bray', in I. Barnes et al., *Early Settlement in Berkshire: Mesolithic-Roman Occupation Sites in the Thames and Kennet Valleys*, Wessex Archaeology Report, 6 (1995), pp. 17–18.

Middle Bronze-Age Activity

The prehistoric evidence found at Monks Farm related almost entirely to the middle Bronze Age. Although the extent of the excavations was limited, sufficient was found to suggest the existence of a middle Bronze-Age enclosure, perhaps associated with pits and a waterhole, a probably later more extensive field system, and two pits containing cremated human remains. Unfortunately, the extent of the excavations means that the overall form of the enclosure and field system, and the relationship between them, remain uncertain. The small quantity of finds recovered also imposed limits upon interpretation.

Only a small part of the enclosure, including an entrance, was exposed in the excavations. The enclosure and nearby features were associated with Deverel-Rimbury pottery, animal bone and charred plant remains, as well as small numbers of other artefacts including worked flint, a bone point and a bone bead. The quantity and range of finds from the enclosure ditches and possibly associated features (many of which, however, lay outside the enclosure and could have been contemporary with the field system rather than the enclosure) suggest that the enclosure might have been a focus of domestic occupation. Whilst most of the finds can be interpreted as having derived from domestic activities, a rich deposit of decorated pottery and animal bone in one of a pair of pits situated within the enclosure entrance (although possibly post-dating the enclosure) might reflect a more specialised form of deposition.

Although ditches which may have formed part of the field system were exposed in several trenches, the precise layout of the field system cannot be inferred with any confidence from the excavations. Whilst not completely regular, it seems, in part at least, to have consisted of a roughly rectilinear pattern of boundaries. A small group of undated postholes found adjacent to one of the field system ditches (in Area 4) may have been contemporaneous with the field system, but did not define any recognisable structures.

Two small pits which contained cremated human remains, possibly originally covered by urns, and other pits, including one containing a saddle quern, were found to the south of the enclosure entrance, and probably lay outside the enclosure, close to one of the field system ditches. Radiocarbon dates show that they date from 1400 to 1120 cal BC, and could have been contemporary with either the occupation of the enclosure or the field system.

The limited scale of the excavations at Monks Farm and problems of dating mean that interpretation is not straightforward, but the site nevertheless has particular interest as an example of a focus of settlement in the upper Thames valley in the middle Bronze Age.

Chronology Although not immune from the problems posed by residual and intrusive material in dating field systems, a good proportion of the enclosure and field system ditches at Monks Farm contained pottery (Table 1). Ditches were initially attributed to the middle Bronze Age based upon the presence of Deverel-Rimbury pottery, and additional ditches were then assigned to the same period based upon their spatial and stratigraphic relationships with the features dated on the basis of their pottery. This exercise produced a generally consistent and reasonably regular spatial pattern.

Whilst there can be little doubt that the enclosure and field system date from the middle Bronze Age, there is little evidence to show how the complex might have developed over time.

The enclosure ditches appear to have been recut, and their location slightly modified, making it possible to define two phases of activity, and perhaps suggesting that the enclosure was in use for some time. There is no similar evidence for recutting of the field system ditches, and although the slight differences in alignment of the ditches in Area 4 compared to those elsewhere could be an indication of differences in date, they might also simply be slight irregularities in the layout of the field system. One of the ditches which might have formed part of the field system (1613: Fig. 4) cut a ditch (1609) belonging to the second phase of the enclosure. This part of the field system at least seems to have been laid out after the enclosure, at a time when the enclosure ditch had already silted up, perhaps suggesting that the enclosure

Table 1. Summary of quantities of pottery and animal bone from middle Bronze-Age features

		Pottery		**Animal bone**	
Feature group	Feature	No. sherds	Weight (g)	No. frags	Weight (g)
Area 5 pre-enclosure features	Parallel WNW-ESE aligned gullies				
	Ditch 1430				
	Pit 1426				
Area 5 enclosure ditches					
Phase 1	Ditch 1618	5	118	3	8
	Ditch 1608	15	337	6	21
	Curved ditch 1568			1	73
Phase II	Ditch 1609	6	43	11	93
	Ditch 1617				
	Ditch 1387	38	489	4	35
Enclosure divisions	Ditch 1553	1	45	1	64
	Ditch 1551				
Area 5 enclosure ditches total		65	1032	26	294
Pits in entrance to enclosure	Pit 1529	10	124	36	94
	Pit 1364	218	6772	48	777
	Plough furrow 1350	78	1510	15	150
Pits in entrance to enclosure total		306	8406	99	1021
Area 5 western features	Ditch 1594	13	459	3	18
	Waterhole 1300	25	993	26	554
	Pit 1234	3	11	10	345
	Gully 1232	20	128	3	99
	Pit 1388	5	38	55	11
	Pit 1335				
	Layer 1338	22	1221		
	Pit 1343	31	424	16	151
Area 5 western features total		119	3274	113	1178
Area 2 cremation burials	Cremation burial 1005	32	1258		
	Cremation burial 1011	3	19		
	Pits 1047 and 1051				
Area 2 cremation burials total		35	1277		
Area 2 pits and postholes	Pit 1037				
	Pit 1041				
	Pit 1025	9	32		
	Pit 1021				
	Postholes 1031, 1035, 1039, 1033, 1023 and 1027				
Field system and trackway					

(Continued)

Table 1. (Continued)

		Pottery		Animal bone	
Feature group	Feature	No. sherds	Weight (g)	No. frags	Weight (g)
Area 4	Ditch 1607			5	29
	Ditch 1588	12	81	43	700
	Ditch 1310			5	58
	Ditch 1590	2	44		
Areas 1 & 2	Ditch 1198			3	15
	Ditches 1591 and 1013				
	Ditches 1604 and 1605				
Area 5	(trackway)	1	17	5	60
	Ditch 1615				
	Ditch 1595				
	Ditch 1613	1	11	4	27
Field system and trackway total		16	153	65	889

itself had already been abandoned. Unfortunately, the limited extent of the trenches means that there is little indication of how the field system itself might have developed over time. Whilst it is thus possible that the enclosure was laid out first in a landscape which was not subdivided by field boundaries, and that the field system was laid out only after the enclosure had been abandoned, it is also possible that the field system developed in a piecemeal fashion around the enclosure whilst the enclosure was in use, and only subsequently extended over the area of the enclosure (when the enclosure had been abandoned).

The only evidence for the absolute chronology of the complex is provided by two radiocarbon dates obtained from two deposits of cremated human remains. The two dates are very similar, indicating that the cremations occurred between 1400 and 1120 cal BC (at 95 per cent probability). Unfortunately, there is no evidence to show how the burials were related chronologically to the other elements of the complex. Overall, then, although the broad date is clear, the development of the complex remains uncertain.

The Form of the Field System Excavations elsewhere now provide evidence for considerable variation in the form of field systems.[8] Distinctions are often drawn between quite regular coaxial systems and more organic aggregate systems, both of which were identified at Terminal 5, Heathrow.[9] Monks Farm lies in a region in which middle Bronze-Age field systems[10] have been identified at a number of sites, in the Vale of the White Horse and along the Thames valley (including Wallingford Road, Didcot,[11] Appleford Sidings,[12] and Long

[8] G. Lambrick and M. Robinson, *The Thames Through Time: Late Prehistory, 1500 BC–AD 50*, Thames Valley Landscapes Monograph, 29 (2009), pp. 73–80; D.T. Yates, *Land, Power and Prestige: Bronze Age Field Systems in Southern England* (2007), chapter 5.

[9] J. Lewis, *Landscape Evolution in the Middle Thames Valley: Heathrow Terminal 5 Excavations*, vol. 2, Framework Archaeology Monograph, 3 (2011).

[10] D.T. Yates, 'Bronze Age Field Systems in the Thames Valley', *Oxford Journal of Archaeology*, 18 (1999), pp. 157–70; Yates, *Land, Power and Prestige*; D. Benson and D. Miles, *The Upper Thames Valley: An Archaeological Survey of the River Gravels* (1974); Lambrick and Robinson, *The Thames Through Time*.

[11] I. Ruben and S. Ford, 'Archaeological Excavations at Wallingford Road, Didcot, South Oxfordshire, 1991', *Oxoniensia*, 57 (1992), pp. 1–28.

[12] P. Booth and A. Simmonds, *Appleford's Earliest Farmers: Archaeological Work at Appleford Sidings, Oxfordshire, 1993–2000*, Oxford Archaeology Occasional Paper, 17 (2009).

Wittenham[13] and between Steventon and East Hanney),[14] and on the Berkshire Downs.[15] The nearest extensively exposed example, at Appleford Sidings,[16] is more regular than many of the aggregate systems elsewhere, but does not have the regular layout of a coaxial system.

The limited extent of the excavations at Monks Farm means that it is difficult to determine the overall form of the field system, and thus to decide how it might best be classified in relation to the varied forms elsewhere. A number of observations can, however, be made about the features at Monks Farm which at least support the idea that they did form part of a field system.

The identification of a possible trackway or droveway in Area 5 is one feature which suggests that the ditches here might have formed part of a field system. The ditches defining this trackway were 4.5 metres part, suggesting that interpretation as a trackway rather than a 'hedge bank' (for which Lambrick suggests spacing of 2 metres) is more plausible.[17]

As far as can be seen, the other ditches belonging to the field system at Monks Farm were laid out on a roughly rectilinear grid. The evidence is insufficient to show that they conformed to a regular coaxial system, and a number of features suggest that they probably formed a more irregular pattern. The spacing of the ditches, for example, is irregular. Projecting the alignment of the ditches beyond the excavated areas indicates that some of the east–west aligned ditches would have been spaced quite closely together (in some cases at intervals of around 20 metres), whilst the north–south aligned ditches are much more widely spaced (at intervals of over 100 metres), although it is possible that some north–south aligned ditches lay between the excavated areas. Furthermore, the ditches in Area 4 were aligned slightly differently from those in the other areas. This could be an indication of differences in chronology, but it is equally possible that it was simply related to irregularities in the layout of the system (such as are apparent at Appleford Sidings).[18] The association of the field system with a waterhole is also typical of such field systems (although waterholes occur equally in areas without field systems).[19] Although affected by truncation, the size of the ditches, and in particular the fact that they were not very deep, is also consistent with field systems elsewhere. The evidence from Monks Farm gives little clear indication of the presence of banks or hedges associated with the ditches. The charred plant remains and charcoal include species such as hawthorn, blackthorn, crab apple, hazel and blackberry, which could have grown in hedgerows. Overall, however, the plant remains probably derive from a range of environments. Many of them are indicative of grassland, but others probably derive from woodland or scrub, and it is quite possible that the hedgerow species derive from the wider area around the site rather than from hedges associated with the field system. It is, however, noticeable that the possible field system ditch (1613) in Area 5 runs along the southern edge of the enclosure ditch (1609; Fig. 4) where one might have expected a bank or hedge to lie. It is possible that any bank lay further to the

[13] S. Baker, 'Prehistoric and Roman-British Landscapes at Little Wittenham and Long Wittenham, Oxfordshire', *Oxoniensia*, 67 (2002), pp. 1–28; R. Thomas, 'A Bronze Age Field System at Northfield Farm?', *Oxoniensia*, 45 (1980), pp. 310–11; M. Gray, 'Northfield Farm, Long Wittenham', *Oxoniensia*, 42 (1977), pp. 1–29.

[14] Hearne, 'Archaeological Evaluation in the Vale of White Horse', pp. 7–12.

[15] F. Small, *The Lambourn Downs: A Report for the National Mapping Programme*, English Heritage Aerial Survey Report Series, AER/13/2002 (2002); R. Bradley and J. Richards, 'Prehistoric Fields and Boundaries on the Berkshire Downs', in H.C. Bowen and P.J. Fowler (eds.), *Early Land Allotment in the British Isles*, BAR BS, 48 (1978), pp. 53–60; J.C. Richards, *The Archaeology of the Berkshire Downs: An Introductory Survey*, Berkshire Archaeological Committee Publication, 3 (1978); P.P. Rhodes, 'The Celtic Field-Systems on the Berkshire Downs', *Oxoniensia*, 15 (1950), pp. 1–28.

[16] Booth and Simmonds, *Appleford's Earliest Farmers*.

[17] Lambrick and Robinson, *The Thames Through Time*, p. 58.

[18] Booth and Simmonds, *Appleford's Earliest Farmers*, fig. 6; see also Lambrick and Robinson, *The Thames Through Time*, pp. 73–80.

[19] G. Hey et al., *Yarnton: Neolithic and Bronze Age Settlement and Landscape, Results of Excavations, 1990–98,* Thames Valley Landscapes Monograph, 39 (2016), pp. 78–9; Lambrick and Robinson, *The Thames Through Time*, pp. 267–70.

south and that the field system ditch ran along a berm, and perhaps made use of a pre-existing bank or hedge (which had been associated with the enclosure).

Differences between the Enclosure and the Field System A wide variety of middle Bronze-Age enclosures have been documented in the Thames valley, and on the basis of the limited excavations at Monks Farm it is, as a result, impossible to infer the character of the enclosure with any certainty.[20] The small part of the enclosure – including an entrance – exposed in the excavations provides little clue as to its overall layout, which may have differed in the two phases of its existence.

The fact that one of the ditches (1613), which may have formed part of the field system, cut across a ditch belonging to the second phase of the enclosure, indicates that at least in part the enclosure predated the field system. It is noticeable, too, that the alignments of the ditches defining the enclosure did not appear to follow those of the field system ditches. The enclosure ditches are, in some cases, slightly curved or sinuous, in contrast to the generally quite straight field system ditches. Although consisting predominantly of rectilinear arrangements of ditches, the middle Bronze-Age enclosures at both Corporation Farm, Abingdon and Weir Bank Stud Farm, Bray contained curvilinear elements. At Corporation Farm, one of these curved ditches was associated with a scatter of postholes which might have been related to roundhouses.

The enclosure ditches are also distinguished from the field system ditches by the larger quantities and range of finds the enclosure ditches contained (see below). It is also possible that the entrance to the enclosure was a focus for deposition (although the deposits at the entrance might, in fact, have post-dated the enclosure and have been contemporary with the field system). Whilst there is no clear evidence for structures such as roundhouses within the limited excavations at Monks Farm, the focus of deposition around the enclosure ditches and in features nearby suggests that the enclosure might have been a focus of domestic occupation.

Deposition and the Interpretation of the Enclosure The finds from Monks Farm include pottery, animal bone and charred plant remains, a saddle quern, a bone point and a bone bead, and a fragment of fired clay probably from an oven or a hearth. Whilst beyond the pottery and animal bone and perhaps the charred plant remains, the numbers of objects are particularly small, the range is perhaps sufficient alone to suggest that the site was occupied rather than just having been the location of agricultural activities (such as might have occurred if, for example, the enclosure had been used only to manage livestock).

Several aspects of the finds could be taken as particularly indicative of the fact that the site was a focus of occupation. The pottery, for example, includes a number of large, coarse bucket urns, perhaps used as storage vessels, but also smaller, finer barrel and globular urns. The saddle quern suggests that the final stages of grain processing, presumably prior to consumption, took place on the site, and the quite high proportions of chaff in two of the assemblages of charred plant remains suggest that earlier stages of crop processing also took

[20] Including roughly rectilinear examples at, for example, Corporation Farm, Abingdon (Barclay et al., *Lines in the Landscape*) and Weir Bank Stud Farm, Bray (Barnes and Cleal, 'Neolithic and Bronze Age Settlement at Weir Bank Stud Farm Bray', pp. 1–51); 'L'-shaped examples at, for example, Cotswold Community (K. Powell et al., *Evolution of a Farming Community in the Upper Thames Valley: Excavation of a Prehistoric, Roman and Post-Roman landscape at Cotswold Community, Gloucestershire and Wiltshire*, Thames Valley Landscape Monograph, 31 (2010)) and Latton Lands (D. Stansbie, and G. Laws, 'Prehistoric Settlement and Medieval to Post-Medieval Field Systems at Latton Lands', *Wiltshire Archaeological and Natural History Magazine*, 97 (2004), pp. 106–43); a single segment of straight ditch on the Banbury Flood Alleviation Scheme (A. Simmonds, *The Archaeology of the Banbury Flood Alleviation Scheme, Oxfordshire: Neolithic and Roman Occupation in the Cherwell Valley*, Oxford Archaeology Monograph, 21 (2014)); and a circular example at All Souls' Farm Quarry, Wexham (S. Preston, *Settlement and Landscape Archaeology in the Middle Thames Valley: Slough and Environs*, Thames Valley Archaeology Services Monograph, 14 (2012)). See Lambrick and Robinson, *The Thames Through Time*, pp. 70–73, 101–105, 118–19.

place on the site. The animal bone includes prime meat bearing parts of the skeleton (femur, scapula and humerus) as well as elements of the foot and the mandible which might be seen as less desirable. The bone point, although its precise use is uncertain, suggests that craft activities may have also taken place.

As was mentioned above, the majority of these finds were concentrated in Area 5 (Table 1). All of the large deposits of finds were recovered from this area, suggesting that the enclosure there was the main focus for deposition and hence of occupation. The only notable exception to this pattern was the saddle quern which was recovered from a pit, part of a small group, near to the cremation burials in Area 2. Apart from the cinerary urn (and the quern just mentioned), very few other finds were recovered from the features in Area 2, and the field system ditches in Areas 1, 2, 4 and 5 contained only small quantities of animal bone (apart from one larger deposit in ditch 1588), and very little pottery when compared with the features associated with the enclosure in Area 5.

It is, however, striking that apart from the exceptionally large deposit of material in pit 1364 at the entrance to the enclosure (which is discussed further below), the largest groups of finds were recovered from a waterhole, pits and ditches which appear to have lain outside the enclosure (rather than from the enclosure ditch itself). Apart perhaps from pit 1529, no features were found in the limited area of the excavation which lay within the enclosure, so it is impossible to say whether this pattern indicates that debris was being preferentially deposited outside the enclosure.

It is, however, also striking that the ratio of pottery to animal bone (the only finds which occur in sufficient quantities for such calculations to be possible) seems to vary in a consistent way across the site. The pits near the entrance to the enclosure contained around three times as much pottery as animal bone (by number of fragments), the enclosure ditches over twice as much pottery as animal bone, and the western features in Area 5 (outside the enclosure) roughly equal quantities (Table 1). The field system ditches, in contrast, contained five times as much animal bone as pottery. The larger proportion of pottery, particularly in the enclosure and in nearby features, might reflect the fact that the pottery was primarily used within the enclosure, and the wider dispersion of animal bone could be a variant of a pattern noticed by Wilson on Iron-Age and Anglo-Saxon settlements, in which animal bone was concentrated at the periphery of sites.[21] Wilson suggested that this pattern reflects the way in which animal remains were disposed of rather than the location of any associated activity. An echo of this pattern might be seen at Weir Bank Stud Farm where larger quantities of animal bone were deposited in the ditches of enclosure 926 (to the east, away from the roundhouse) than in the ditches of enclosure 925 which lay just to the south of the roundhouse (although it is possible that the roundhouse post-dated the enclosure).[22]

Special Deposits? As well as perhaps reflecting the location of occupation and of waste disposal, the pattern of deposition in part may also reflect the size of the features involved. The occurrence of large quantities of finds in the waterhole (1300) is unsurprising since this was a large feature – much wider than any of the other pits and also amongst the deepest features on the site. That size was not the only factor involved is shown by the fact that some of the field system ditches were larger than those associated with the enclosure but nonetheless contained much smaller quantities of finds.

Size can also not be used to explain the exceptionally large assemblage of finds from pit 1364 which lay at the entrance to the enclosure (and from plough furrow 1350 which probably contained finds removed from that pit by later disturbance). This pit contained by far the largest quantities of finds on the site: 6.8 kg of pottery and 0.8 kg of animal bone, as

[21] B. Wilson, *Spatial Patterning Among Animal Bones in Settlement Archaeology: An English Regional Exploration*, BAR BS, 251 (1996), p. 29.

[22] Barnes and Cleal, 'Neolithic and Bronze Age Settlement at Weir Bank Stud Farm, Bray', p. 46.

well as some worked flint. The pottery included an elaborately decorated bucket urn which perhaps alone could be taken as being indicative of a deposit which, in some sense, was special. The animal bone includes large fragments of cattle skull, mandible and vertebrae (including a cattle axis vertebra which had been chopped through, perhaps when the animal was beheaded) and sheep/goat mandible. The deposition of mandibles and skulls was noted as a significant feature of the enclosure ditches at Corporation Farm. More generally, deposits of animal bone, including animal burials, were found at both Corporation Farm and Rams Hill.[23] Unfortunately the relationship between pit 1364 and the enclosure ditch (1609) was not clear. The ditch at this point was only 0.13 metres deep and lay in an area cut by a medieval furrow (which had removed the upper parts of the features) and a modern field drain. Whilst the pit appeared to cut the end of the enclosure ditch, it is not clear whether the pit had been cut through the ditch once it had already completely filled, or if the intersection was merely the product of erosion of the outer edges of the features. Thus, whilst it is possible that the large quantity of pottery and animal bone in pit 1364 formed a special deposit which was related to the liminal location created by the enclosure ditches (which could be paralleled by the cattle remains found in pits at the entrance to the space which may have been occupied by roundhouses at Corporation Farm), it is also possible that the pit post-dated the enclosure and was related to the field system ditch (1613) which ran immediately to the south of the pit (Fig. 4).[24]

The Subsistence Economy and the Use of the Field System Evidence for the subsistence economy in the middle Bronze Age in the upper Thames valley at sites comparable to Monks Farm is very limited. Whilst the finds from Monks Farm thus have a particular interest, which is added to by their association with a field system, in which some of the resources represented may have been raised, it is important to stress the limitations of the evidence. The assemblage of animal bones is too small to give a clear indication of the relative importance of the species represented, which include cattle, sheep/goat, pig, horse and dog (although the last three are represented by very small numbers of fragments). The high proportions of weed seeds in the charred plant remains may reflect the fact that much of the charred material was brought to the site with fodder or that it derives from a certain stage of crop processing. It is very difficult, on the basis of archaeological evidence alone, to establish the relative importance of pastoral and arable elements of an economy, although it is unlikely that the subsistence strategy in this period would have been particularly specialised.[25]

What evidence there is at Monks Farm suggests a varied subsistence economy, without any clear indication of any particular focus or specialisation. Among the animal bones, cattle and sheep/goat are represented by roughly equal numbers of fragments (although the weight of the cattle bone far exceeds that of the sheep/goat). It is likely that field systems such as that at Monks Farm, defined by ditches, were constructed in part at least to manage livestock, and the presence of a waterhole at Monks Farm could be seen as suggesting that in this case, cattle were likely to have been of some importance. The recovery of dung beetles from waterholes

[23] R. Bradley and A. Ellison, *Rams Hill: A Bronze Age Defended Enclosure and its Landscape*, BAR BS, 19 (1975); a further example of a middle Bronze-Age animal burial, of a cattle skeleton from which the mandible was missing, was found at Wallingford. Its wider context is unclear, however, and it is possible that it was not deposited into a cut feature: T. Bradley and P.L. Armitage, 'A Partial Cow Skeleton of the Middle Bronze Age at Wallingford, Oxfordshire', *Oxoniensia*, 67 (2002), pp. 359–63. See also Lambrick and Robinson, *The Thames through Time*, p. 286 for more general discussion of special deposits.

[24] P. Shand et al., 'Corporation Farm, Wilsham Road, Abingdon: A Summary of the Neolithic and Bronze Age Excavations, 1971–4', in Barclay et al. *Lines in the Landscape* (2003), fig. 3.8.

[25] G. Jones, 'Evaluating the Importance of Cultivation and Collecting in Neolithic Britain', in A.S. Fairbairn (ed.), *Plants in Neolithic Britain and Beyond*, Neolithic Studies Group Seminar Paper, 5 (2000), pp. 79–84; G. Barker et al., 'On the Origins of Milk and Wool Production in the Old World', *Current Anthropology*, 429/5 (1988), pp. 743–8.

at other sites (such as Appleford Sidings) confirms their frequent association with cattle.[26] Cattle appear to have dominated the animal bone assemblage from Corporation Farm (where, however, no waterholes were found). The presence of an apparently appreciable proportion of sheep/goat bones at Monks Farm is, therefore, a surprise. A high proportion of sheep/goat is, however, consistent with broader patters in southern England in which proportions of sheep/goat increase from the early Bronze Age.[27] The increase in the proportion of sheep/goat may well also have been related to widespread setting out of field systems in the middle Bronze Age, the widespread evidence for clearance of the landscape (which the molluscs from Monks Farm show had taken place by the time the features there were filling), and the increasingly common occurrence of spinning and weaving equipment on settlements.[28] The limited scale of the excavations at Monks Farm means that little significance can be attached to the absence of such equipment there (the scarcity of which has, however, been noted at other sites in the Thames valley and neighbouring regions).[29]

Monks Farm also provides limited evidence for arable agriculture. The saddle quern, found in Area 2, outside the enclosure, provides evidence for the final stages of crop processing, but the high proportions of wheat chaff found in two of the samples of charred plant remains suggest that earlier stages of crop processing also took place on the site.[30] It is possible that some of the large quantities of weed seeds found in the samples of charred plant remains also derive from crop processing, although it is suggested below that they might also have been brought to the site with fodder for animals.

The range of subsistence activities represented at Monks Farm might be related to its location at the foot of the Berkshire Downs, in an area characterised by east–west aligned, quite narrow bands of different underlying geology. The location would have given the occupants of the site access to a broad range of environments, including areas with soil good for cultivation, the Downs themselves, and lower lying areas.[31]

The Cremation Burials Two pits containing cremated human remains were found in Area 2. Whether both pits should be considered deliberate cremation burials is unclear. While the larger deposit of 528 g of cremated remains, found with sherds of a bucket urn missing its base (perhaps originally placed, inverted, over the cremation burial), seems certainly to have been such a burial, the other pit contained only 99 g of cremated remains, and could have been a deposit of pyre debris. The extent to which both deposits might have been reduced in size as a result of plough truncation is uncertain. Two other nearby pits of similar size also contained ashy fills similar to those associated with the deposits of cremated human remains. It is possible that these pits also originally contained cremated human remains which had been entirely removed by truncation.

Both of the pits with cremated remains may have contained the remains of more than one individual: male and female adults or adolescents in one and a child and an adolescent in the other.

[26] Booth and Simmonds, *Appleford's Earliest Farmers*; see also Lambrick and Robinson, *The Thames Through Time*, pp. 36–42 for more general discussion.

[27] D. Serjeantson, *Review of Animal Remains from the Neolithic and Early Bronze Age of Southern Britain, 4000 BC–1500 BC*, English Heritage Research Department Report Series, 29–2011 (2011).

[28] Barnes and Cleal, 'Neolithic and Bronze Age Settlement at Weir Bank Stud Farm, Bray', table 13; A.S. Henshall, 'Textiles and Weaving Appliances in Prehistoric Britain', *Proceedings of the Prehistoric Society*, 16 (1950), pp. 130–62.

[29] Barnes and Cleal, 'Neolithic and Bronze Age Settlement at Weir Bank Stud Farm, Bray', table 13.

[30] C.J. Stevens, 'An Investigation of Agricultural Consumption and Production Models for Prehistoric and Roman Britain', *Environmental Archaeology*, 8 (2003), pp. 61–76.

[31] For further discussion: S. Needham and J. Ambers, 'Redating Rams Hill and Reconsidering Bronze Age Enclosure', *Proceedings of the Prehistoric Society*, 60 (1994), pp. 225–43; C. Gingell, *The Marlborough Downs: A Later Bronze Age Landscape and its Origins,* Wiltshire Archaeological and Natural History Society Monograph, 1 (1992); R. Bradley et al., *Rams Hill: A Bronze Age Defended Enclosure and its Landscape* (1975); Lambrick and Robinson, *The Thames Through Time*, pp. 240–66 for a general overview.

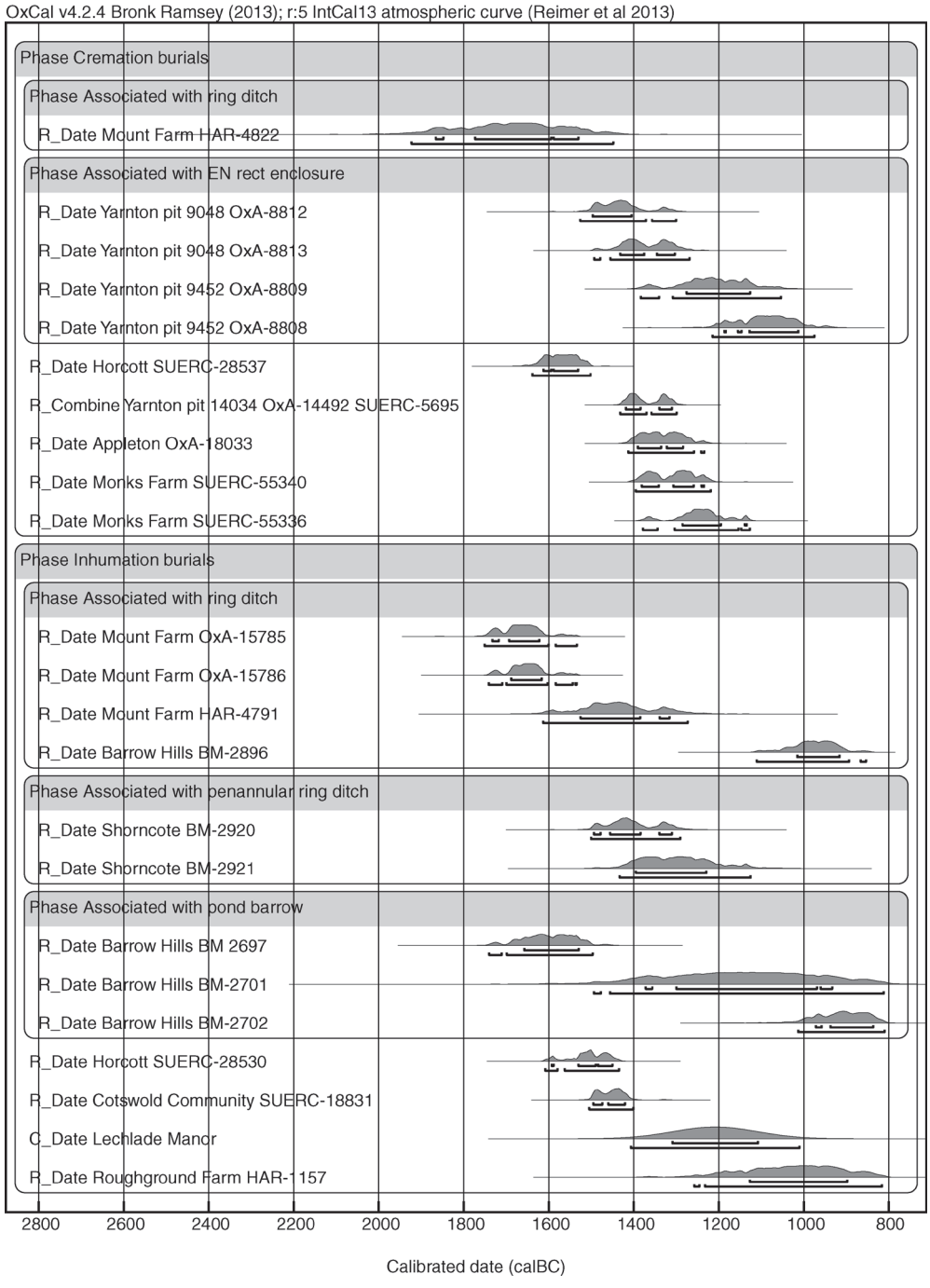

Fig. 3. Comparative radiocarbon dates.

Cremation burials of more than one individual have been noted quite frequently at other sites.[32] The small group of middle Bronze-Age examples at Long Wittenham provides a nearby example.[33]

The radiocarbon dates from the two deposits at Monks Farm (Fig. 3) show that they probably date from the latter half of the middle Bronze Age.[34] The dates pass a chi-squared test indicating that the burials could have been contemporaneous (T=0.6; 5%=3.8).[35] Overall, the two dates show that the two burials were probably deposited in a period of less than 70 years (68 per cent probability; 160 years at 95 per cent probability).

These two dates add to the small number of middle Bronze-Age burials with radiocarbon dates from the upper Thames valley which have been accumulating over the last few decades. Although the number of dates is still not very large, they are beginning to make it possible to examine the extent to which the great variation in burials from this period might have involved chronological trends in a way that is not possible when the burials are all lumped together in a single phase. The dates obtained so far are shown in Figure 3 in relation to the burial type (cremation vs inhumation) and the contexts of the burials (and in particular, burials associated with monuments versus those in other contexts).

Whilst the prevailing view that 'as the practice of burial in formal monuments declined in later prehistory a strong tradition of disposing of the dead within the wider environment developed' is still broadly valid for the later Bronze Age, these dates suggest that in detail the pattern is more complex than its reduction to a simple linear trend would suggest. The dates currently available indicate, for example, that burials continued to be placed in and around monuments (some of which were already ancient by the middle Bronze Age) throughout the middle Bronze Age (at, for example, Yarnton and Barrow Hills).[36]

The burials at Monks Farm add to the evidence that small groups of burials and isolated burials, set within field systems, and not associated with monuments, were common in this period (although in no case is it possible to prove that the burials were, in fact, contemporaneous with the use of the field systems). It is noticeable that of the group of seven cremation burials not associated with monuments to which the Monks Farm burials belong, the dates of six fall into the thirteenth and fourteenth centuries cal BC. At Monks Farm and Appleford these burials lay within field systems; at the other sites they appear to have lain in isolated contexts (or at least, contexts which cannot be identified from archaeological evidence).[37] The number of dates available is, however, too small, given the range of variation in the burials, to be certain that this accurately defines the floruit for this kind of burial. Equally, the small number of dates give little indication of whether the quite late associations of burials with monuments at Barrow Hills, Yarnton and Shorncote might be rare exceptions to, or a significant component of, the overall pattern.[38]

[32] J.I. McKinley, 'Bronze Age "Barrows" and Funerary Rites and Rituals of Cremation', *Proceedings of the Prehistoric Society*, 63 (1997), pp. 129–45.

[33] E.T. Leeds, 'Bronze Age Urns from Long Wittenham', *The Antiquaries Journal*, 9 (1929), pp. 153–4.

[34] Radiocarbon dates have been calibrated using OxCal v. 4.2: C. Bronk Ramsey, 'Bayesian Analysis of Radiocarbon Dates', *Radiocarbon*, 51 (2009), pp. 337–60, using the IntCal13 calibration data: P.J. Reimer et al., 'IntCal13 and Marine13 Radiocarbon Age Calibration Curves 0–50,000 Years cal BP', *Radiocarbon*, 55 (2012), pp. 1869–87.

[35] G.K. Ward and S.R. Wilson, 'Procedures for Comparing and Combining Radiocarbon Age Determinations: A Critique', *Archaeometry*, 20 (1978), pp. 19–31.

[36] A. Barclay and C. Halpin, *Excavations at Barrow Hills, Radley, Oxfordshire, Volume 1: The Neolithic and Bronze Age Monument Complex*, Thames Valley Landscapes Monograph, 11 (1999); Hey et al., *Yarnton*, pp. 438–44.

[37] Booth and Simmonds, *Appleford's First Farmers* (2009), pp. 24–5; Hey et al., *Yarnton*, p. 582; C. Hayden et al. *Horcott Quarry, Fairford and Arkell's Land, Kempsford: Prehistoric, Roman and Anglo-Saxon Settlement and Burial in the Upper Thames Valley in Gloucestershire*, Thames Valley Landscapes Monograph, 40 (2017), pp. 48–50; C. Hayden et al., *Great Western Park, Didcot, Oxon.: Excavations, 2010–2012*, Thames Valley Landscapes Monograph, in preparation.

[38] Barclay and Halpin, *Barrow Hills, Radley*; Hey et al., *Yarnton*, pp. 438–44; A. Barclay et al., 'Excavations of Neolithic and Bronze Age Ring-Ditches, Shorncote Quarry, Somerford Keynes, Gloucestershire', *Transactions of the Bristol and Gloucestershire Archaeological Society*, 113 (1995), pp. 31–4.

Lambrick has suggested that the considerable variation in the numbers of burials occurring in particular locations can be explained in demographic terms. The largest cemeteries would have been used for burial by several families over several generations whilst the more common small cemeteries were the burial grounds for a single family, used only for one or two generations.[39] The distinction between small cemeteries and dispersed or isolated burials would, then, reflect only demographic vagaries, rather than any significant difference. It is, of course, inevitable that in some respects the patterns of burial reflect demography. It also, however, seems unlikely that demography alone could account for apparent attraction of certain locations as places of burial either over a long period or to a large section of the population (most conspicuously exemplified in the upper Thames by the seventy-eight burials associated with a ring ditch at Standlake).[40] Nor could it account for the apparent significance of earlier monuments as a location for burial. It is possible, then, that small groups of burials, such as those set in field systems at Monks Farm and elsewhere in isolated contexts, represent a deliberate rejection of, or exclusion from, attempts to reference earlier traditions of burial.

EXCAVATION RESULTS

Middle Bronze Age

A number of features contained within the fills pottery of exclusively middle Bronze-Age date. Although the site stratigraphy shows that not all of the features were contemporaneous, the pottery analysis identifying all the material as falling within the Deveral Rimbury tradition has suggested that all the activity can be ascribed to the middle Bronze Age.

In the west of Area 5 (Fig. 4), north-east to south-west aligned ditch 1618 and broadly north–south aligned ditch 1608 suggest that some of the earliest activity was represented by a sinuous boundary ditch, perhaps defining an enclosure. Ditch 1618 was somewhat irregular in plan and may have been constructed in sections, or just recut close to the south-west limit of excavation. The ditch measured 1.2 m in width and 0.2 m in depth, and had a concave profile. Its single silty fill contained a single sherd of pottery (21 g) of middle Bronze-Age date. The possible recut of the western extent was also substantial, but also deeper, measuring 1.8 m in width and 0.45 m in depth. It contained two fills, the upper of which contained six sherds (200 g) of middle Bronze-Age pottery. The eastern extent of this ditch was truncated by a later ditch and the ditch almost certainly turned to the north-west here and may be represented by the earlier of two ditches seen in section to the north-west (Fig. 5, section 1096), although no datable material was recovered from the earliest cut. An area where several of the ditches in this area would have intersected was severely damaged by post-medieval ploughing and so several relationships have been lost. However, ditch 1608 appears to be the continuation of 1618 to the north, but no pottery was recovered from interventions through it so the assignment of this ditch to this phase is tentative. Ditch 1608 truncated an earlier ditch (1430) to the east, of which only a short extent had survived the later ploughing, and a pit (1426) to the west. Neither feature contained finds or other datable material, but as they are cut by ditch 1608, they can also be presumed to be of middle Bronze-Age or earlier date.

Part of a curvilinear ditch (1568) was recorded to the south-east of ditch 1618. This extended beyond the southern limit of excavation and to the east was truncated by a later ditch (1609). It measured 0.9 m in width and 0.34 m in depth. Its date is unclear as no datable

[39] Lambrick and Robinson, *The Thames Through Time*, p. 302.

[40] S. Stone, 'Account of Certain (Supposed) British and Saxon Remains Recently Discovered at Standlake, in the County of Oxford', *Proceedings of the Society of Antiquaries of London*, 4 (1857), pp. 92–3; D.N. Riley, 'A Late Bronze Age and Iron Age Site on Standlake Downs, Oxon.', *Oxoniensia*, 11/12 (1946), pp. 27–43.

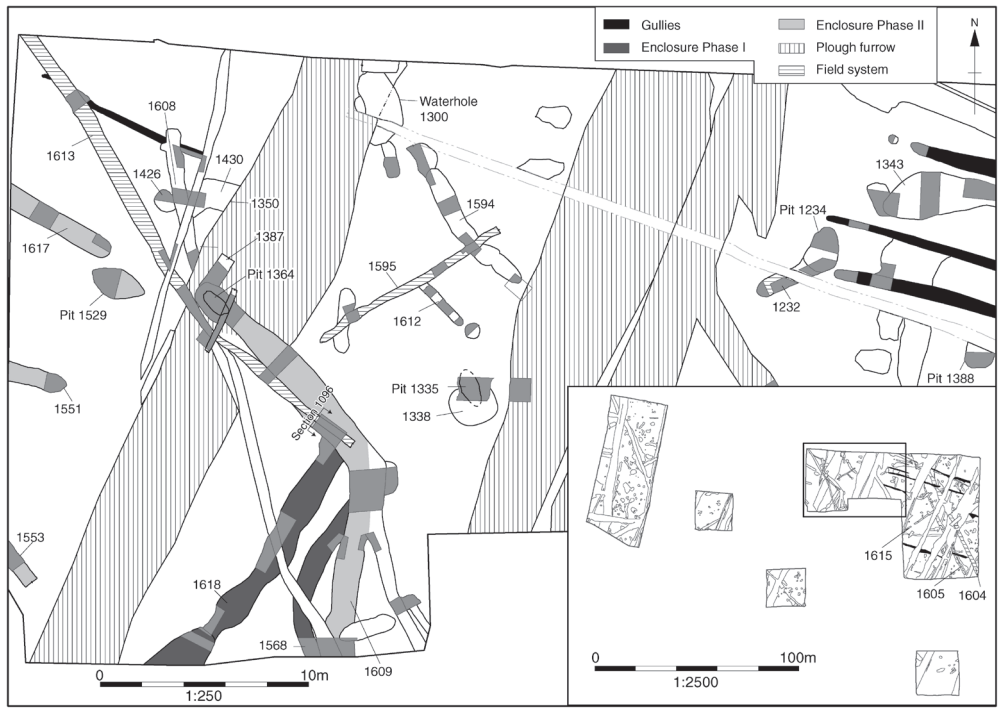

Fig. 4. Bronze-Age features in the western part of Area 5.

material was recovered from the fill, although its stratigraphic position suggests that it belongs to this earliest phase of activity.

A second phase of activity is represented by ditches and pits that cut the features described above and point to the remodelling of the enclosure and activity related to its use. In Area 5 (Fig. 4) the earliest ditches were truncated by the ditches of the north-eastern side of an enclosure and two pits defining an entranceway through it. Ditch 1609 extended from the southern limit of excavation for 8 m to the north, then turned to the north-west and extended for a further 11 m, where it appeared to be cut by a pit (1364) and terminated. Ditch 1609 measured 1.2 m in width and 0.25 m in depth and had a concave profile. Its single silty fill contained seven pottery sherds (79 g) of middle Bronze-Age date. Some 6.5 m to the north-west, a length of ditch (1617) was on the same alignment and extended beyond the western limit of excavation. It measured 1 m in width and 0.26 m in depth. No dating material was recovered from the silty fill, but its alignment and terminus suggest that it formed the opposing side of an entrance with the terminus of ditch 1609.

Two pits were located in the area between these two ditch terminals and may have had a function related to the entranceway. Pit 1529 (Fig. 5, section 1138) was located on the western side of the entranceway, just south of the terminus of ditch 1617. It was oval in shape and measured 1.6 m by 1.5 m by more than 1.1 m in depth (it was not bottomed). The two fills were dark grey silty clays, the upper of which (1531) contained 10 sherds of pottery (124 g) of middle Bronze-Age date (at least 4 vessels), along with some animal bone. The features on the eastern side of the entranceway were severely damaged by later ploughing and the relationships were not clear. However, a pit (1364) located here appears to have been deliberately placed, possibly cutting the terminus of ditch 1609, which had already filled up. The pit was similar in size to pit 1529, measuring 1.6 m in diameter and 0.55 m in depth (Fig. 5, section 1108). Its four fills contained a large amount of pottery (218 sherds, 6,772 g) including a bowl and

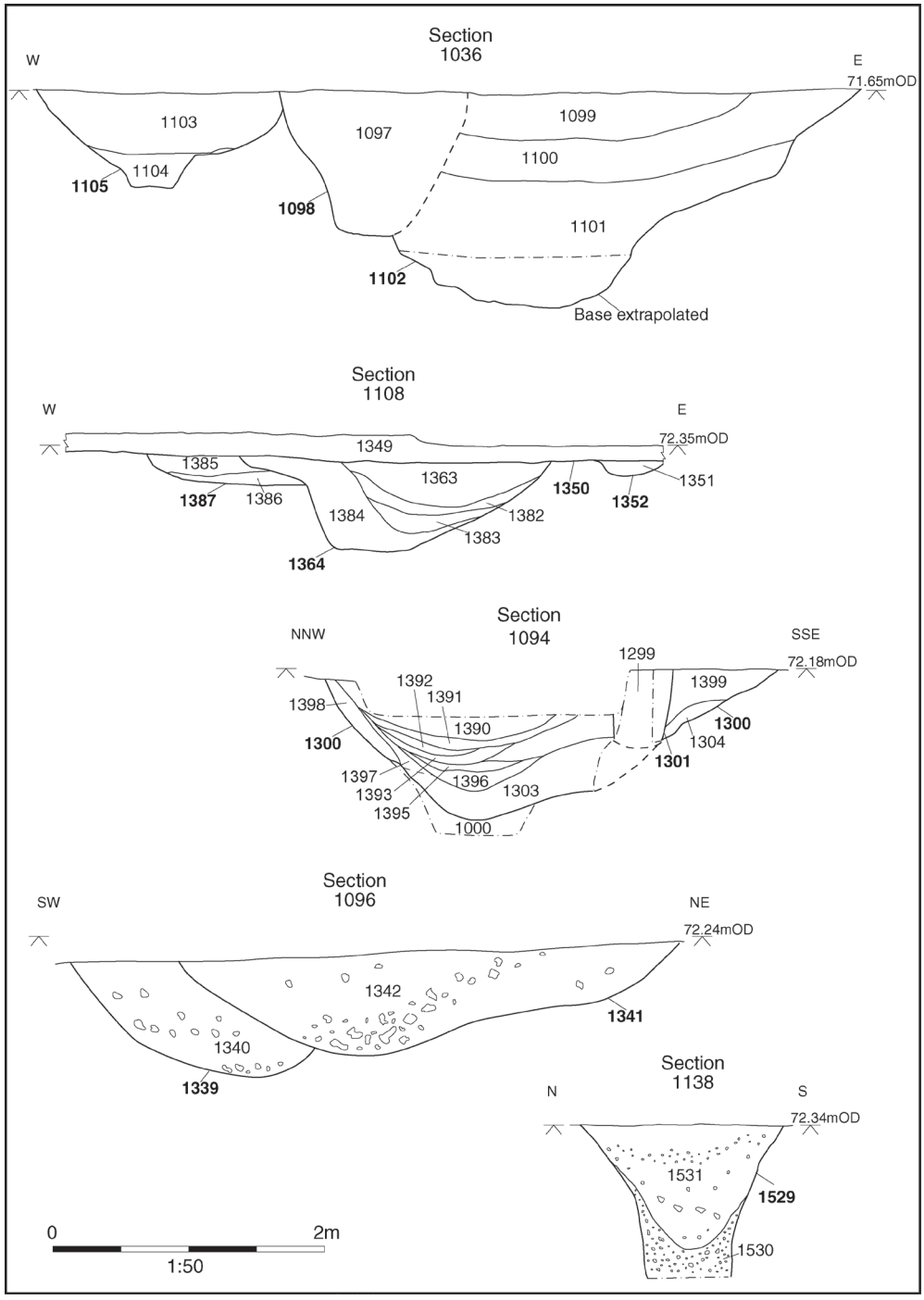

Fig. 5. Sections through selected features.

jar and a cordoned jar in decorated flint-tempered fabrics, although some of the pottery may have originated from other features cut by this pit, as disturbance here was significant. The fills of the feature were mid to dark greyish brown silty clays that contained a range of freshwater snail species, suggesting the presence of standing water in the feature. This may suggest it was open for a time, perhaps functioning as a small well prior to infilling. The animal bones recovered from the feature included skull and mandible fragments, which may have been selected as a ritual component, rather than representing food waste. Plough furrow 1350 was situated just to the north of this pit and 78 sherds (1,510 g) of pottery was recovered from it, some of which were part of a vessel also found in pit 1364. This plough furrow also appeared to cut another short length of ditch (1387), which was severely disturbed by it and contained 38 sherds (489 g) of pottery in several different flint-tempered fabrics, including sherds from at least two corndoned urns. The severe disturbance of this area of the enclosure entrance by ploughing means that the relationships described here and shown in Figure 4 are a tentative interpretation of the remaining evidence. The large concentration of pottery associated with the entranceway suggests a deliberate deposition of vessels here, including a highly decorated bucket urn alongside skull, mandible and vertebrae animal bone fragments from both pits 1364 and 1529.

A short length of ditch (1553) was recorded at the western edge of Area 5. It only extended part-way into the excavation area before terminating, and measured 0.8 m in width and 0.22 m in depth. This may be the terminal of an interior division within the enclosure. A single sherd of pottery recovered from the fill dated to the middle Bronze Age. Similarly, ditch terminal 1551 may also represent an internal divison, although no datable material was recovered from the fill to confirm its similar date.

Situated *c.*10 m to the east of the enclosure was a short length of irregular ditch, aligned broadly north-west to south-east (1594). The total length was constructed from three segments and both ends turned slightly to the east. Twelve sherds (411 g) of pottery of middle Bronze-Age date were recovered from the fills. The north and south-east ends were truncated by a plough furrow which may have removed the relationship between this ditch and pit 1300 (see below).

Middle Bronze Age Cremation Burials Another focus of middle Bronze-Age activity was recorded *c.*35 m to the south-west in Area 2 (Fig. 6). Here, two cremation burials (1005 and 1011) and a group of pits were located *c.*10 m apart.

Cremation burial 1005 was sub-circular in shape, had a concave profile and measured 0.62 m by 0.54 m and was 0.12 m in depth (Fig. 7). Its soft very dark grey/black fill (1006) was notably ashy and was concentrated within the remains of an urn, which appeared to have been plough damaged as the base was missing. The remains of the urn numbered 32 sherds (1,258 g) and were from a probable bucket urn of middle Bronze-Age, Deverel Rimbury, type. A radiocarbon date was obtained from cremated bone from this burial and the result was 1379–1127 cal BC (95.4 per cent probability; 3004±29 BP, SUERC-55336 (GU35015)), indicating a date for burial in the later part of the middle Bronze Age. The human remains (528.1 g) were not complete and it is likely that some of the bone was lost during plough truncation, but analysis has suggested that the bone could represent the remains of two individuals. The fill of the urn also contained ash wood charcoal and a small amount of charred large legumes and the odd cereal seed that could not be identified to species.

Cremation burial 1011 consisted of a circular pit with shallow sides and a flat base, measuring 0.4 m in diameter and 0.06 m in depth (Fig. 7). It was filled with a soft dark grey black silt with an ashy consistency (1012). Cremated long bone fragments from this burial were submitted for radiocarbon dating, obtaining a result of 1396–1220 cal BC (95.4 per cent probability; 3043±29 BP, SUERC-55340 (GU35016)), similarly indicating a date in the later part of the middle Bronze Age. This burial also appeared to contain two individuals, suggested

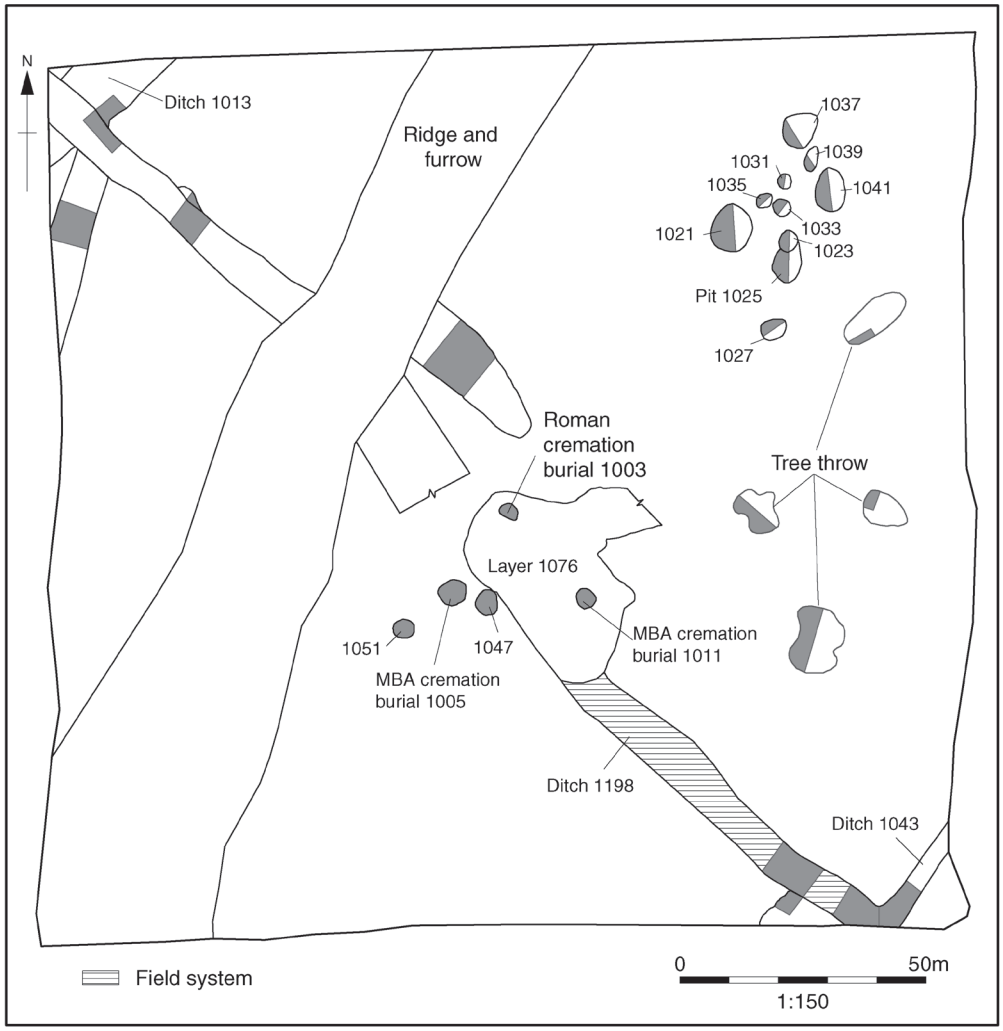

Fig. 6. Plan of Area 2.

by contrasting diagnostic age indicators between fragments. Sex could not be determined, but one individual was probably an adult or older juvenile and one appeared to be a juvenile. Only 98.6 g of bone was recovered, and this is also likely to be due to disturbance by ploughing, although it is also possible that the remains were included in a deposit of pyre debris rather than a deliberately deposited cremation burial. Three sherds of pottery (19 g) from a probable bucket urn were recovered from the feature. The environmental sample taken from this deposit yielded no remains.

Middle Bronze Age Pits and Postholes A cluster of small pits and postholes was situated to the north-east of the cremation burials (Fig. 6). The four pits (1037, 1041, 1025 and 1021) were spaced in an irregular rectangle arrangement measuring from the south-west corner 1.4 m by 1.8 m by 1.4 m by 2.4 m. It is not clear whether this is the remains of a post-built structure or a group of pits. Only one pit (1025) contained artefacts, consisting of 9 sherds (32 g) of a large storage jar of middle Bronze-Age date, and a fragment of quernstone.

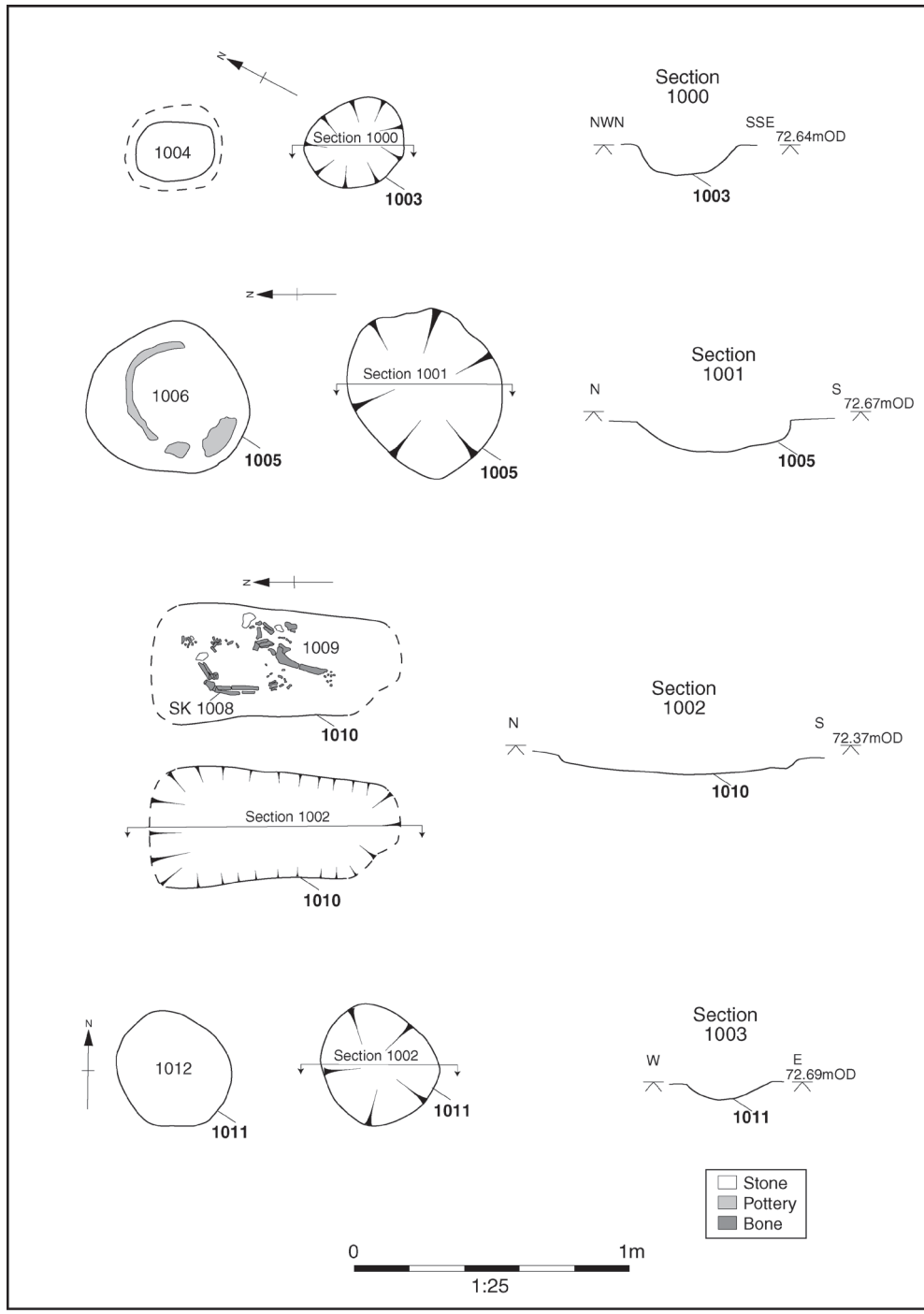

Fig. 7. Plans of and sections through burials.

There were also six postholes among the group (1031, 1035, 1039, 1033, 1023, 1027). The postholes did not form any clear arrangement to suggest a structure. All were shallow (between 0.1 m and 0.3 m in depth) and measured 0.26 m to 0.42 m in diameter. No dating material was recovered from any of the postholes, although one (1023) truncated middle Bronze-Age pit 1025, demonstrating that at least this posthole was middle Bronze Age or later in date.

Other pits of this date were located in the western part of trench 5, in the area to the east of the enclosure. Pit 1300 (Fig. 5, section 1094) was situated north-east of the enclosure entrance and was very large, measuring *c.*3.36 m in length, 1.88 m in width and 1.08 m in depth. The sides were fairly irregular and the southern slope was notably shallower than the others and this may have been used for access for its possible original use as a waterhole. The pit had been backfilled with thirteen separate fills, four of which contained sherds of pottery dated to the middle Bronze Age. This pottery totalled 25 sherds (993 g) in several different flint-tempered fabrics and included at least two urns, one of which was cordoned. This fairly small amount of pottery from such a large feature suggests incidental deposition, perhaps occasional deposition in a feature that was slowly silting up, rather than dumps in a designated rubbish pit, strengthening the case for this feature being a waterhole that silted up largely naturally when it went out of use. The environmental evidence supports this, with samples from the dark grey to black organic middle and upper fills containing freshwater snail species suggesting standing water (Stafford, below).

Pit 1234 was situated *c.*27 m east of the enclosure entrance. It measured 1.46 m in diameter and 0.5 m in depth. It contained four fills, the thickest of which was charcoal-rich and contained three sherds (11 g) from a flint-tempered bowl. A short length of gully (1232) was cut by the pit and extended on a north-east to south-west alignment to the south-west. It measured 0.8 m in width and 0.08 m in depth. Truncation by ploughing had removed any trace of the feature towards the south-west. However, it was on the same alignment as the middle Bronze-Age field system ditches recorded elsewhere on the site and may have formed part of this. The fill contained 130 g of very crumbly middle Bronze-Age pottery (over 100 fragments) and some animal bone, a typical domestic rubbish assemblage.

Pit 1388 was situated *c.*8 m to the south-east of pit 1234. Its northern side had been truncated by a plough furrow but the remaining portion measured 1.27 m in diameter and 0.26 m in depth. The two fills were both very dark silts and the lower of these (1389) contained five sherds (38 g) from at least two middle Bronze-Age urns along with animal bone, suggesting that this is another rubbish pit.

Some 13.5 m to the south-east of the enclosure entrance were pit 1335 and layer 1338. The layer appeared to be composed of material ploughed out of the pit and spread to the south. A large amount of pottery was recovered from the deposit, which was a greenish grey clay silt and similar to the upper fill of the pit. Twenty-two sherds (1,221 g) were recovered, including a large flat base of a single flint-tempered vessel that appeared to have been trimmed deliberately.

One more large pit in this area also contained a fairly large finds assemblage and was disturbed by plough damage. Feature 1343 measured 2.5 m in diameter and 0.64 m in depth and had moderate to steep sides with a concave base. It contained three mid grey fills, the earliest of which contained 15 sherds (309 g) of middle Bronze-Age pottery.

Middle Bronze Age Field System A trackway and several large ditches dating to this period defined a field system on a north-west to south-east and north-east to south-west alignment. Ditches on this alignment were seen in four of the five excavated areas. There was no evidence in the excavated sections of the ditches for corresponding positive features associated with them (that is, banks), but it is possible that the boundaries they represent were visible for some time as earthworks after they had infilled and may have functioned as field boundaries after the deposition of the middle Bronze-Age pottery within them.

In the western part of the site, three perpendicular ditches extended the length and width of Area 4 (Fig. 8). Ditch 1607 was on a north-east to south-west alignment. It measured 3.6 m in width and 0.94 m in depth with steep straight sides and a flat base. It extended for *c.*18 m accross the south-east corner of the area. It was truncated by post-medieval ditch 1600 to the north. On a perpendicular alignment, ditch 1588 measured 1.9 m in width and 1 m in depth and had near-vertical sides and a stepped base. It extended for 47.5 m and continued beyond the northern limit of excavation. This ditch contained 12 sherds (81 g) of pottery of middle Bronze-Age date. A short length of ditch (1310) extending perpendicular from the eastern side of ditch 1588 measured 1.45 m in width and 0.5 m in depth. No dating material was recovered from its fill but its alignment and stratigraphic position along with the similarity of the dark brown clayey fills suggest that it was broadly contemporary with ditch 1588.

A short section of ditch to the east of ditch 1588 (1590) measuring *c.*4 m in length, 0.74 m in width and 0.34 m in depth was on a similar alignment to the field system. Two sherds of pottery recovered from the intervention were of middle Bronze-Age date.

In Area 1 (Fig. 9) and Area 2 (Fig. 6), three lengths of ditch (1591, 1198 and 1013) were on the same alignment as those described above and were also relatively wide (up to 1.3 m in width), though were shallower. Although no datable material was recovered from the fills, it is likely that these ditches form part of the same field system and were of a similar date.

The alignment of four ditches in the eastern part of Area 5 (Fig. 2) strongly suggests that they formed part of this Bronze-Age ditch system, although finds to corroborate this were scarce. Two ditches (1604 and 1605), 4.5 m apart, defined the edges of a north-west to south-east aligned trackway, which extended for *c.*60 m across the area. Although the westernmost ditch was shallower and narrower in the northern part of the area, this appears to be the result of truncation; where a greater portion of the ditch survived, the two parallel ditches were comparable in size, measuring 1.7 to 1.8 m in width and 0.6 to 0.8 m in depth. The fills were silty clays and in both ditches were described as having a greenish hue, perhaps suggesting the deposition of domestic waste with cess. The northern ends and other parts along the lengths were disturbed by medieval or post-medieval ploughing. Only a single sherd of shell-tempered pottery of probable Bronze-Age date was recovered from ditch 1605. Ditch 1615 extended to the south-west from the western side of ditch 1605 and is likely to have formed part of this field system. A single north-east to south-west aligned ditch in the western part of Area 5 (1595) may also form part of this field system, although it was not dated by artefacts. If the ditch does belong to the field system, it suggests that the field system ditches were laid out after ditch 1594, as it (1595) truncated 1594 and gully 1512. However, it is not known how it relates to the enclosure chronologically.

Ditch 1613 extended on a north-west to south-east alignment across the western part of Area 5 (Fig. 2). It was slightly sinuous in plan and an area of it was damaged by ploughing and its relationship with one other ditch was unclear due to this disturbance. The ditch extended for *c.*33 m and measured *c.*0.68 m in width and 0.24 m in depth and was filled by a single silty clay fill, from which 23 sherds (312 g) of middle Bronze-Age pottery were recovered. The overall alignment of this ditch was the same as that of the field system ditches and suggests that this layout post-dated the end of the use of the enclosure.

A series of parallel gullies were aligned across the site on a west-north-west to east-south-east alignment. One was identified in the far north-west of Area 5, where it was cut by middle Bronze-Age enclosure ditch 1608. In the east of the site the intersection between one of these gullies and trackway ditch 1604 was not clear. Although these gullies were not dated by finds and only one stratigraphic relationship survived it is possible that they represent agricultural activity that predated the construction of the enclosure, although it is impossible to be certain.

Roman

Grave 1003 was located to the north of the two Bronze-Age burials in Area 2 and comprised a circular-shaped feature with a concave profile and measuring 0.34 m in diameter and 0.1 m

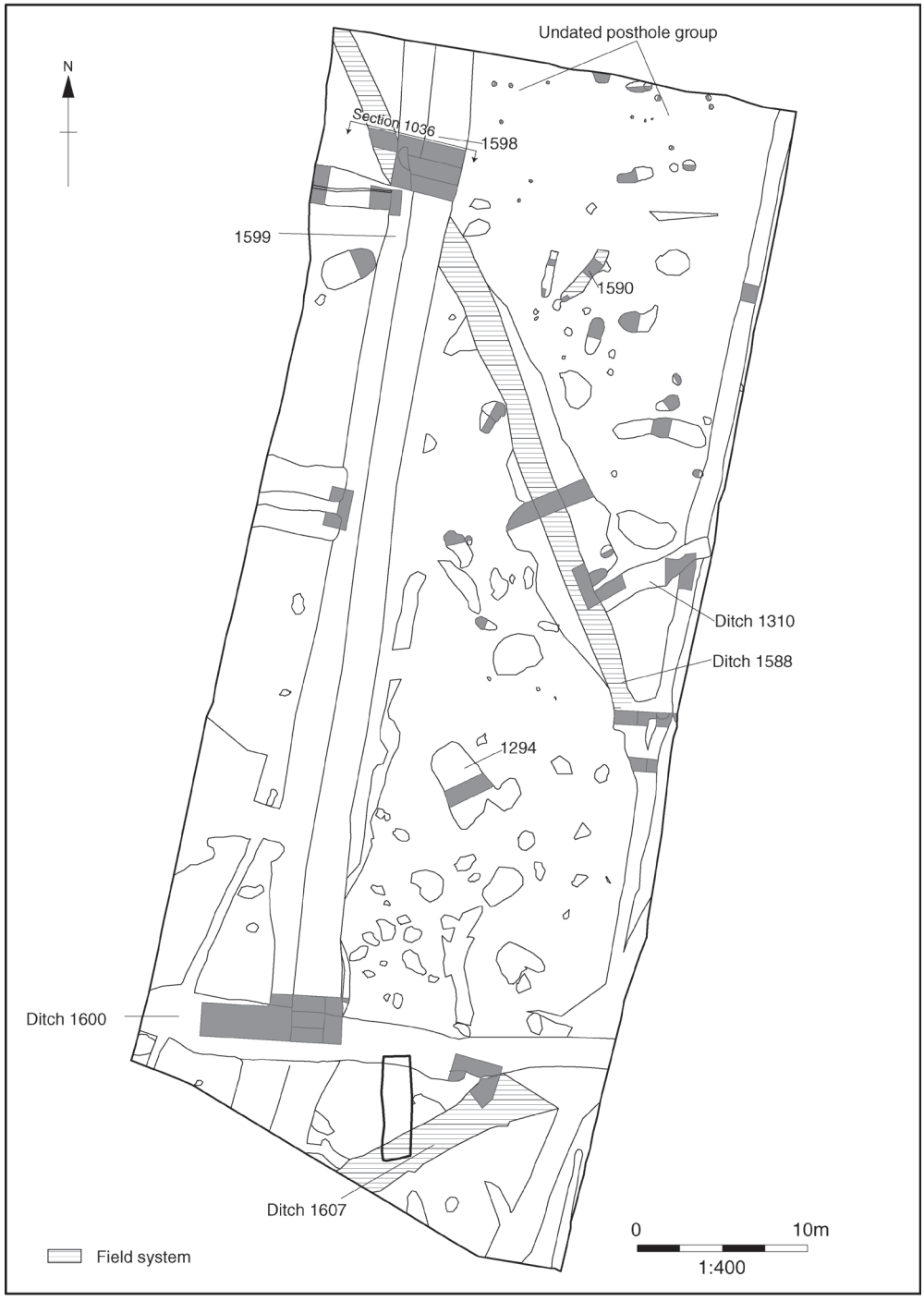

Fig. 8. Plan of Area 4.

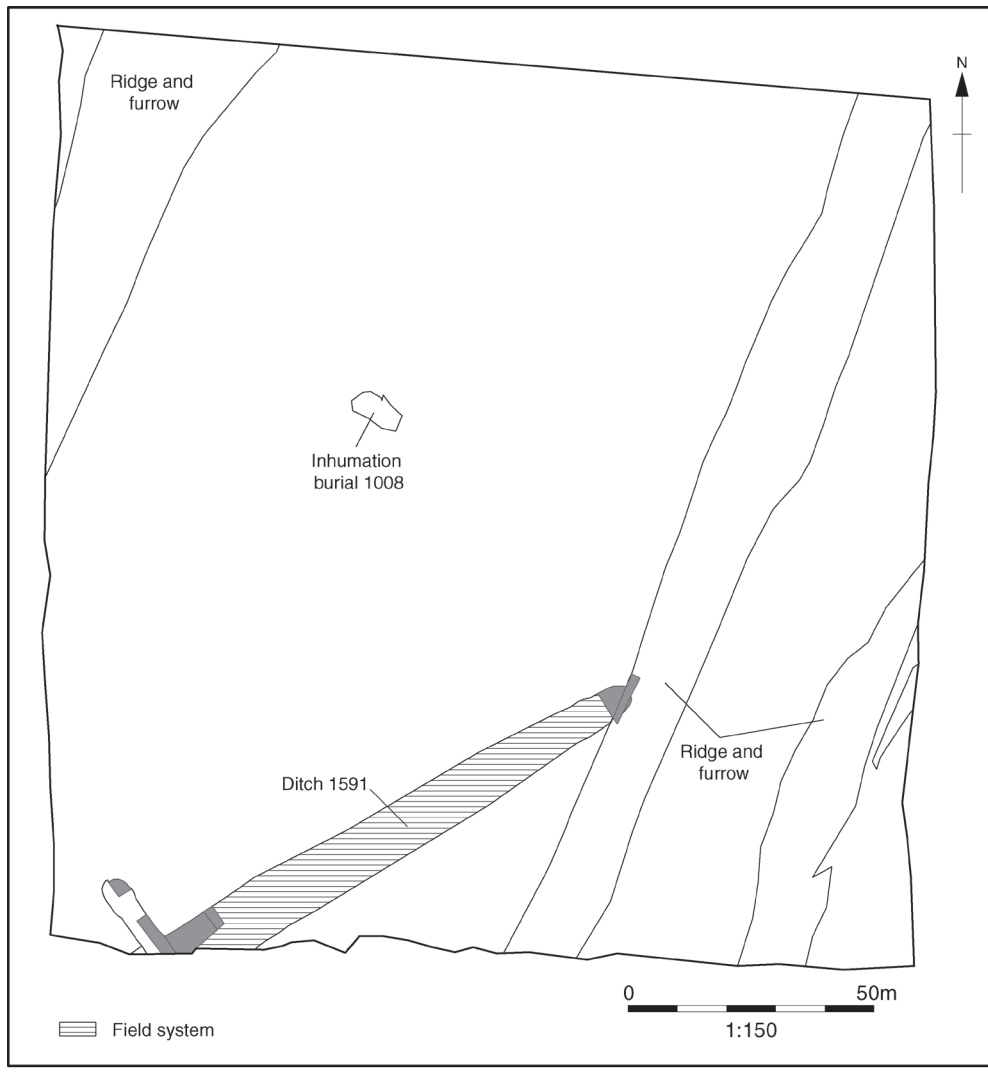

Fig. 9. Plan of Area 1.

in depth (Figs. 6 and 7). The dark blue/black charcoal rich fill (1004) contained 137.8 g of calcined bone, comprising the partial remains of an adult or older juvenile, probably male (see Webb, below). No pottery was recovered from the fill, but there were metal finds consisting of thirty iron hobnails and seven iron nails. A Roman date was confirmed by a radiocarbon date obtained from a sample of ash roundwood of cal AD 116–247 (91.3 per cent probability; 1834±29 BP, SUERC-55341 (GU35017)), placing the burial in the middle Roman period.

A single Roman inhumation grave (1010) was identified to the north-west of the cremation burials in Area 1 (Fig. 9). The burial was aligned north-west to south-east within a sub-rectangular cut (1010) with steep long sides and shallower sides at the head and foot ends. The cut measured 0.9 m in length, 0.4 m in width and 0.1 m in depth, and contained a disturbed or plough-damaged juvenile (skeleton 1008); only a small proportion of the bones of the individual remained (Fig. 7). The grave backfill (1009) was a soft mid grey brown clay.

No artefacts were recovered from it. A radiocarbon date obtained from a femoral fragment dated the burial to cal AD 126–254 (93.8 per cent probability; 1821±26 BP, SUERC-55335 (GU35014)). The grave was therefore broadly contemporary with the cremation burial.

Medieval to Early Post-Medieval

The site is criss-crossed by evidence of medieval to early post-medieval agriculture on a north-east to south-west and north-west to south-east alignment, which in several areas greatly disturbed the underlying archaeological remains (Fig. 2). Much of this ridge and furrow can still be seen on current aerial photographs. No other features of medieval date were identified and no artefacts of medieval date were recovered from the site.

Post-Medieval

Ditches of post-medieval date date traversed the site and were recorded in Area 5 and Area 4. These suggest a field system on a north-north-east to south-south-west and east-south-east to west-north-west alignment. In Area 4 a large north-north-east to south-south-west ditch (1598) and a recut (1599) were recorded. This substantial ditch extended across the length of Area 4 and was 2.6 m wide and at least 1.5 m deep (Fig. 5, section 1036). It contained three silty clay fills, the upper of which (1099) contained three sherds of Roman pottery of first- or second-century date, two sherds dating to the eighteenth century and a small amount of animal bone. The ditch is aligned parallel to an extant field boundary/track and map regression has shown that it represents an earlier field boundary seen on the second edition OS map (1900) but not on the first edition of 1883. This ditch was subsequently recut along the western edge and this later ditch had a much shallower and narrower profile, measuring 1.05 m wide and 1 m deep. Only residual pottery of Bronze-Age and first- or second-century date was recovered from the fill, the former almost certainly originating from the north-west to south-east aligned Bronze-Age ditch (1588) through which it cut. Other ditches on the same and on a perpendicular alignment were recorded across the site, although no finds were recovered from them.

Undated

Two features (1047 and 1051) located close to the group of cremation burials (Fig. 6) were also thought to be cremation burials upon excavation but no human remains were hand collected or recovered from the samples taken. Both cuts were similar in size to the nearby cremation burials and contained similar dark ashy fills. It is possible that these were cremation burials of Bronze-Age or Roman date, but that the remains of the burials themselves had been removed by ploughing.

An undated group of postholes was located in the northern part of Area 4. Four may have formed part of a circular structure and others the surviving parts of other structures or fence-lines. None contained datable material.

A small number of other excavated features were not dated and the fairly irregular shape of these suggests that they were tree-throw holes and other natural features. One of these, 1294 (Fig. 8), contained a radial bone tentatively identified as belonging to an aurochs (see Strid, below).

THE FLINT by MICHAEL DONNELLY

In total, 157 pieces of flint were recovered from site, but this included 82 natural pieces and 37 burnt unworked pieces (293 g) with only 38 genuine struck pieces (Table 2). The assemblage is of very low potential, but does appear to indicate prehistoric activity over a broad period of time. However, only one absolutely diagnostic piece was recovered and given the small size of the assemblage, the remaining period-restricted pieces must be viewed with caution.

Table 2. Worked flint

Category type	Total
Flake	20
Blade	2
Bladelet	1
Blade index	3/23 (13.04%)
Microburin	1
Irregular waste	5
Sieved chips	4
Core opposed platform blades	1
Core single platform flakes	1
Core keeled flakes	1
End scraper	1
Piercer	1
Total	38
No. burnt (excluding sieved chips)	2/34 (5.88%)
No. broken (excluding sieved chips)	1/34 (2.94%)
No. retouched (excluding sieved chips)	2/34 (5.88%)

The artefacts were catalogued according to OA South's standard system of broad artefact/debitage type,[41] general condition noted and dating was attempted where possible. During the initial analysis additional information on condition (rolled, abraded, fresh and degree of cortication), and state of the artefact (burnt, broken, or visibly utilised) was also recorded. Retouched pieces were classified according to standard morphological descriptions.[42] Technological attribute analysis included the recording of butt type,[43] termination type, flake type,[44] hammer mode,[45] and the presence of platform edge abrasion.

Raw Material and Condition

The flint was generally found to display a fresh or low level of edge damage with a very few moderately damaged pieces and just one displaying heavy damage indicative of disturbed material. Very few pieces were unpatinated. However, the majority had just low levels of patina, although 10 did have moderate and three had heavy patina. One iron-stained piece was recovered and is a good candidate for the earliest piece in the assemblage, being either early Mesolithic or possibly even Upper Palaeolithic in date.

The Assemblage

The flint assemblage includes a fairly disparate collection of flints ranging in date from the Mesolithic through to the Bronze Age. Many of the flints were clearly residual but there were

[41] P. Bradley, 'The Worked Flint', in Barclay and Halpin, *Barrow Hills, Radley*, pp. 211–27.

[42] For example: H. Bamford, *Briar Hill: Excavation 1974–1978*, Northampton Development Corporation Archaeological Monograph, 3 (1985), pp. 72–7; F. Healy, *The Anglo-Saxon Cemetery at Spong Hill, North Elmham. Part VI: Occupation in the Seventh to Second Millennia BC*, East Anglian Archaeology Monograph, 39 (1988), pp. 48–9; Bradley, 'The Worked Flint', in Barclay and Halpin, *Barrow Hills, Radley,* pp. 211–27.

[43] M.-L. Inizan et al., *Technology of Knapped Stone*, Cercle de Recherches et d'Etudes Préhistoriques, CNRS (1992).

[44] P. Harding, 'The Worked Flint', in J.C. Richards, *The Stonehenge Environs Project* (1990), pp. 213–25.

[45] K. Onhuma and C.A. Bergman, 'Experimental Studies in the Determination of Flake Mode', *Bulletin of the Institute of Archaeology*, 19 (1982), pp. 161–71.

several concentrations of material that may indicate assemblages contemporary with their contexts of recovery.

Pit 1353 contained just two pieces but both are probably Neolithic flint work. One keeled core was present and the remaining piece was a possible axe working flake with curved profile, faceted butt and multi-directional flaking pattern.

Samples 117, 118 and 119 from pit 1364 produced a blade, three quite squat flakes and a piercer on a thermal chunk. While the blade is clearly early, the flakes and the piercer are typical of middle to late Bronze-Age assemblages.

Pit 1388 contained ten pieces all from sample 111. Many were quite small and consisted of six trimming flakes and four pieces of fine knapping debris. Two of the flakes refitted and a third was a probable near-refit. Several are good candidates for axe working debris.

Pit 1529 also produced a small assemblage, mostly from sample 121. Here, a bladelet and some inner flakes were found alongside a large blade core weighing 254 g and measuring 98 mm by 52 mm by 50 mm. This last piece is likely to be of early Mesolithic or even possibly Upper Palaeolithic date. The core displays genuine opposed flaking rather than having a corrective secondary platform. The core is slightly iron stained with most removals cutting through the staining but some earlier flakes are clearly visible (Fig. 10, no. 1).

Two other finds merit discussion. Tree-throw hole 1148 yielded an elongated atypical proximal microburin, dating to the Mesolithic period (Fig. 10, no. 2). Cut 1343 from ditch 1610 produced a side and end scraper on a fairly squat and thick but short inner flake (Fig. 10, no. 3). This piece most likely dates to the late Neolithic or earlier Bronze Age.

Discussion

The assemblage confirms a limited Mesolithic presence at the site as indicated by the microburin. Microburins are restricted to the Mesolithic period but do not show the same variability in form as microliths to allow us to refine the date any further. The presence of some larger blades and a very large blade core could suggest that the blade technology present here is of early Mesolithic date, but it could equally be the case that there is very limited material from the Upper Palaeolithic, early Mesolithic and late Mesolithic. Possible Neolithic material is accounted for by the keeled core and some potential axe working debitage, although the latter material could also be Mesolithic in date. One large but fairly well made scraper could also be of this date but a Bronze-Age date cannot be entirely ruled out. Finally, a small component of the assemblage appears to be characteristic of the middle to later Bronze Age and includes a small group from pit 1364. These pieces include some unprepared squat hard-hammer flakes with prominent platform spurs and cortical or thermal platforms, as well as a piercer on a thermal chunk.

PREHISTORIC POTTERY by LISA BROWN

A total of 556 sherds of prehistoric pottery weighing 14,139 g was recovered from 45 contexts within 36 features and one layer. No more than 20 individual vessels were identified to type, although additional vessels of less certain form were represented by undiagnostic sherds. Most of the material came from seven pits and 25 ditches (or ditch segments), but a small component of this group was residual in Roman and post-Roman contexts. The entire assemblage belongs to the middle Bronze Age Deverel-Rimbury tradition of southern England (*c*.1600–1100 BC), and includes the range of vessel forms typically found on sites of this period – large bucket-shaped vessels (including fragments of two cremation urns) and smaller, finer barrel and globular urns.

The pottery was recorded on to an Access database. Fabrics were identified with the aid of a hand lens and binocular microscope at 20x and 10x magnification and classified using an alpha-numeric dominant inclusion code, further subdivided on size and frequency of

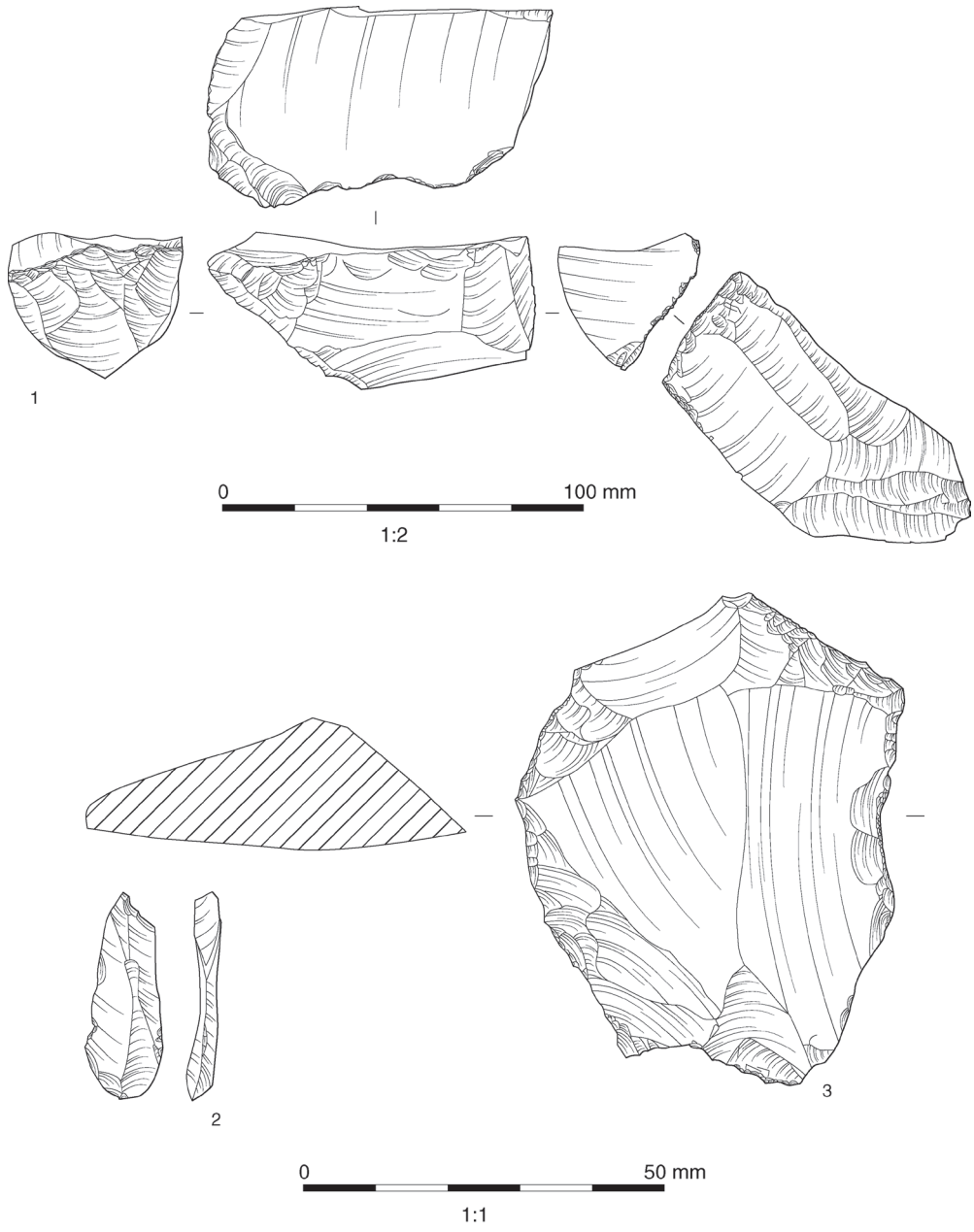

Fig. 10. Worked flint.

the inclusions, following the recommended guidelines of the Prehistoric Ceramics Research Group.[46] The pottery was recorded within context groups and all fragments counted and weighed. The following characteristics were entered in separate fields: fabric, form, surface

[46] *The Study of Later Prehistoric Pottery: General Policies and Guidelines for Analysis and Publication*, Prehistoric Ceramics Research Group Occasional Papers, 1 and 2 (1997).

treatment, decoration, degree of abrasion, type and position of residue (carbonised material, soot, limescale), and date. Degrees of abrasion were based on three broad categories: (3) high – surface survival minimum, breaks heavily eroded; (2) moderate – surface somewhat preserved but clearly worn; (1) slight – little indication of wear apparent.

Some of the pottery was recovered from deposits created by ploughing or other later disturbance of prehistoric features, which resulted in the displacement of sherds. Where possible, refitting sherds from the original features and associated disturbed contexts were identified in order to attempt to establish original degrees of completeness of vessels at the time of deposition.

Condition

A relatively high average sherd (ASW) weight of 25 g across the entire assemblage testifies to the large size of many fragments. However, this also reflects the fact that several of the fragmented vessels recovered were large and thick-walled, two of them associated with cremation burials. Two pits, 1300 and 1364, also contained particularly large sherds (see Table 1). Some 64 sherds were assigned an abrasion factor of 1 (slight abrasion). At almost 9 per cent of the total, this proportion of unabraded material is relatively uncommon for a prehistoric assemblage, but again reflects the presence of burial urns. Other vessels, while coming from disturbed contexts, appear to have been deliberate deposits of complete or near-complete vessels subsequently fragmented by pressure of overburden and/or ploughing.

Fabric, Form and Decoration

Eight fabrics within four ware groups were identified. These are described below:

Predominantly flint inclusions

FL1 Lightly sanded, slightly micaceous clay additionally containing common ferrous pellets and occasional unwedged argillaceous lumps. Tempered with common ill-assorted calcined white/grey flint pieces measuring 0.5–5 mm in size.

FL2 Clay matrix similar to FL1 but may have a slightly soapy texture and flint temper is better sorted and somewhat smaller at 0.5–3 mm. The distinction between FL1 and FL2 is not always clear and the two are on a continuum.

FL3 Very lightly sanded, slightly micaceous clay incorporating sparse ferrous pellets and common to abundant well-sorted white/grey flint pieces typically 0.5–2 mm in size, generally <2 mm. Surfaces generally smoothed or burnished and vessels thin-walled.

FL4 Very fine micaceous sand, rare ferrous pellets, spare to moderate scatter of small white/grey flint pieces, generally 2mm and smaller. The texture can be somewhat soapy and surfaces are generally at least smoothed, sometimes burnished.

Predominantly quartz sand inclusions

QU1 Moderately fine, abundant rounded quartz sand and visible glauconite pellets. Fires to uniform dark grey throughout. Five sherds only (representing two individual vessels).

QU2 Abundant rounded quartz sand of medium grade, and common ferrous pellets. Date uncertain, possibly later prehistoric or Roman.

Predominantly shelly inclusions

SH1 Fine smooth clay with minimal sand content, incorporating common platey fossil shell. Single sherd only.

Predominantly grog inclusions

G1 Smooth fine clay with ferrous pellets, small grey/brown grog lumps and sparse calcined flint pieces <2 mm. Single 2 g sherd only.

Flint-tempered fabrics form a full 99 per cent of the total site assemblage (Table 3). This dominant group reflects the local underlying geology of the site, which is situated just to the north of chalk scarp that runs along the Berkshire Downs. Most or all of the pottery was likely to have been produced close to the site utilising locally procured clay and flint nodules, which would have been burnt, then pounded to the required grade for temper.

Other fabrics were present in quantities that together amounted to only about 1 per cent of the total prehistoric assemblage. These consist of four conjoining basal sherds (37 g) in glauconitic sandy ware QU1 from pit 1364. They belong to a small, thin-walled jar, possibly a middle Bronze-Age globular or barrel-shaped urn. A featureless 2 g sherd in a coarser sandy fabric from ditch 1266 (group 1598) cannot be accurately dated. A single featureless 17 g highly abraded shell-tempered sherd (SH1) from trackway ditch 1482 (context 1478, group 1605) cannot be dated or stylistically classified, but the fabric is typical of middle Bronze Age shelly clays found at sites in the upper Thames valley, so it may represent an import. An equally undistinguished grog-tempered sherd (2 g) from pit 1364 (context 1384) is also undated. Both could belong to middle Bronze-Age or even earlier vessels, but nothing more can be determined from these single occurrences.

The dominant flint-tempered assemblage has been divided, somewhat subjectively, into four sub-groups which exhibit some degree of overlap. They all contain naturally occurring well-rounded quartz sand within a sparsely micaceous clay matrix, with lesser or greater quantities of black ferrous pellets, suggesting that the raw materials were procured from a narrow, and probably near-local, source of potting clay. To this was added calcined, crushed flint in grades and quantities appropriate to the vessel size and function, producing something of a fabric spectrum rather than objectively differentiated categories. Unsurprisingly, the coarsest and most poorly sorted fillers were used in the production of the large bucket urns (including the cremation vessels), and the finer, well-graded material for smaller and more delicately decorated vessels.

The coarsest variety (FL1) dominates by a large margin (Table 3). The high sherd count and weight figures for FL1 are in part attributable to the fact that the most common forms recovered, cordoned bucket urns (including two cremation urns), are very large and heavy. These had been reduced to numerous sherds by plough damage and compression of overburden. If attribution of fragments to individual vessels from a very few features is taken into account, it is clear that the 78 per cent of sherd count and 85 per cent of total weight figures for fabric FL1 reflects skewing by a very few, very large and highly fragmented vessels.

Table 3. Prehistoric pottery – fabric proportions

FABRIC	NOSH	WT (g)	% NOSH	% WT
FL	1	1	<1	<1
FL1	435	11990	78	85
FL2	56	1499	10	10
FL3	36	360	7	3
FL4	20	218	4	1
G1	1	2	<1	<1
QU1	5	41	<1	<1
QU2	1	11	<1	<1
SH1	1	17	<1	<1
TOTAL	556	14139		

Fabric FL2 is a somewhat finer version of FL1, incorporating slightly smaller and well-sorted flint pieces. The clay is also slightly soapy in texture, possibly suggesting the addition of organic matter for this particular recipe. There is a degree of overlap between FL2 and FL1 and the distinction between them is somewhat subjective. However, a correlation between sherds designated FL2 and forms shows that, while not being period-specific, the variation reflects more care in grading the flint temper to be used for slightly smaller vessels, a few of which are decorated with incised linear motifs, also seen (but more commonly) within the even finer FL3 and FL4 fabric groups.

The only handled vessel in the assemblage (Fig. 12, no. 13) was made in fabric FL2. Vertical bar-shaped handles are not particularly common within the Deverel-Rimbury tradition, but examples have been found fairly widely, for example at Park Brow, Itford Hill in Sussex and West Meon in Hampshire.[47] Unfortunately, in the Monks Farm example only the handle survives so the specific form is unknown.

Fabrics FL3 and FL4 contain much finer and well-sorted flint inclusions than FL1 and FL2 and surfaces of vessels produced in these fabrics are generally well-finished, either by extensive smoothing or, more rarely, burnishing. These fabrics invariably correlate with the fineware component of the assemblage (barrel and globular urns and linear decorated sherds) in those few cases where forms are classifiable. These are characterised by thin-walled vessels and incised or shallow-tooled linear decoration, although the fragmentary nature of most examples precludes form classification. Several rim fragments are slightly out-flaring, and carinated shoulders are sometimes enhanced with finger-tipping. A partial profile of at least one decorated globular urn was found in ditch 1553 (Fig. 12, no. 14) and several others are represented only by fragments of rims or decorated body sherds.

The range of vessel forms produced and utilised at this settlement includes the three broad classes of Deverel-Rimbury urns (bucket, barrel and globular) described by Ellison and summarised by Gibson.[48] Bucket urns, often associated with cremation burials, are well-recognised nationally and regionally in the Thames valley and Kennet valley, for example at Sulhamstead and at Knight's Farm.[49] Bucket urns have also been found at a settlement site at Bray and in river deposits at Brimpton, Berks.[50] However, numbers of classifiable vessels from Monks Farm are very small – a maximum of 20 individual vessels were identified, including the two cremation urns. With such a small body of data the scope for inter-site comparisons of vessel range and function is limited.

The Pottery in Context

The quantities of pottery by feature are summarised in Table 1.

Pottery from Cremation Burials Fragments of two vessels in fabric FL1 associated with cremation graves 1005 and 1011. Both vessels were probably bucket urns but were too

[47] G.R. Wolseley et al., 'Prehistoric and Roman Settlements on Park Brow', *Archaeologia*, 76 (1927), figs. 2 and 2a; M. Seager Thomas, 'From Potsherds to People. Sussex Prehistoric Pottery: Collared Urns to Post Deverel-Rimbury', *Sussex Archaeological Collections*, 146 (2008), fig. 6, no. 16; E.R. Lewis and G. Walker, 'A Middle Bronze Age Site at Westbury, West Meon, Hampshire', *Proceedings of the Hampshire Field Club and Archaeological Society*, 33 (1977), fig. 3, no. 3.

[48] I. Hodder et al. (eds.), *Pattern of the Past: Studies in Honour of David Clarke* (1981), pp. 413–38; A. Gibson, *Prehistoric Pottery in Britain and Ireland* (2002), p. 105.

[49] S.J. Lobb, 'Excavations at Shortheath Lane, Abbotts Farm, Sulhamstead', in C.A. Butterworth and S.J. Lobb, *Excavations in the Burghfield Area, Berkshire: Developments in the Bronze Age and Saxon Landscapes*, Wessex Archaeology Report, 1 (1992), fig. 25, nos. 5 and 7; R.J. Bradley et al., 'Two Late Bronze Age Settlements on the Kennet Gravels: Excavations at Aldermaston Wharf and Knight's Farm, Burghfield, Berkshire', *Proceedings of the Prehistoric Society*, 46 (1980), fig. 32, no. 39c.

[50] Barnes and Cleal, 'Neolithic and Bronze Age Settlement at Weir Bank Stud Farm Bray', pp. 1–51; S.J. Lobb, 'Excavations and Observations of Bronze Age and Saxon Deposits at Brimpton, 1978–9', *Berkshire Archaeological Journal*, 73 (1986–90), fig. 2, nos. 4–5.

incomplete to describe their precise form. The use of domestic vessels, in this case large storage jars, in a cemetery setting is a characteristic of Deverel-Rimbury material that distinguishes it from the earlier phases of the Bronze Age when some vessel forms were specifically produced for burial use. Radiocarbon dates obtained on cremated bone from graves 1005 and 1011 place them in a fairly tight time frame within the latest phase of the middle Bronze Age. The cremation burials presumably formed a burial ground for the settlement represented by the nearby ditches and pits.

The highly disturbed feature 1011 contained only three undiagnostic body sherds weighing 19 g. The 32 sherds (1,258 g), probably from a single vessel from burial 1005, included a fragment decorated with a fingertip-impressed cordon (Fig. 12, no. 15). The base was missing, suggesting either that an incomplete vessel or an arrangement of sherds had been placed around the cremated bone or that the vessel had been inverted over the bone and the lower part of the vessel subsequently removed by ploughing. Both of these practices are recognised features of Deverel-Rimbury cremation burials. The practice of inversion was notably reported at the urn field at Sunbury Common (Ashford), Middlesex, where few bases survived due to later disturbance.[51] Burials of this date were vulnerable to later disturbance as they were generally placed directly into the ground in contrast to the early Bronze-Age practice which involved a 'vertical axis above and below ground';[52] that is, a pit dug into the ground to receive the burial, which was then covered by a mound. On the other hand, many Deverel-Rimbury cemeteries have been preserved owing to the fact that the agricultural landscapes of which they were an integral component were abandoned by the end of the second millennium BC.

Pit Assemblages Six pits or pit-like features, some possibly postholes (1025, 1234, 1300, 1364, 1388 and 1529), together produced 272 sherds (8,040 g) of middle Bronze-Age pottery, almost half the site total. Only pit 1364, however, yielded a substantial quantity of material, at 218 sherds weighing 6,772g, amounting to some 80 per cent of the pit total. Pit 1300 contained 25 sherds/993 g but other pit assemblages numbered under a dozen sherds.

Pit/posthole 1025 yielded only nine very abraded undecorated body sherds weighing 32 g, all in FL1, of which little can be determined other than that they belonged to a large storage jar, possibly a bucket urn. The pottery was associated with a quernstone fragment. Pit 1234 contained only three sherds (11 g) of a simple, slightly out-flaring rim in the finer ware FL3, smoothed on its inner surface, and probably belonging to a globular urn.

The five sherds (38 g) from pit 1388 derived from a minimum of two vessels. Three sherds in fabric FL2 would have been from a relatively coarse form but two sherds in fabric FL3 probably represent a barrel urn with a simple, slightly inturning rim (Fig. 12, no. 11).

Pit 1529 yielded 10 sherds (124 g) from at least four vessels – in fabrics FL1, FL2, FL3 and FL4. All are body sherds apart from a simple upright rim in FL3, but a well-smoothed sherd in the very finest flint-tempered ware (FL4) clearly came from a thin-walled finer vessel.

The three fills of pit 1300 contained 25 sherds weighing 993 g and included the full range of flint-tempered fabrics, only two sherds of which are of the most common variety, FL1. A large sherd (84 g) in this fabric came from a cordoned bucket urn. Two well-finished, thin-walled body sherds in FL2 bore traces of composite decoration consisting of lightly incised lines and fingernail impressions. Similar decoration was visible on a sherd in FL3 (Fig. 12, no. 10) and another sherd in this fabric is decorated with a small applied boss.

Pit 1364 was by far the most productive, yielding 218 sherds weighing 6,772 g. The pit appears to have been located at the entrance to a ditched enclosure and the presence of a large

[51] E. Roberts, 'On an Ancient British Cemetery on Sunbury Common at Ashford, Middlesex', *Journal of the British Archaeological Association*, 27 (1871), pp. 449–52.

[52] J.C. Barrett et al., *Landscape, Monuments and Society: The Prehistory of Cranborne Chase* (1991).

quantity of pottery, especially a large and intricately decorated bucket urn, along with finer decorated material, suggest ritual deposition.

Some 181 sherds (6,103 g), which constitutes 90 per cent by weight of the total pit 1364 assemblage, represent a single vessel – a large, highly decorated bucket urn (Fig. 11, no. 1). The decoration consists of slash marks along the rim, on the mid-section cordon, and in a diagonal arrangement down the wall of the vessel. It was certainly a deliberate deposit and may have been complete, either placed intact in the feature or, as in some cremation burials, as an arrangement of fragments. Sherds of this vessel were spread through fills 1363, 1382, 1383 and 1384 but the pit had been disturbed by later activity, especially by a plough furrow (1350), from which several additional sherds were recovered.

In addition to the bucket urn, there is a smaller vessel with a simple inturning rim in FL1, probably a barrel urn (Fig. 11, no. 2). Additional fragments of several finer vessels in fabrics FL2, FL3 and FL4 were identified. These include a jar with fingertip decorated rim (Fig. 11, no. 3) in FL2, sherds from at least three thin-walled vessels, probably globular urns, with incised linear decoration in FL3 (Figs. 11, no. 4; 12, no. 6) and a small jar with fingertip decoration on a carinated shoulder, also in FL3. Several sherds in the finest fabric (FL4) have smoothed or burnished surfaces and some are decorated with the typical incised linear motif (Fig. 12, no. 7). This pit also produced the only sherd in grog-tempered ware and one of the few sandy ware sherds (QU1), but their significance in this context is unclear due to the high levels of disturbance to the feature.

A collection of sherds found in the fill of plough furrow 1350 clearly derived from the upper fills of pit 1364, including a dozen sherds belonging to the decorated bucket urn (Fig. 11, no. 1). Several finer sherds decorated with incised lines probably also belonged to illustrated vessels from the pit. A small barrel urn with an applied boss in coarse ware FL1 was also recovered from this feature (Fig. 12, no. 8).

Ditch and Gully Assemblages Only 149 sherds (2,191 g) were found in the fills of 27 ditch and gully segments. The relatively high ASW of 15 g for the ditch assemblage is interesting as ditches typically have a ceramic signature of low weight, abraded material that has entered ditch fill through erosion or other low energy processes, with deliberate placement of selected material a less common occurrence. In fact, the high ASW can be accounted for largely by the presence of several fragments of thick-walled cordoned, bucket urns in fabric FL1. Just over half of all sherds from ditch deposits here show high degrees of abrasion but there are examples of very fresh sherds also, notably in ditches 1343, 1534 and 1060. However, there is nothing particularly distinctive about these sherds, at least insufficient evidence to suggest that any are special deposits. There is no evidence to suggest that any of this material should be viewed as anything other than domestic residue, despite the presence of funerary features on the site.

All the flint-tempered fabrics and a number of vessel forms are represented in the ditch assemblages, with no indication of selection for deposition or of catchments for particular activity areas. The cordoned bucket urn fragments came from ditches 1351 and 1385 and another likely bucket urn fragment with fingernail-impressed decoration on a slight shoulder was recovered from ditch 1343 (Fig. 12, no. 9). Otherwise noteworthy sherds amongst the largely undiagnostic collections are the base of a small vessel in FL2 from ditch 1339 (Fig 12, no. 12), a small strap handle in the same fabric from ditch 1540 (Fig. 12, no. 13). The partial upper section of a small globular urn in FL4 decorated with incised infilled triangles came from ditch 1553 (Fig. 12, no. 14).

Displaced Complete Base A complete base of a large vessel (1332), probably a bucket urn, in fabric FL1, was found lying within layer 1338, which overlay the natural gravel. The base may have been dislodged from a vessel and ploughed out of an underlying, but severely truncated, feature, although no evidence for any such feature was detected. The base is complete and

possibly deliberately shaped or trimmed for reuse as a lid or plate of some sort, but this is uncertain.

Discussion

The middle Bronze Age in southern England was a period of social transformation characterised in some areas by an increase in the permanent nature of settlement activity and the division of the landscape through the construction of field systems and land boundaries. The locating of cemeteries within this bounded landscape is an important element in this transformation, and the burials and burial groups no doubt played important roles in linking the living settlement to the dead and to the land.

Pottery was intimately connected to the expression of these relationships. The cremated bones of the dead were often enclosed within or placed below a complete vessel, or were surrounded by fragments of broken pots. Pottery used in middle Bronze-Age burial contexts appears not to have been specifically produced for use in funerary rites, and the use of the term 'urn' is therefore currently contested by some, as it suggests a funerary context. Nonetheless, the terms 'bucket urn, barrel urn and globular urn' remain in common parlance. The two cremation burials at Monks Farm were evidently associated with cordoned bucket urns, although these were so incomplete that the original degree of completeness and placement of the vessels is uncertain.

Bucket urns were probably designed and most commonly utilised as storage vessels as their size and weight would have made them unsuitable for frequent movement, and they are often found in settings that indicate a non-funerary association. Several bucket urn sherds, some with a cordon, were found in pits and ditches at Monks Farm, in circumstances that clearly indicate they were not deposited complete. It can be assumed that the vessels either broke during use or were deliberately broken for some purpose before they ended up in the fills of these features. This appears to be the general pattern for the, albeit small, assemblage recovered from this site but there is one significant exception to this – the considerable portion of, or perhaps originally complete decorated bucket urn from pit 1364. The presence of this pot, and probably of the associated variety of other sherds, in the pit was the result of a deliberate act of selection and deposition which would have had precise meaning for the occupants of the settlement. The pit either cut or was integral with the terminal of ditch 1609, which appeared to form one side of an entrance to an enclosure (although relationships are not certain owing to the level of intercutting). The act of depositing this collection of distinctive pottery at what may have been a key location in the settlement landscape could be compared with the contemporary practice of positioning burials close to boundaries, thereby linking identity to place. In this sense, the pottery may have been some sort of foundation deposit. The other side of the enclosure may have been marked by pit/posthole 1529, but the small pottery assemblage from this feature was unremarkable by comparison.

Catalogue of Illustrated Pottery (Figs. 11–12)

1. Cordoned bucket urn. Fabric FL1. Expanded rim and cordon decorated with slash marks, which also run diagonally down the body. Between rim and cordon pit 1364 (contexts 1363, 1382, 1383, 1384) and plough furrow 1349 (context 1350).
2. Small barrel urn. Fabric FL1. Pit 1364 (context 1363).
3. Simple rim barrel urn with fingertip-impressed decoration. Pit 1364 (context 1383).
4. Part of a globular or barrel urn decorated with shallow-tooled diagonal lines. Fabric FL3. Pit 1364 (context 1363).
5. Small urn fragment decorated with incised diagonal lines. Fabric FL3. Pit 1364 (context 1383).
6. Sherds from small urn decorated with incised lines. Fabric FL3. Pit 1364 (context 1363).

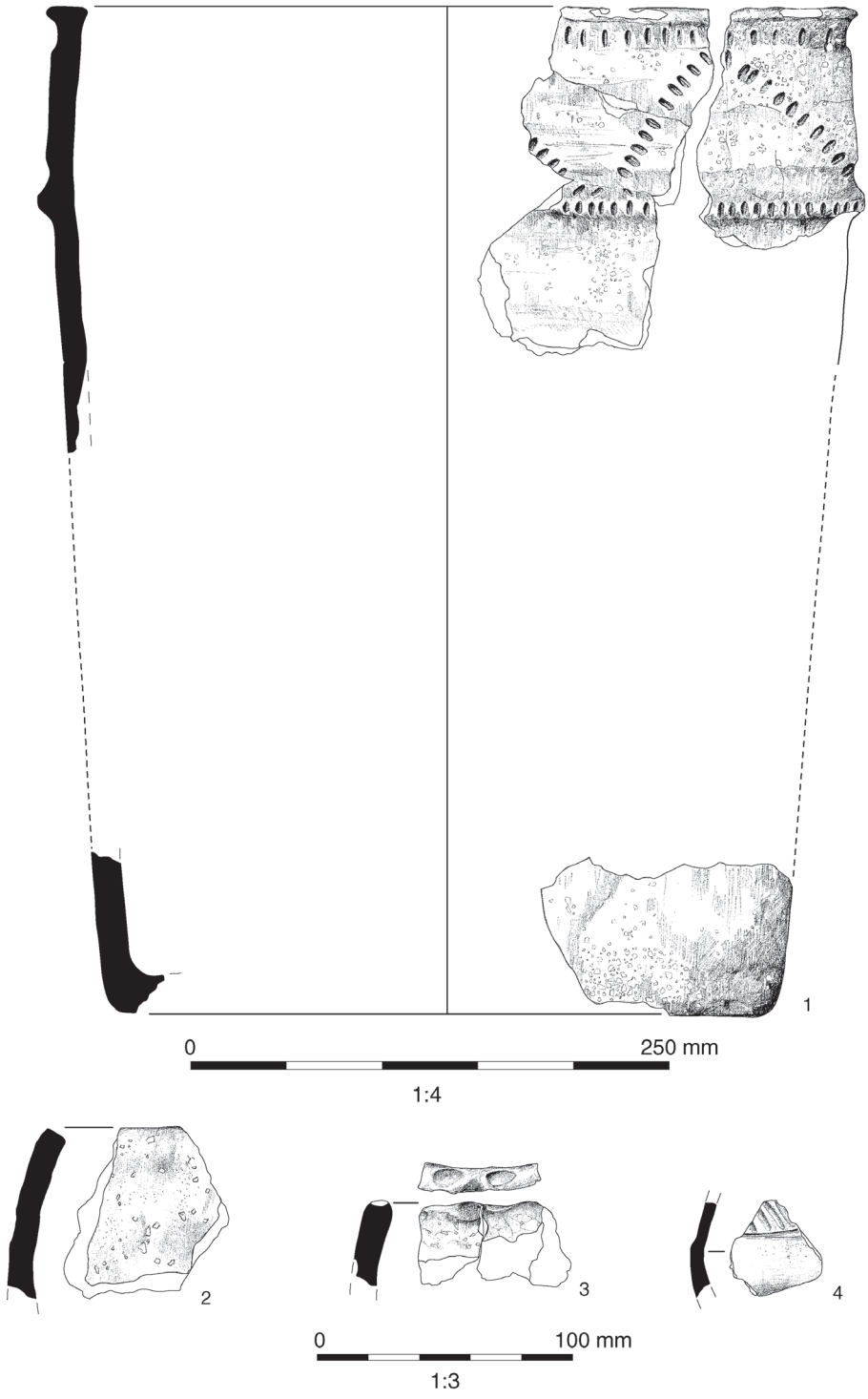

Fig. 11. Pottery, catalogue nos. 1–4.

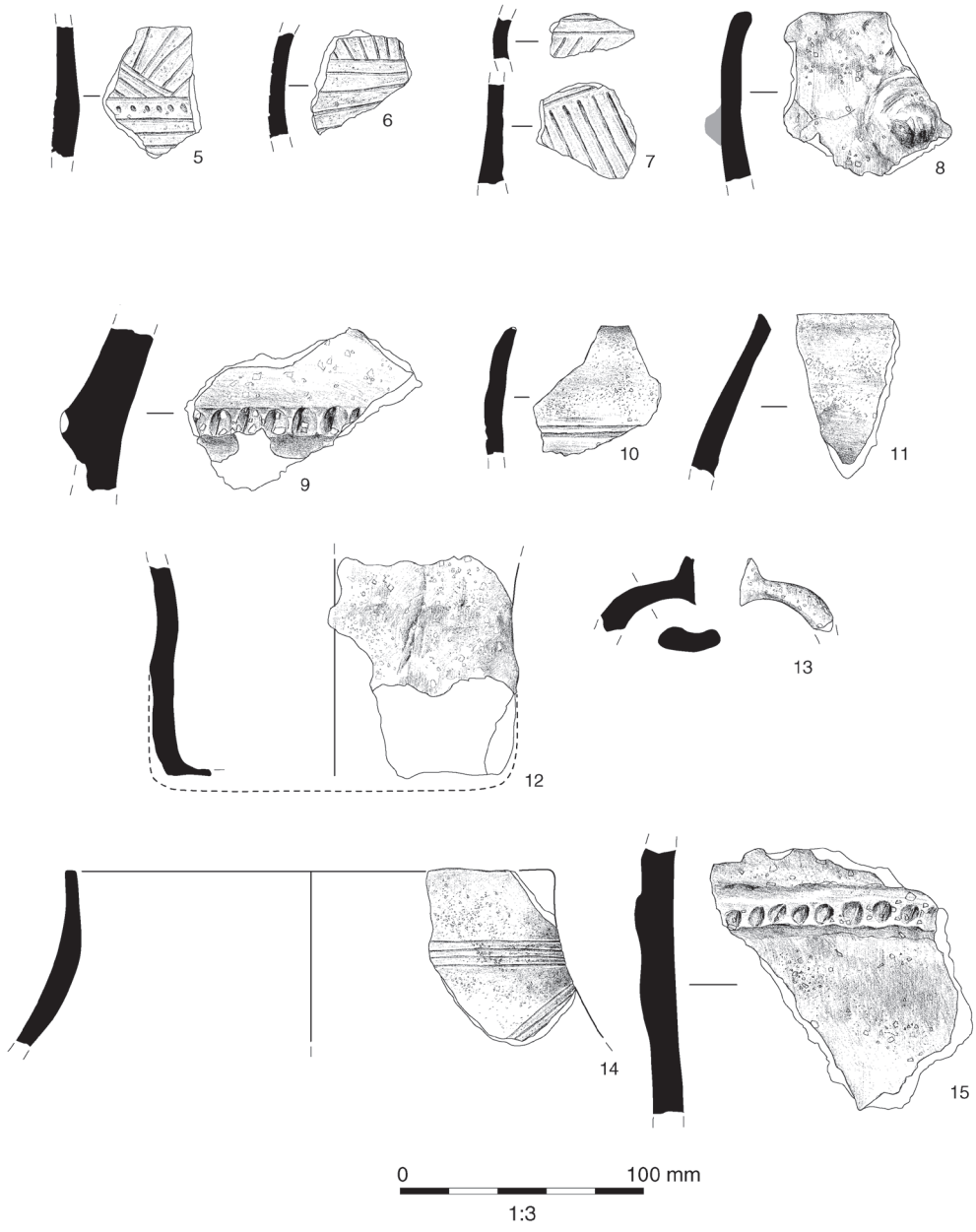

Fig. 12. Pottery, catalogue nos. 5–15.

7. Burnished sherd decorated with incised lines. Fabric FL4. Pit 1364 (context 1384).
8. Small bucket urn with applied boss. Fabric FL1. Furrow 1349 (context 1350). Probably originally from pit 1364.
9. Large urn with fingertip-impressed decoration on shoulder. Fabric FL1. Ditch 1343 (context 1346).
10. Thin-walled vessel decorated with lightly incised lines. Fabric FL3. Pit 1300 (context 1394).
11. Small barrel urn rim. Fabric FL3. Pit 1388 (context 1389).
12. Base. Fabric FL2. Smoothed inner surfaces. Ditch 1339 (context 1340).
13. Strap handle from unclassified vessel. Fabric FL2. Ditch 1540 (context 1542).
14. Globular urn decorated with lightly incised infilled triangular decoration Fabric FL4. Ditch 1553 (context 1555).
15. Cordoned bucket urn with fingertip-impressed decoration on cordon. Fabric FL1. Cremation burial 1005 (context 1006).

ROMAN POTTERY by KATE BRADY

Nine sherds weighing 179 g were recovered from the site. The small assemblage spanned the first to fourth centuries, although there appeared to be a first- to second-century emphasis, owing to the absence of exclusively late Roman material. The earliest sherds were two refitting sherds of Savernake ware dating from the mid first to late second century. Necked jars were available in sandy grey wares; one sherd from a narrow necked jar had a slightly bifid rim, suggesting a second century or later date. A mortarium in Oxfordshire white ware similarly dated to the second century onwards. A single sherd of South Gaulish samian ware was of first-century date.

With a mean sherd weight of 20 g, the condition of the pottery was relatively good, although this encompasses a wide range of values, from 1 g for the samian sherd to 58 g for the mortarium fragment. The assemblage is consistent with one whose appearance in trackway and boundary features is incidental, maybe having been redeposited a number of times from its original place of discard.

FIRED CLAY by CYNTHIA POOLE

A single fragment (9 g) of fired clay was recovered from the fill of pit 1388 dated to the middle Bronze Age. It is made in smooth micaceous fine silty clay containing small red clay pellets and has fired to mottled red, buff and grey colours. The fabric is typical of local clay deposits available in this area of the Thames valley. It measured 10–12 mm thick and had a single moulded flat or slightly dished surface with the ends of possible finger marks and a slight lip or raised ridge to one side. It does not obviously form part of any type of oven or hearth furniture, but is more likely to derive from the interior wall or floor lining of an oven or possibly the floor of a hearth.

THE SADDLE QUERN by RUTH SHAFFREY

A single saddle quern was the only item of worked stone found on the site. It came from middle Bronze-Age pit 1025. It is damaged and lacks original edges, leaving the identification uncertain, although given the date, it is unlikely to be anything but a saddle quern. It is made of a ferruginous gritty sandstone known as Culham Grit. Culham Grit is a type of Greensand that outcrops in a small area near the village of Culham, about 10 km to the north-east. It is best known for its use for saddle querns during the middle Iron Age at sites such as Yarnton,

Gill Mill, and Claydon Pike.[53] It was never exploited at anything more than a very local level but this find pushes its known use back into the middle Bronze Age.

Catalogue of Worked Stone

1. Saddle quern fragment. Culham Grit. Flat parallel-faced fragment with possible spaced pecking on one side. Shallow flat-bottomed basin. 51 mm thick × >300 mm diameter. Context 1026.

WORKED BONE by IAN R SCOTT

There are two pieces of worked bone both recovered from Bronze-Age contexts. An incomplete bone point (L: 56 mm; W: 7 mm) cut from a small long bone and polished or worn was retrieved from a sample (117) from pit 1364. A small annular bead or spacer (D: 5.5 mm; L: 3 mm), square or near square in section, was collected with sample 113 from pit 1300.

METAL FINDS by IAN R SCOTT

There are 39 metal finds but these included 30 hobnails and 7 nails from Roman cremation burial 1003. The hobnails are nearly all complete, although a few are quite badly eroded. There are also four small hobnail stem fragments. The same context produced seven small nails with flat near circular heads, comprising two complete nails (L: 39 mm and 43 mm), two incomplete nails, and two nail heads, and a single small stem fragment.

Two further iron objects were recovered from a medieval or later plough furrow 1131. These are a thin tapering rod or bar apparently flattened towards one end, possibly part of an awl or other tool, and a detached iron knob or head of lozenge cross section, possibly from a pin or similar or the head of a soldering iron. Neither is closely datable.

HUMAN REMAINS by HELEN WEBB

The human remains submitted for osteological analysis comprised three cremation deposits, two dated to the late middle Bronze Age (1006 and 1012) and one to the second century AD (1004), and an inhumation burial (1008) also dated to the second century AD. Deposit 1006 was in a highly fragmented cordoned urn within grave 1005. Deposit 1012 was unurned within grave 1011. Roman-period cremation deposit 1004 within grave 1003 was also unurned. Multiple iron nails (including hobnails) were present in deposit 1004 (grave 1003).

All three cremation graves were earth-cut, roughly circular and shallow, with depths ranging from just 0.06 m to 0.12 m. The shallowness of the pits may be representative of the original depths of these features, although it is highly likely that they had suffered truncation through ploughing. This may also be inferred by the high fragmentation and incompleteness of the urn containing cremation deposit 1006. The graves were close to one another and adjacent to a Bronze-Age field system ditch. Deposits 1004 and 1012 were cut into layer 1076, which overlay part of ditch 1068. The fills of the pits were soft, dark grey-black, ashy silt-clays. It should be noted that two other circular pits (1047 and 1051), similar in dimension and fill

[53] F. Roe, 'Worked Stone', in G. Hey et al., *Yarnton: Iron Age and Romano-British Settlement and Landscape, Results of Excavations, 1990–1998*, Thames Valley Landscapes Monograph, 35 (2011), p. 439; R. Shaffrey, 'Other Worked Stone Objects', in P. Booth and A. Simmonds, *Later Prehistoric Landscape and Roman Nucleated Settlement in the Lower Windrush Valley at Gill Mill, near Witney, Oxfordshire*, Thames Valley Landscape Monograph, forthcoming; F. Roe, 'Worked Stone', in D. Miles et al., *Iron Age and Roman Settlement in the Upper Thames Valley: Excavations at Claydon Pike and Other Sites within the Cotswold Water Park*, Thames Valley Landscapes Monograph, 26 (2007), CD section, 3.8.

type, were located in the close vicinity of these cremation deposits, although no burnt bone was recovered from them.

Skeleton 1008 had been buried in a north-west to south-east aligned, sub-rectangular, earth-cut grave. The skeleton, which was positioned supine, was very incomplete having been heavily disturbed. There was no evidence for a coffin, nor were there any grave goods.

Methods

Recovery and processing of both the inhumation and cremation deposits was undertaken in accordance with published guidelines.[54] The cremation deposits were subject to whole-earth recovery. It should be noted that while spit excavation of urned cremation burials is recommended, this was not possible in the case of 1006 because the urn was highly fragmented. Following excavation, the cremation deposits were subject to wet sieving. This involved passing the material through varying sieve sizes, which sorted the cremated bone into >10 mm, 10–4 mm and 4–2 mm fraction sizes. This process allows the degree of fragmentation to be explored. The cremated bone from the >10 mm and 10–4 mm fractions was sorted from the extraneous material (grit). However, it was not viable to carry this out for the smaller fractions. Instead, the smaller fractions were scanned for identifiable fragments. Following this, a 10 g sample of each was sorted in order to establish the proportions of bone present, facilitating a more accurate estimate of the total bone weights present within them.

All osteological analysis was undertaken in accordance with published guidelines.[55] For articulated skeleton 1008 (a juvenile), completeness was scored as one of: <25 per cent, 25–50 per cent, 50–75 per cent, or 75–100 per cent. Fragmentation was scored as high, moderate or low, and condition (surface preservation) of the bone was graded in accordance with the criteria set out by McKinley (Grades 0 to 5+).[56] Age estimation was based on the observation of unfused epiphyses and long bone lengths.[57] The absence of the dentition precluded the use of dental development and eruption as a method of age estimation.[58] No attempt was made to estimate the sex of the juvenile skeleton, in accordance with accepted practice.[59] The bones were also assessed for pathology and any other bony abnormalities.

Analysis of the cremation deposits involved recording their colour, weight and maximum fragment sizes. This information can facilitate the interpretation of the nature of the deposits, for example, whether they represent formal burials, or dumps of redeposited pyre debris.[60] The colour of the bone may refer to the efficiency of the cremation process.[61]

The deposits were also examined for identifiable bone elements and, for each deposit, the minimum number of individuals (MNI) represented was determined by looking for repeated skeletal elements combined with observations of size. Indicators of age and sex were limited within the deposits but observation of cranial morphology was used in one instance to estimate sex.[62]

[54] M. Brickley and J.I. McKinley, *Guidelines to the Standards for Recording Human Remains*, IFA Paper, 7 (2004); British Association for Biological Anthropology and Osteoarchaeology Code of Practice, BABAO Working Group for Ethics and Practice (2010).

[55] Brickley and McKinley, *Guidelines to the Standards for Recording Human Remains*.

[56] J.I. McKinley, 'Compiling a Skeletal Inventory: Disarticulated and Co-Mingled Remains', in *Guidelines to the Standards for Recording Human Remains*, p. 16.

[57] L. Scheuer and S. Black, *Developmental Juvenile Osteology* (2000).

[58] C.F.A. Moorees et al., 'Age Variation of Formation Stages for Ten Permanent Teeth', *Journal of Dental Research*, 42 (1963), pp. 1490–1502; S.J. AlQahtani, *Atlas of Tooth Development and Eruption* (2009).

[59] M. Brickley, 'Determination of Sex from Archaeological Skeletal Material and Assessment of Parturition', in *Guidelines to the Standards for Recording Human Remains*, p. 23.

[60] J.I. McKinley, 'Compiling a Skeletal Inventory: Cremated Human Bone', in *Guidelines to the Standards for Recording Human Remains*, p. 10.

[61] Ibid. p. 11.

[62] J.E. Buikstra and D.H. Ubelaker, *Standards for Data Collection from Human Skeletal Remains*, Arkansas Archaeological Survey Research Series, 44 (1994).

Results

Urned Cremation Deposit 1006 This had a total weight of 528.1 g, of which 116.1 g (22 per cent) was the estimated weight from the unsorted, smaller fractions. The total weight falls below the range of weights observed in modern, adult cremations (1,000–2,400 g).[63] It is likely that some bone was lost through plough truncation, but quite how much is impossible to estimate.

In terms of fragmentation, the vast majority of the total bone weight was made up of fragments over 4 mm in size, with a significant proportion (28 per cent) comprising >10 mm fragments. The largest fragment, a piece of tibial shaft, was 55 mm in length. The urn probably influenced the preservation of frequent, larger fragments because, although found to be highly fragmented during excavation, it would originally have afforded significant protection from the pressure of the overlying soil.

There appeared to be no evidence for deliberate selection of elements, with all regions of the skeleton represented. Unsurprisingly, considering their proportional weight compared with other body regions, the lower limbs (notably femur and tibia fragments), were well represented. The skull was equally well represented. Whilst the skull does not constitute as high a mass within the body, it is often very well represented in cremation deposits because the skull vault is easily identifiable, even within the smaller fractions.

All bone fragments were consistent with an adult or older juvenile (adolescent) individual, in terms of size/thickness and the absence of any unfused epiphyses. The presence of complete tooth root apices also supported this. With regard to the MNI, there were no repeated elements to suggest that more than one individual was represented. However, it is very tentatively suggested that two individuals may have been present. This is because many of the femur shaft fragments were notably large/robust, perhaps in keeping with a male individual, while a fragment of the frontal bone exhibited a very thin, sharp orbit margin, indicative of a female. While the overall size/robusticity of a bone should not be considered a reliable indicator of sex, the femur fragments were certainly not in keeping with the morphology of the orbit fragment.

Half the total bone weight in deposit 1006 comprised grey coloured fragments. A significant proportion (35 per cent) were white, with the remaining 15 per cent made up of blue and a few black/brown fragments. It was noted that skull fragments were more frequently white in colour, while many of the pelvis and femur fragments were black/brown. The colour changes of bone undergoing cremation depend on the temperature of the firing, the oxygen supply and the duration of exposure of the body to flames,[64] thus the colours observed reflect the efficiency of the cremation process.[65] Black fragments represent bone that has been charred up to *c*.300ºC, and brown fragments are considered to be unburnt. Hues of blue and grey indicate temperatures higher than 300ºC, but not complete oxidation, which occurs at temperatures over 600ºC. The varying colours observed in deposit 1006 may indicate differences in temperature across the pyre. However, given that potentially two individuals were represented, it should also be considered that the remains were from two different cremation processes altogether, with the burnt remains having been combined for burial.

Cremation Deposit 1012 The total weight of unurned deposit 1012 was 98.6 g (Table 4). While all regions of the skeleton (skull, axial, upper and lower limbs) were represented, the vast majority of the total weight (over 85 per cent) comprised unidentified fragments, including hand, foot and long bones. This is perhaps not surprising given that the bone was highly fragmented, with 65 per cent of the total bone weight comprising fragments less than 4 mm in size.

[63] J.I. McKinley, 'Cremation Burials', in B. Barber and D. Bowsher, *The Eastern Cemetery of Roman London. Excavations 1983–1990*, MoLAS Monograph, 4 (2000), p. 269.

[64] Eadem, 'Funerary Practice', in Barber and Bowsher, *The Eastern Cemetery of Roman London*, p. 66.

[65] Eadem, 'Compiling a Skeletal Inventory: Cremated Human Bone', p. 11.

Table 4. Cremation deposits 1006 and 1012 – osteological summary. Key: est. = estimated, UL = upper limb, LL = lower limb, LB = long bone, H/F = hand/foot, JS = joint surface

Deposit	Weight (inc. est. weights)	Frag. size (% of total weight)	Max. frag. size	Colour	Skeletal representation (% of total weight)	MNI	Age	Sex
1006	528.1g	>10mm (146g, 28%) 10-4mm (266g, 50%,) 4-2mm (est. 64.9g, 12%) 2-0.5mm (est. 51.2g, 10%)	55mm (tibia shaft)	Brown 3% Black 2% Blue 10% Grey 50% White 35%	Skull (73.4g, 14%) Axial (1.8g, <1%) UL (13.1g, 2%) LL (74.7g, 14%) Unid. LB(91.5g, 17%) Unid. H/F (1.9g, <1%) Unid. JS (4.7g, 1%) Unid. Other (264g, 50%)	?2	Adult/ older juvenile	??M + ??F
1012	98.6g	>10mm (1.3g, 1%) 10-4mm (33.1g, 34%) 4-2mm (0.2g+ 26g est., 27%) 2-0.5mm (38g est., 38%)	19mm (skull vault)	Black 1% Blue 25% Grey 25% White 49%	Skull (6.6g, 7%) Axial (2.3g, 2%) UL (2.0g, 2%) LL (1.5g, 1%) Unid. LB(11.4g, 12%) Unid. H/F (0.5g, <1%) Unid. Other (74.3g, 75%)	?2	Adult/ older juvenile + ?juvenile	?

The colour of the cremated bone fragments, as with deposit 1006, was mixed, although there was a higher proportion (49 per cent of the total bone weight) of white fragments, indicative of a higher pyre temperature (>600ºC).[66] Again, skull fragments were generally white in colour, with blue, black and grey fragments observed across the other skeletal regions.

Of the identifiable fragments observed, it was noted that the skull fragments were all fairly thin, indicative of a juvenile (possibly a younger child, 1–5 years). In contrast, two hand phalanges were identified, which were more in keeping with an older juvenile (an adolescent) or adult individual. Thus, the MNI represented in deposit 1012 is probably two, despite the fact that there were no repeated elements. There were no fragments with morphological features indicative of sex, and no lesions of pathology were observed.

Cremation Deposit 1004 The total weight of the deposit was 137.8 g, which includes an estimated 79.8 g from the unsorted 4–2 mm and 2–0.5 mm, fractions (Table 5). This falls well below even the lowest weight (1,000 g) observed for modern, adult cremations.[67]

The colour of the cremated bone was very mixed. The largest proportion of fragments (40 per cent) was black, followed by white (30 per cent), with fewer fragments exhibiting hues of of blue (10 per cent) and grey (20 per cent). However, no clear patterning was noted between colour and skeletal element. Orange iron staining was noted on a small number of unidentified fragments. This almost certainly resulted from post-depositional contact with the iron nails/hobnails recovered from the deposit.

The level of fragmentation in the deposit was high, with 58 per cent of the total bone weight comprising fragments less than 4 mm. As such, while all skeletal regions were observed within the deposit, the vast majority of bone (*c.*83 per cent of the total bone weight) was unidentified.

No specific indicators of age were observed within deposit 1004, although the general size/thickness of the bone fragments allowed for a confident estimate that this was an adult or older juvenile (i.e. adolescent). There were also no morphological indicators present for estimating sex. No pathological lesions or abnormalities were observed.

Skeleton 1008 As noted above, this skeleton was very incomplete (approximately 15 per cent present; Table 6). The bones present comprised most of the right arm, a fragment of left ulna, fragments of the left and right pelvis, and the right femur. In addition, a single skull vault fragment and a few rib shaft fragments were present.

Unsurprisingly, given the previous disturbance, the bones were highly fragmented, and most of the bone surfaces were affected by some degree of erosion, consistent with McKinley's (2004a, 16) grade 3 preservation.[68] Overall, the skeleton was in fairly poor condition.

All the observable bones exhibited unfused epiphyses, indicating that this was a juvenile. The unfused proximal ulna and hand phalanx epiphyses suggested an age of less than 16 years, but it was clear that the individual was far younger than this, based on the overall size of the bones. Whilst none of the long bones were complete, measurements were taken on the near-complete right radius and femur (reconstructed). These gave a minimum age of five years and, based on an estimate of the length of the missing parts, a likely maximum age of seven years. No lesions of pathology or non-metric traits were observed.

Discussion and Conclusions

Whilst the human remains recovered from Monks Farm are a small assemblage, their value lies in the information they add to the existing body of data on Bronze-Age and Roman period burial practice in Oxfordshire and the Thames valley.

[66] Ibid.
[67] J.I. McKinley, 'Cremation Burials', p. 269.
[68] Eadem, 'Compiling a Skeletal Inventory: Disarticulated and Co-Mingled Remains', p. 16.

Table 5. Cremation deposit 1004 – osteological summary. Key: est. = estimated, UL = upper limb, LL = lower limb, LB = long bone, H/F = hand/foot

Deposit	Weight (inc. est. weights)	Frag. size (% of total weight)	Max. frag. size	Colour	Skeletal representation (% of total weight)	MNI	Age	Sex
1004	137.8g	>10mm (22.8g, 16%) 10-4mm (35.2g, 26%) 4-2mm (23.9g est., 17%) 2-0.5mm (55.9g est., 41%)	41mm (skull vault)	Black 40% Blue 10% Grey 20% White 30%	Skull (10.2g, 7%) Axial (2.2g, 1%) UL (3.3g, 2%) LL (8.1g, 6%) Unid. LB(13.2g, 10%) Unid. H/F (0.5g, <1%) Unid. Other (100.3g, 73%)	1	Adult/ older juvenile	?

Table 6. Skeleton 1008 – osteological summary

Completeness	**0-25%**
Condition (McKinley 2004a)	Grade 3
Fragmentation	High
Sex	?
Age	Young-older child, 5–7 yrs
Non-metric traits	None observed
Dental pathology	No dentition present
Other pathology	None observed

The Middle Bronze Age Cremation Deposits The human remains dating to the middle Bronze Age comprised two cremation deposits, one urned (1006) and one unurned (1012). While the weight of urned burial 1006 was fairly high at over half a kilogram, it was still far less than the average weight of a cremated adult (see above). Given that the deposit probably represented two individuals, the weight is even lower than expected. It is impossible to know whether the lower weight reflects the original amount interred, or whether it is simply the result of plough truncation. Even undisturbed cremation burials from any period exhibit a very wide range of bone weights.[69] Thus, for all periods, the quantity of bone included for burial at the time of deposition varied, although the reason for this is unclear.

At less than 100 g, the bone weight in unurned deposit 1012 was remarkably low, and it seems unlikely that the pit would have contained anywhere near the average adult weight, let alone the weight of two individuals, as indicated by the probable adult and juvenile bone fragments present. In addition, this deposit exhibited a particularly high level of fragmentation. These features, combined with the fact that the deposit was unurned in a matrix of dark grey-black ashy material, indicate that it may represent redeposited pyre debris. Pyre debris deposits comprise the material remaining at the end of a cremation, including fragments of cremated bone not collected to form part of the formal 'burial'; thus the bone present within this material is essentially incidental.[70] The higher proportion of small fragments in such deposits is, therefore, not surprising. Such deposits have been recovered from a variety of different context types, and from a wide range of periods. It is worth highlighting here that the other two adjacent pits (1047 and 1051), containing dark, ashy fills, but without bone, may also have been pyre debris deposits, although the date of these features is unclear.

As noted above, both Bronze-Age cremation deposits probably contained the remains of two individuals. It has been reported that on average, *c*.5 per cent of cremation burials (multi-period) comprise the remains of two individuals and a very small proportion may contain three.[71] The presence of an adult and juvenile, as observed in deposit 1012, is most commonly observed in dual cremation burials. The presence of two adults of different sex, as seen in urned burial 1006, is a less common finding. McKinley reports that in most dual burials, the distribution of bone fragments suggests that the individuals had been cremated on the same pyre.[72] However, in an urned burial from Twyford Down (Hants.) spit excavation revealed that the two individuals had been deposited separately within the urn, suggesting separate

[69] J.I. McKinley, 'Bronze Age "Barrows" and Funerary Rites and Rituals of Cremation', *Proceedings of the Prehistoric Society*, 63 (1997), p. 139.
[70] Ibid. p. 137; Eadem, 'Phoenix Rising: Aspects of Cremation in Roman Britain', in J. Pearce et al. (eds.), *Burial, Society and Context in the Roman World* (2000), p. 41.
[71] Eadem, 'Bronze Age "Barrows" and Funerary Rites and Rituals of Cremation', p. 130.
[72] Ibid. pp. 130–1, 142.

cremation processes.[73] Unfortunately, such analysis could not be carried out on urned deposit 1006 because spit excavation was not possible.

The Roman Period Human Remains The human remains dating to the second century AD comprise a single inhumation (1008), that of a juvenile, and an unurned cremation deposit (1004) containing the remains of an adult. As observed in the Bronze-Age cremation deposits, unurned deposit 1004 was also within a dark, charcoal-rich, ashy matrix. The proportion of small (<4 mm) fragments was also high, and the bone weight was far lower than expected for an adult cremation. It therefore seems likely that this was a deposit of pyre debris, rather than an actual burial. While the colour of the fragments in the Bronze-Age cremation deposits were mixed, deposit 1004 had a far higher proportion of black fragments, indicative of a lower pyre temperature/lower efficiency. This observation has frequently been observed in Roman period cremation deposits, suggesting that full oxidation of the bone during this period may not have been considered necessary.[74] The presence of hobnails within cremation deposit 1004 indicates that shoes had been either worn or placed on the pyre for the cremation process.

ANIMAL BONES by LENA STRID

A total of 482 bone fragments were recovered, of which 381 came from features securely dated to the Bronze Age and later periods. Bones from sieved soil samples comprised 119 fragments (24.7 per cent of the assemblage). A full record of the assemblage can be found in the site archive.

The bones were identified using comparative skeletal reference collections in addition to osteological identification manuals. All animal remains were counted and weighed, and where possible identified to species, element, side and zone.[75] An attempt was made to identify sheep and goat to species, using Boessneck et al., and Prummel and Frisch.[76] However, this was not successful and consequently all ovicaprine bones were classified as 'sheep/goat'. Ribs and vertebrae, with the exception of atlas and axis, were classified by size: 'large mammal' representing cattle, horse and deer; 'medium mammal' representing sheep/goat, pig and large dog; 'small mammal' representing small dog, cat and hare; and 'microfauna' representing animals such as frog, rat and mouse.

The condition of the bone was graded on a six-point system (0–5). Grade 0 equating to very well preserved bone, and grade 5 indicating that the bone had suffered such structural and attritional damage as to make it unrecognisable (Table 7).

For ageing, Habermehl's data on epiphyseal fusion were used.[77] Three fusion stages were recorded: 'unfused', 'in fusion', and 'fused'. 'In fusion' indicates that the epiphyseal line is still visible. Tooth wear was recorded using Grant's tooth wear stages,[78] and correlated with tooth eruption.[79] In order to estimate an age for the animals, the methods of Halstead and Payne

[73] Ibid. p. 142.
[74] McKinley, 'Phoenix Rising', p. 39.
[75] D. Serjeantson, 'The Animal Bones', in S. Needham and T. Spence, *Refuse and Disposal at Area 16 East Runnymede. Runnymede Bridge Research Excavations, Volume 2* (1996), pp. 194–253; L. Strid, 'Animal Bone', in E. Biddulph et al., *London Gateway: Iron Age and Roman Salt Making in the Thames Estuary. Excavation at Stanford Wharf Nature Reserve, Essex*, Specialist Report 15, http://library.thehumanjourney.net/909/
[76] J. Boessneck et al., *Osteologische Unterscheidungsmerkmale zwischen Schaf (Ovis aries Linné) und Ziege (Capra hircus Linné), Kühn-Archiv*, 78 (1964); W. Prummel and H.-J. Frisch, 'A Guide for the Distinction of Species, Sex and Body Side in Bones of Sheep and Goat', *Journal of Archaeological Science*, 13 (1986) pp. 567–77.
[77] K.-H. Habermehl, *Die Altersbestimmung bei Haus- und Labortieren* (1975).
[78] A. Grant, 'The Use of Toothwear as a Guide to the Age of Domestic Ungulates', in B. Wilson et al. (eds.), *Ageing and Sexing Animal Bones from Archaeological Sites*, BAR BS, 109 (1982), pp. 91–108.
[79] Habermehl, *Die Altersbestimmung bei Haus- und Labortieren.*

Table 7. Animal bone preservation grading methodology

Grade 0	Excellent preservation. Entire bone surface complete.
Grade 1	Good preservation. Almost all bone surface complete.
Grade 2	Fair preservation
Grade 3	Poor preservation. Most bone surface destroyed.
Grade 4	Very poor preservation. No surface structure remaining.
Grade 5	Extremely poor preservation. Unlikely to be able to identify element.

were used for cattle and sheep/goat.[80] Sex estimation was carried out on morphological traits on cattle pelves, using data from Vretemark.[81] Measurements were taken according to von den Driesch,[82] using digital callipers with an accuracy of 0.01 mm.

The Assemblage

The bones were generally well or fairly well preserved, regardless of time period. Bones with gnaw marks from carnivores, probably dogs or foxes, occurred in small quantities in all phases, an indication that some refuse lay on the ground before final burial. A small number of burnt bones was found in the middle Bronze-Age assemblages (Table 8).

The species present include cattle (*Bos taurus*), sheep/goat (*Ovis aries*/ *Capra hircus*), pig (*Sus domesticus*), horse (*Equus caballus*), dog (*Canis familiaris*), mole (*Talpa europea*) and frog (*Rana* sp.) (Table 9). The scarcity of wild fauna follows the general trend for Bronze-Age rural settlements.[83]

Of note, but not included in the analysis as it came from an unphased natural feature (1294), is a radius from a large bovid, possibly aurochs. Aurochs bones are rare finds in early prehistoric assemblages.[84] It is believed that they became extinct in Britain around the beginning of the middle Bronze Age.[85] Aurochs are usually identified by their larger size compared to contemporary domestic cattle, but unfortunately the radius from Monks Farm was too fragmented to be measured. It was, however, much larger than prehistoric cattle and similar in size to modern domestic cattle.

The middle Bronze-Age assemblage contains too few bones for a useful analysis of the inter-species frequency of cattle, sheep/goat and pig.[86] Generally, middle Bronze-Age sites are

Table 8. Animal bone preservation and number of bones with traces of burning and gnawing

	N	0	1	2	3	4	5	Gnawed	Burnt
MBA	305	10.2%	35.1%	40.7%	11.5%	2.6%		12	29
19th C	165	0.6%	14.5%	80.6%	3.6%	0.6%		4	

[80] P. Halstead, 'A Study of Mandibular Teeth from Romano-British Contexts at Maxey', in F. Pryor, *Archaeology and Environment in the Lower Welland Valley*, East Anglian Archaeology Monograph, 27 (1985), pp. 219–24; S. Payne, 'Kill-Off Patterns in Sheep and Goats: The Mandibles from Aşwan Kale', *Anatolian Studies*, 23 (1973) pp. 281–303.

[81] M. Vretemark, *Från ben till boskap. Kosthåll och djurhållning med utgångspunkt i medeltida benmaterial från Skara, Skrifter från Länsmuseet Skara*, 25 (1997).

[82] A. von den Driesch, *A Guide to the Measurement of Animal Bones from Archaeological Sites* (1976).

[83] D. Yalden, *The History of British Mammals* (1999), pp. 100–102.

[84] J. Cotton et al., 'Taming the Wild: A Final Neolithic/Earlier Bronze Age Aurochs Deposit', in D. Serjeantson and D. Field (eds.), *Animals in the Neolithic of Britain and Europe* (2006), p. 160.

[85] T.P. O'Connor and N.J. Sykes, *Extinctions and Invasions: A Social History of British Fauna* (2010), p. 34.

[86] E. Hambleton, *Animal Husbandry Regimes in Iron Age Britain. A Comparative Study of Faunal Assemblages from British Iron Age Sites*, BAR BS, 282 (1999), pp. 39–40.

Table 9. Number of animal bone fragments by taxon and phase

	Middle Bronze Age	19th century
Cattle	42	20
Sheep/goat	41	2
Pig	5	1
Horse	1	4
Dog	2	
Rodent	1	
Mole	1	
Frog	1	
Frog/toad	8	
Indet. microfauna	4	
Medium mammal	44	2
Large mammal	41	53
Indeterminate	114	82
TOTAL	305	165
Weight (g)	3856	4056

rare and most contain relatively few bones. Two exceptions in the upper Thames valley are Latton Lands and Corporation Farm.[87] Both sites are strongly dominated by cattle, although Hamilton suggests that bone preservation in combination with species-related disposal strategies may have heavily reduced the number of recovered bones from sheep/goat. Ageing data for Latton Lands suggest that cattle were mostly used for secondary products such as milk and traction. Surplus young animals and older animals past their prime were slaughtered for meat. It is assumed that Bronze-Age settlements practised a multi-purpose animal husbandry, where cattle and sheep would have been utilised for meat but also for secondary products such as milk, wool and traction, and pigs were raised solely for meat production.[88]

The ageing data for livestock at Monks Farm are limited, but show that animals were killed at a range of ages from young, probably surplus animals, to very old animals (Tables 10 and 11). The latter may represent draught oxen or milch cows that were slaughtered when they were past their prime. Two cattle bones and a large mammal vertebra come from juvenile animals and probably represent either natural mortalities or the deliberate slaughter of very young animals and (probably) the subsequent consumption of veal.

Only a small number of bones could be measured and therefore they are again of limited use for analysis. Measurements that were useful for comparison on a regional scale have been compiled in Table 12. The only bone which could be sexed was a female cattle pelvis.

Butchery marks were only found on bones from cattle, pig and large mammal. The chopping through of a dens axis from cattle may represent severing of the head during the butchery process. Several transverse chop marks on the distal shaft of a cattle tibia suggest disarticulation of the lower leg. Filleting of meat was indicated by a cut mark on a young pig mandible and by cut marks on two large mammal ribs.

Two pits, 1364 and 1529 were located at the entrance to enclosure 1609/1617. They contained 48 and 36 fragments each, with an additional 15 fragments recovered from nineteenth-century

[87] J. Hamilton, 'The Animal Bone', in Stansbie and Laws, 'Prehistoric Settlement and Medieval to Post-Medieval Field Systems at Latton Lands', pp. 106–43; P. Shand et al., 'Corporation Farm, Wilsham Road, Abingdon', pp. 31–40.

[88] Lambrick and Robinson, *The Thames Through Time*, pp. 240–2.

Table 10. Tooth wear and estimated age of cattle and sheep/goat, following Grant (1982), Halstead (1985) and Payne (1973). MBA = Middle Bronze Age

Species	Phase	Dp4	M1	M2	M3	MWS	Estimated age
Cattle	MBA	k	j	f	b	32	30-36 months
				k	j	44-46	Old Adult
					k	46-50	Senile
Sheep/goat	MBA	g				5-22	<2 years
		f	f-g	V		13-14	6-12 months
	19th C	f				4-12	<2 years

Table 11. Epiphyseal fusion of cattle, sheep/goat, pig and horse, following Habermehl (1975). Fusion stages follows Serjeantson (1996). MBA = Middle Bronze Age

MBA		**Unfused**	**Fusing**	**Fused**
Cattle	Early fusion			5
	Mid fusion			2
	Late fusion			
Sheep/goat	Early fusion			3
	Mid fusion			1
	Late fusion			1
Pig	Early fusion			1
	Mid fusion			
	Late fusion			
Horse	Early fusion			1
	Mid fusion			
	Late fusion			
19th C		Unfused	Fusing	Fused
Cattle	Early fusion			1
	Mid fusion			2
	Late fusion			3
Horse	Early fusion			2
	Mid fusion			
	Late fusion			1

plough furrow 1350 which cut across pit 1364 and from which the bones in the furrow may have originated. The pits contained a variety of species, although no particular predominance of species or body parts was observed (Tables 13 and 14). Nevertheless, it is possible that the fragments of a cattle mandible and maxilla (upper jaw) in pit 1364 represent the remains of a skull. Skulls have been associated with ritual deposits in several time periods and furthermore the pit's location in the entrance suggests a potential for special deposits. However, site records do not mention whether the fragments were found together or apart, nor where in the fill they were found; details which may strengthen or weaken the hypothesis of ritual deposits.

A summary of quantities of animal bone by feature is presented in Table 1.

The nineteenth-century assemblage came from a number of plough furrows and drains crossing the site. Little distinguished them from the Bronze-Age assemblage, whether bone condition or size, suggesting that many of the bones may be residual. Three cattle bones

Table 12. Measurements of cattle, sheep/goat and horse. MBA = Middle Bronze Age

Species	Element	Phase	Greatest proximal breadth (Bp)	Greatest distal breadth (Bd)
Cattle	Tibia	MBA		51.4
		19th C		64.0
Sheep/goat	Tibia	MBA		24.0
Horse	Metacarpal	19th C	48.4	48.1

Table 13. Number of animal bone fragments by taxon from pits 1364 and 1529 and furrow 1350 (containing bones probably ploughed away from pit 1364)

	Pit 1364	Ditch 1350	Pit 1529
Cattle	6	10	1
Sheep/goat	6	7	2
Pig	2		
Rodent	1		
Frog	1		
Frog/toad	8		
Indet. microfauna	3		
Medium mammal	5		16
Large mammal	1		5
Indeterminate	15	10	12
TOTAL	48	15	36
Weight (g)	777	150	94

Table 14. Element representation of cattle, sheep/goat, pig, medium and large mammals in pits 1364 and 1529. Bones from plough furrow 130 within parentheses

	Pit 1364 + furrow 1350					Pit 1529			
	Cattle	Sheep/goat	Pig	Medium	Large	Cattle	Sheep/goat	Medium	Large
Skull fragment	1								
Mandible	1	1 (1)							
Tooth	2 (3)	1	1						
Vertebra	1				1			4	1
Rib				1				1	2
Ulna		1							
Radius	(1)								
Pelvis			1						
Patella		1							
Tibia	1								
Metapodial		2				1	2		
Sesamoid				1				1	
Long bone				3				10	2
TOTAL	6 (4)	6 (1)	2	5	1	1	2	16	5
Weight	696 (113)	30 (3)	10	5	2	0	7	33	35

from the nineteenth-century assemblage displayed evidence of butchery. The absence of saw marks, typical of late post-medieval butchery methods, is further indication of the possible residuality of the assemblage. Several chop marks on the distal quarter of a cattle tibia shaft and a cut mark on the distal end of a cattle calcaneus suggest disarticulation of the meat-poor lower leg. Filleting of meat was indicated by cut marks at the intra-mandibular joint on a cattle mandible. The interpretation of a transverse chop mark on the distal third of a cattle metatarsal shaft is more uncertain; possibly an indication of removal of the feet for glue rendering or for the extraction of the metatarsal for use as raw material for bone working. As the bone was discarded without any further indications of modification, the former may be more likely.

Two cattle bones, both from ditch 1330, exhibit pathological conditions. Indications of gum infection were found on a mandible with bone absorption buccally and lingually at the fourth premolar/first molar. This is fairly common in cattle and sheep and may be a sign of gingivitis and/or periodontitis related to food being lodged between the teeth and the gum.[89] A metatarsal has large exostoses medially and laterally on the distal quarter of the shaft, extending posteriorly and medially/anteriorly but never reaching the mid-line of the anterior side. The aetiology is unknown, but could be associated with muscle strain, infection or trauma.

LAND AND FRESHWATER SNAILS by ELIZABETH STAFFORD

Fifteen flot samples were submitted for assessment of land and freshwater snails. The samples derive from the fills of cremation burials and pits dated to the Middle Bronze Age. The flots, initially processed for charred plant remains, derive from bulk samples of up to 40 litres of sediment. Each flot was scanned under a low power binocular microscope to magnifications of up to x40. The abundance of taxa was recorded on a sliding scale and an estimate was also made of the total number of individuals in each flot. The results are presented in Table 15. Nomenclature follows Kerney and ecological preferences follow Boycott and Evans.[90]

Overall, shell abundance was quite variable; three of the samples examined did not contain any shell and numbers were low in the samples from the cremation burials. In addition, the samples from the cremation burials were noted to contain fresh specimens suggesting a level of recent intrusion, most likely through bioturbation and soil processes. Shell abundance was highest in pits 1300 and 1364, reaching *c*.500 identifiable individuals in sample 118. The quality of preservation was generally good with minimal mechanical damage and whole shells of fragile shelled species such as *Lymnaea* were preserved intact.

In terms of species diversity, the majority of the samples produced broadly similar assemblages. The flots are dominated by terrestrial open country species, particularly the grass snails *Vallonia costata* and to a lesser extent *Vallonia excentrica*, along with the catholic species *Trichia hispida*. Other open country species (*Vertigo pygmaea* and *Pupilla muscorum*) and catholic species (*Cochlicopa* sp., *Cepaea*/*Arianta* sp., *Punctum pygmaeum* and *Nesovitrea hammonis*) were present in much lower numbers. There was no real evidence of shady environments suggestive of tree cover. However, pit 1364 produced a substantial number of shade-demanding species at the catholic end of the range that may indicate the presence of long grass in the immediate vicinity. Species included *Aegopinella nitidula*, *Oxychilus cellarius*, *Vitrea* sp. and *Ena obscura*. Freshwater taxa, largely comprising slum species (for example *Anisus leucostoma*, *Aplexa hypnorum*, *Lymnaea truncatula*, *L. palustris* and *L. peregra*), were noted in the pit samples in some abundance, suggesting that the features may have contained water for some of the time. Slum species are those able to live in water subject to stagnation,

[89] L. Bartosiewicz and E. Gál, *Shuffling Nags, Lame Ducks. The Archaeology of Animal Disease* (2013), p. 177.

[90] M. Kerney, *Atlas of Land and Freshwater Molluscs of Britain and Ireland* (1999); A.E. Boycott, 'The Habitats of Land Mollusca in Britain', *Journal of Ecology*, 22 (1934), pp. 1–38; idem, 'The Habitats of Freshwater Mollusca in Britain', *Journal of Animal Ecology*, 5 (1936), pp. 116–86; J.G. Evans, *Land Snails in Archaeology* (1972).

Table 15. Land and freshwater snails.

Feature	**Crem**	**Crem**	**Crem**	**Crem**	**Pit**	**Pit**				**Ditch**		**Pit**			**Pit**
Cut No	**1003**	**1011**	**1047**	**1051**	**1234**	**1300**				**1343**		**1364**			**1388**
Context	**1004**	**1012**	**1048**	**1052**	**1237**	**1390**	**1393**	**1394**	**1395**	**1347**	**1363**	**1382**	**1383**	**1384**	**1389**
Sample	**100**	**107**	**108**	**109**	**110**	**112**	**113**	**114**	**115**	**120**	**116**	**117**	**118**	**119**	**111**
TAXA															
TERRESTRIAL															
Carychium spp.												+		++	
Cochlicopa sp.						+		+			++	+++	+++	+++	
Vertigo pygmaea (Draparnaud)		+				+	++	+			+	+	+	+	
Pupilla muscorum (Linné)						++	+	+	+			+	+	+	
Vallonia costata (Müller)		+		+		+	++	++	+		++++	+++++	+++++	+++++	
Vallonia excentrica (Sterki)		+	++			++++	+	+++	+		+++	++++	++++	+++	
Vallonia spp.					+	++	++	+	++		++	++	+++	++	
Ena obscura (Müller)											+	+	+		
Punctum pygmaea (Draparnaud)						+								++	
Vitrea sp.											+	++	++	+	
Aegopinella nitidula (Draparnaud)		+				+					++	++	++	+++	
Oxychilus cellarius (Müller)											++	++	++	+	
Nesovitrea hammonis (Ström)												+		+	
Candidula sp.						+			+		+				
Helicella itala (Linné)		+													
Trichia hispida (Linné)						++	++	++	+		+++++	++++++	++++++	+++++	
Cepaea/Arianta sp.											+	+			

Table 15. (Continued)

Feature	**Crem**	**Crem**	**Crem**	**Crem**	**Pit**	**Pit**				**Ditch**		**Pit**			**Pit**
Cut No	**1003**	**1011**	**1047**	**1051**	**1234**	**1300**				**1343**		**1364**			**1388**
Context	**1004**	**1012**	**1048**	**1052**	**1237**	**1390**	**1393**	**1394**	**1395**	**1347**	**1363**	**1382**	**1383**	**1384**	**1389**
Sample	**100**	**107**	**108**	**109**	**110**	**112**	**113**	**114**	**115**	**120**	**116**	**117**	**118**	**119**	**111**
FRESHWATER															
Valvata piscinalis (Müller)						+									
Aplexa hypnorum (Linnaeus)												+	++	+	
Lymnaea truncatula/palustris								+			++	++	++	++++	
Lymnaea peregra (Müller)						+	++	++++	+++			+	+++	++	
Anisus leucostoma (Müller)							+	+				++	+++++	++	
Estimated no. individuals	0	10	4	1	4	60	30	100	30	0	180	350	500	300	0

Key: + = 1-3, ++ = 4-12, +++ = 13-25, ++++ = 26-50, +++++ = 51-100, ++++++ = >100

drying up and large temperature variations. There was notably no evidence of a riverine component to the assemblages suggestive of frequent flooding, with only a single very worn example of the flowing water species *Valvata piscinalis* in sample 112. Equally the absence of terrestrial wet ground taxa, *Vertigo antivertigo* or *Succinea*, for example, would suggest that the general area was not frequently inundated or marshy.

Pit 1300, a large irregular feature, has been interpreted as a possible waterhole that probably silted up through natural processes as it went out of use. The samples examined for snails derive from the middle and upper fills, generally described as very dark grey to black organic clay silts with occasional small stones. The abundance of the freshwater aquatic snail *L. peregra* in these fills would be consistent with the feature holding standing water. Pit 1364 contained mid to dark greyish brown silty clay fills with some gravel that also produced a range of freshwater slum species dominated by *Anisus leucostoma* and *Lymnaea* spp.

CHARRED PLANT REMAINS AND WOOD CHARCOAL by SHEILA BOARDMAN

Following the rapid assessment of eight samples, four samples from fills of separate middle Bronze-Age pits (contexts 1237, 1393, 1389 and 1531), and one sample from a middle Roman cremation burial fill (1004) were analysed for charred plant remains. Three pit fills (1237, 1389 and 1531) and the Roman cremation burial sample were analysed for wood charcoal. In addition, the results of the charcoal assessment for two middle Bronze-Age cremation deposits (contexts 1006 and 1012) are included below for comparison. The aims of the charred plant investigation were to identify the range of cultivated and edible plants, and any evidence for middle Bronze-Age husbandry practices. The aims of the wood charcoal investigation were to characterise the fuels used during the middle Bronze Age, and for the middle Bronze-Age and Roman cremations, and the evidence these provide for the local woody vegetation.

Methods

The bulk samples were processed using a modified Siraf tank. Flots were collected on a 250 μm mesh and the heavy residues, on a 500 μm mesh. Once dried, the greater than 250μm flots were sorted for charred plant remains, including cereal grains, smaller seeds and nut shell fragments. The flots were then dry sieved at 2 mm and around a hundred greater than 2 mm charcoal fragments were extracted for identification. About 20 charcoal fragments per sample were identified for the assessed samples. Individual fragments were fractured by hand and sorted into groups based on features observed in the transverse section, at magnifications of x10–40. Sub-samples were then fractured longitudinally and examined at magnifications of up to x400 using a Brunel SP400 BD metallurgical microscope with brightfield and darkfield illumination. Identifications were made with reference to modern reference material and keys in Hather, Gale and Cutler, and Schweingruber.[91] Plant nomenclature follows Stace.[92]

Charred Plant Remains

Middle Bronze-Age Pit Fills The number of quantifiable remains per sample varied from around twenty (sample 110) to more than 450 (sample 113), and there were many non-quantifiable fragments. Cereal grains included wheat (probable emmer [*T. dicoccum*] and/or spelt [*T. spelta*]), hulled barley (*Hordeum* sp., including the six row species, *H. vulgare*),

[91] J.G. Hather, *The Identification of Northern European Woods: A Guide for Archaeologists and Conservators* (2000); R. Gale and D. Cutler, *Plants in Archaeology: Identification Manual of Vegetative Plant Materials Used in Europe and the Southern Mediterranean to c.1500* (2000); F.H. Schweingruber, *Microscopic Wood Anatomy*, 3rd edn (1990).

[92] C. Stace, *New Flora of the British Isles*, 3rd edn (2010).

Table 16. Charred plant remains. KEY: BA - Bronze Age. F – fragment(s)

Sample No		**110**	**111**	**113**	**121**	**100**
Context No		**1237**	**1389**	**1393**	**1531**	**1004**
Feature No.		**1234**	**1388**	**1300**	**1529**	**1003**
Feature		**Pit fill**	**Pit fill**	**Pit fill**	**Pit fill**	**Fill of cremation burial**
Period		BA	BA	BA	BA	Roman
Sample Vol. (litres)		7	35	10	40	10
Cereal grain						
Triticum spp.	wheat grain (glume wheat type)	2	3	22	5	
cf. *Triticum* spp.	cf. wheat grain	4	2			
Hordeum vulgare	barley, hulled assymetric grain			11		
Hordeum vulgare	barley, hulled straight grain			7		
Hordeum sp	hulled barley		5	32	4	
Hordeum sp.	barley grain	2	1	31	9	
cf. *Hordeum* sp.	cf. barley grain	3	5			
Avena sp.	oat grain			1		
cf. Avena sp.	cf. oat			1	1	
Cereal indet.	indeterminate cereal grain	9	30	73 + Fs	16	1
Cereal indet.	detached embryo				1	
Cereal grains	Subtotals	20	46	178	36	1
Cereal chaff						
Triticum dicoccum	emmer wheat spikelet fork			1		
Triticum dicoccum	emmer wheat glume base			6		
Triticum dicoccum/ spelta	emmer/spelt wheat spikelet fork		1 + Fs	7	10	
Triticum dicoccum/ spelta	emmer/spelt wheat glume base			26 + Fs	8	
Triticum spp.	wheat rachis			2		
Cereal indet.	indet cereal culm node			10		
Cereal indet.	indet cereal culm base			6		
Cereal chaff	Subtotals	0	1	58	18	0
Pulses, wild edible plants						
Vicia faba var. *minor*	small horse bean					8
Vicia cf. *faba* var. *minor*	cf. small horse bean					5
Vicieae	Vicia/ Lathyrus/Pisum	1F		1F		23 + Fs
Prunus cf. *spinosa*	sloe stone frags.	0.5				
Prunus sp.	sloe/cherry stone frags.	2 + 5F	1F		2F	

Table 16. (continued)

Sample No		**110**	**111**	**113**	**121**	**100**
Context No		**1237**	**1389**	**1393**	**1531**	**1004**
Feature No.		**1234**	**1388**	**1300**	**1529**	**1003**
Feature		**Pit fill**	**Pit fill**	**Pit fill**	**Pit fill**	**Fill of cremation burial**
Rubus sect. Glandulosus	bramble/blackberry			1		
Rubus sp.	blackberry, raspberry, etc.			1		
Fragaria vesca	wild strawberry		1			
Corylus avellana	hazelnut - shell fragments		6F			
Indet.	nut shell frags			1F		
Pulses, wild edible plants	Subtotals	2.5 + Fs	1 + Fs	2 + Fs	Fs	36 + Fs
Wild plants						
Papaver sp.	poppy		1			
Vicia hirsuta type	hairy tare type			4		
Vicia/Lathyrus	vetch/tare (> 2mm)			4		2
Vicia/Lathyrus	vetch/tare (< 2mm)			7	24	
Melilotus/Medicago/ Trifolium	melilot/medick/clover			15	32	
Fabaceae undiff.	small seeded legume		1	3	2	3F
Potentilla sp.	cinquefoil				6	
cf. *Potentilla* sp.	cf. cinquefoil		1			
Persicaria maculosa	redshank		4	1		
Persicaria lapathifolia	pale persicaria		2			
Persicaria sp.	knotweed		1		3	
Polygonum aviculare type	knotgrass		1	5		
Polygonum sp.	knotgrasses			3		
Fallopia convolvulus	black bindweed			4		
Rumex spp.	docks		9	9	8	
Polygonaceae undiff.	knotweed family		1	1		
Stellaria media	common chickweed			11		
Stellaria sp.	stitchwort/mouse-ear			2	2	
Stellaria/Cerastium	stitchwort		1	1		
Caryophyllaceae undiff.	pink family				2	
Chenopodium album type	fat hen		2	24	23	
Chenopodiaceae undiff.	goosefoot family			3	2	

Table 16. (Continued)

Sample No		**110**	**111**	**113**	**121**	**100**
Context No		**1237**	**1389**	**1393**	**1531**	**1004**
Feature No.		**1234**	**1388**	**1300**	**1529**	**1003**
Feature		**Pit fill**	**Pit fill**	**Pit fill**	**Pit fill**	**Fill of cremation burial**
Chenopodiaceae/ Caryophyllaceae	goosefoot/pinks families				3	
Galium aparine	cleavers		11	19	29	
Veronica hederifolia	ivy-leaved speedwell		2			
Lamiaceae undiff.	dead-nettle family				2	
Tripleurospermum inodorum	scentless mayweed			7		
Sambucus nigra	elder			1		
Valarianella dentata	narrow-fruited cornsalad		1			
Juncus sp.	rush		16			
Carex sp.	sedge, two sided nutlet			1	4	
Anisantha sterilis	barren brome			2		
Poaceae undiff.	grass family, small		3	5		
Poaceae undiff.	grass family, medium			8	10	
Poaceae undiff.	grass family, large			1	4 + Fs	
Poaceae undiff.	grass family, culm node			67	6	
Wild species	Subtotals	1	62 + Fs	215	168	2
Indeterminate	seed/fruit/nut	1	5 + Fs	7	6	
Quantifiable remains	Totals	23.5	110	453	222	39

oat/possible oat (*Avena*/cf. *Avena* sp.) and indeterminate cereal. Chaff and straw remains included emmer and emmer/spelt glume bases and spikelet forks, wheat rachis fragments, and some straw (culm) bases and nodes. Other possible cultivated plants are represented by two indeterminate, larger legume (Vicieae) fragments. Wild edible plants (represented by fruit stones/fragments, seeds and nutshell fragments) included probable sloe (*Prunus* cf. *spinosa*), sloe/cherry (*Prunus* sp.), blackberry (*Rubus* sect. *Glandulosus*), blackberry/raspberry (*Rubus* sp.), wild strawberry (*Fragaria vesca*) and hazelnut (*Corylus avellana*). Most numerous in three of four of the Bronze-Age pit samples were the seeds/fruits of a range of wild plants, including many possible weeds of cultivation.

Middle Roman Cremation Burial This fill produced thirty-nine quantifiable remains and many fragments. This mostly comprised large-seeded legumes/fragments, including small horse bean (*Vicia faba* var. *minor*) and additional large vetch, vetching or pea fragments, grouped as Vicieae. There were some smaller seeded legumes (Fabaceae indet.) and one indeterminate cereal grain.

Wood charcoal

Middle Bronze-Age Pit Fills Sample 110 was dominated by oak (*Quercus*) charcoal. There appeared to be more oak sapwood than heartwood fragments, where this could be determined.

There were a few fragments of hawthorn group (Pomoideae) charcoal. This group includes hawthorn (*Crataegus*), crab-apple (*Malus*) and rowan, whitebeam or service (*Sorbus*) species. Another subgroup of the Rosaceae is represented by the Prunoideae: here blackthorn/cherry (*Prunus* sp.) or possible blackthorn/cherry (cf. *Prunus* sp.), plus blackthorn (*P. spinosa*) type in sample 111 below. The individual species within this group are anatomically similar but they come from quite different trees.

A similar range of species was identified in sample 111, together with blackthorn type (producing sloe fruits – see above) and ash (*Fraxinus excelsior*). There were similar numbers of hawthorn group fragments to those of oak, plus many more blackthorn/cherry fragments. Oak heartwood was more common than oak sapwood, and the hawthorn group and blackthorn/cherry charcoal included a number of (mostly incomplete) roundwood fragments.

In contrast, sample 121 had similar proportions of blackthorn/cherry and hawthorn charcoal, with very little oak fragments. Ash was present and this included two twiggy fragments (with 2–3 growth rings). The hawthorn group charcoal mostly comprised mixed sized roundwood (with 2–16+ growth rings). There were roughly equal numbers of blackthorn/cherry timber and roundwood (average 5–7 growth rings) fragments. Also present in small quantities were two other species, hazel (*Corylus avellana*) and field maple (*Acer campestre*).

Middle Bronze-Age Cremation Fills Two dated cremation fills were assessed for wood charcoal. Both produced very limited, mixed remains, including some oak and ash charcoal, alder (*Alnus glutinosa*) or hazel, and a few fragments of either hawthorn group or blackthorn/cherry charcoal. There were quite a few fragments of indeterminate charcoal in both samples that were not examined at high power, so it is possible that other taxa are present.

Middle Roman Cremation Burial The only charcoal taxon was ash, around 40 per cent of which was roundwood (with 3–15 growth rings; Fig. 13). The main cremation fuel, therefore, was ash wood. The two to three groups of roundwood sizes shown in Figure 13 may represent mixtures of kindling, pyre construction materials and (with the timber) cremation fuel. One piece of ash roundwood (with 5 growth rings) was radiocarbon dated to 1834±29 BP (SUERC-55341).

Discussion

Cultivated and Wild Edible Species The main cereals present in the middle Bronze-Age pit fills from Monks Farm (that is, emmer and/or spelt wheat, and hulled barley) are consistent with other Bronze Age sites across southern England. The transition from emmer to spelt wheat as the main staple crop took place during the early 1st millennium BC, but there was considerable variation in the timing, and in some areas emmer wheat seems to have continued as the main staple crop into the Iron Age, suggesting a strong socio-political element to the transition.[93] In the Grove area, we might expect to find little emmer wheat by the end of the Bronze Age.[94] Hulled barley is widespread in deposits dating from the

[93] R. Pelling, 'Dowd's Farm, Hedge End, Hampshire (62354): Charred Plant Remains', supplement to www.wessexarch.co.uk/system/files/Dowds_Farm_CharredPlant.pdf (2012); M.K. Jones, 'Regional Patterns in Crop Production', in B. Cunliffe and D. Miles (eds.), *Aspects of the Iron Age in Central Southern Britain* (1984), pp. 120–25; C. Palmer and M.K. Jones, 'Plant Resources', in N.M. Sharples, *Maiden Castle: Excavations and Field Survey, 1985–6*, English Heritage Archaeological Report, 19 (1991), pp. 129–39; M. van der Veen, *Crop Husbandry Regimes. An Archaeobotanical Study of Farming in Northern England: 1000BC–AD500*, Sheffield Archaeological Monograph, 3 (1992); M. van der Veen and C. Palmer, 'Environmental Factors and the Yield Potential of Ancient Wheat Crops', *Journal of Archaeological Science*, 24 (1997), pp. 163–82.

[94] M. Robinson and B. Wilson, 'A Survey of Environmental Archaeology in the South Midlands', in H. Keeley (ed.), *Environmental Archaeology: A Regional Review, Volume 2* (1987), pp. 16–100; M.K. Jones, 'The Plant Remains', in M. Parrington, *The Excavation of an Iron Age Settlement, Bronze-Age Ring-Ditches and Roman Features at Ashville Trading Estate, Abingdon (Oxfordshire), 1974–6* (1978), pp. 93–110.

Table 17. Wood charcoal. Counts include following: h – heartwood; s – sapwood; r – roundwood

Sample No.		**110**	**111**	**121**			**100**
Context No.		**1237**	**1389**	**1531**	**101**	**107**	**1004**
Feature No.		**1234**	**1388**	**1529**	**1006**	**1012**	**1003**
Feature type		**Pit fill**	**Pit fill**	**Pit fill**	**Fill of cremation burial**	**Fill of cremation burial**	**Fill of cremation burial**
Period/phase		**BA**	**BA**	**BA**	**BA**	**BA**	**Roman**
Sample Vol. (litres)		**7**	**35**	**40**	**25**	**6**	**10**
Rosaceae							
Prunus spinosa type	plum/ blackthorn		3	2			
Prunus sp.	blackthorn/ cherry	1	14r	53r		2	
cf. *Prunus* sp.	cf. blackthorn/ cherry	2	2r			1	
Pomoideae* (see key below)	hawthorn group	6	40r	40r	4		
cf. Pomoideae	cf. hawthorn group		1				
Fagaceae							
Quercus	oak	83(sh)	45h(s)	4	3(s)	5	
cf. *Quercus*	cf. oak			1	1	1	
Betulaceae				5			
Corylus avellana	hazel						
Alnus glutinosa/ Corylus avellana	alder/hazel				2	1	
Sapindaceae							
Acer campestre	field maple			5			
Oleaceae							
Fraxinus excelsior	ash		2	5r	2	6	107r
cf. *Fraxinus excelsior*	cf. ash				2	3	
Indet. charcoal fragments		-	-	3r	6	4	-
Total fragments		92	107	118	20	23	107

*Pomoideae includes: Malus (apple), Crataegus (hawthorn) and Sorbus (rowan, service, whitebeam)

Neolithic onwards. Oat grains have been recovered from a number of Bronze-Age deposits,[95] but this cereal is presumed to have been a weed of other crops at this time. No barley or oat chaff remains were present to confirm the species present at Monks Farm, but the presence of asymmetric barley grains confirms the presence of the six row species (*Hordeum vulgare*). The indeterminate legume fragments in two Bronze-Age pit samples (110, 113) provide a hint of other crops, possibly horse bean (*Vicia faba*) or pea (*Pisum sativum*), although they also may have come from larger, wild legumes.

The fairly wide range but low numbers of wild, edible remains may reflect their collection together with wood fuel, from local hedgerows. Blackthorn/cherry fruit stones/fragments and charcoal were present in three pit samples but these remains were not more numerous in samples with the most wood charcoal (for example in 121), and hazelnut shells were only recovered from one sample (111) where hazel wood was absent. It is therefore possible that wild foods played a role in local Bronze-Age diets.

The presence of small horse beans in the Roman cremation fill is intriguing. The absence of other charred remains, and woody taxa other than ash, means that it is unlikely (but not impossible) that the cremation deposit disturbed existing domestic deposits from which the horse beans filtered in. Instead, these remains may have been deliberately deposited, or they may represent debris from food eaten during the cremation, which possibly took place over several days. Horse beans and other cultivated legumes are widely found (in low numbers) in Roman period deposits in southern England.[96]

Wild Species and the Areas Cultivated The majority of the wild plants associated with the Bronze-Age cereals are very common weeds of cultivation which tolerate a wide range of disturbed conditions, both damp and dry, so they may have grown with crops on the downs or closer to the site itself. Rough, uncultivated ground nearby may be indicated by hairy tare (*Vicia hirsuta* type) and scentless mayweed (*Tripleurospermum inodorum*). Hairy tare, the other wild legumes (that is, *Vicia*/*Lathyrus*, *Melilotus*/ *Medicago*/ *Trifolium*, Fabaceae indet., and so on), the rush(es) (*Juncus* sp.) and grasses (Poaceae) also point to another local habitat, grassland. Possibly some of these remains come from grassy material collected as animal fodder, bedding, for furnishings and so on, the remnants of which were later burnt on domestic fires.

Most of the wild, edible plants (including *Prunus*, *Rubus*, *Fragaria*, and *Corylus* species) probably came from hedgerows, woodlands or scrub. Other species that may have grown in more shady conditions include elder (*Sambucus nigra*) and cleavers (*Galium aparine*).

Evidence for the Woody Vegetation Across the region, oak, hazel and ash are some of the most frequently identified charcoal taxa in pre-Iron-Age deposits. Pomoideae and Prunoideae charcoal are also very common. At Monks Farm, oak charcoal from heartwood may indicate mature trees (though not necessarily ancient woodland), while the dominance of oak sapwood in some samples may point to use of young trees or larger branch wood, as fuel. Oak and hazel may represent remnants of the original oak-hazel woodland, in which hazel formed an understorey. Ash also forms large trees so may have grown in wooded areas. However, this species does not tolerate dense tree canopies, so is more likely in light woodland, clearings, along river banks, or in abandoned areas.[97] Alder is a tree associated with damper conditions, so may have grown along the nearby stream or on waterlogged ground.

[95] P. Tomlinson and A. Hall, 'A Review of the Archaeological Evidence for Food Plants from the British Isles: An Example of the Use of the Archaeobotanical Computer Database (ABCD)', *Internet Archaeology*, 1 (1996), http://intarch.ac.uk/journal/issue1/tomlinson_index.html.

[96] Ibid.

[97] R. Gale, 'Charcoal from Later Neolithic/Early Bronze Age, Iron Age and Early Roman Contexts', in G. Lambrick and T. Allen, *Gravelly Guy, Stanton Harcourt, Oxfordshire: The Development of a Prehistoric and Romano-British Community*, Oxford Archaeology Thames Valley Landscapes Monograph, 21 (2004), pp. 445–56.

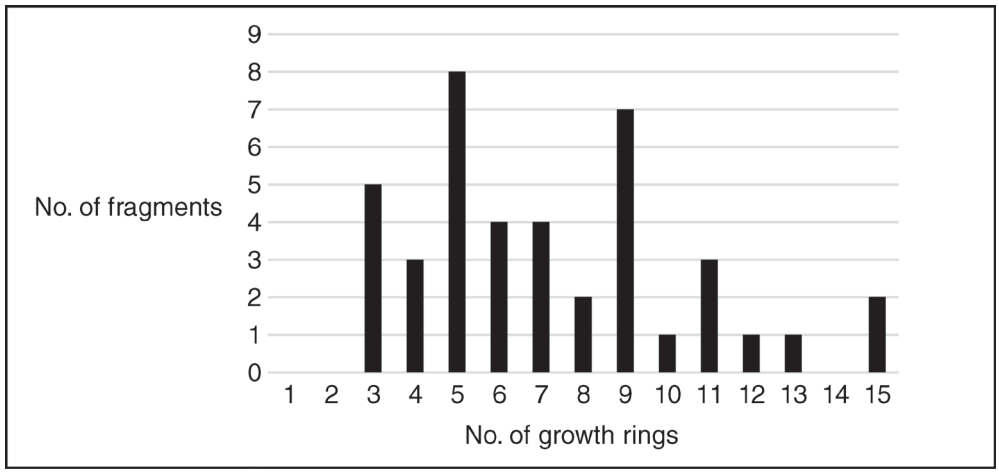

Fig. 13. Roundwood from middle Roman cremation grave 1003.

Of the Pomoideae, hawthorn (*Crataegus*) is the most likely on anatomical grounds. This may grow as a small tree at woodland margins or as scrub in more open areas. Of the other genera, crab-apple (*Malus*) is a tree of woodland margins, particularly of oak woods. Rowan (*Sorbus aucuparia*) and wild service (*Sorbus torminalis*) are trees of woodland/woodland margins, but rowan was rare in southern, lowland Britain in the past and wild service tree has become rare. Common whitebeam (*Sorbus aria*) is a secondary woodland species.[98]

In contrast to blackthorn, which forms tall spiny shrubs on open ground and is a rapid coloniser, wild cherry (*Prunus avium*) is a woodland tree of up to 30m. Blackthorn and hawthorn type charcoal together may point to local scrub vegetation, or, with species such as hazel and field maple, the collection of wood fuels from hedgerows. The Pomoideae and Prunoideae species all have edible fruits.

From the limited remains that survived and were analysed, it is unclear whether the Bronze-Age cremation fills were dominated by one or two high calorie woods, such as oak, ash and Pomoideae, as has been the case for prehistoric cremations elsewhere.[99] The charcoal taxa appear more mixed here. They were also recovered from very rooty deposits. It is possible that the cremations took place elsewhere and only limited remains of the charcoal fuel was buried with the bone, and/or that some of the charcoal has filtered in from surrounding Bronze-Age features. Other than possible alder, the range of taxa was almost identical to that seen in the Bronze-Age pit samples.

Conclusions

The charred plant assemblage from four middle Bronze-Age samples and one middle Roman period sample from Monks Farm have provided limited insights into cultivation practices in the area. The Bronze-Age crops seem to have included the glume wheats, emmer and spelt, hulled barley and possibly one or more legumes. It seems likely that a range of hedgerow fruit and nuts (including blackberry, sloe and hazelnut) also played a role in local diets. Many

[98] Ibid.

[99] For example, G.B. Thompson, 'The Analysis of Wood Charcoals from Selected Pits and Funerary Contexts', in Barclay and Halpin, *Excavations at Barrow Hills, Radley*, pp. 247–53; G. Campbell, 'Cremation Deposits and the Use of Wood in Cremation Ritual', in J. Harding and F. Healy, *A Neolithic and Bronze Age Landscape in Northamptonshire. Volume 1 – the Raunds Area Project* (2008), pp. 30–3; D. Challinor, 'Latton Lands (LALA 01-04). The Wood Charcoal', in L. Brown, *Latton Lands Gravel Pit, North Wiltshire* (2008), http://archaeologydataservice.ac.uk/archives/view/lattonlands_eh_2008/downloads.cfm.

smaller-seeded wild species are represented but unfortunately, these do not provide evidence for the areas possibly cultivated or other contemporary husbandry practices. The Roman period sample was a discrete (deliberate?) deposit of small horse beans and other legume remains, so this also provides little evidence for Roman cultivation practices more generally.

The wood charcoal remains from three Bronze-Age pits and two cremation fills were reasonably consistent and suggest that wood fuels were probably sourced from nearby oak woodland, possibly remnants of the original oak-hazel woods of the region, as well as from more open wooded areas, such as scrub or hedgerows, which supported ash, hawthorn, blackthorn, and possibly hazel and field maple. The fuel used in the Roman cremation was entirely composed of ash, including timber and roundwood, so no further deductions can be drawn about the nature of local woodlands by this time, other than that they supported this valuable species.

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